

DOCKLANDS LIGHT RAILWAY LIMITED

Reference Number: WS1159818322

ROLLING STOCK REPLACEMENT PROGRAMME BECKTON DEPOT MAINTENANCE FACILITY BUILDING (MFB), SOUTHERN SIDINGS (SS) AND TEMPORARY FIT OUT SHED (TFOS) BUILD

CALL-OFF CONTRACT

(SR20577-1.2-002)

Surface Rail Infrastructure Improvement Framework

Between
Docklands Light Railway Limited
and
Morgan Sindall Construction & Infrastructure Ltd.



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Volume 0

Call-Off Contract Contents



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Volume 1

Contract Terms and Conditions

1.000

Section	Description	Appendices / Schedules	Title
Volume 1.0	Contract Terms and Conditions		
1.010			Form of Agreement
1.020			Consolidated NEC 3 Option C Conditions of Contract
1.030	Contract Data		
1.031			Contract Data Part 1
1.032			Contract Data Part 2
1.033			Incentive Schedule
1.034			Activity Schedule
1.040	Amended Framework Schedules		
1.041		Schedule 9	Form of Warranty from Contractor
1.042		Schedule 10 A&B	Subcontractor warranty to Employer/ Beneficiary
1.043		Schedule 11 A&B	Subconsultant warranty to Employer/ Beneficiary
Volume 2.0	Works Information		
2.010			WI INTRO100 - Description of the Works - Project Overview
2.020			WI MFB100 - Description of the Works - Maintenance Facility Building
2.030			WI SS100 - Description of the Works - Southern Sidings
2.040			WI TFOS100 - Description of the Works - Temporary Fit Out Shed
2.050			WI200 - Constraints on how the Contractor provides the Works
2.060			WI300 - The Contractors Design
2.070			WI400 - Completion
2.080			WI500 - Programme Requirements
2.090			WI600 - Quality Assurance, Inspection and Testing
2.100			WI800 - Management of the Works
2.110			WI900 - Working with the Employer and Others
2.120			WI1000 - Services and Other Things to be Provided
2.130			WI1100 - Health, Safety and Environmental Requirements
2.140			WI1200 - Subcontracting
2.150			WI1300 - Title
2.160			WI1500 - Accounts & Records
2.170			WI2000 - Employer's Works Specification and Drawings
Volume 3.0	Site Information		
3.010			Environmental Report
3.020			49200-DLR-MAC-TD350_Z-HS-K-0002 Beckton Depot CoCP_V4
3.030			1499901-DLR-RSTK-TR600_Z-IE-K-0114 Sustainability Strategy Rev1.0
3.040			CDM boundary sketch 65204MF-DLR-BOU-TD350_00-SKE-GL-0002
3.050			National Grid 572_Beckton_AgreementForLease_HoTs_TFL_Land_240919
3.060			Route Sketch Rev.03 65204MF-DLR-BOU-TD350_00-SKE-GL-0001 MFB Route Sketch
3.070			Site plan showing location of MFB, SS & TFOS - 65204MF-DLR-BOU-TD350_00-SKE-GL-0003

3.080			Works Licence Relating to Haul Road at Beckton Gas Works Site dated 08.01.2021
3.090			Works Licence Relating to Property at Beckton Gas Works Site dated 08.01.2021
Volume 4.0	Works Information Appendices		
4.010		Appendix A	List of Appendices
4.020		Appendix B	Requirements
4.030		Appendix C	Design
4.040		Appendix D	DLR process Project Plans & Standards
4.050		Appendix E	Templates
4.060		Appendix F	Support Information Only (Not Part of Site or Works Information)
4.070		Appendix G	OTC, Test Track, Road BA



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.01

Form of Agreement

1.010

Form of Agreement

THIS DEED is made the day of January 2023.

BETWEEN

1. **DOCKLANDS LIGHT RAILWAY LIMITED (registered number 02052677)** of 5 Endeavour Square, London, E20 1JN, United Kingdom ("the Employer") which expression shall include its successors in title and assigns;

AND

2. **MORGAN SINDALL CONSTRUCTION & INFRASTRUCTURE LTD**, a company incorporated in and in accordance with the laws of **ENGLAND AND WALES** having as its registered number **04273754** and its registered office at **KENT HOUSE, 14-17 MARKET PLACE, LONDON, W1W 8AJ** (hereinafter called "the Contractor").

RECITALS

- (1) This contract is made pursuant to a framework agreement between Rail for London Limited (the "Framework Employer") and the *Contractor* relating to the provision of works and/or services dated 5th August 2021 ("the Framework Agreement").
- (2) The *Employer* wishes the *Contractor* to Provide the Works.
- (3) Subject to the provisions of this contract, the *Contractor* Provides the Works and corrects Defects therein in accordance with this contract.

NOW IT IS HEREBY AGREED as follows:

1. In this Form of Agreement, unless the context otherwise requires, words and expressions shall have the same meaning as set out in the *conditions of contract*.
2. The *conditions of contract* are an amended NEC3 Engineering and Construction Contract Third Edition April 2013 as set out in Part B of Schedule 2 to the Framework Agreement.
3. This contract shall mean this Form of Agreement and the following documents which are hereby incorporated into and shall comprise this contract:
 - 3.1 the *conditions of contract*;
 - 3.2 Schedules 1, 2B, 4, 5, 7, 8B, 9, 10, 11, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 & 26 of the Framework Agreement;
 - 3.3 the Contract Data Part One;

- 3.4 the Works Information;
 - 3.5 the Contract Data Part Two;
 - 3.6 the Site Information
 - 3.7 the Activity Schedule.
- 4. The several documents forming this contract are to be taken as mutually explanatory of one another. In the event of any ambiguity they shall be construed in the order set out in Clause 3 of this Form of Agreement.
 - 5. The *Contractor* Provides the Works in accordance with this contract and the terms of the Framework Agreement.
 - 6. The *Employer* pays the *Contractor* for complying with his obligations to Provide the Works the amount due in accordance with this contract.
 - 7 Notwithstanding the manner of execution of this contract it is agreed that:
 - 7.1 the limitation period within which any claim may be brought by the *Employer* for breach of this contract by the *Contractor* is 12 years from the date of breach; and
 - 7.2 the *Contractor* agrees not to raise in defence of any such claim a shorter limitation period whether pursuant to the Limitation Act 1980 (as the same may be amended or re-enacted from time to time) or otherwise.

EXECUTED as a DEED (but not delivered until the date specified at the beginning of this Deed) by Docklands Light Railway acting by its attorney in the presence of a witness:

Signature of attorney

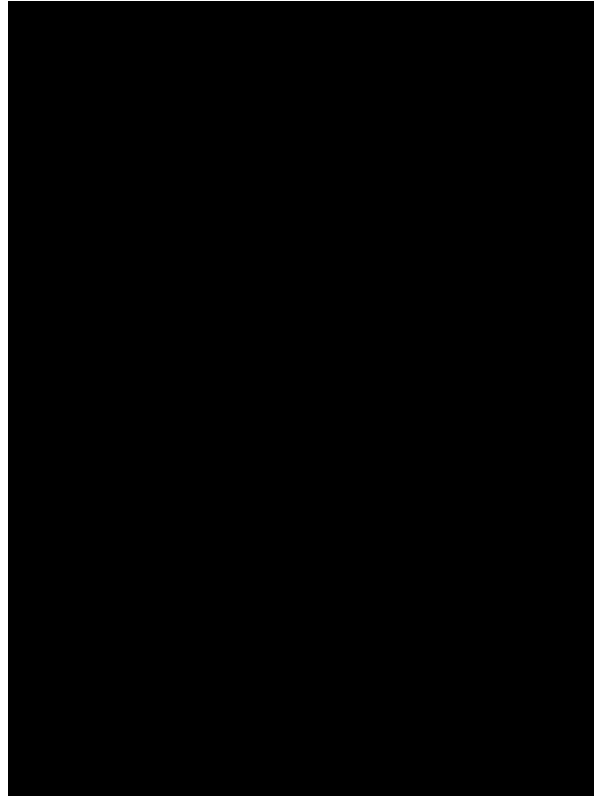
Name of attorney

Signature of witness

Name of witness

Address of witness

Occupation of witness



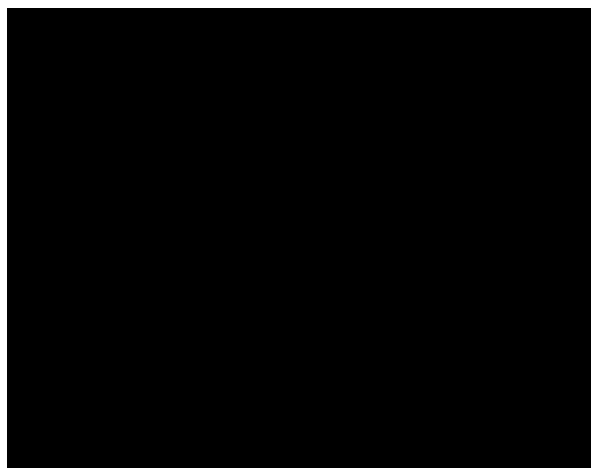
EXECUTED as a DEED by Morgan Sindall Construction & Infrastructure Ltd by:

Signature of Director

Name of Director

Signature of Director or Secretary

Name of Director or Secretary



DLR Rolling Stock Replacement Programme; Beckton Depot MFB, SS & TFOS Build Call-Off Contract; NEC3 ECC Option C

Section 1.02

Consolidated NEC3 Option C Conditions of Contract

1.020

Schedule 2 – Part B

Engineering and Construction Contract – Call-off Conditions of Contract

NEC 3 ENGINEERING AND CONSTRUCTION CONTRACT CONSOLIDATED CONDITIONS OF CONTRACT

This amended contract is based on the NEC family of contracts (2013 edition), the copyright of which belongs to the Institution of Civil Engineers.

CONTENTS

Core clauses	1	General	1
	2	The <i>Contractor's</i> main responsibilities	8
	3	Time	11
	4	Testing and Defects	14
	5	Payment	16
	6	Compensation events	21
	7	Title	28
	8	Risks and insurance	29
	9	Termination	35
Dispute resolution	W	Option W1 is not used	49
Note		Option W2	49
Secondary Option clauses	X1	Not used	53
	X2	Changes in the law	53
	X3	Not used	53
	X4	Parent company guarantee Not used	53
	X5	Sectional Completion	53
	X6	Bonus for early Completion Not used	54
	X7	Delay damages	54
	X12	Not used	54
	X13	Performance Bond Not used	54
	X14	Not used	54
	X15	Limitation of the <i>Contractor's</i> liability for his design to reasonable skill and care	54
	X16	Retention	55
	X17	Not used	55
	X18	Limitation of liability	55
	X20	Key Performance Indicators	56
	X21	Single Point Design Responsibility	57
	X22	Novation of Associated Contracts	57
	X23	Key Person Succession Plan	58
	X24	Fee Cap	59
	X25	Information Modelling	59
	X26	Lift and Escalator Subcontractors	59
	X27	Not used	61
	X28	Early Contractor Involvement	61
	Y(UK)1	Not used	63
	Y(UK)2	The Housing Grants, Construction and Regeneration Act 1996	64
	Y(UK)3	The Contracts (Rights of Third Parties) Act 1999	64
	Z	<i>Additional conditions of contract</i>	64
Note		Options X8 to X11 and X19 are not used	
Schedule of Cost Components			65
Shorter Schedule of Cost Components			68
Supplementary Notes			70

CORE CLAUSES

1 General

	Actions	10	
		10.1	The <i>Employer</i> , the <i>Contractor</i> , the <i>Project Manager</i> and the <i>Supervisor</i> shall act as stated in this contract and in a spirit of mutual trust and co-operation.
	Identified and defined Terms	11	
Z1.1		11.1	In these conditions of contract, terms identified in the Contract Data are in italics and defined terms have capital initials.
		11.2	<p>(1) The Accepted Programme is the programme identified in the Contract Data or is the latest programme accepted by the <i>Project Manager</i>. The latest programme accepted by the <i>Project Manager</i> supersedes previous Accepted Programmes.</p> <p>(2) Completion is when the <i>Contractor</i> has</p> <ul style="list-style-type: none"> done all the work which the Works Information states he is to do by the Completion Date and corrected notified Defects which would have prevented the <i>Employer</i> from using the <i>works</i> and Others from doing their work. <p>If the work which the <i>Contractor</i> is to do by the Completion Date is not stated in the Works Information, Completion is when the <i>Contractor</i> has done all the work necessary for the <i>Employer</i> to use the <i>works</i> and for Others to do their work.</p> <p>(3) The Completion Date is the <i>completion date</i> unless later changed in accordance with this contract.</p>
Z1.1.1			(4) The Contract Date is the date when this contract came into existence of this contract.
Z1.1.2			<p>(5) A Defect is</p> <ul style="list-style-type: none"> a part of the <i>works</i> which is not in accordance with the Works Information or the requirements of this contract, or a part of the <i>works</i> designed by the <i>Contractor</i> which is not in accordance with the applicable law or the <i>Contractor's</i> design which the <i>Project Manager</i> has accepted.
Z1.1.3			<p>(6) The Defects Certificate is either a list of Defects that the <i>Supervisor</i> or the <i>Contractor</i> has notified before the <i>defects date</i> which the <i>Contractor</i> has not corrected or, if there are no such Defects, a statement that there are none.</p> <p>(7) Equipment is items provided by the <i>Contractor</i> and used by him to Provide the Works and which the Works Information does not require him to include in the <i>works</i>.</p> <p>(8) The Fee is the sum of the amounts calculated by applying the <i>subcontracted fee percentage</i> to the Defined Cost of subcontracted work and the <i>direct fee percentage</i> to the Defined Cost of other work.</p> <p>(9) A Key Date is the date by which work is to meet the Condition stated. The Key Date is the <i>key date</i> stated in the Contract Data and the Condition is the <i>condition</i> stated in the Contract Data unless later changed in accordance with this contract.</p>
Z1.1.4			(10) Others are people or organisations who are not the <i>Employer</i> , the <i>Project Manager</i> , the <i>Supervisor</i> , the Adjudicator , the <i>Adjudicator</i> the <i>Contractor</i> or any employee, Subcontractor or supplier of the <i>Contractor</i> .
Z1.1.5			<p>(11) The Parties are the <i>Employer</i> (which expression includes his successors in title and assigns) and the <i>Contractor</i>.</p> <p>(12) Plant and Materials are items intended to be included in the <i>works</i>.</p>

(13) To Provide the Works means to do the work necessary to complete the *works* in accordance with this contract and all incidental work, services and actions which this contract requires.

(14) The Risk Register is a register of the risks which are listed in the Contract Data and the risks which the *Project Manager* or the *Contractor* has notified as an early warning matter. It includes a description of the risk and a description of the actions which are to be taken to avoid or reduce the risk.

(15) The Site is the area within the *boundaries of the site* and the volumes above and below it which are affected by work included in this contract.

(16) Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in.

(17) A Subcontractor is a person or organisation who has a contract with the *Contractor* to

- construct or install part of the *works*,
- provide a service necessary to Provide the Works or
- supply Plant and Materials which the person or organisation has wholly or partly designed specifically for the *works*.

(18) The Working Areas are those parts of the *working areas* which are

- necessary for Providing the Works and
- used only for work in this contract

unless later changed in accordance with this contract.

(19) Works Information is information which either

- specifies and describes the *works* or
- states any constraints on how the *Contractor* Provides the Works

and is either

- in the documents which the Contract Data states it is in or
- in an instruction given in accordance with this contract.

(20) The Activity Schedule is the *activity schedule* unless later changed in accordance with this contract.

Z1.1.6

(22) **This clause applies if clause 11.2(23) does not apply.** Defined Cost is the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not-excluding the cost of preparing quotations for compensations events.

Z1.1.7

(23) **This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One.¹** Defined Cost is

- the amount of payments due to Subcontractors for work which is subcontracted without taking account of amounts deducted for
 - retention,
 - payment to the *Employer* as a result of the Subcontractor failing to meet a Key Date,
 - the correction of Defects after Completion,
 - payments to Others and
 - the supply of equipment, supplies and services included in the charge for overhead cost within the Working Areas in this contract

and

- the cost of components in the Schedule of Cost Components for other work

¹ Main Option E may only apply if Option X28 applies and then may only apply to Stage One.

less Disallowed Cost.

Z1.1.8

(25) This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. Disallowed Cost is cost which the *Project Manager* decides

- is not justified by the *Contractor's* accounts and records **or has not been reasonably incurred,**
- should not have been paid to a Subcontractor or supplier in accordance with his contract,
- was incurred only because the *Contractor* did not
 - follow an acceptance or procurement procedure stated in the Works Information or
 - give an early warning which this contract required him to give

and the cost of

- correcting Defects after Completion,
- correcting Defects caused by the *Contractor* not complying with a constraint on how he is to Provide the Works stated in the Works Information,
- Plant and Materials not used to Provide the Works (after allowing for reasonable wastage) unless resulting from a change to the Works Information,
- resources not used to Provide the Works (after allowing for reasonable availability and utilisation) or not taken away from the Working Areas when the *Project Manager* requested ~~and~~
- **a key person not appointed in accordance with this contract,**
- preparation for and conduct of an adjudication or proceedings of the *tribunal* **and**
- **finances, charges, penalties and fees imposed on or accepted by the Contractor as a result of any unsafe, unlawful or criminal conduct or any infringement or disregard of any Statutory Requirement.**

Z1.1.9

(27) This clause applies if clause 11.2(29) does not apply. The Price for Work Done to Date is the total of the Prices for

- each group of completed activities and
- each completed activity which is not in a group,

A completed activity is one which is without Defects which would either delay or be covered by immediately following work.

Z1.1.10

(29) This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. The Price for Work Done to Date is the total Defined Cost which the *Project Manager* forecasts will have been paid by the *Contractor* before the next assessment date plus the Fee.

Z1.1.11

(30) This clause applies if clause 11.2(32) does not apply. The Prices are the lump sum prices for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

Z1.1.12

(32) This clause applies to Stage One if main Option E applies to Stage One. The Prices **for Stage One** are the Defined Cost plus the Fee.

Z1.2

11.3 Additional defined terms are included in Appendix 1.

Z1.2.1

Interpretation and the law 12

Z1.3

	12.1	In this contract, except where the context shows otherwise, words in the singular also mean in the plural and the other way round and words in the masculine also mean in the feminine and neuter.
Z1.3.1	12.1A	References to "this contract" mean the call-off contract between the <i>Employer</i> and the <i>Contractor</i> including the documents listed as forming the contract in the relevant Call-Off Contract.
Z1.3.2	12.1B	In this contract, unless the context otherwise requires, references to: <ul style="list-style-type: none"> (a) "including" means "including without limitation", and (b) "fault" of the <i>Employer</i> or the <i>Contractor</i> include the breach, unlawful act, negligence, omission, default or failure to comply with any provision of this contract of the <i>Employer</i> or the <i>Contractor</i> (as the case may be).
Z1.3.3	12.2	This contract is governed by and is construed in accordance with the <i>law of the contract</i> and, without prejudice to clause W2, the Parties submit to the exclusive jurisdiction of the courts of England and Wales.
	12.3	No change to this contract, unless provided for by the <i>conditions of contract</i> , has effect unless it has been agreed, confirmed in writing and signed by the Parties.
Z1.3.4	12.3A	Words denoting persons or parties includes individuals, partnerships, firms and corporations and any organisation having legal capacity.
Z1.3.5	12.4	This contract is the entire agreement between the Parties supersedes any previous agreement, arrangement or understanding between the <i>Employer</i> and the <i>Contractor</i> in relation to the matters dealt with in this contract and represents the entire understanding and agreement between the <i>Employer</i> and the <i>Contractor</i> in relation to such matters. The <i>Employer</i> and <i>Contractor</i> acknowledge and agree that each of them has not relied upon any prior representation by the other in entering into this contract.
Z1.3.6	12.5	The headings to the sections, clauses and sub-clauses of the conditions of this contract are for convenience only and do not affect the construction or interpretation of the <i>conditions of contract</i> .
Y2.1(2)	12.6	A period of time stated in days is a period calculated in accordance with Section 116 of the Act.
Z1.3.7	12.7	References in this contract to "applicable law" are deemed to include Statutory Requirements and include: <ul style="list-style-type: none"> • that law as from time to time amended, re-enacted or substituted and • any orders, rules, regulations, schemes, warrants, bye-laws, directives or codes of practice raised under any such law. <p>The <i>Contractor</i> complies with the applicable law. Laws are regarded as applicable to the <i>Contractor</i> where they impose duties, obligations or restrictions on the <i>Employer</i> or TfL in relation to the <i>Network</i> and/or its operation, and the <i>Contractor</i> performs his obligations under this contract in compliance with such duties, obligations and restrictions as if such laws imposed such duties, obligations and restrictions on the <i>Contractor</i>.</p>
Z1.3.8	12.8	Failure by the <i>Employer</i> to exercise his rights under this contract does not constitute waiver of those rights nor any of them nor does any such failure relieve the <i>Contractor</i> from any of his obligations under this contract. The waiver in one instance of any right, condition or requirement does not constitute a continuing or general waiver of that or any other right, condition or requirement.
Z1.3.9	12.9	If any provision of this contract is held by any court or competent authority to be void or unenforceable in whole or in part, the other provisions of this contract and the remainder of the affected provisions shall continue to be valid.
Z1.3.10	12.10	Any member of the TfL Group has the right to enforce the terms of this contract in accordance with the Contracts (Rights of Third Parties) Act 1999, but otherwise the <i>Employer</i> and the <i>Contractor</i> do not intend that any of the terms of this contract are enforceable by virtue of the Contracts (Rights of Third Parties) Act 1999 by any

person not a Party. Notwithstanding the terms of this clause, the Parties are entitled to vary or rescind this contract without the consent of any or all members of the TFL Group (other than the *Employer*).

Communications 13

Z1.4

Z1.4.1

- 13.1 *The Employer, the Contractor, the Project Manager and the Supervisor comply with the communications requirements in the Works Information.* Each instruction, certificate, submission, proposal, record, acceptance, notification, reply and other communication which this contract requires is communicated in a form which can be read, copied and recorded. Writing is in the *language of this contract*.
- 13.2 A communication has effect when it is received at the last address notified by the recipient for receiving communications or, if none is notified, at the address of the recipient stated in the Contract Data.
- 13.3 If this contract requires the *Project Manager*, the *Supervisor* or the *Contractor* to reply to a communication, unless otherwise stated in this contract, he replies within the *period for reply*.
- 13.4 The *Project Manager* replies to a communication submitted or resubmitted to him by the *Contractor* for acceptance. If his reply is not acceptance, the *Project Manager* states his reasons and the *Contractor* resubmits the communication within the *period for reply* taking account of these reasons. A reason for withholding acceptance is that more information is needed in order to assess the *Contractor's* submission fully.
- 13.5 The *Project Manager* may extend the *period for reply* to a communication if the *Project Manager* and the *Contractor* agree to the extension before the reply is due. The *Project Manager* notifies the *Contractor* of the extension which has been agreed.
- 13.6 The *Project Manager* issues his certificates to the *Employer* and the *Contractor*. The *Supervisor* issues his certificates to the *Project Manager* and the *Contractor*.
- 13.7 A notification which this contract requires is communicated separately from other communications.
- 13.8 The *Project Manager* may withhold acceptance of a submission by the *Contractor*. Withholding acceptance for a reason stated in this contract is not a compensation event.

The Project Manager and

the Supervisor

Z1.5

- 14.1 *The Project Manager's or the Supervisor's acceptance of a communication from the Contractor or of his work does not change the Contractor's responsibility to Provide the Works or his liability for his design.*
- 14.2 *The Project Manager and the Supervisor, after notifying the Contractor, may delegate any of their actions and may cancel any delegation. A reference to an action of the Project Manager or the Supervisor in this contract includes an action by his delegate.*
- 14.3 *The Project Manager may give an instruction to the Contractor which changes the Works Information or a Key Date.*
- 14.4 *The Employer may replace the Project Manager or the Supervisor after he has notified the Contractor of the name of the replacement.*

Y2.1/Z1.5.1

- 14.5 *The Project Manager is for relevant purposes the "specified person" as defined in section 110A(6) of the Act.*

Adding to the Working 15

Areas

- 15.1 *The Contractor may submit a proposal for adding an area to the Working Areas to the Project Manager for acceptance. A reason for not accepting is that the proposed area is either not necessary for Providing the Works or used for work not in this contract.*

<p>Early warning 16</p> <p>Z1.6 Z1.6.1</p>	<p>16.1 The <i>Contractor</i> and the <i>Project Manager</i> give an early warning by notifying the other as soon as either becomes aware of (i) any matter which could</p> <ul style="list-style-type: none"> • increase the total of the Prices, • delay Completion, • delay meeting a Key Date, or • impair the performance of the <i>works</i> in use, • adversely affect the work of Others, or • adversely affect the <i>Employer</i> (including by increasing the monies payable by the <i>Employer</i> to Others engaged on the Project) and/or cause any disruption to the operation of the <i>Network</i>; and <p>(ii) of any ambiguity or inconsistency in or between the documents which are part of this contract and which could have any of the impacts listed in the bullet points above.</p> <p>In the notification the <i>Contractor</i> and the <i>Project Manager</i> state whether the early warning must be dealt with immediately or can wait until the next scheduled risk reduction meeting.</p> <p>The <i>Contractor</i> may give an early warning by notifying the <i>Project Manager</i> of any other matter which could increase his total cost. The <i>Project Manager</i> enters early warning matters in the Risk Register. Early warning of a matter for which a compensation event has previously been notified is not required.</p> <p>16.2 Either the <i>Project Manager</i> or the <i>Contractor</i> may instruct the other to attend a risk reduction meeting. Each may instruct other people to attend if the other agrees.</p> <p>16.3 At a risk reduction meeting, those who attend co-operate in</p> <ul style="list-style-type: none"> • making and considering proposals for how the effect of the registered risks can be avoided or reduced, • seeking solutions that will bring advantage to all those who will be affected, • deciding on the actions which will be taken and who, in accordance with this contract, will take them and • deciding which risks have now been avoided or have passed and can be removed from the Risk Register. <p>16.4 The <i>Project Manager</i> revises the Risk Register to record the decisions made at each risk reduction meeting and issues the revised Risk Register to the <i>Contractor</i>. If a decision needs a change to the Works Information, the <i>Project Manager</i> instructs the change at the same time as he issues the revised Risk Register.</p>
<p>Ambiguities and Inconsistencies 17</p>	<p>17.1 The <i>Project Manager</i> or the <i>Contractor</i> notifies the other as soon as either becomes aware of an ambiguity or inconsistency in or between the documents which are part of this contract. The <i>Project Manager</i> gives an instruction resolving the ambiguity or inconsistency.</p> <p>17.2 Such instruction is not a compensation event where the <i>Project Manager</i> assesses:</p> <ul style="list-style-type: none"> • that the ambiguity or inconsistency in question is one for which the <i>Contractor</i> is responsible for under the contract.
<p>Illegal and impossible requirements 18</p>	<p>18.1 The <i>Contractor</i> notifies the <i>Project Manager</i> as soon as he considers that the Works Information requires him to do anything which is illegal or impossible. If the <i>Project Manager</i> agrees, he gives an instruction to change the Works Information appropriately.</p>
<p>Prevention 19</p> <p>Z1.7</p>	<p>19.1 If an event occurs which</p> <ul style="list-style-type: none"> • stops the <i>Contractor</i> completing the <i>works</i> or

- stops the *Contractor* completing the *works* by the date shown on the Accepted Programme,

and which

Z1.7.1

- neither Party could prevent and
- an experienced contractor would have judged at the Contract Date to have such a small chance of occurring that it would have been unreasonable for him to have allowed for it,
- if Option X28 applies, a prudent and experienced contractor familiar with works similar to the Stage Two *works* and exercising the foresight appropriate to such a contractor would have judged at the date of the Notice to Proceed to have such a small chance of occurring that it would have been unreasonable for him to have allowed for it.

the *Project Manager* gives an instruction to the *Contractor* stating how he is to deal with the event.

2 The Contractor's main responsibilities

Providing the Works	20	
Z1.8	20.1	The <i>Contractor</i> Provides the Works in accordance with the Works Information.
Z1.8.1	20.2	Not used
Z1.8.2	20.3	This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. The <i>Contractor</i> advises the <i>Project Manager</i> on the practical implications of the design of the <i>works</i> and on subcontracting arrangements.
Z1.8.3	20.4	This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. The <i>Contractor</i> prepares forecasts of the total Defined Cost for the whole of the <i>works</i> in consultation with the <i>Project Manager</i> and submits them to the <i>Project Manager</i> . Forecasts are prepared at the intervals stated in the Contract Data from the <i>starting date</i> until Completion of the whole of the <i>works</i> . Each forecast is in a format prescribed in the Works Information. An explanation of the changes made since the previous forecast is submitted with each forecast.
Z1.8.4	20.5	Not used.
Z1.8.5	20.6	These <i>conditions of contract</i> and the warranties and undertakings in them are deemed to apply to all work and/or services performed by the <i>Contractor</i> in relation to the <i>works</i> both before and after the Contract Date.
The Contractor's design	21	
Z1.9		
Z1.9.1	21.1	The <i>Contractor</i> designs the parts of the <i>works</i> which the Works Information states he is to design. Where Option X21 applies the <i>Contractor</i> is responsible for the design of all the <i>works</i> .
Z1.9.2	21.2	The <i>Contractor</i> submits the particulars of his design as the Works Information requires to the <i>Project Manager</i> for acceptance. A reason for not accepting the <i>Contractor's</i> design is that it does not comply with the Works Information, this contract or the applicable law- and if Option X15 does not apply <ul style="list-style-type: none"> • is such that it will not allow the works to be constructed, • it is such that if constructed the works will not be capable of being used for their intended purpose <p>The <i>Contractor</i> does not proceed with the relevant work until the <i>Project Manager</i> has accepted his design.</p>
	21.3	The <i>Contractor</i> may submit his design for acceptance in parts if the design of each part can be assessed fully.
Value Engineering	21A	
Z1.9A		
Z1.9A.1	21A.1	The <i>Contractor</i> may propose to the <i>Project Manager</i> that the Works Information provided by the <i>Employer</i> should be changed so as to result in a reduction to the anticipated total Defined Cost of the works and/or result in a saving in the time required to Provide the Works or any part thereof. In such event the <i>Contractor</i> submits details of the proposal to the <i>Project Manager</i> in accordance with the requirements set out in the Works Information. The <i>Project Manager</i> may provide the <i>Contractor</i> with details of the <i>Employer's</i> estimated additional costs resulting from the <i>Contractor's</i> proposal
Z1.9A.2	21A.2	If the <i>Project Manager</i> accepts the proposal referred to in clause 21A.1, he gives an instruction changing the Works Information and: <ul style="list-style-type: none"> • the Prices are reduced by the <i>Employer's</i> share of the overall saving; but

- the Completion Date is not changed.

21A.3 For the purposes of clause 21A.2, the *Employer's* share of the overall saving equals 50% (fifty per cent) of the sum of the following, namely:

- the saving in Defined Cost identified in the *Contractor's* proposal or otherwise agreed between the *Project Manager* and the *Contractor*;
- the associated Fee (being such saving in Defined Cost multiplied by the fee percentage); plus
- the *Employer's* estimated additional costs.

Using the *Contractor's* 22

Z1.10

Design 22.1 The *Employer* may use and copy the *Contractor's* design for any purpose connected with construction, use, alteration or demolition of the works unless otherwise stated in the Works Information and for other purposes as stated in the Works Information specified in clause Z2.7.

Z1.10.1

Design of Equipment 23

23.1 The *Contractor* submits particulars of the design of an item of Equipment to the *Project Manager* for acceptance if the *Project Manager* instructs him to. A reason for not accepting is that the design of the item will not allow the *Contractor* to Provide the Works in accordance with

- the Works Information,
- the *Contractor's* design which the *Project Manager* has accepted or
- the applicable law.

People 24

Z1.11

Z1.11.1

24.1 The *Contractor* complies with Option X23 if applicable. The *Contractor* either employs each key person named to do the job stated in the Contract Data or employs a replacement person who has been accepted by the *Project Manager*. The *Contractor* submits the name, relevant qualifications and experience of a proposed replacement person to the *Project Manager* for acceptance. A reason for not accepting the person is that his relevant qualifications and experience are not as good as those of the person who is to be replaced.

Z1.11.2

24.2 The *Project Manager* may, having stated his reasons, instruct the *Contractor* to remove an employee any person under his control. The *Contractor* then arranges that, after one day, the employee such person has no further connection with the work included in this contract.

Working with the 25

Employer and Others

Z1.12

25.1 The *Contractor* co-operates with Others in obtaining and providing information which they need in connection with the works. He co-operates with Others and shares the Working Areas with them as stated in the Works Information.

25.2 The *Employer* and the *Contractor* provide services and other things as stated in the Works Information. Any cost incurred by the *Employer* as a result of the *Contractor* not providing the services and other things which he is to provide is assessed by the *Project Manager* and paid by the *Contractor*.

Z1.12.1

25.3 If the *Project Manager* decides that the work does not meet the Condition stated for a Key Date by the date stated and, as a result, the *Employer* incurs additional cost either

- in carrying out work or
- by paying an additional amount to Others in carrying out work

on the same project ~~Project~~, the additional cost which the *Employer* has paid or will incur is paid by the *Contractor*. The *Project Manager* assesses the additional cost within four weeks of the date when the Condition for the Key Date is met. ~~The Employer's right to recover the additional cost is his only right in these circumstances.~~ The *Project Manager's* assessment is without prejudice to any other rights and remedies the *Employer* may have arising from the *Contractor's* failure to meet a Key Date.

Subcontracting 26

Z1.13

26.1 If the *Contractor* subcontracts work, he is responsible for Providing the Works as if he had not subcontracted and he complies with the provisions of the Works Information. This contract applies as if a Subcontractor's employees and equipment were the *Contractor's*.

26.2 The *Contractor* submits the name of each proposed Subcontractor to the *Project Manager* for acceptance. A reason for not accepting the Subcontractor is that his appointment will not allow the *Contractor* to Provide the Works. The *Contractor* does not appoint a proposed Subcontractor until the *Project Manager* has accepted him.

Z1.13.1

26.3 The *Contractor* submits the proposed conditions of contract for each subcontract to the *Project Manager* for acceptance unless

an NEC contract is proposed or
the *Project Manager* has agreed that no submission is required.

The *Contractor* does not appoint a Subcontractor on the proposed subcontract conditions submitted until the *Project Manager* has accepted them. A reason for not accepting them is that

- they will not allow the *Contractor* to Provide the Works, or
- they do not include a statement that the parties to the subcontract shall act in a spirit of mutual trust and co-operation
- they contain payment terms that do not comply with the Public Contracts Regulations 2015 or
- they do not grant suitable third party rights (by way of collateral warranty or pursuant to the Contracts (Rights of Third Parties) Act 1999) in favour of the *Employer* or other members of the TfL Group.

Z1.13.2

26.4 **This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One.** The *Contractor* submits the proposed contract data for each subcontract for acceptance to the *Project Manager* if

- an NEC contract is proposed and
- the *Project Manager* instructs the *Contractor* to make the submission.

A reason for not accepting the proposed contract data is that its use will not allow the *Contractor* to Provide the Works.

Other responsibilities 27

Z1.14

27.1 The *Contractor* obtains approval of his design from Others where necessary.

27.2 The *Contractor* provides access to work being done and to Plant and Materials being stored for this contract for

- the *Project Manager*,
- the *Supervisor* and
- Others notified to him by the *Project Manager*.

27.3 The *Contractor* obeys an instruction which is in accordance with this contract and is given to him by the *Project Manager* or the *Supervisor*.

Z1.14.1

27.4 The *Contractor* acts in accordance with the health and safety requirements stated in the Works Information and co-operates with persons having health and safety

responsibilities on or adjacent to the Site for the effective discharge of all such responsibilities. Without prejudice to the generality of the above, if a Safety Breach is committed by one of the *Contractor's* employees or agents or by any Subcontractor (or one of the Subcontractor's employees or agents) then the *Employer* may (at his sole discretion) choose to serve a warning notice upon the *Contractor* instead of exercising his right to terminate with immediate effect pursuant to clause 91.8 and unless, within thirty (30) days of receipt of such warning notice, the *Contractor* removes or procures the removal of the relevant person or Subcontractor (as the case may be) from the Site and (if necessary) procures the provision of the affected *works* by another person or Subcontractor this constitutes a material breach of this contract and entitles the *Employer* to terminate the contract in whole or in part with immediate effect in accordance with clause 91.8.

3 Time

Starting, Completion and Z1.15 30

- | | | |
|------------------|-------|---|
| Key Dates | 30.1 | The <i>Contractor</i> does not start work on the Site until the first <i>access date</i> and does the work so that Completion is on or before the Completion Date. |
| Z1.15.1 | 30.1A | The <i>Contractor</i> notifies the <i>Project Manager</i> when in his opinion the <i>works</i> will have been completed in accordance with this contract and requests an inspection. The <i>Project Manager</i> and the <i>Contractor</i> undertake such inspection in accordance with the requirements set out in the Works Information. The <i>Supervisor</i> may attend the inspection. |
| Z1.15.2 | 30.2 | The <i>Contractor</i> provides all information and evidence listed or identified in the Works Information as being required to demonstrate that the <i>works</i> have been so completed. If the <i>Project Manager</i> is satisfied that the <i>works</i> have been so completed, he Project Manager decides the date of Completion. The <i>Project Manager</i> certifies Completion within one week of Completion. If the <i>Project Manager</i> is not so satisfied, he notifies the <i>Contractor</i> of his reasons for not accepting that the <i>works</i> have been completed and the <i>Contractor</i> notifies the <i>Project Manager</i> in accordance with clause 30.1A when the necessary corrective action has been taken. |
| | 30.3 | The <i>Contractor</i> does the work so that the Condition stated for each Key Date is met by the Key Date. |

The programme Z1.16 31

- | | | |
|---------|------|--|
| Z1.16.1 | 31.1 | If a programme is not identified in the Contract Data, the <i>Contractor</i> submits a first programme to the <i>Project Manager</i> for acceptance within the period stated in the Contract Data. |
| Z1.16.1 | 31.2 | <p>The <i>Contractor</i> shows on each programme which he submits for acceptance</p> <ul style="list-style-type: none"> • the <i>starting date</i>, <i>access dates</i>, Key Dates and Completion Date, • planned Completion, • the order and timing of the operations which the <i>Contractor</i> plans to do in order to Provide the Works, • the order and timing of the work of the <i>Employer</i> and Others as last agreed with them by the <i>Contractor</i> or, if not so agreed, as stated in the Works Information, • the dates when the <i>Contractor</i> plans to meet each Condition stated for the Key Dates and to complete other work needed to allow the <i>Employer</i> and Others to do their work, • provisions for <ul style="list-style-type: none"> • float, • time risk allowances, • environmental and health and safety requirements and • the procedures set out in this contract, • the dates when, in order to Provide the Works in accordance with his programme, the <i>Contractor</i> will need <ul style="list-style-type: none"> • any access in accordance with the access requirements in the Works Information and access to a part of the Site if later than its <i>access date</i>, • acceptances, • Plant and Materials and other things to be provided by the <i>Employer</i> and • information from Others, |

		<ul style="list-style-type: none"> for each operation, a statement of how the <i>Contractor</i> plans to do the work identifying the principal Equipment and other resources which he plans to use and other information which the Works Information requires the <i>Contractor</i> to show on a programme submitted for acceptance.
	31.3	Within two weeks of the <i>Contractor</i> submitting a programme to him for acceptance, the <i>Project Manager</i> either accepts the programme or notifies the <i>Contractor</i> of his reasons for not accepting it. A reason for not accepting a programme is that <ul style="list-style-type: none"> the <i>Contractor's</i> plans which it shows are not practicable, it does not show the information which this contract requires, it does not represent the <i>Contractor's</i> plans realistically or it does not comply with the Works Information.
Z1.16.2	31.4	This clause applies if main Option A or main Option C applies. The <i>Contractor</i> provides information which shows how each activity on the Activity Schedule relates to the operations on each programme which he submits for acceptance.
Revising the programme	32	
Z1.17		
	32.1	The <i>Contractor</i> shows on each revised programme <ul style="list-style-type: none"> the actual progress achieved on each operation and its effect upon the timing of the remaining work, the effects of implemented compensation events, how the <i>Contractor</i> plans to deal with any delays and to correct notified Defects and any other changes which the <i>Contractor</i> proposes to make to the Accepted Programme.
Z1.17.1	32.2	The <i>Contractor</i> submits a revised programme to the <i>Project Manager</i> for acceptance <ul style="list-style-type: none"> within the <i>period for reply</i> after the <i>Project Manager</i> has instructed him to, when the <i>Contractor</i> chooses to and, in any case, at no longer interval than the interval stated in the Contract Data from the <i>starting date</i> until Completion of the whole of the works and following the occurrence of a compensation event which has an impact on Completion or a Key Date.
Access to and use of	33	
Z1.18		
the Site	33.1	Subject to the provisions of the Works Information regarding access, the <i>Employer</i> allows access to and use of each part of the Site to the <i>Contractor</i> which is necessary for the work included in this contract. Access and use is allowed on or before the later of its <i>access date</i> and the date for access shown on the Accepted Programme.
Z1.18.1		
Z1.18.2	33.1A	The <i>Employer</i> does not guarantee uninterrupted or exclusive access to or use of the Site or any Working Area and access is limited in accordance with this contract.
Instructions to stop or	34	
not to start work	34.1	The <i>Project Manager</i> may instruct the <i>Contractor</i> to stop or not to start any work and may later instruct him that he may re-start or start it.
Take over	35	

- 35.1 The *Employer* need not take over the *works* before the Completion Date if it is stated in the Contract Data that he is not willing to do so. Otherwise the *Employer* takes over the *works* not later than two weeks after Completion.
- 35.2 The *Employer* may use any part of the *works* before Completion has been certified. If he does so, he takes over the part of the *works* when he begins to use it except if the use is
- for a reason stated in the Works Information or
 - to suit the *Contractor's* method of working.
- 35.3 The *Project Manager* certifies the date upon which the *Employer* takes over any part of the *works* and its extent within one week of the date.

Acceleration 36

Z1.19

- 36.1 The *Project Manager* may instruct the *Contractor* to submit a quotation for an acceleration to achieve Completion before the Completion Date. The *Project Manager* states changes to the Key Dates to be included in the quotation. A quotation for an acceleration comprises proposed changes to the Prices and a revised programme showing the earlier Completion Date and the changed Key Dates. The *Contractor* submits details of his assessment with each quotation.
- 36.2 The *Contractor* submits a quotation or gives his reasons for not doing so within the *period for reply*.

Z1.19.1

- 36.3 **This clause applies to the extent clause 36.4 does not apply. When the *Project Manager* accepts a quotation for an acceleration, he changes the Prices, the Completion Date and the Key Dates accordingly and accepts the revised programme. If the *Project Manager* does not accept a quotation for an acceleration, or does not accept the *Contractor's* reasons for not submitting a quotation, the *Project Manager* may issue an instruction to the *Contractor* to accelerate and the *Contractor* proceeds to accelerate in accordance with that instruction and the *Project Manager* makes his own assessment of the compensation event**

Z1.19.2

- 36.4 **This clause applies to Stage One if main Option E applies to Stage One. When the *Project Manager* accepts a quotation for an acceleration of Stage One, he changes the Completion Date, the Key Dates and the forecast of the total Defined Cost of the whole of the *works* accordingly and accepts the revised programme. If the *Project Manager* does not accept a quotation for an acceleration, or does not accept the *Contractor's* reasons for not submitting a quotation, the *Project Manager* may issue an instruction to the *Contractor* to accelerate and the *Contractor* proceeds to accelerate in accordance with that instruction and the *Project Manager* makes his own assessment of the compensation event**

4 Testing and Defects

Tests and inspections 40 Z1.20

- 40.1 This clause only applies to tests and inspections required by the Works Information or the applicable law.
- 40.2 The *Contractor* and the *Employer* provide materials, facilities and samples for tests and inspections as stated in the Works Information.
- 40.3 The *Contractor* and the *Supervisor* each notifies the other of each of his tests and inspections before it starts and afterwards notifies the other of its results. The *Contractor* notifies the *Supervisor* in time for a test or inspection to be arranged and done before doing work which would obstruct the test or inspection. The *Supervisor* may watch any test done by the *Contractor*.
- 40.4 If a test or inspection shows that any work has a Defect, the *Contractor* corrects the Defect and the test or inspection is repeated.
- 40.5 The *Supervisor* does his tests and inspections without causing unnecessary delay to the work or to a payment which is conditional upon a test or inspection being successful. A payment which is conditional upon a *Supervisor's* test or inspection being successful becomes due at the later of the *defects date* and the end of the last *defect correction period* if
- the *Supervisor* has not done the test or inspection and
 - the delay to the test or inspection is not the *Contractor's* fault.
- 40.6 The *Project Manager* assesses the cost incurred by the *Employer* in repeating a test or inspection after a Defect is found. The *Contractor* pays the amount assessed.

Z1.20.1

- 40.7 **This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. When the *Project Manager* assesses the cost incurred by the *Employer* in repeating a test or inspection after a Defect is found, the *Project Manager* does not include the *Contractor's* cost of carrying out the repeat test or inspection.**

Testing and inspection before delivery 41

- 41.1 The *Contractor* does not bring to the Working Areas those Plant and Materials which the Works Information states are to be tested or inspected before delivery until the *Supervisor* has notified the *Contractor* that they have passed the test or inspection.

Searching for and notifying Defects 42

- 42.1 Until the *defects date*, the *Supervisor* may instruct the *Contractor* to search for a Defect. He gives his reason for the search with his instruction. Searching may include
- uncovering, dismantling, re-covering and re-erecting work,
 - providing facilities, materials and samples for tests and inspections done by the *Supervisor* and
 - doing tests and inspections which the Works Information does not require.
- 42.2 Until the *defects date*, the *Supervisor* notifies the *Contractor* of each Defect as soon as he finds it and the *Contractor* notifies the *Supervisor* of each Defect as soon as he finds it.

Correcting Defects 43

- 43.1 The *Contractor* corrects a Defect whether or not the *Supervisor* notifies him of it.
- 43.2 The *Contractor* corrects a notified Defect before the end of the *defect correction period*. The *defect correction period* begins at Completion for Defects notified before Completion and when the Defect is notified for other Defects.

- 43.3 The *Supervisor* issues the Defects Certificate at the later of the *defects date* and the end of the last *defect correction period*. The *Employer's* rights in respect of a Defect which the *Supervisor* has not found or notified are not affected by the issue of the Defects Certificate.
- 43.4 The *Project Manager* arranges for the *Employer* to allow the *Contractor* access to and use of a part of the *works* which he has taken over if they are needed for correcting a Defect. In this case the *defect correction period* begins when the necessary access and use have been provided.

Accepting Defects 44

- 44.1 The *Contractor* and the *Project Manager* may each propose to the other that the Works Information should be changed so that a Defect does not have to be corrected.
- 44.2 If the *Contractor* and the *Project Manager* are prepared to consider the change, the *Contractor* submits a quotation for reduced Prices or an earlier Completion Date or both to the *Project Manager* for acceptance. If the *Project Manager* accepts the quotation, he gives an instruction to change the Works Information, the Prices and the Completion Date accordingly.

Uncorrected Defects 45

- 45.1 If the *Contractor* is given access in order to correct a notified Defect but he has not corrected it within its *defect correction period*, the *Project Manager* assesses the cost to the *Employer* of having the Defect corrected by other people and the *Contractor* pays this amount. The Works Information is treated as having been changed to accept the Defect.
- 45.2 If the *Contractor* is not given access in order to correct a notified Defect before the *defects date*, the *Project Manager* assesses the cost to the *Contractor* of correcting the Defect and the *Contractor* pays this amount. The Works Information is treated as having been changed to accept the Defect.

Critical Defects 46

Z1.21

Z1.21.1

This clause applies only if selected in the Contract Data for the relevant Call-Off Contract. The *Contractor* acknowledges and agrees that the *Project Manager* may, either before or after Completion, arrange for a Critical Defect to be corrected by Others, instead of by the *Contractor*, at the cost of the *Contractor*. Without prejudice to any other right or remedy of the *Employer*, the *Contractor* pays to the *Employer* all costs properly paid by the *Employer* to Others for correcting a Critical Defect. The *Project Manager* notifies the *Contractor* of a Critical Defect as soon as reasonably practicable.

5 Payment

Assessing the amount due 50

Z1.22

- due 50.1 The *Project Manager* assesses the amount due at each assessment date. The first assessment date is decided by the *Project Manager* to suit the procedures of the Parties and is not later than the *assessment interval* after the *starting date*. Later assessment dates occur
- at the end of each *assessment interval* until four weeks after the *Supervisor* issues the Defects Certificate and
 - at Completion of the whole of the *works*.

Z1.22.1



- 50.2 The amount due is

- the Price for Work Done to Date,
- plus other amounts to be paid to the *Contractor*,
- less amounts to be paid by or retained from the *Contractor*.

Any tax which the law requires the *Employer* to pay to the *Contractor* is included in the amount due.

- 50.3 If no programme is identified in the Contract Data, one quarter of the Price for Work Done to Date is retained in assessments of the amount due until the *Contractor* has submitted a first programme to the *Project Manager* for acceptance showing the information which this contract requires.

Z1.22.2

- 50.3A If any revised programme is not submitted by the *Contractor* to the *Project Manager* for acceptance showing the information which this contract requires within the timescales required by clause 32.2, one tenth of the total cumulative increase in the amount due since the assessment date following the last submission of such revised programme is retained in all assessments of the amount due and is not payable to the *Contractor* until such revised programme has been submitted to the *Project Manager* for acceptance.

Z1.22.3

- 50.4 In assessing the amount due, the *Project Manager* considers any application for payment the *Contractor* has submitted in accordance with clause 50.1A ~~on or before the assessment date~~. The *Project Manager* gives the *Contractor* details of how the amount due has been assessed.

- 50.5 The *Project Manager* corrects any wrongly assessed amount due in a later payment certificate.

Z1.22.4

- 50.6 **This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. Payments of Defined Cost made by the Contractor in a currency other than the currency of this contract are included in the amount due as payments to be made to him in the same currency. Such payments are converted to the currency of this contract in order to calculate the Fee and any Contractor's share using the exchange rates.**

Z1.22.5

- 50.7 Not used.

Z1.22.6

- 50.8 If any parent company guarantee or performance bond required by this contract is not procured by the *Contractor* and delivered to the *Employer* in accordance with Option X4 and/or Option X13, one quarter of the Price for Work Done to Date is retained in assessments of the amount due and is not payable to the *Contractor* until such documents have been delivered.

Z1.22.7

- 50.9 If a warranty required under sub-clauses Z2.1.2 and/or Z2.2 is not delivered to the *Employer* in accordance with the provisions of sub-clauses Z2.1.2 or Z2.2 as applicable:

- in the case of warranties required under sub-clause Z2.1.2 one tenth of the total cumulative increase in the amount due since the assessment date following the end of the period for provision of such warranty is retained in all assessments of the amount due; or
- in the case of warranties required under sub-clause Z2.2, one tenth of the total cumulative increase in the amount due since the assessment date following the end of the period for provision of such warranty relative to the work carried out and/or goods supplied by the relevant Subcontractor is retained in all assessments of the amount due

and in each case is not payable to the *Contractor* until such warranty is delivered.

Z1.22.8 50.10 If a Management Plan is not provided by the times or within the timescales required by this contract, one tenth of the total cumulative increase in the amount due since the assessment date following the end of the period for provision of such Management Plan is retained in all assessments of the amount due and is not payable to the *Contractor* until such Management Plan is delivered.

Z1.22.9 50.11 If the *Contractor's* employment is terminated under clause 91.1 because the *Contractor* has become insolvent within the meaning of section 113 of the Act (R10A), the *Employer* need not pay any sum due to the *Contractor* other than any amount due to him under clause 90.4 either:

- where the *Contractor* becomes insolvent prior to the prescribed period before the final date for payment, provided that the *Employer* or *Project Manager* issues a Pay Less Notice notifying the *Employer's* intention not to pay such sum, or
- in any event, if the *Contractor* becomes insolvent after the prescribed period before the final date for payment.

Z1.22.10 50.12 [REDACTED]

Z1.22.11 50.13 The Parties acknowledge that the Reverse Charge Order will enter into force on 1 March 2021 and is expected to have effect for supplies made on or after that date.

The *Employer* is an End User for the purposes of this contract if stated in the Contract Data.

Where the *Employer* is an End User for the purposes of this contract, the Parties acknowledge that:

- services provided by the *Contractor* to the *Employer* on or after 1 March 2021 pursuant to this contract are expected to include "specified services" (within the meaning of article 4 of the Reverse Charge Order) and will be "excepted supplies" (within the meaning of article 8 of the Reverse Charge Order) on the basis that the *Employer* is an End User in respect of such specified services and
- accordingly the Reverse Charge Order will not apply and the *Employer* will not be required to account for VAT to HM Revenue & Customs in respect of such supplies under section 55A of VATA.

Where the *Employer* is not an End User for the purposes of this contract:

- the Parties acknowledge that services provided by the *Contractor* to the *Employer* on or after 1 March 2021 pursuant to this contract will include "specified services" (within the meaning of article 4 of the Reverse

Charge Order) and are expected to be subject to the Reverse Charge Order on the basis that the *Employer* is not an End User,

- accordingly, the Parties acknowledge that the *Employer* will be required to account for VAT to HM Revenue & Customs in respect of such supplies from the *Contractor* under section 55A of VATA and

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

If the *Employer's* status as an End User changes during the term of this contract, the *Employer* uses its reasonable endeavours to notify the *Contractor* and the *Contractor* applies the Reverse Charge accordingly.

Payment 51

- Y1.1.1 51.1 The *Project Manager* certifies a payment within ~~one week~~ **seven (7) days** of each assessment date. The first payment is the amount due. Other payments are the change in the amount due since the last payment certificate. A payment is made by the *Contractor* to the *Employer* if the change reduces the amount due. Other payments are made by the *Employer* to the *Contractor*. Payments are in the *currency of this contract* unless otherwise stated in this contract. **If a certificate is not issued by the *Project Manager* in accordance with clause 51.1, the sum to be paid by the *Employer* is the sum stated as due in the *Contractor's* application in accordance with clause 50.1A.**
- Y1.1.2 Y2.2 The date on which payment becomes due is seven **(7)** days after the assessment date. The final date for payment is fourteen **(14)** days or a different period for payment if stated in the Contract Data after the date on which payment becomes due.
- Y1.1.2A 51.1B The *Project Manager's* certificate is the ***Employer's*** notice of payment to the *Contractor* specifying the amount due at the payment due date (the notified sum) and stating the basis on which the amount is calculated.
- Y1.1.2B [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- Y1.1.3 51.2 Each certified payment is made within ~~three weeks~~ **twenty-one (21) days** of the assessment date or, if a different period is stated in the Contract Data, within the

		<p>period stated. If a certified payment is late, or if a payment is late because the <i>Project Manager</i> does not issue a certificate which he should issue, or either Party fails to pay a sum or any part of it due to the other Party by the final date for its payment, interest is paid on the late payment. Interest is assessed from the final date by which the late payment should have been made until the date when the late payment is made, and is included in the first assessment after the late payment is made.</p>
Y1.1.3A	51.2A	<p>If the amount to be paid to the <i>Contractor</i> is less than the amount to be paid by or retained from the <i>Contractor</i>, the difference is recoverable from the <i>Contractor</i> as a debt due on demand.</p>
Y1.1.4	Y2.3	<p>If either Party intends to pay less than the notified sum, he notifies the other Party not later than seven (7) days (the prescribed period) before the final date for payment by stating the amount considered to be due and the basis on which that sum is calculated. A Party does not withhold payment of an amount due under this contract unless he has notified his intention to pay less than the notified sum as required by this contract. In the case of the Employer, the notice may be given on his behalf by the Project Manager.</p>
	51.3	<p>If an amount due is corrected in a later certificate either</p> <ul style="list-style-type: none"> • by the <i>Project Manager</i> in relation to a mistake or a compensation event or • following a decision of the <i>Adjudicator</i> or the <i>tribunal</i>, <p>interest on the correcting amount is paid. Interest is assessed from the date when the incorrect amount was certified until the date when the correcting amount is certified and is included in the assessment which includes the correcting amount.</p>
	51.4	<p>Interest is calculated on a daily basis at the <i>interest rate</i> and is compounded annually.</p>
	Defined Cost 52	
Z1.23	52.1	<p>All the <i>Contractor's</i> costs which are not included in the Defined Cost are treated as included in the Fee. Defined Cost includes only amounts calculated using rates and percentages stated in the Contract Data and other amounts at open market or competitively tendered prices with deductions for all discounts, rebates and taxes which can be recovered.</p>
Z1.23.1	52.2	<p>This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. The Contractor keeps these records</p> <ul style="list-style-type: none"> • accounts of payments of Defined Cost, • proof that the payments have been made, • communications about and assessments of compensation events for Subcontractors and • other records as stated in the Works Information.
	52.3	<p>This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. The Contractor allows the Project Manager to inspect at any time within working hours the accounts and records which he is required to keep.</p>
The Contractor's Share	53	<p>This clause applies if main Option C is stated to apply in the Contract Data for the relevant Call-Off Contract.</p>
Z1.24		
Z1.24.1	53.1	<p>The <i>Project Manager</i> assesses the <i>Contractor's</i> share of the difference between the total of the Prices and the Price for Work Done to Date. The difference is divided into increments falling within each of the <i>share ranges</i>. The limits of a <i>share range</i> are the Price for Work Done to Date divided by the total of the Prices, expressed as a percentage. The <i>Contractor's</i> share equals the sum of the products of the increment within each <i>share range</i> and the corresponding <i>Contractor's share percentage</i>.</p>
	53.2	<p>If the Price for Work Done to Date is less than the total of the Prices, the <i>Contractor</i> is paid his share of the saving. If the Price for Work Done to Date</p>

		is greater than the total of the Prices, the <i>Contractor</i> pays his share of the excess.
	53.3	The <i>Project Manager</i> makes a preliminary assessment of the <i>Contractor's</i> share at Completion of the whole of the <i>works</i> using his forecasts of the final Price for Work Done to Date and the final total of the Prices. This share is included in the amount due following Completion of the whole of the <i>works</i> .
	53.4	The <i>Project Manager</i> makes a final assessment of the <i>Contractor's</i> share using the final Price for Work Done to Date and the final total of the Prices. This share is included in the final amount due.
Z1.24.2	53.5	Without limiting sub-clauses 53.1 to 53.4 and 93, if at any time prior to Completion: <ul style="list-style-type: none"> the Price for Work Done to Date exceeds the total of the Prices; and the <i>Project Manager</i> assesses that the final Price for Work Done to Date is likely to exceed the final total of the Prices <p>the <i>Project Manager</i> may deduct from sums otherwise due to the <i>Contractor</i> a sum equivalent to the <i>Project Manager's</i> reasonable assessment of the likely <i>Contractor's</i> share of the excess of the forecast final Price for Work Done to Date over the forecast final total of the Prices. Any sum so deducted is taken into account in assessing the amount due under clauses 53.3 and 53.4 or, if applicable, clause 93.</p>
The Activity Schedule	54	This clause 54 applies if main Option A or main Option C applies.
Z1.25		
Z1.25.1	54.1	Information in the Activity Schedule is not Works Information or Site Information.
	54.2	If the <i>Contractor</i> changes a planned method of working at his discretion so that the activities on the Activity Schedule do not relate to the operations on the Accepted Programme, he submits a revision of the Activity Schedule to the <i>Project Manager</i> for acceptance.
	54.3	A reason for not accepting a revision of the Activity Schedule is that <ul style="list-style-type: none"> it does not comply with the Accepted Programme, any changed Prices are not reasonably distributed between the activities or the total of the Prices is changed
	55	Not used
Z1.26	56	In addition to any other rights of the <i>Employer</i> whether at law or equity under this contract, whenever <ul style="list-style-type: none"> under this contract or any other contract between the <i>Employer</i> and the <i>Contractor</i> any sum of money is recoverable from or payable by the <i>Contractor</i> or any Losses are reasonably and properly owed to, or incurred by, the <i>Employer</i> or any member of the TfL Group under or arising out of this contract or any other contract between the <i>Employer</i> and the <i>Contractor</i> <p>the same may be set-off and/or deducted from any sum then due or which at any time thereafter may become due to the <i>Contractor</i> under this contract.</p>
Z1.26.1		
Z1.27	57.1	If the <i>Employer</i> is or at any time up to the making of the final payment under this contract becomes a 'contractor' for the purposes of the Construction Industry Scheme, his obligation to make any payment under this contract is subject to the provisions and requirements of the Construction Industry Scheme and the <i>Contractor</i> complies with the provisions of the Works Information regarding the Construction Industry Scheme.
Z1.27.1		

6 Compensation events

Compensation events 60

Z1.28

Z1.28.1

- 60.1 The following are compensation events, but only to the extent that they are not due to any fault of the Contractor and provided that the Contractor has taken all reasonable steps to mitigate the actual or potential effect of the event.
- (1) The *Project Manager* gives an instruction changing the Works Information except
- a change made in order to accept a Defect or
 - a change to the Works Information provided by the *Contractor* for his design which is made either at his request or to comply with other Works Information provided by the *Employer*, or
 - an instruction which is stated in this contract not to give rise to a compensation event.
- (2) ~~The Employer~~ Subject to the requirements of the Works Information regarding access and provided that the *Contractor* has booked and co-ordinated access in accordance with its requirements, the *Employer* does not allow access to and use of a part of the Site in accordance with the provisions of this contract by the later of its access date and the date shown on the Accepted Programme.
- (3) The *Employer* does not provide something which he is to provide by the date for providing it shown on the Accepted Programme.
- (4) The *Project Manager* gives an instruction to accelerate or to stop or not to start any work or to change a Key Date.
- (5) The *Employer* or Others
- do not work within the times shown on the Accepted Programme,
 - do not work within the conditions stated in the Works Information or
 - carry out work on the Site that is not stated in the Works Information.
- (6) The *Project Manager* or the *Supervisor* does not reply to a communication from the *Contractor* within the period required by this contract.
- (7) The *Project Manager* gives an instruction for dealing with an object of value or of historical or other interest found within the Site.
- (8) The *Project Manager* or the *Supervisor* changes a decision which he has previously communicated to the *Contractor*.
- (9) The *Project Manager* withholds an acceptance (other than acceptance of a quotation for acceleration or for not correcting a Defect) for a reason not stated in this contract.
- (10) The *Supervisor* instructs the *Contractor* to search for a Defect and no Defect is found unless the search is needed only because the *Contractor* gave insufficient notice of doing work obstructing a required test or inspection.
- (11) A test or inspection done by the *Supervisor* causes unnecessary delay.
- (12) This clause applies only if it is stated to apply in the Contract Data for the relevant Call-Off Contract. The *Contractor* encounters physical conditions which
- are within the Site,
 - are not weather conditions and
 - an experienced contractor would have judged at the Contract Date to have such a small chance of occurring that it would have been unreasonable for him to have allowed for them.

Only the difference between the physical conditions encountered and those for which it would have been reasonable to have allowed is taken into account in assessing a compensation event.

(13) A *weather measurement* is recorded

- within a calendar month,
- before the Completion Date for the whole of the *works* and
- at the place stated in the Contract Data

the value of which, by comparison with the *weather data*, is shown to occur on average less frequently than once in ten years.

Only the difference between the *weather measurement* and the weather which the *weather data* show to occur on average less frequently than once in ten years is taken into account in assessing a compensation event.

(14) An event which is an *Employer's* risk stated in this contract.

(15) The *Project Manager* certifies take over of a part of the *works* before both Completion and the Completion Date.

(16) The *Employer* does not provide materials, facilities and samples for tests and inspections as stated in the Works Information.

(17) The *Project Manager* notifies a correction to an assumption which he has stated about a compensation event.

(18) A breach of contract or act of prevention on the part of ~~by~~ the *Employer* which is not one of the other compensation events in this contract.

(19) An event which

- stops the Contractor completing the works or
- stops the Contractor completing the works by the date shown on the Accepted Programme,

and which

- neither Party could prevent,
- an experienced contractor would have judged at the Contract Date to have such a small chance of occurring that it would have been unreasonable for him to have allowed for it and
- is not one of the other compensation events stated in this contract.

(20) Any of the following events where such event is directly caused by the Coronavirus Pandemic:

- the implementation of revised methods of working which is mandated by a change in the law of the country in which the Site is located after the Contract Date or
- the implementation of revised methods of working which is instructed by the *Project Manager* following guidance or a change in the law of the country in which the Site is located relating to the Coronavirus Pandemic,

but only to the extent that the *Contractor* was not aware and an experienced and prudent *Contractor* would not reasonably have been aware that such law or guidance would come into force after the Contract Date.

(21) Any of the following events where such event is directly caused by the Coronavirus Pandemic:

- the closure of the Site or cessation of the *works* which is mandated by a change in the law of the country in which the Site is located after the Contract Date or

- the closure of the Site or cessation of the *works* which is instructed by the *Project Manager* following guidance or a change in the law of the country in which the Site is located relating to the Coronavirus Pandemic.

(22) Disruption to the supply of Plant and Materials where such disruption is directly caused by the Coronavirus Pandemic, provided that the *Contractor* is not entitled under this clause 60.1(22) to any change to the Prices.

(23) Disruption to the supply of one or more of the Plant and Materials listed below, where such disruption is directly and solely caused by war, civil war, rebellion, revolution, insurrection, military or usurped power or by a global shortage of supplies (excluding any such shortage due to the Coronavirus Pandemic) which could not have been avoided by the *Contractor*, but only if the *Contractor* has placed timely orders for the relevant Plant and Materials listed below having due regard to the lead times for such Plant and Materials and the Accepted Programme and provided that the *Contractor* is not entitled under this clause 60.1(23) to any change to the Prices.

- Signalling systems components supplied by Iconsys
- Conductor rail and support brackets supplied by Bracknell Willis
- TIS units (track isolating circuits) supplied by LC Switch Gear
- Materials with chips
- Relays for switchboards and ATS
- Fans, Pumps and Lights

Z1.28.2	60.2	This clause applies only if stated to apply in the Contract Data for the relevant Call-Off Contract . In judging the physical conditions for the purpose of assessing a compensation event, the <i>Contractor</i> is assumed to have taken into account <ul style="list-style-type: none"> • the Site Information, • publicly available information referred to in the Site Information, • information obtainable from a visual inspection of the Site and • other information which an experienced contractor could reasonably be expected to have or to obtain.
Z1.28.3	60.3	This clause applies only if stated to apply in the Contract Data for the relevant Call-Off Contract . If there is an ambiguity or inconsistency within the Site Information (including the information referred to in it), the <i>Contractor</i> is assumed to have taken into account the physical conditions more favourable to doing the work.
Z1.28.4	60.4	The <i>Contractor</i> takes all prudent and commercial steps necessary to minimise the impact of any actual or potential compensation event. The <i>Contractor</i> mitigates or avoids any effects on the Prices and / or any Key Date and / or the Completion Date as far as is reasonably practicable.

Notifying compensation 61

	Events	61.1	For compensation events which arise from the <i>Project Manager</i> or the <i>Supervisor</i> giving an instruction, issuing a certificate, changing an earlier decision or correcting an assumption, the <i>Project Manager</i> notifies the <i>Contractor</i> of the compensation event at the time of that communication. He also instructs the <i>Contractor</i> to submit quotations, unless the event arises from a fault of the <i>Contractor</i> or quotations have already been submitted. The <i>Contractor</i> puts the instruction or changed decision into effect.
Z1.29			

Z1.29.1

- 61.2 The *Project Manager* may instruct the *Contractor* to submit quotations for a proposed instruction or a proposed changed decision. The *Contractor* does not put a proposed instruction or a proposed changed decision into effect.
- 61.3 The *Contractor* notifies the *Project Manager* of an event which has happened or which he expects to happen as a compensation event if
- the *Contractor* believes that the event is a compensation event and
 - the *Project Manager* has not notified the event to the *Contractor*.

If the *Contractor* does not notify a compensation event within eight weeks of becoming aware or when he ought reasonably to have become aware of the event, he is not entitled to a change in the Prices, the Completion Date or a Key Date unless the event arises from the *Project Manager* or the *Supervisor* giving an instruction, issuing a certificate, changing an earlier decision or correcting an assumption. The *Project Manager* may assess a change to the Completion Date or a Key Date (but not a change to the Prices) as a result of a compensation event notwithstanding that the *Contractor* has failed to notify that compensation event in accordance with this clause.

Z1.29.2

- 61.4 If the *Project Manager* decides that an event notified by the *Contractor*
- arises from a fault of the *Contractor*,
 - has not happened and is not expected to happen,
 - has no effect upon Defined Cost, Completion or meeting a Key Date or
 - is not one of the compensation events stated in this contract

he notifies the *Contractor* of his decision that the Prices, the Completion Date and the Key Dates are not to be changed. If the *Project Manager* decides otherwise, he notifies the *Contractor* accordingly and instructs him to submit quotations.

The *Project Manager* notifies his decision to the *Contractor* and, if his decision is that the Prices, the Completion Date or the Key Dates are to be changed, instructs him to submit quotations before the end of either

- one week after the *Contractor's* notification or
- a longer period to which the *Contractor* has agreed,

If the *Project Manager's* decision is that the Prices, the Completion Date or the Key Dates are not to be changed, the *Contractor* notifies the *Project Manager* if he does not accept the decision and at the same time of his reasons for not accepting the decision. The *Contractor's* notification does not affect the *Project Manager's* decision that the Prices, Completion Date or the Key Dates are not to be changed. If the *Contractor* does not provide this notification within four weeks of notification of the *Project Manager's* decision, he is treated as having accepted the *Project Manager's* decision.

If the *Project Manager* does not notify his decision, the *Contractor* may notify the *Project Manager* of his failure. A failure by the *Project Manager* to reply within two weeks of this notification is treated as acceptance by the *Project Manager* that the event is a compensation event and an instruction to submit quotations.

- 61.5 If the *Project Manager* decides that the *Contractor* did not give an early warning of the event which an experienced contractor could have given, he notifies this decision to the *Contractor* when he instructs him to submit quotations.
- 61.6 If the *Project Manager* decides that the effects of a compensation event are too uncertain to be forecast reasonably, he states assumptions about the event in his instruction to the *Contractor* to submit quotations. Assessment of the event is based on these assumptions. If any of them is later found to have been wrong, the *Project Manager* notifies a correction.
- 61.7 A compensation event is not notified after the *defects date*.

Quotations for compensation events

- 62
- 62.1 After discussing with the *Contractor* different ways of dealing with the compensation event which are practicable, the *Project Manager* may instruct the

Z1.30

Contractor to submit alternative quotations. The *Contractor* submits the required quotations to the *Project Manager* and may submit quotations for other methods of dealing with the compensation event which he considers practicable.

Z1.30.1

62.2 Quotations for compensation events comprise proposed changes to the Prices and any delay to the Completion Date and Key Dates assessed by the *Contractor*. The *Contractor* submits details of his assessment **in accordance with the requirements of the Works Information** with each quotation. If the programme for remaining work is altered by the compensation event, the *Contractor* includes the alterations to the Accepted Programme in his quotation.

62.3 The *Contractor* submits quotations within three weeks of being instructed to do so by the *Project Manager*. The *Project Manager* replies within two weeks of the submission. His reply is

- an instruction to submit a revised quotation,
- an acceptance of a quotation,
- a notification that a proposed instruction will not be given or a proposed changed decision will not be made or
- a notification that he will be making his own assessment.

62.4 The *Project Manager* instructs the *Contractor* to submit a revised quotation only after explaining his reasons for doing so to the *Contractor*. The *Contractor* submits the revised quotation within three weeks of being instructed to do so.

62.5 The *Project Manager* extends the time allowed for

- the *Contractor* to submit quotations for a compensation event and
- the *Project Manager* to reply to a quotation

if the *Project Manager* and the *Contractor* agree to the extension before the submission or reply is due. The *Project Manager* notifies the extension that has been agreed to the *Contractor*.

62.6 If the *Project Manager* does not reply to a quotation within the time allowed, the *Contractor* may notify the *Project Manager* of his failure. If the *Contractor* submitted more than one quotation for the compensation event, he states in his notification which quotation he proposes is to be accepted. If the *Project Manager* does not reply to the notification within two weeks, and unless the quotation is for a proposed instruction or a proposed changed decision, the *Contractor's* notification is treated as acceptance of the quotation by the *Project Manager*.

Assessing compensation 63 Events

Z1.31

Z1.31.1

63.1 The changes to the Prices are assessed as the effect of the compensation event upon

- the actual Defined Cost of the work already done **by the dividing date**,
- the forecast Defined Cost of the work not ~~yet~~ done **by the dividing date** and
- the resulting Fee.

If the compensation event arose from the *Project Manager* or the *Supervisor* giving an instruction, issuing a certificate, changing an earlier decision or correcting an assumption, the **dividing** date which divides the work already done from the work not yet done is the date of that communication. In all other cases, the **dividing** date is the date of the notification of the compensation event.

63.1A The *Contractor's* only entitlement to a change in the Prices, the Completion Date or any Key Date in respect of the Coronavirus Pandemic is under clause 60.1(20), 60.1(21) or 60.1(22) (as applicable), and no other compensation event in this contract applies to events which are a result of the Coronavirus Pandemic.

Z1.31.2

63.2 If the effect of a compensation event is to reduce the total Defined Cost, the Prices are not reduced except as stated in this contract.

63.3 A delay to the Completion Date is assessed as the length of time that, due to the compensation event, planned Completion is later than planned Completion as shown on the Accepted Programme **current at the dividing date**.

The assessment takes into account

- any delay caused by the compensation event already in the Accepted Programme, and
- events which have happened between the date of the Accepted Programme and the dividing date

A delay to a Key Date is assessed as the length of time that, due to the compensation event, the planned date when the Condition stated for a Key Date will be met is later than the date shown on the Accepted Programme **current at the dividing date provided always that the delay is only assessed as giving rise to a change in the Completion Date or a Key Date if and to the extent that the compensation event is the principal cause of the delay**.

The *Project Manager* may determine an earlier Completion Date or Key Date if the effect of the compensation event is to reduce the time required for Completion or meeting a Key Date.

Z1.31.3

63.4 [REDACTED]

63.5 If the *Project Manager* has notified the *Contractor* of his decision that the *Contractor* did not give an early warning of a compensation event which an experienced contractor could have given, the event is assessed as if the *Contractor* had given early warning.

Z1.31.4

63.6 Assessment of the effect of a compensation event includes **reasonable and proportionate** risk allowances for cost and time for matters which have a significant chance of occurring and are at the *Contractor's* risk under this contract. Assessments take into account the extent to which the compensation event is caused or contributed to by any fault of the *Contractor* and assumes that the *Contractor* has taken all reasonable steps to mitigate the actual or potential effects of the event.

63.7 Assessments are based upon the assumptions that the *Contractor* reacts competently and promptly to the compensation event, that any Defined Cost and time due to the event are reasonably incurred and that the Accepted Programme can be changed.

63.8 **Subject to clause 17.2, a** compensation event which is an instruction to change the Works Information in order to resolve an ambiguity or inconsistency is assessed as if the Prices, the Completion Date and the Key Dates were for the interpretation most favourable to the Party which did not provide the Works Information.

63.9 If a change to the Works Information makes the description of the Condition for a Key Date incorrect, the *Project Manager* corrects the description. This correction is taken into account in assessing the compensation event for the change to the Works Information.

Z1.31.5

63.10 **This clause applies if main Option A is stated to apply in the Contract Data in the relevant Call-Off Contract. If the effect of a compensation event is to reduce the total Defined Cost and the event is**

- a change to the Works Information or

- a correction of an assumption stated by the *Project Manager* for assessing an earlier compensation event

the Prices are reduced.

Z1.31.6

63.11 This clause applies if main Option C is stated to apply in the Contract Data in the relevant Call-Off Contract. If the effect of a compensation event is to reduce the total Defined Cost and the event is

- a change to the Works Information, other than a change to the Works Information provided by the *Employer* which the *Contractor* proposed and the *Project Manager* has accepted or
- a correction of an assumption stated by the *Project Manager* for assessing an earlier compensation event,

the Prices are reduced.

63.12 Assessments for changed Prices for compensation events are in the form of changes to the Activity Schedule.

Z1.31.7

63.13 Not used.

63.14 If the *Project Manager* and the *Contractor* agree, rates and lump sums may be used to assess a compensation event.

Z1.31.8

63.15 This clause applies if main Option C applies and/or applies to Stage One if main Option E applies to Stage One. If the *Project Manager* and the *Contractor* agree, the *Contractor* assesses a compensation event using the Shorter Schedule of Cost Components. The *Project Manager* may make his own assessments using the Shorter Schedule of Cost Components.

The *Project Manager's* Assessments

Z1.32

Z1.32.1

64.1 The *Project Manager* assesses a compensation event

- if the *Contractor* has not submitted a quotation and details of his assessment in accordance with the Works Information within the time allowed,
- if the *Project Manager* decides that the *Contractor* has not assessed the compensation event correctly in a quotation and he does not instruct the *Contractor* to submit a revised quotation,
- if, when the *Contractor* submits quotations for a compensation event, he has not submitted a programme or alterations to a programme which this contract requires him to submit or
- if, when the *Contractor* submits quotations for a compensation event, the *Project Manager* has not accepted the *Contractor's* latest programme for one of the reasons stated in this contract.

64.2 The *Project Manager* assesses a compensation event using his own assessment of the programme for the remaining work if

- there is no Accepted Programme or
- the *Contractor* has not submitted a programme or alterations to a programme for acceptance as required by this contract.

64.3 The *Project Manager* notifies the *Contractor* of his assessment of a compensation event and gives him details of it within the period allowed for the *Contractor's* submission of his quotation for the same event. This period starts when the need for the *Project Manager's* assessment becomes apparent.

Z1.32.2

64.4 If the *Project Manager* does not assess a compensation event within the time allowed, the *Contractor* may notify the *Project Manager* of his failure. If the *Contractor* submitted more than one quotation for the compensation event, he states in his notification which quotation he proposes is to be accepted. If the *Project Manager* does not reply within ~~four~~^{two} weeks of this notification the

notification is treated as acceptance of the *Contractor's* quotation by the *Project Manager*.

Z1.32.3

64.5 The *Project Manager* may extend the time allowed for the following actions:

- notification of a decision and/or instruction (cl. 61.4); or
- assessment of a compensation event (cl. 64.3 and cl. 64.4)

provided that this discretion will only be exercised where it is reasonable to do so having regard to all the circumstances including the complexity of the issues connected with the event, the level of detail included in the quotation, the time required to make an assessment and the value of the compensation event either on its own or when combined with other outstanding compensation events. The *Project Manager* notifies the extension to the *Contractor* before the date that such notification, reply or assessment would become due under the contract.

Implementing compensation events 65

Z1.33

65.1 A compensation event is implemented when

- the *Project Manager* notifies his acceptance of the *Contractor's* quotation,
- the *Project Manager* notifies the *Contractor* of his own assessment or
- a *Contractor's* quotation is treated as having been accepted by the *Project Manager*.

65.2 The assessment of a compensation event is not revised if a forecast upon which it is based is shown by later recorded information to have been wrong.

Z1.33.1

65.3 The *Contractor* notifies the *Project Manager* if he does not accept the *Project Manager's* assessment and at the same time of his reasons for not accepting the *Project Manager's* assessment. If the *Contractor* does not provide this notification within four weeks of notification of the *Project Manager's* assessment, he is treated as having accepted the *Project Manager's* assessment.

Z1.33.2

65.4 The changes to the Prices or (if main Option E applies to Stage One) in **Stage One the forecast amount of the Prices**, the Completion Date and the Key Dates are included in the notification implementing a compensation event.

7 Title

The *Employer's* title to Plant and Materials 70

Z1.34
Z1.34.1

70.1 Whatever title the *Contractor* has to Plant and Materials which is outside the Working Areas passes to the *Employer* as soon as the *Contractor* or *Supervisor* has marked them as for this contract or the *Employer* makes payment for them, whichever is the earlier ~~if the *Supervisor* has marked it as for this contract.~~ The *Contractor* ensures that such Plant and Materials are clearly identified as belonging to the *Employer* and are set aside for the *Employer*.

70.2 Whatever title the *Contractor* has to Plant and Materials passes to the *Employer* if it has been brought within the Working Areas. The title to Plant and Materials passes back to the *Contractor* if it is removed from the Working Areas with the *Project Manager's* permission.

Z1.34.2

70.3 If requested by the *Project Manager*, the *Contractor* provides proof of his title to Plant and Materials prior to their value being included in the assessment of any amount due under this contract.

Marking Equipment, Plant and Materials outside the Working Areas 71

71.1 The *Supervisor* marks Equipment, Plant and Materials which are outside the Working Areas if

- this contract identifies them for payment and
- the *Contractor* has prepared them for marking as the Works Information requires.

Removing Equipment 72

72.1 The *Contractor* removes Equipment from the Site when it is no longer needed unless the *Project Manager* allows it to be left in the works.

Objects and materials within the site 73

73.1 The *Contractor* has no title to an object of value or of historical or other interest within the Site. The *Contractor* notifies the *Project Manager* when such an object is found and the *Project Manager* instructs the *Contractor* how to deal with it. The *Contractor* does not move the object without instructions.

73.2 The *Contractor* has title to materials from excavation and demolition only as stated in the Works Information.

8 Risks and insurance

Z1.35	Employer's risks 80	80.1	The following are <i>Employer's</i> risks.
Z1.35.1			<ul style="list-style-type: none"> • Claims, proceedings, compensation and costs payable which are due to <ul style="list-style-type: none"> • use or occupation of the Site by the <i>works</i> or for the purpose of the <i>works</i> which is the unavoidable result of the <i>works</i>, • negligence, breach of statutory duty or interference with any legal right by the <i>Employer</i> or by any person employed by or contracted to him except the <i>Contractor</i> or • if Option X21 applies a fault of the <i>Employer</i> other than a fault in his design, • if Option X21 does not apply a fault of the <i>Employer</i> or a fault in his design • Loss of or damage to Plant and Materials supplied to the <i>Contractor</i> by the <i>Employer</i>, or by Others on the <i>Employer's</i> behalf, until the <i>Contractor</i> has received and accepted them. • Loss of or damage to the <i>works</i>, Plant and Materials due to <ul style="list-style-type: none"> • war, civil war, rebellion, revolution, insurrection, military or usurped power, • strikes, riots and civil commotion not confined to the <i>Contractor's</i> employees or • radioactive contamination. • Loss of or wear or damage to the parts of the <i>works</i> taken over by the <i>Employer</i>, except loss, wear or damage occurring before the issue of the Defects Certificate which is due to <ul style="list-style-type: none"> • a Defect which existed at take over, • an event occurring before take over which was not itself an <i>Employer's</i> risk or • the activities of the <i>Contractor</i> on the Site after take over. • Loss of or wear or damage to the <i>works</i> and any Equipment, Plant and Materials retained on the Site by the <i>Employer</i> after a termination, except loss, wear or damage due to the activities of the <i>Contractor</i> on the Site after the termination. • Additional <i>Employer's</i> risks stated in the Contract Data.
	The Contractor's risks 81		
		81.1	From the <i>starting date</i> until the Defects Certificate has been issued, the risks which are not carried by the <i>Employer</i> are carried by the <i>Contractor</i> .
	Repairs 82		
		82.1	Until the Defects Certificate has been issued and unless otherwise instructed by the <i>Project Manager</i> , the <i>Contractor</i> promptly replaces loss of and repairs damage to the <i>works</i> , Plant and Materials.
	Indemnity 83		
Z1.36 Z1.36.1		83.1	Each Party The <i>Contractor</i> is responsible for and indemnifies the <i>Employer</i>, his employees and agents and members of the TfL Group against all Losses in respect

- personal injury to or death of any person;
- loss of or damage to property real or personal other than to the *works*; and
- any other Losses arising under his contracts with Others.

- all Losses arising from any infringement of any intellectual property right of any third party (including a Subcontractor) arising out of the design, construction or use of the *works* or the project,
- any Losses arising from any nuisance or interference referred to in clause Z2.6 and which could not have been avoided by the *Contractor* using all reasonable and practical means, and
- any Losses arising from any breach of Data Protection Legislation or clause Z2.17.

[illegible]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

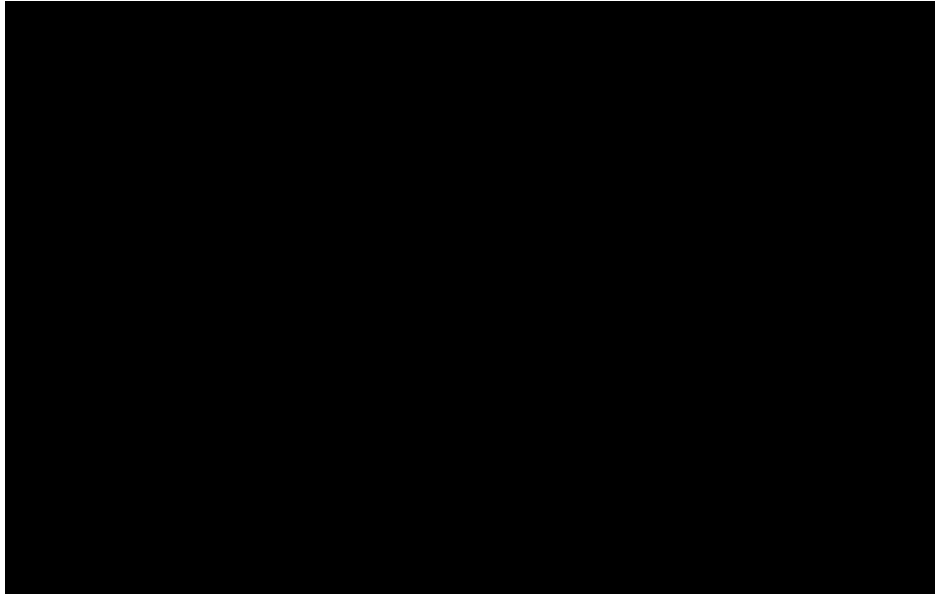
[REDACTED]

Z1.37

- (a) liquidated damages for disruption to the *Network* pursuant to clause Z2.12 is without prejudice to the *Employer's* right to delay damages pursuant to Option X7; and
- (b) delay damages pursuant to Option X7 is without prejudice to the *Employer's* right to liquidated damages for disruption pursuant to clause Z2.12.

Z1.38

84.1 The ~~Parties provide~~ *Contractor provides* the insurances stated in the Insurance Table ~~except any insurance which the Employer is to provide as stated in the Contract Data.~~ The *Contractor* provides additional insurances as stated in the Contract Data.

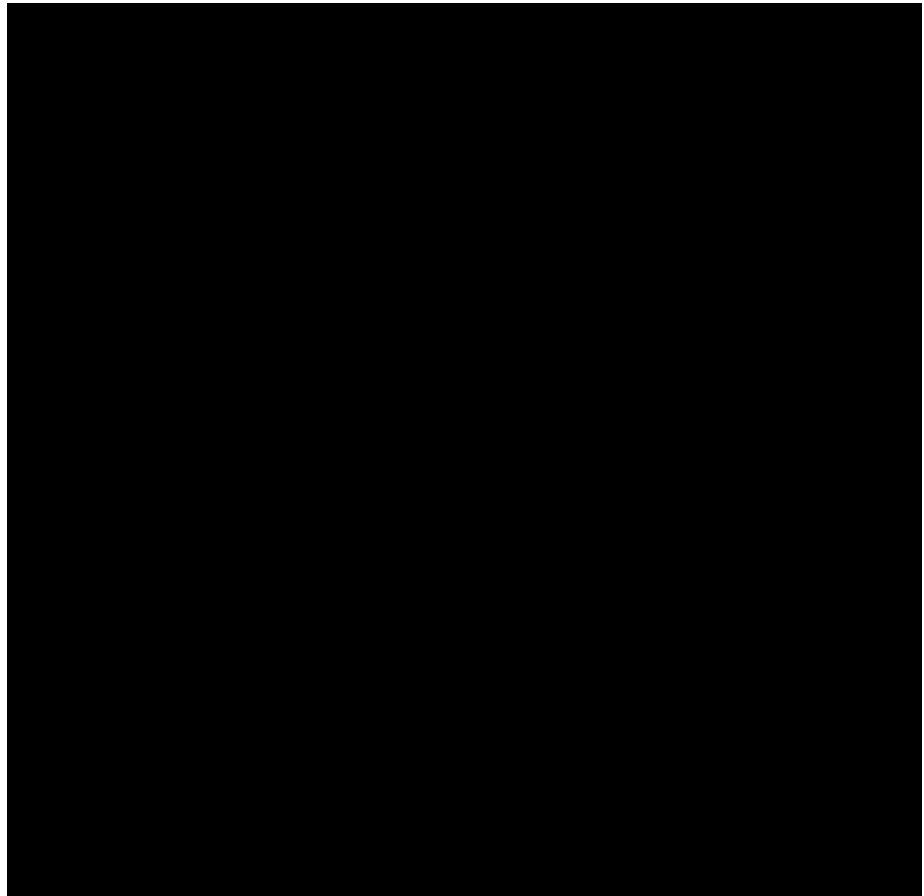


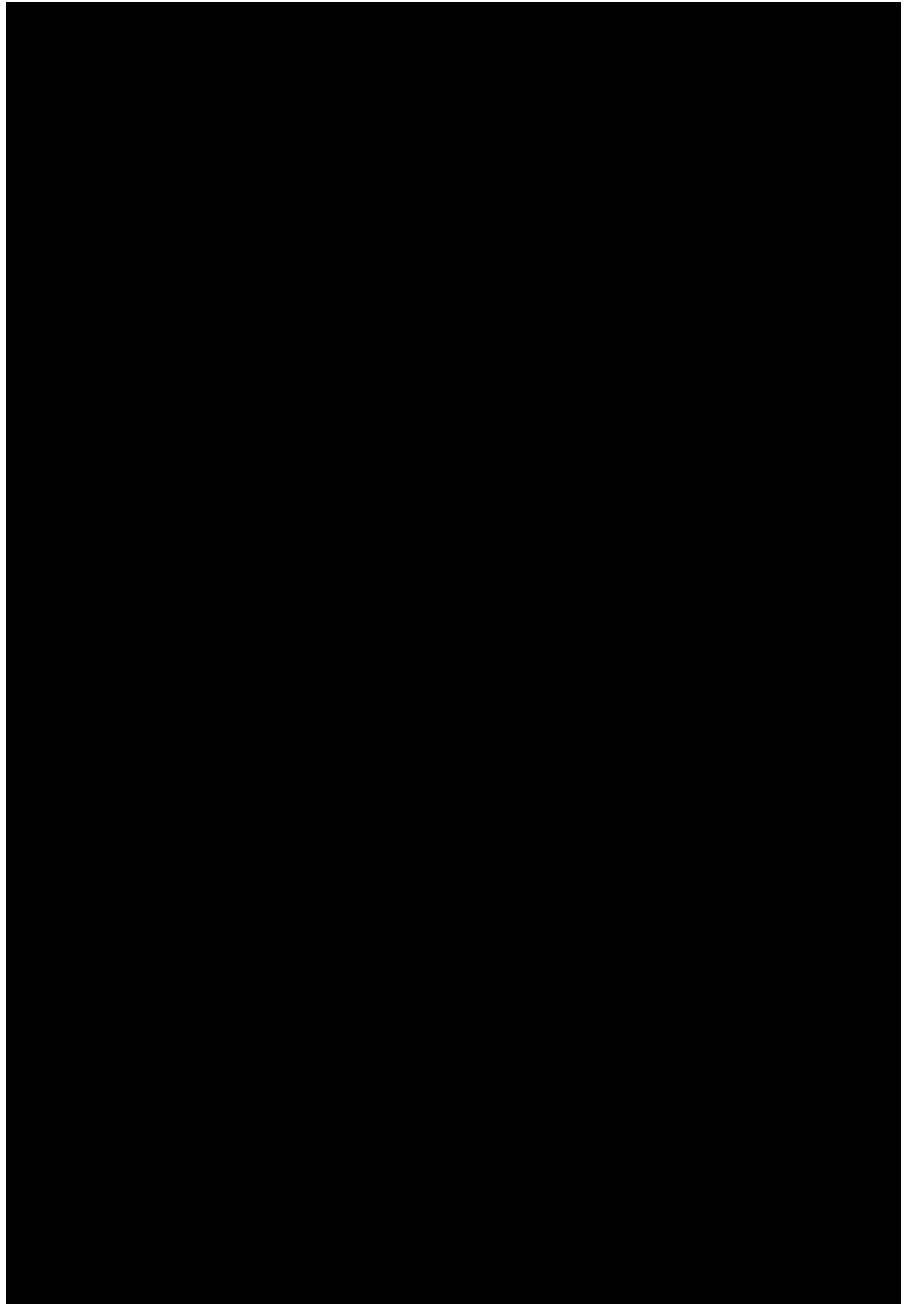
Insurance Table

Insurance Against

**Party
Responsible for
ensuring
insurance is in
place**

**Minimum amount
of cover or
minimum limit of
indemnity**





Z1.38.3

84.3 In respect of the insurances provided by the *Contractor*:

- the insurances provide cover from the *starting date* until the Defects Certificate or a termination certificate has been issued, whichever is the later, provided however that the *Contractor* ensures that his professional indemnity insurance is in place from the Contract Date until not less than twelve (12) years after Completion;
- the *Contractor* bears the cost of all premiums, which is deemed to be included in the Fee;
- if such professional indemnity insurance ceases to be available at commercially reasonable rates and on reasonable terms, the Parties meet and the *Contractor* outlines the steps he intends to take to manage such risks.

If the steps proposed by the *Contractor* are not acceptable to the *Employer* (acting reasonably), the Parties agree an alternative method of managing such risk.

Z1.38.4 84.4 The *Contractor* does not by any act or fault prejudice, lose or forgo the Parties' right or the right of either of them to make or proceed with a claim against any insurer.

Z1.38.5 [REDACTED]

Z1.38.6 84.6 The insurances provided pursuant to this contract do not relieve the *Contractor* from any of his obligations and liabilities under this contract.

Insurance policies 85

Z1.39
Z1.39.1 85.1 Before the *starting date* and on each renewal of the insurance policy until the *defects date*, the *Contractor* submits to the *Project Manager* for acceptance certificates which state that the insurance required by this contract is in force. The certificates are signed by the *Contractor's* insurer or insurance broker. A reason for not accepting the certificates is *that*:

- ~~that~~ they do not comply with this contract,
- the proposed insurer is not a reputable insurer authorised to underwrite the insurances in the United Kingdom; or
- the proposed insurer is not, having regard, without limitation, to the size, nature and complexity of the *works*, of sufficient financial strength.

85.2 Insurance policies include a waiver by the insurers of their subrogation rights against directors and other employees of every insured except where there is fraud.

85.3 The Parties comply with the terms and conditions of the insurance policies.

Z1.39.2 85.4 Any amount not recovered from an insurer (including excesses or deductibles) is borne by the *Employer* for events which are at his risk and by the *Contractor* for events which are at his risk.

Z1.39.3 85.5 In the event of the insolvency of an insurer of either Party, the insuring Party informs the other Party forthwith on becoming aware thereof and submits documentary evidence of alternative insurance to the other Party for acceptance.

If the *Contractor* does not insure 86

Z1.40

Z1.40.1 86.1 The *Employer* may insure a risk which this contract requires the *Contractor* to insure if the *Contractor* does not submit a required certificate. The cost of this insurance (including all reasonable expenses incurred by the *Employer* in respect of taking out such insurance) to the *Employer* is paid by the *Contractor*. If the *Employer* insures a risk which this contract requires the *Contractor* to insure, this is without prejudice to any of the *Employer's* other rights, powers or remedies under this contract.

Insurance by the *Employer* 87

Z1.41 87.1 The *Project Manager* submits policies and certificates for insurances provided by the *Employer* to the *Contractor* for acceptance before the *starting date* and

afterwards as the *Contractor* instructs. The *Contractor* accepts the policies and certificates if they comply with this contract.

- 87.2 The *Contractor's* acceptance of an insurance policy or certificate provided by the *Employer* does not change the responsibility of the *Employer* to provide the insurances stated in the Contract Data.
- 87.3 The *Contractor* may insure a risk which this contract requires the *Employer* to insure if the *Employer* does not submit a required policy or certificate. The cost of this insurance to the *Contractor* is paid by the *Employer*.
- Z1.41.1 87.4 The *Contractor* co-operates with the *Employer* regarding the handling and settlement of claims under the *Employer's* insurances and complies with the requirements of the *Employer's* insurers in connection with the handling and settlement of claims, including where appropriate the provision of such information, documents and records as the *Employer*, its claims handler and its insurers require.
- Z1.41.2 87.5 The *Contractor* complies and ensures that its Subcontractors comply with the requirements of the *Employer's* claims handling procedures, such procedure to be provided to the *Contractor* by the *Employer*.
- Z1.41.3 87.6 The *Contractor* does not compromise, settle or waive any claim which the *Contractor* may have under the *Employer's* insurances without the prior written consent of the *Employer*.
- Z1.41.4 87.7 The insurances provided by the *Employer* are in effect for the duration of the *works* at the Site and any associated compounds storage and transit locations and other places accepted by the *Project Manager* and used solely for the purposes of carrying out of the physical works within the United Kingdom.
- Z1.41.5 87.8 The *Contractor* ensures that each subcontract with its Subcontractors includes an acknowledgement that the Subcontractor is an insured party under the insurances provided by the *Employer* while the Subcontractor is engaged in carrying out the *works* at the Site and any associated compounds storage and transit locations and other places accepted by the *Project Manager* and used solely for the purposes of carrying out of the physical works within the United Kingdom.

9 Termination

Termination 90

Z1.42

- 90.1 If either Party wishes to terminate the *Contractor's* obligation to Provide the Works he notifies the *Project Manager* and the other Party giving details of his reason for terminating. The *Project Manager* issues a termination certificate to both Parties promptly if the reason complies with this contract.
- 90.2 The *Contractor* may terminate only for a reason identified in the Termination Table. The *Employer* may terminate for any reason. The procedures followed and the amounts due on termination are in accordance with the Termination Table.

TERMINATION TABLE

Terminating Party	Reason	Procedure	Amount due
The <i>Employer</i>	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]		
	[REDACTED]		
	[REDACTED]		
	[REDACTED]		
	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]		
	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]		
The <i>Contractor</i>	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]		
	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]		
	[REDACTED]		
	[REDACTED]		
	[REDACTED]		
	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]		

Z1.42.2

- 90.3 The procedures for termination are implemented immediately after the *Project Manager* has issued a termination certificate.
- 90.4 Within thirteen weeks of termination, the *Project Manager* certifies a final payment to or from the *Contractor* which is the *Project Manager's* assessment of the amount due on termination less the total of previous payments. Payment is made within three weeks of the *Project Manager's* certificate [REDACTED]
[REDACTED]
[REDACTED]
- 90.5 After a termination certificate has been issued, the *Contractor* does no further work necessary to Provide the Works.

Reasons for termination 91

Z1.43

Z1.43.1

- 91.1 Either Party may terminate if the other Party has done one of the following (or its equivalent in other jurisdictions).
- If the other Party is an individual and has
 - presented his petition for bankruptcy (R1),
 - had a bankruptcy order made against him (R2),
 - had a receiver appointed over his assets (R3) or
 - made an arrangement with his creditors (R4).
 - If the other Party is a company or partnership and has
 - had a winding-up order made against it (R5),
 - had a provisional liquidator appointed to it (R6),
 - passed a resolution for winding-up (other than in order to amalgamate or reconstruct) (R7),
 - had an administration order made against it (R8),
 - had a receiver, receiver and manager, or administrative receiver appointed over the whole or a substantial part of its undertaking or assets (R9) or
 - made an arrangement with its creditors (R10).
 - If the other Party has become insolvent as defined in section 113 of the Act (R10A).
- 91.2 The *Employer* may terminate if the *Project Manager* has notified that the *Contractor* has defaulted in one of the following ways and not put the default right within four weeks of the notification.
- Substantially failed to comply with his obligations (R11).
 - Not provided a bond or guarantee which this contract requires (R12).
 - Appointed a Subcontractor for substantial work before the *Project Manager* has accepted the Subcontractor (R13).
- 91.3 The *Employer* may terminate if the *Project Manager* has notified that the *Contractor* has defaulted in one of the following ways and not stopped defaulting within four weeks of the notification.
- Substantially hindered the *Employer* or Others (R14).
 - Substantially broken a health or safety regulation or health or safety requirement of this contract (R15).
- 91.4 The *Contractor* may terminate if the *Employer* has not paid an amount due under the contract within eleven weeks of the date that it should have been paid (R16).

Z1.43.2

91.5 Either Party may terminate if the Parties have been released under the law from further performance of the whole of this contract (R17).

91.6 If the *Project Manager* has instructed the *Contractor* to stop or not to start any substantial work or all work and an instruction allowing the work to re-start or start has not been given within thirteen weeks,

- the *Employer* may terminate if the instruction was due to a default by the *Contractor* (R18),
- the *Employer* may terminate if the instruction was due to a reason related to the Coronavirus Pandemic (R18A)
- the *Contractor* may terminate if the instruction was due to a default by the *Employer* (R19) and
- either Party may terminate if the instruction was due to any other reason other than a reason related to the Coronavirus Pandemic (R20).

91.7 The *Employer* may terminate if an event occurs which

- stops the *Contractor* completing the *works* or
- stops the *Contractor* completing the *works* by the date shown on the Accepted Programme and is forecast to delay Completion by more than 13 weeks,

and which

- neither Party could prevent and
- an experienced contractor would have judged at the Contract Date to have such a small chance of occurring that it would have been unreasonable for him to have allowed for it (R21).

Z1.43.3

91.8 The *Employer* may terminate the *Contractor's* appointment in the event of:

- a Safety Breach or a Prohibited Act or in the event the *Contractor* has persistently failed to comply with his obligations under clause Z2.20 or has failed to comply with its obligations under clause Z2.17 (R22),
- a conflict of interest which has not been resolved to the *Employer's* satisfaction in accordance with the provisions of Z2.18 (R23),

■ [REDACTED]

- the *Employer* not obtaining any necessary funding for the Project and/or the necessary funding is curtailed (R25),
- A Change of Control (R25A).

Z1.43.4

91.9 In the event that either:

- any court or other competent authority declares or orders that this contract is ineffective or shortened pursuant to the *law of the contract* from time to time including any applicable law, directive or requirement of the European Union; or
- this contract has been subject to any substantial modification which would require a new procurement procedure in accordance with regulation 72(9) of the Public Contracts Regulations 2015 or regulation 88(8) of the Utilities Contract Regulations 2016; or
- the *Contractor* has, at the time of contract award, been in one of the situations referred to in regulation 57(1) of the Public Contracts Regulations 2015 (to the extent not already covered by this clause 91.9) and should therefore have been excluded from the procurement procedure in accordance with those Regulations; or
- to the extent not already provided for in this clause 91.9, the *Employer* may terminate if it determines that the contract should not have been

awarded to the Contractor in view of a serious infringement of the obligations contained under the EU Treaties and applicable procurement regulations.

then:

- the *Employer* notifies the *Project Manager* and the *Contractor* in writing as soon as reasonably practicable of the declaration or order;
- the *Project Manager* issues a termination certificate to both Parties certifying the date the contract became or is to become ineffective or shortened; and
- the contract is deemed for all purposes to have been terminated by the *Employer* on the date named in the termination certificate (R26).

Notwithstanding the declaration or order, the provisions of clauses 90-93 continue in full force and effect along with any other provisions of this contract necessary to give effect to them. In addition, any provisions of the contract which by their nature or implication are required to regulate, determine or limit the Parties' rights and liabilities that have accrued at the date the contract became ineffective or shortened survive the declaration or order as aforesaid.

Z1.43.5 91.10 The *Employer* may terminate if any circumstances arise which entitle the Framework Employer (as such term is defined in the Framework Agreement) to terminate the Framework Agreement, save that the *Employer* is not entitled to terminate the *Contractor's* obligation to Provide the Works pursuant to this clause by reason of clause [26.3] of the Framework Agreement but for the avoidance of doubt this proviso does not limit or restrict the *Employer's* right to terminate the *Contractor's* obligation to Provide the Works for a reason not identified in the termination table under clause 90.2 of the *conditions of contract* (R27).

Z1.43.6 91.11 **This clause applies if main Option C applies. Without limiting sub-clause 93, the *Employer* may terminate if the *Project Manager* assesses at any time that (having regard to the Price for Work Done to Date and the total of the Prices at the relevant time):**

- the final Price for Work Done to Date is likely to exceed the final total of the Prices; and
- the resulting forecast of the *Contractor's* share of the excess is likely to exceed the *share termination threshold* (R26A).

Z1.43.7 91.12 The *Employer* may terminate the *Contractor's* appointment in the event of a *specified termination event* (R28).

Procedures on 92

Z1.404
termination

92.1 On termination, the *Employer* may complete the *works* and may use any Plant and Materials to which he has title (P1).

Z1.44.1 92.2 The procedure on termination also includes one or more of the following as set out in the Termination Table. In each case, the Site is left in a safe, clean and workmanlike condition to the satisfaction of the *Project Manager*.

P2 The *Employer* may instruct the *Contractor* to leave the Site, remove any Equipment, Plant and Materials from the Site and assign the benefit of and/or enter into a novation of any subcontract or other contract related to performance of this contract to the *Employer*.

P3 The *Employer* may use any Equipment to which the *Contractor* has title to complete the *works*. The *Contractor* promptly removes the Equipment from Site when the *Project Manager* notifies him that the *Employer* no longer requires it to complete the *works*.

		P4	The <i>Contractor</i> leaves the Working Areas and removes the Equipment.
Payment on termination	93		
Z1.45	93.1		The amount due on termination includes (A1) <ul style="list-style-type: none"> • an amount due assessed as for normal payments, • the Defined Cost for Plant and Materials <ul style="list-style-type: none"> • within the Working Areas or • to which the <i>Employer</i> has title and of which the <i>Contractor</i> has to accept delivery, • other Defined Cost reasonably incurred in expectation of completing the whole of the <i>works</i>, • any amounts retained by the <i>Employer</i> and • a deduction of any un-repaid balance of an advanced payment.
	93.2		The amount due on termination also includes one or more of the following as set out in the Termination Table.
		A2	The forecast Defined Cost of removing the Equipment.
		A3	A deduction of the forecast of the additional cost to the <i>Employer</i> of completing the whole of the <i>works</i> .
		A4	The <i>direct fee percentage</i> applied to any excess of the total of the Prices at the Contract Date over the Price for Work Done to Date.
Z1.45.1	93.3		This clause applies if main Option A applies. The amount due on termination is assessed without taking grouping of activities into account.
Z1.45.2	93.4		This clause applies if main Option C applies. If there is a termination, the <i>Project Manager</i> assesses the <i>Contractor's</i> share after he has certified termination. His assessment uses, as the Price for Work Done to Date, the total of the Defined Cost which the <i>Contractor</i> has paid and which he is committed to pay for work done before termination and the resulting Fee . The assessment uses as the total of the Prices <ul style="list-style-type: none"> • the lump sum price for each activity which has been completed and • a proportion of the lump sum price for each incomplete activity which is the proportion of the work in the activity which has been completed.
Z1.45.3	93.5		Not used.
Z1.45.4	93.6		This clause applies if main Option C applies. The <i>Project Manager's</i> assessment of the <i>Contractor's</i> share is added to the amount due to the <i>Contractor</i> on termination if there has been a saving or deducted if there has been an excess.

2. ADDITIONAL CONDITIONS OF CONTRACT

Contractor's Warranties

Z2.1

Z2.1.1 This clause is only applicable if stated in the Contract Data for the relevant Call-Off Contract. The *Employer* may at any time before or within twelve (12) years after Completion enter into an agreement or agreements without the *Contractor's* consent being required with:

- any member of the TfL Group,
- MTR,
- Network Rail,
- persons providing finance in connection with the *works*,
- purchasers and tenants of the whole or any part of the *works*,
- developers having or acquiring an interest in whole or any part of the *works*;
- any other persons having or acquiring an interest in neighbouring or adjacent property.

Z2.1.2 The *Contractor*, within twenty one (21) days of the *Employer's* request made no later than the Completion Date, duly executes and delivers to the *Employer* deeds of warranty in the appropriate form attached at Schedule 9 and/or Schedule 12 of the Framework Agreement, (with such amendments as may be reasonably required) in favour of each such persons.

Subcontractors' Warranties

Z2.2

Z2.2.1 This clause is only applicable if stated in the Contract Data for the relevant Call-Off Contract. Unless informed by the *Project Manager* in writing that such warranties are not required, the *Contractor* uses his best endeavours to procure that the Subcontractors (and sub-sub-contractors of any tier with design responsibility, and other sub-sub-contractors as the *Project Manager* may advise) duly execute and deliver to the *Employer*, within twenty one (21) days of the date of their appointment, deeds of warranty in the appropriate form attached at Schedule 10A and/or Schedule 10B and/or Schedule 11A and/or Schedule 11B and/or Schedule 12 of the Framework Agreement (with such amendments as may be reasonably required) or in favour of

- the *Employer*,
- any member of the TfL Group,
- MTR,
- Network Rail,
- persons providing finance in connection with the *works*,
- purchasers and tenants of the whole or any part of the *works*,
- developers having or acquiring an interest in the whole or any part of the *works*;
- any other persons having or acquiring an interest in neighbouring or adjacent property.

If the *Contractor* is unable to procure and deliver to the *Employer* any requisite deed of warranty in the appropriate form within twenty one (21) days of the relevant appointment the *Contractor* without prejudice to the *Employer's* rights and remedies consults with the *Project Manager* as to what steps can reasonably be taken to procure the outstanding warranty and safeguard the *Employer's* interests.

Z2.3 Not used

Z2.3.1
Warranties and Undertakings
Z2.4

Z2.4.1 The *Contractor* warrants and undertakes to the *Employer* as a condition of this contract that:

- he has all the resources including financial, technical and human resources as are required to carry out and complete the *works* in accordance with the *conditions of contract*,
- all design, workmanship, manufacture and fabrication will be in accordance with the Works Information and applicable law,
- the *works* will be carried out using only materials and goods which are of sound and good quality and that he will only specify substances and materials for incorporation in the *works* and only incorporate substances and materials which are in accordance with the Standards, general good building and engineering practice and the requirements of the Works Information,
- the Plant and Materials will on Completion be capable of being used, operated and maintained in a safe, economic and efficient manner, free from any unreasonable risk to the health and well-being of persons using it and free from any unreasonable or avoidable risk of pollution, nuisance, interference or hazard,
- Plant and Materials will not deteriorate at a greater rate than that reasonably to be expected of high quality, reliable, well-designed plant and materials of a similar nature and manufacture,
- neither the functionality nor the performance of the *works*, or any computer product, application or system forming part of the *works*, or any Plant, Materials or Equipment, or any part of the railways on which works are undertaken, or any part of the *Network* is affected, made inoperable, difficult or suffers any abnormality by reason of any software defect,
- the Plant and Materials will at take-over operate safely and efficiently in combination with any plant, equipment or system to which it is to be connected,
- he will maintain a sufficient supply of the spare parts (including software) necessary for the operation and maintenance of the *works* as specified in the Works Information, and
- the proceeds of insurance taken out by the *Contractor* pursuant to clause 84 of the *conditions of contract* will be used solely for the purposes of the *works* and for no other purpose.
- Subject to clause X15, nothing expressed or implied in the Works Information creates a fitness for purpose obligation in respect of design.

Accounts and Records

Z2.5

Z2.5.1 The *Contractor* maintains and retains (and procures that his Subcontractors maintain and retain) the Minimum Records for a minimum of twelve (12) years from Completion of the *works*.

Z2.5.2 The *Contractor* complies with (and ensures his Subcontractors comply with) the provisions of the Works Information (including the Subcontractor Procurement Plan) regarding accounts and records. The *Employer* and his authorised representatives are entitled to audit the Minimum Records in accordance with the provisions set out in the Works Information. The *Contractor* procures that each subcontract contains open-book audit rights in favour of the *Employer* and his authorised representatives.

- Z2.5.3 The *Contractor* ensures that any requirements of Data Protection Legislation are complied with to enable the *Employer* to exercise its rights under or pursuant to this clause Z2.5.

Nuisance

Z2.6

- Z2.6.1 The *Contractor* uses all reasonable endeavours to prevent any public or private nuisance including nuisance caused by noxious fumes, noisy working operations or the deposit of materials or debris or other interference with the rights of adjoining or neighbouring landowners, tenants or occupiers or Statutory Undertakers arising out of the *works* and, if the *Employer* (acting reasonably) considers that the claim should be defended, defends or, if the *Employer* so elects, assists the *Employer* in defending any action or proceedings which may be instituted in relation thereto.
- Z2.6.2 Without prejudice to the *Contractor's* obligations under clause Z2.6.1 if the carrying out of the *works* is likely to necessitate any interference (including the oversailing of tower crane jibs) with the rights of adjoining or neighbouring landowners, tenants or occupiers, the *Contractor* without cost to the *Employer* obtains the prior written agreement of such landowners, tenants or occupiers subject to the approval of the *Employer*. The *Contractor* complies (at his own cost) in every respect with the conditions contained in such agreements.

Intellectual Property Rights

Z2.7

Z2.7.1 Vesting of IPR

The Parties agree that the IPR in all Documentation and works that is created wholly or mainly in connection with the performance of this contract (including IPR created by a Subcontractor or sub-subcontractor of any tier) vests in the *Employer*. The *Contractor* procures that each Subcontractor (and sub-subcontractor of any tier) assigns such IPR to the *Employer*. The *Contractor* is not liable for any use of materials other than purposes for which they were originally prepared.

Z2.7.2 Background IPR

In respect of Background IPR, the *Contractor* grants (in respect of his own Background IPR) and procures the grant of (in respect of a Subcontractor's or other third party's Background IPR) a non-exclusive, world-wide, perpetual, irrevocable, royalty free licence (including the right to sub-licence) to the *Employer* to use the Background IPR for the following purposes:

- (a) understanding the *works*,
- (b) operating, maintaining, repairing, modifying, altering, enhancing, re-figuring, correcting and replacing the *works*, any Equipment or Plant and Materials,
- (c) extending, interfacing with, integrating with, connection into and adjusting the *works* and/or the works of Others,
- (d) enabling the *Employer* to carry out the operation, maintenance, repair, renewal and enhancement of the *Network*,
- (e) enabling the *Employer* to perform his function and duties as Infrastructure Manager and Operator of the *Network*,
- (f) executing and completing the *works*, and
- (g) designing, testing and commissioning the *works*.

Z2.7.3 The *Contractor* agrees to provide to the *Employer* or any person nominated by the *Project Manager* access as soon as reasonably practicable to all Documentation in whatever form requested by the *Project Manager* at any time but at the latest on termination or expiry of this contract.

Z2.7.4 IPR Claims

- (a) The *Contractor* promptly notifies the *Employer* upon becoming aware of an infringement, alleged infringement or potential infringement of any IPR (including any claims, demands or actions (collectively "Claims") relating to the same) which affects or may affect the provision of the *works*
- (b) Subject to the *Employer's* proper observance of its obligations under this contract, the *Contractor* indemnifies the *Employer* against all Claims and Losses that arise from or are incurred by reason of any infringement or alleged infringement of any IPR.
- (c) The *Employer*, at the request of the *Contractor*, gives the *Contractor* all reasonable assistance for the purpose of contesting any such Claim. The *Contractor* reimburses the *Employer* for all Losses incurred in doing so and/or the *Contractor* conducts any litigation and all negotiations at its own expense arising from such Claim. The *Contractor* consults with the *Employer* in respect of the conduct of any Claim and keeps the *Employer* regularly and fully informed as to the progress of such Claim.

Z2.7.5 Corporate IPR

- (a) The *Employer* grants the *Contractor* a non-exclusive, non transferable, royalty-free licence to the *Contractor* to use, and allow his Subcontractors to use, the Corporate IPRs for the duration of this contract for the sole purpose of enabling the *Contractor* to Provide the Works and to comply with his obligations under this contract.
- (b) The *Contractor* uses, and procures that his Subcontractors use, the Corporate IPRs in compliance with any relevant Standards and applicable law.
- (c) The *Contractor* does not use, and procures that his Subcontractors do not use, the Corporate IPRs in combination with any other trade marks without the *Employer's* prior written consent.
- (d) On written request by the *Project Manager*, the *Contractor* supplies to the *Project Manager* copies or details of items on or in relation to which it uses the Corporate IPRs or details of the manner in which they are used. If the *Project Manager* reasonably determines that any use of the Corporate IPRs falls below the Standards, the *Project Manager* gives the *Contractor* written notice of that fact and the *Contractor* corrects the use so as to comply with the Standards taking into account the *Project Manager's* instructions.
- (e) The *Contractor* is not entitled to bring any action against any third party for infringement relating to the Corporate IPRs and the *Employer* is not obliged to bring or extend any proceedings relating to the Corporate IPRs if it decides in his sole discretion not to do so.
- (f) As soon as reasonably practicable after expiry or termination of this contract for any reason, the *Contractor* and his

Assignment Z2.8

- Confidentiality**
Z2.9

59

Cost saving proposals Not used

Z2.10

Z2.10.1 The *Contractor* may submit a proposal to change the Works Information provided by the *Employer* ("**Cost Saving Proposal**") to the *Employer* for acceptance. Such proposal is submitted in accordance with the Works Information.

Z2.10.2 The *Employer* may reject a Cost Saving Proposal for any reason. If he accepts a Cost Saving Proposal, the *Employer* assesses the effect of the Cost Saving Proposal on forecast Defined Cost and the resulting percentages for overheads and profit stated in the *Contractor's* Offer and the Prices are reduced by 50% of the amount of the assessed saving. The costs of preparing and submitting a Cost Saving Proposal (including the reasonable costs of exploring and establishing the merits and feasibility of the same) are borne by the *Contractor*.

Z2.11 Not Used

Z2.11.1

Liquidated Damages for Disruption This clause applies only if it is stated to apply in the Contract Data for the relevant Call-Off Contract

Z2.12

Z2.12.1

Z2.12.2 The *Contractor* will pay and/or the *Employer* may deduct from the amount due by way of liquidated damages *disruption damages* in respect of any disruption to or closure of the *Network* or any part thereof which is caused by a failure by the *Contractor* to Provide the Works or a breach of his obligations under this contract. The *Employer* makes a pro rata evaluation in the event of a disruption if it is less than twelve (12) hours. If the delay is more than twelve (12) hours, the full day value will be applied.

Responsible Procurement

Z2.13

- Z2.13.1 The *Contractor* has regard to the Responsible Procurement Principles and complies at all times with the obligations with regard to the Responsible Procurement Principles set out in the Works Information. Compliance with such obligations does not constitute a compensation event unless the *Project Manager* issues an instruction and states in his instruction that it constitutes a compensation event.

Crime and Disorder

Z2.14

- Z2.14.1 The *Contractor* acknowledges that the *Employer* is under a duty in accordance with Section 17 of the Crime and Disorder Act, 1998 to

- have due regard to the impact of crime, disorder and community safety in the exercise of the *Employer's* duties,
- where appropriate, identify actions to reduce levels of crime and disorder,
- without prejudice to any other obligation imposed on the *Employer*, exercise his functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent, crime and disorder in its area,

and in the performance of the contract the *Contractor* assists and co-operates, and uses reasonable endeavours to procure that his Subcontractors (and sub-sub-contractors) assist and co-operate, with the *Employer* where possible to enable the *Employer* to satisfy his duty.

London Living Wage

Z2.15

- Z2.15.1 The *Contractor* acknowledges and agrees that the Mayor, pursuant to section 155 of the GLA Act, has directed the *Employer* to ensure that the London Living Wage is paid to anyone engaged by the *Employer* who is required to discharge contractual obligations (whether as a direct contractor or a subcontractor (of any tier) of that direct contractor) on the *Employer's* estate in the circumstances set out in sub-clause Z2.15.2(a).

- Z2.15.2 Without prejudice to any other provision of this contract, the *Contractor*:

- (a) ensures that his employees and procures that the employees of his Subcontractors and sub-subcontractors (of any tier) engaged in the performance of the *works*:

- for two (2) or more hours of work in any given day in a week, for eight (8) or more consecutive weeks in a year and
- on the *Employer's* estate including (without limitation) the Site and premises and land owned or occupied by the *Employer*,

is paid an hourly wage (or equivalent of an hourly wage) equivalent to or greater than the London Living Wage,

- (b) ensures that none of

- his employees nor
- the employees of his Subcontractors or sub-subcontractors (of any tier),

engaged in the performance of the *works* is paid less than the amount to which they are entitled in their respective contracts of employment,

- (c) provides to the *Employer* such information concerning the London Living Wage as the *Employer* or his nominees may reasonably require from time to time, including (without limitation):
 - all information necessary for the *Employer* to confirm that the *Contractor* is complying with his obligations under this clause Z2.15 and
 - reasonable evidence that sub-clause Z2.15.2(a) is implemented,
- (d) in connection with sub-clause Z2.15.2(c),
 - acknowledges and agrees that the Centre for Civil Society (or any relevant replacement organisation notified to the *Contractor* from time to time) may contact and meet with any trade unions representing the *Contractor's* employees and the employees of his Subcontractors and sub-subcontractors (of any tier) in order to establish that the obligations in sub-clause Z2.15.2(a) have been complied with and
 - liaises and cooperates with the *Employer* and the Centre for Civil Society (or any relevant replacement organisation notified to the *Contractor* from time to time) in order to establish that the obligations in sub-clause Z2.15.2(a) have been complied with,
- (e) disseminates on behalf of the *Employer* to:
 - his employees and
 - the employees of his Subcontractors and sub-subcontractors (of any tier),

engaged in the performance of the *works* such perception questionnaires as the *Employer* may reasonably require from time to time and promptly collates and returns to the *Employer* responses to such questionnaires, and
- (f) co-operates and provides all reasonable assistance in monitoring the effect of the London Living Wage.

Z2.15.3 For the avoidance of doubt the *Contractor*:

- (a) implements the annual increase in the rate of the London Living Wage and
 - (b) procures that his Subcontractors and sub-subcontractors (of any tier) implement the annual increase in the rate of the London Living Wage,
- on or before 1 April in the year following the publication of the increased rate of the London Living Wage.

Z2.15.4 The *Employer* reserves the right to audit (acting by itself or its nominee(s)) the provision of the London Living Wage to the *Contractor's* staff and the staff of his Subcontractors and sub-subcontractors (of any tier).

Z2.15.5 Any breach by the *Contractor* of the provisions of this clause Z2.15 is treated as the *Contractor* having substantially failed to comply with his obligations for the purpose of Clause 91.2 of this contract.

Data Transparency

Z2.16

Z2.16.1 Clauses 19.5 to 19.7 of the Framework Agreement apply.

Data Protection

Z2.17

Z2.17.1

The *Contractor* complies with Schedule 14 to the Framework Agreement.

Conflict of Interest

Z2.18

- Z2.18.1 The *Contractor* acknowledges and agrees that he does not have any interest in any matter where there is or is reasonably likely to be a conflict of interest with Providing the Works or any member of the TfL Group, save to the extent fully disclosed to and approved in writing by the *Employer*.
- Z2.18.2 The *Contractor* undertakes ongoing and regular conflict of interest checks throughout the duration of the contract and in any event not less than once in every six months and notifies the *Employer* in writing immediately on becoming aware of any actual or potential conflict of interest with Providing the Works or any member of the TfL Group and works with the *Employer* to do whatever is necessary (including the separation of staff working and/or data relating to the works from the matter in question) to manage such conflict to the *Employer's* satisfaction and provided that, where the *Employer* is not so satisfied (in his absolute discretion), the *Employer* is entitled to terminate the contract.

Freedom of Information

- Z2.19
- Z2.19.1 Clauses 19.1 to 19.4 of the Framework Agreement apply.

Criminal Record Declarations

- Z2.20
- Z2.20.1 The *Contractor* procures from each Relevant Individual (as the case may be) a declaration that he has no Relevant Convictions ("**Declaration**") or disclosure of any Relevant Convictions he has committed. A Declaration is procured prior to a Relevant Individual carrying out any aspect of the works. The *Contractor* confirms to the *Employer* in writing on request and in any event not less than once in every year that each Relevant Individual has provided a Declaration. The *Contractor* procures that a Relevant Individual notifies the *Contractor* immediately if he commits a Relevant Conviction throughout the duration of this contract and the *Contractor* notifies the *Employer* in writing immediately on becoming aware that a Relevant Individual has committed a Relevant Conviction.
- Z2.20.2 The *Contractor* is not permitted to engage or allowed to act on behalf of the *Contractor* or any Subcontractor in the performance of any aspect of the works any Relevant Individual who has disclosed a Relevant Conviction.
- Z2.20.3 The *Employer* may in accordance with the audit rights set out or referred to in clause Z2.5 audit and check any and all such records as are necessary or referred to in order to monitor compliance with this clause at any time during performance of this contract.
- Z2.20.4 If the *Contractor* fails to comply with the requirements under clauses Z2.20.1 and/or Z2.20.2, the *Employer* may, without prejudice to his rights under clause 91.8, serve notice on the *Contractor* requiring the *Contractor* to immediately remove or procure the removal of (as the case may be) any Relevant Individual who has not provided a Declaration from the Site with immediate effect and take such steps as are necessary to ensure that such Relevant Individual has no further involvement with the carrying out of the works unless (in the case of non-compliance with clause Z2.20.1) within seven (7) days of receipt of the notice the *Contractor* confirms to the *Employer* he has procured all of the Declarations required under clause Z2.20.1.
- Z2.20.5 A persistent breach of clause Z2.20.1 and/or Z2.20.2 by the *Contractor* constitutes a material breach of this contract and entitles the *Employer* to terminate the contract in whole or in part with immediate effect in accordance with clause 91.8.
- Z2.20.6 If either Party becomes aware that a Relevant Individual has committed a Relevant Conviction, the *Contractor* removes or procures the removal (as the case may be) of such Relevant Individual from the Site with immediate effect and take such steps as are necessary to ensure that such Relevant Individual has no further involvement with the carrying out of the works.

	Z2.20.7	Nothing in this clause Z2.20 in any way waives, limits or amends any obligation of the <i>Contractor</i> to the <i>Employer</i> arising under this contract and the <i>Contractor's</i> obligation to Provide the Works remain in full force and effect and the <i>Contractor</i> cannot claim any extra costs or time as a result of any actions under this clause Z2.20.
	Best Value	
	Z2.21	
Prohibited Acts	Z2.21.1	Clause 13.1 of the Framework Agreement applies.
	Z2.22	
	Z2.22.1	The <i>Contractor</i> does not and uses his reasonable endeavours to procure that his Subcontractors (and sub-subcontractors of any tier) do not commit any Prohibited Act.
	Z2.22.2	Without prejudice to his rights under clause Z2.5 the <i>Employer</i> may audit and check any and all such records as are necessary in order to monitor compliance with this clause at any time during performance of this contract and during the twelve (12) years thereafter.
	Z2.22.3	If the <i>Contractor</i> , any of his shareholders or any Subcontractor or anyone employed by or acting on behalf of the <i>Contractor</i> or any of his agents commits any Prohibited Act, this constitutes a material breach of this contract and entitles the <i>Employer</i> to terminate the contract in whole or in part with immediate effect in accordance with clause 91.8.
	Z2.22.4	If a Prohibited Act is committed by an employee of the <i>Contractor</i> or by any Subcontractor (or employee or agent of such Subcontractor) then the <i>Employer</i> may (at his sole discretion) choose to serve a warning notice upon the <i>Contractor</i> instead of exercising his right to terminate with immediate effect and unless, within thirty (30) days of receipt of such warning notice, the <i>Contractor</i> removes or procures the removal of the relevant employee or Subcontractor (as the case may be) from the Site and (if necessary) procures the provision of the affected <i>works</i> by another person or Subcontractor this constitutes a material breach of this contract and entitles the <i>Employer</i> to terminate the contract in whole or in part with immediate effect in accordance with clause 91.8.

DISPUTE RESOLUTION

Option W1 - Not used

Option W2

- W2.1 (1) The Parties follow the procedure below for the avoidance and resolution of any Dispute arising under or in connection with this contract.
- (2) In this clause, time periods stated in days exclude Christmas Day, Good Friday and bank holidays.
- (3) A Party may refer a Dispute to the *Adjudicator* at any time by way of a Notice of Adjudication. Subject to that, by notice in writing, a Party may refer a Dispute to the Parties' Senior Representatives for consideration. The written notice identifies the Party's Senior Representative, gives brief written particulars of the Dispute, including the provisions of this contract that are relevant to the Dispute, the relief sought and the basis for claiming the relief sought.
- (4) Within fourteen (14) days of receipt of the notice of referral to Senior Representatives, the responding party provides the referring party with a brief written response and identifies the responding party's Senior Representative.
-
- (5) Within a further fourteen (14) days the Senior Representatives meet and try to reach agreement to resolve the Dispute. Each Party bears its own costs and expenses in relation to any reference of a Dispute to the Senior Representatives. Any documents prepared or exchanged in relation to the reference of the Dispute to Senior Representatives and any discussions between the Senior Representatives are without prejudice and the Parties do not make use of or rely upon any without prejudice statements in any subsequent Dispute proceedings.
- W2.2 (1) If a Dispute is to be referred to the *Adjudicator* the Parties appoint the *Adjudicator*.
- (2) Any person requested or selected to act as the *Adjudicator* in accordance with this clause W2 is a natural person acting in a personal capacity and is not an employee of any of the Parties, or of any other party related to the Dispute, and declares any interest, financial or otherwise, in any matter relating to the Dispute.
- (3) The *Adjudicator* acts impartially and decides the Dispute as an independent adjudicator and not as an arbitrator.
- (4) The Parties may choose an adjudicator (or replacement adjudicator, as necessary) jointly or a Party may ask the *Adjudicator nominating body* to choose an adjudicator. Such joint appointment or referral to the *Adjudicator nominating body* shall take place immediately upon the serving of a Notice of Adjudication, or immediately following the position of *Adjudicator* falling vacant.
-
- (5) The *Adjudicator nominating body* chooses an adjudicator within four (4) days of the request. The chosen adjudicator becomes the *Adjudicator*.
- (6) A replacement *Adjudicator* has the power to decide a Dispute referred to a predecessor but not decided at the time when the predecessor resigned or became unable to act. The *Adjudicator* deals with an undecided Dispute as if it had been referred on the date of appointment as replacement *Adjudicator*.
- (7) The *Adjudicator*, and the *Adjudicator's* employees and agents are not liable to the Parties for any action or failure to take action in an adjudication unless the action or failure to take action was in bad faith.

(8) The Parties may terminate the *Adjudicator's* appointment at any time. In such case, or if the *Adjudicator* fails to give notice of a decision within the period required or agreed, or if at any time the *Adjudicator* declines to act or is unable to act as a result of the *Adjudicator's* death, disability, resignation or otherwise, a person is appointed to replace the *Adjudicator* in accordance with the provisions of this clause W2.2.

W2.3 (1) Before a Party refers a Dispute to the *Adjudicator*, it gives a Notice of Adjudication to the other Party with a brief description of the Dispute, including the provisions of this contract that are relevant to the Dispute, the relief sought, the basis for claiming the relief sought and the decision that it wishes the *Adjudicator* to make. Following the appointment of the *Adjudicator*, the Party immediately sends a copy of the Notice of Adjudication to the *Adjudicator*. Within three (3) days of the receipt of the Notice of Adjudication, the *Adjudicator* notifies the Parties that the *Adjudicator*

- is able to decide the Dispute in accordance with the contract or
- is unable to decide the Dispute and has resigned.

If the *Adjudicator* does not so notify within 3 three (3) days of the issue of the Notice of Adjudication, either Party may act as if the *Adjudicator* has resigned.

(2) The terms of remuneration of the *Adjudicator* are agreed by the Parties and the *Adjudicator*, with the object of securing the appointment of the *Adjudicator*, within seven (7) days of the Notice of Adjudication. If any Party (but not all the Parties) rejects the terms of the remuneration of the *Adjudicator* the same are settled (and binding upon the Parties) by agreement between the *Adjudicator nominating body* and the *Adjudicator* (provided that the level of the *Adjudicator's* remuneration does not exceed the level originally proposed to the Parties by the *Adjudicator*). If all the Parties reject the terms of remuneration proposed by an *Adjudicator* another person is selected as an *Adjudicator* in accordance with clause W2.2.

(3) Within seven (7) days of a Party giving a Notice of Adjudication it

- refers the Dispute to the *Adjudicator*,
- provides the *Adjudicator* with the information on which it relies, including the factual and contractual or other basis of the claim, the amount (if any) claimed and any supporting documents, and
- provides a copy of the information and supporting documents it has provided to the *Adjudicator* to the other Party.

Upon receipt of the referral notice, the *Adjudicator* must inform every party to the Dispute of the date it was received.

Within fourteen (14) days from the referral, any Party, who is not the Party giving a Notice of Adjudication, provides the *Adjudicator* with the information on which it relies, including the factual and contractual or other basis of the claim, the amount (if any) claimed and any supporting documents and provides a copy of the information and supporting documents it has provided to the *Adjudicator* to the Party giving a Notice of Adjudication.

These periods may be extended if the *Adjudicator* and Parties agree.

(4) If a matter disputed by the *Contractor* under or in connection with a subcontract is also a matter disputed under or in connection with this contract the *Contractor* may, with the consent of the Subcontractor and *Employer*, refer the subcontract dispute to the *Adjudicator* at the same time as the main contract referral. The *Adjudicator* then decides the disputes together and references to the Parties for the purposes of the dispute are interpreted as including the Subcontractor. The Parties comply with any reasonable request by the *Adjudicator* for more time to decide the disputes referred to him.

If this contract is a subcontract and the main contract provides for joint

adjudication of disputes, the following procedure applies.

Within two (2) weeks of the notification of the dispute by the *Contractor* to the *Employer*, the *Employer* notifies the *Contractor* if the matter disputed is a matter disputed under or in connection with the main contract.

The *Employer* may then

- submit the subcontract dispute to the main contract adjudicator at the same time as the main contract submission and
- instruct the *Contractor* to provide any information which the *Employer* may require.

The main contract adjudicator then gives a decision on the disputes together.

(5) The *Adjudicator* may

- make directions for the conduct of the Dispute
- review and revise any action or inaction of the Parties related to the Dispute
- take the initiative in ascertaining the facts and the law related to the Dispute
- instruct a Party to provide further information related to the Dispute within a stated time and
- instruct a Party to take any other action which is considered necessary to reach a decision and to do so within a stated time.

(6) If a Party does not comply with any instruction within the time stated by the *Adjudicator*, the *Adjudicator* may continue the adjudication and make a decision based upon the information and evidence received.

(7) The *Adjudicator* shall consider any relevant information submitted by any of the Parties and shall make available to them any information to be taken into account in reaching a decision.

(8) A communication between a Party and the *Adjudicator* is communicated to the other Party at the same time.

(9) All notices, written submissions and any other written communications between the Parties and the *Adjudicator* are either delivered by hand, sent by electronic mail (if agreed between the Parties and the *Adjudicator*) or sent by first class pre-paid post or mail delivery service providing proof of delivery and in each case are copied simultaneously (delivered or sent as aforesaid) to the other Parties. Copies by way of confirmation of all communications by electronic mail between the Parties and the *Adjudicator* are also sent by first class post not later than the business day next following the date of the original electronic mail.

(10) Save as required by law, the Parties and the *Adjudicator* keep information relating to the Dispute confidential.

(11) If the *Adjudicator's* decision includes assessment of additional cost or delay caused to the *Contractor*, the assessment is made in the same way as a compensation event is assessed.

(12) The *Adjudicator* decides the Dispute and notifies the Parties of the decision and reasons in writing within twenty eight (28) days of receipt by the *Adjudicator* of the referral notice. This period may be extended by up to fourteen (14) days with the consent of the Party giving the Notice of Adjudication or by any other period agreed by the Parties.

(13) After the giving of a Notice of Adjudication, the Parties may seek to agree how the *Adjudicator* allocates the costs and expenses of the adjudication, excluding the *Adjudicator's* own remuneration and expenses, as between the Parties. Subject to any agreement of the Parties, the *Adjudicator* allocates

payment of the *Adjudicator's* own remuneration and expenses and other costs and expenses of the adjudication as between the Parties.

(14) Unless and until the *Adjudicator* has notified the Parties of the decision the Parties proceed as if the matter disputed was not disputed.

(15) If the *Adjudicator* does not make the decision and notify it to the Parties within the time provided by this contract the Parties and the *Adjudicator* may agree to extend the period for making a decision. If they do not agree to an extension, either Party may act as if the *Adjudicator* has resigned.

(16) The *Adjudicator's* decision is binding on the Parties unless and until revised by the courts pursuant to any legal proceedings and is enforceable as a matter of contractual obligation between the Parties and not as an arbitral award. The *Adjudicator's* decision is final and binding if neither Party has

- notified the other it is dissatisfied with a matter decided by the *Adjudicator* and intends to refer the matter to the courts within the time required by this contract and/or

- commenced court proceedings within the time required by this contract, or unless agreed otherwise by the Parties.

(17) The *Adjudicator* may, on the *Adjudicator's* own initiative or on the application of a Party correct the decision so as to remove a clerical or typographical error arising by accident or omission. Any correction of a decision must be made within seven (7) days of the delivery of the decision to the Parties. As soon as possible after correcting a decision in accordance with this clause, the *Adjudicator* must deliver a copy of the corrected decision to each of the Parties. Any correction of a decision forms part of the decision.

(18) If the *Adjudicator's* decision changes an amount notified as due, payment of the sum decided by the *Adjudicator* is due not later than twenty eight (28) days from the date of the decision or the final date for payment of the notified amount whichever is the later.

W2.4

(1) Unless the Parties agree otherwise, a Party does not refer any Dispute under or in connection with this contract to the courts unless it has first been decided by the *Adjudicator* in accordance with this contract.

(2) Any Party may apply to any appropriate court for enforcement of the *Adjudicator's* decision.

(3) If, after the *Adjudicator* notifies the decision, a Party is dissatisfied, that Party may notify the other Party of the matter which it disputes and state that it intends to refer it to the courts. The Dispute may not be referred to the courts unless

- this notification is given within six (6) weeks of the notification of the *Adjudicator's* decision and
- court proceedings are commenced within six (6) months of the notification of the *Adjudicator's* decision.

(4) The courts settle the Dispute referred to it. The courts have the powers to reconsider any decision of the *Adjudicator* and to review and revise any action or inaction of the Parties related to the Dispute. A Party is not limited in court proceedings to the information or evidence put to the *Adjudicator*.

(5) A Party does not call the *Adjudicator* as a witness in court proceedings.

SECONDARY OPTION CLAUSES

Option X1: Price adjustment for inflation

Defined terms	X1	
	X1.1	<p>(a) The Base Date Index (B) is the latest available index before the <i>base date</i>.</p> <p>(b) The Latest Index (L) is the latest available index before the date of assessment of an amount due.</p> <p>(c) The Price Adjustment Factor is the total of the products of each of the proportions stated in the Contract Data multiplied by $(L - B)/B$ for the index linked to it.</p> <p>(d) The Beckton Staff Rates are the rates listed in the Contract Data (Part 2) for the purpose of the Schedule of Cost Components.</p>
Price Adjustment Factor	X1.2	<p>If an index is changed after it has been used in calculating a Price Adjustment Factor, the calculation is repeated and a correction included in the next assessment of the amount due.</p> <p>The Price Adjustment Factor calculated at the Completion Date for the whole of the <i>works</i> is used for calculating price adjustment after this date.</p>
Compensation events	X1.3	<p>The Defined Cost for compensation events is assessed using the</p> <ul style="list-style-type: none"> Defined Cost current at the time of assessing the compensation event adjusted to <i>base date</i> by dividing by one plus the Price Adjustment Factor for the last assessment of the amount due and Defined Cost at <i>base date</i> levels for amounts calculated from rates stated in the Contract Data for employees and Equipment and Defined Cost current at the time of assessing the compensation event (without adjustment) for people costs (whether directly employed or subcontracted) for whom there Beckton Staff Rates provided such Defined Cost shall be calculated on the basis that the Beckton Staff Rates do not exceed the Maximum People Rates (as defined in the Framework Agreement).
	X1.4	Not used
Price adjustment Option C	X1.5	<p>Each time the amount due is assessed, an amount for price adjustment is added to or deducted from the total of the Prices which is the sum of</p> <ul style="list-style-type: none"> the change in the Price for Work Done to Date (but (i) excluding any Defined Cost on account of people, whether directly employed or subcontracted, whose roles are included in the Maximum People Rates, as defined in the Framework Agreement and (ii) including any Defined Cost on account of people, whether directly employed or subcontracted, who are included in the Beckton Staff Rates) since the last assessment of the amount due multiplied by $(PAF/(1 + PAF))$ where PAF is the Price Adjustment Factor for the date of the current assessment and correcting amounts, not included elsewhere, which arise from changes to indices used for assessing previous amounts for price adjustment. Defined Cost for people listed by role in Schedule 1, Part B of the Framework Agreement are not subject to any price adjustment under clause X1 and, and without prejudice to any relevant rates in the Contract Data which may be less, Defined Cost for such

people shall not exceed the applicable Maximum People Rates (as defined in the Framework Agreement).

•

Option X2: Changes in the law

Changes in the law

X2

- X2.1 A change in the law of the country in which the Site is located (and which is not a change in law which a competent and experienced contractor familiar with works similar to the works and exercising the foresight appropriate to such a contractor ought, or ought reasonably to have, anticipated at the Contract Date) is a compensation event if it occurs after the Contract Date. The *Project Manager* may notify the *Contractor* of a compensation event for such a change in the law and instruct him to submit quotations. If the effect of a compensation event which is a change in the law is to reduce the total Defined Cost, the Prices are reduced.

Option X3: Not used

Option X4: Parent company guarantee

Parent company Guarantee X4

Z1.46

Z1.46.1

Z1.46.2

Z1.46.3

Z1.46.4

Z1.46.5

X4.1

If a parent company owns the *Contractor*, the *Contractor* gives to the *Employer* a guarantee by the ~~parent company~~ *parent company* of the *Contractor's* performance in the form set out in the Works Information attached at Schedule 5 of the Framework Agreement. ~~If the~~ The guarantee was not is given by at the Contract Date, it is given to the *Employer* within four weeks of the Contract Date unless the *Employer* (in its sole discretion) gives its prior written consent to the guarantee being given by a later date.

X4.2

If the *Contractor* is an incorporated joint venture, the *parent company* of each shareholder in the *Contractor* gives to the *Employer* a guarantee of the *Contractor's* performance in the form set out in Schedule 5 of the Framework Agreement. The guarantee is given at the Contract Date unless the *Employer* (in its sole discretion) gives its prior written consent to the guarantee being given by a later date.

X4.3

If the *Contractor* comprises two or more companies acting in an unincorporated joint venture, consortium, partnership or otherwise, each such company gives to the *Employer* a guarantee by its *parent company* of such company's performance in the form set out in Schedule 5 of the Framework Agreement. The guarantee is given at the Contract Date unless the *Employer* (in its sole discretion) gives its prior written consent to the guarantee being given by a later date.

X4.4

If the guarantor providing a guarantee required pursuant to this clause X4 is not a company registered in England and Wales, such guarantor provides to the *Employer* a legal opinion in the form set out in Schedule 5 of the Framework Agreement on the guarantor's execution of any such guarantee.

X4.5

Upon any novation of this contract the *Contractor* gives to the *Employer* further guarantees and legal opinions on identical terms as any guarantees and legal opinions required pursuant to clause X4.1 to X4.4.

Option X5: Sectional Completion

Sectional Completion X5

- X5.1 In these *conditions of contract*, unless stated as the whole of the *works*, each reference and clause relevant to
- the *works*,
 - Completion and
 - Completion Date
- applies, as the case may be, to either the whole of the *works* or any *section* of the *works*.

Option X6: Bonus for early Completion

Bonus for early Completion X6

- X6.1 The *Contractor* is paid a bonus calculated at the rate stated in the Contract Data for each day from the earlier of
- Completion and
 - the date on which the *Employer* takes over the *works*
- until the Completion Date.

Option X7: Delay damages

Delay damages X7

- X7.1 The *Contractor* pays delay damages at the rate stated in the Contract Data from the Completion Date for each day until the earlier of
- Completion and
 - the date on which the *Employer* takes over the *works*.
- X7.2 If the Completion Date is changed to a later date after delay damages have been paid, the *Employer* repays the overpayment of damages with interest. Interest is assessed from the date of payment to the date of repayment and the date of repayment is an assessment date.
- X7.3 If the *Employer* takes over a part of the *works* before Completion, the delay damages are reduced from the date on which the part is taken over. The *Project Manager* assesses the benefit to the *Employer* of taking over the part of the *works* as a proportion of the benefit to the *Employer* of taking over the whole of the *works* not previously taken over. The delay damages are reduced in this proportion.

Option X12: Not used

Option X13: Performance bond

Performance bond

X13

X13.1

[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]

[REDACTED]

Option X14: **Not used**

Option X15: Limitation of the *Contractor's* liability for his design to reasonable skill and care

The Contractor's design X15 This clause applies unless it is stated not to apply in the Contract Data for the relevant Call Off Contract.
Z1.47
Z1.47.1
Z1.47.2

- X15.1 The *Contractor* is not liable for Defects in the *works* due to his design so far as he proves that he used **all the** reasonable skill **and** care **and diligence normally used by an appropriate and competent professional designer experienced in carrying out design works similar to those included in the works in connection with projects of a similar size, scope and complexity to the Project** to ensure that his design complied with the Works Information.
- X15.2 If the *Contractor* corrects a Defect for which he is not liable under this contract it is a compensation event.

Option X16: Retention

- Retention** X16
Z1.48
- X16.1 After the Price for Work Done to Date has reached the *retention free amount*, an amount is retained in each amount due. Until the earlier of
- Completion of the whole of the *works* and
 - the date on which the *Employer* takes over the whole of the *works*
- the amount retained is the *retention percentage* applied to the excess of the Price for Work Done to Date above the *retention free amount*.
- X16.2 The amount retained is halved
- in the assessment made at Completion of the whole of the *works* or
 - in the next assessment after the *Employer* has taken over the whole of the *works* if this is before Completion of the whole of the *works*.

The amount retained remains at this amount until the Defects Certificate is issued. No amount is retained in the assessments made after the Defects Certificate has been issued.

- Z1.48.1 X16.3 Where under this contract the *Employer* is entitled to withhold money from the *Contractor* as a retention, the retention monies are retained by the *Employer* without obligation to invest and without creating any fiduciary obligation or duty on the part of the *Employer* to the *Contractor* or any other person with whom the *Contractor* has contracted.
- Z1.48.2 X16.4 After the Price for Work Done to Date has reached the *retention free amount*, as an alternative to a cash retention, the *Contractor* may provide a retention bond in the form attached at Schedule 6 of the Framework Agreement (with such amendments as the *Employer* may agree in his absolute discretion) from a bank or an insurer with a minimum credit rating of no less than 'A+' (Standard & Poors) (or its equivalent from each of the rating agencies which rate the bond provider). If the provider of a retention bond no longer holds a long-term credit rating of least 'A' or its equivalent the *Contractor* provides to the *Employer* within thirty five (35) days of such request a bond in the same form and amount (net of any claims previously made on the bond) as that originally provided and from a bank or insurer which the *Project Manager* has accepted. Failure by the *Contractor* to provide to the *Employer* a replacement bond will constitute default under the contract sufficient to enable the *Employer* to make a demand under the original bond or terminate the contract.
- Z1.48.3 X16.5 The following applies in respect of a retention bond provided pursuant to clause X16.4:
- until Completion of the whole of the *works*, the amount of the retention bond is the *retention percentage* applied to the excess of the Price for Work Done to Date above the *retention free amount*;
 - the amount of the retention bond is halved at Completion of the whole of the *works* and remains at this amount until the Defects Certificate is issued. No amount is retained after the Defects Certificate has been issued.

Option X17: **Not used**

Option X18: Limitation of liability

- Limitation of liability X18**
- Z1.49 X18.1 Without prejudice to the *Employer's* entitlement to delay damages (Option X7), ~~the~~ *Contractor's* liability to the *Employer* for the *Employer's* indirect or consequential loss is limited to the amount stated in the Contract Data.
- Z1.49.1 X18.2 For any one event, the liability of the *Contractor* to the *Employer* for loss of or damage to the *Employer's* property is limited to the amount stated in the Contract Data.
- Z1.49.2 X18.3 The *Contractor's* liability to the *Employer* for Defects due to his design which are not listed on the Defects Certificate is limited to the amount stated in the Contract Data.
- Z1.49.3 X18.4 The *Contractor's* total liability to the *Employer* for all matters arising under or in connection with this contract, other than the excluded matters, is limited to the amount stated in the Contract Data and applies in contract, tort or delict and otherwise to the extent allowed under the *law of the contract*.
- The excluded matters are amounts payable by the *Contractor* as stated in this contract for
- loss of or damage to the *Employer's* property,
 - ~~delay damages if Option X7 applies,~~

- Z1.49.5

Age Group	Should Take Action (%)	Should Not Take Action (%)
18-29	95	5
30-49	95	5
50-69	95	5
70+	95	5
Total	95	5

Incentives

Z1.50

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

Option X21: Single Point Design Responsibility

Single Point Design Responsibility	X21
Z1.51	<p>X21.1 In this Option, “Employer's Design Information” means any drawings, proposals, specifications, method statements, designs, plans, schemes or other documents, or concepts prepared or developed by the <i>Employer</i> and included in the Works Information.</p> <p>X21.2 The <i>Contractor</i> is deemed to have scrutinized, prior to the Contract Date, the <i>Employer's</i> Design Information. The <i>Contractor</i> is responsible for the design of the <i>works</i> and for the accuracy of such <i>Employer's</i> Design Information except as stated in clause X21.3 below.</p> <p>X21.3 The <i>Employer</i> is not responsible for any error, inaccuracy or omission of any kind in the <i>Employer's</i> Design Information as originally included in the contract. The <i>Employer</i> does not give any representation or warranty as to the accuracy, status or completeness of the <i>Employer's</i> Design Information except as stated below.</p> <p>The <i>Employer</i> is responsible for the correctness of the following elements of the <i>Employer's</i> Design Information:</p> <ul style="list-style-type: none">(a) data and information stated in the Works Information as being the responsibility of the <i>Employer</i>,(b) definitions of intended purposes of the <i>works</i> or any part thereof, and(c) criteria for the testing and performance of the completed <i>works</i>. <p>X21.4 Where there is a mistake, inaccuracy or discrepancy in or omission from the <i>Employer's</i> Design Information, the <i>Contractor</i> informs the <i>Project Manager</i> in writing of his proposed amendment to remove the mistake, inaccuracy, discrepancy or omission. Within two weeks, the <i>Project Manager</i> may consent to the <i>Contractor's</i> proposed amendment or comment in writing on such an amendment provided that the <i>Project Manager</i> does not unreasonably withhold his consent to a proposed amendment. The <i>Contractor</i> takes account of such comments and resubmits his proposed amendment to the <i>Project Manager</i>. Such process is repeated until the <i>Project Manager</i> accepts the <i>Contractor's</i> proposed amendment.</p> <p>X21.5 The following does not give rise to a compensation event:</p> <ul style="list-style-type: none">• anything which is the <i>Contractor's</i> responsibility as set out in this Option X21;• any comment, failure to comment or delay in commenting by the <i>Project Manager</i> in connection with this Option X21 (which is also not treated as an act of prevention or breach of contract by the <i>Employer</i>); or• any discrepancy, mistake, inaccuracy in, or omission from, the <i>Contractor's</i> design and/or the <i>Employer's</i> Design Information.

Option X22: Novation of Associated Contracts

Novation of Associated Contracts	X22
Z1.52	<p>X22.1 In this Option:</p> <p>“Associated Works or Services” means any preliminary or ancillary works or services which the <i>Employer</i> wishes to be carried out with a view to the same being integrated with this contract;</p>

“Associated Contract” means a contract for the performance of Associated Works or Services; and

“Associated Contractor” means a contractor who has entered into an Associated Contract.

X22.2 The *Contractor* acknowledges that the *Employer* may procure an Associated Contract, and where the *Employer* has entered into an Associated Contract which it wishes to novate to the *Contractor*, the *Contractor* agrees to enter into a Deed of Novation with respect to such contract in the form attached at Schedule 13 of the Framework Agreement (with such amendments as the *Employer* may agree in his absolute discretion) within fourteen (14) days of request from the *Employer* to do so.

X22.2.2 The conditions that are to be met before the *Contractor* enters into a Deed of Novation are:

- A credit check of the Associated Contractor confirming that the Associated Contractor is credit worthy and able to complete the Associated Contract, and;;
- The terms of the Associated Contract comply with the *Contractor's* policies for contracting, and;
- The Employer and Associated Contractor provide full disclosure of any breaches of contract by either the *Employer* or Associated Contractor, compensation events which have occurred (whether notified or not) which have not been accepted, or unpaid certificates at the Date of Novation (“Disclosed Matters”) and either;
- The liability for the Disclosed Matters is provided for in the Deed of Novation and/or;;
- The Prices are adjusted to include any items which become the *Contractor's* responsibility for either performing or paying for the Disclosed Matters following the execution of the Deed of Novation and/or;
- The Contract provides that the *Contractor* is entitled to a compensation event under the Contract for any of the Disclosed Matters where following the execution of the Deed of Novation the *Contractor* incurs additional obligations and liabilities.

X22.3 The *Contractor* procures that the Associated Contractor provides to the *Employer*, within seven (7) days of receiving a request from the *Employer*, a collateral warranty in the relevant form attached at Schedule 9 or 13 of the Framework Agreement (as applicable) in favour of the *Employer* and/or any of the beneficiaries listed in Z2.2 if applicable.

X22.4 The *Contractor* does not dismiss the Associated Contractor, vary the terms of the Associated Contract nor waive or release any of the material obligations of the Associated Contractor without the prior written approval of the *Employer*. Such approval is not to be unreasonably withheld or delayed, but the *Contractor* acknowledges that if any organisation providing finance in relation to the Project objects to the proposed waiver or release, this will be a reasonable ground for the *Employer* to withhold his consent. If the employment of the Associated Contractor is terminated before Completion, the *Contractor*, as soon as is practicable but on seven (7) days' notice to the *Employer*, appoints another contractor to complete the Associated Works or Services (save any contractor to whom the *Employer* makes reasonable objection in writing).

X22.5 The *Contractor* warrants to the *Employer* that he will promptly pay in accordance with the terms of the Associated Contract any monies due and owing to the Associated Contractor in respect of the works or services novated to the *Contractor*.

Option X23: Key Person Succession Plan

Key Person Succession Plan	X23	
Z1.53	X23.1	If a key person succession plan is stated in the Works Information to be applicable to the Project, then the <i>Contractor</i> complies with the provisions set out in the Works Information regarding the appointment and replacement of key persons in accordance with the key person succession plan.
	X23.2	The <i>Contractor</i> submits his key person succession plan to the <i>Project Manager</i> for acceptance in accordance with the Works Information. A reason for not accepting a key person succession plan is that it does not contain the information required by the Works Information and/or a key person named in the key person succession plan does not have acceptable competency, qualifications or experience.
	X23.3	Save where a key person is removed pursuant to sub-clause 24.2 or for other reasons which the <i>Project Manager</i> considers are outside the <i>Contractor's</i> reasonable control, if a key person: <ul style="list-style-type: none"> • ceases to be employed to do the job stated in the Contract Data; and/or • the <i>Contractor</i> fails to comply with an accepted key person succession plan, <p>the salary and expense costs associated with the replacement key person during the relevant <i>handover period</i> are treated as Disallowed Cost unless the <i>Project Manager</i> decides to reduce or waive this requirement.</p>

Option X24: Fee Cap

Fee Cap	X24	This clause applies where main Option C is stated to apply in the Contract Data of the relevant Call-Off Contract.
Z1.54		

Option X25: Information Modelling

Defined terms	X25	
Z1..54A	X25.1	<p>(1) The Information Execution Plan is the <i>information execution plan</i> or is the latest Information Execution Plan accepted by the <i>Project Manager</i>. The latest Information Execution Plan accepted by the <i>Project Manager</i> supersedes the previous Information Execution Plan.</p> <p>(2) Project Information is information provided by the <i>Contractor</i> which is used to create or change the Information Model.</p> <p>(3) The Information Model is the electronic integration of Project Information and similar information provided by the <i>Employer</i> and other Information Providers and is in the form stated in the Information Model Requirements.</p> <p>(4) The Information Model Requirements are the requirements identified in the Works Information for creating or changing the Information Model.</p>

(5) Information Providers are the people or organisations who contribute to the Information Model and are identified in the Information Model Requirements.

Collaboration	X25.2	The <i>Contractor</i> collaborates with other Information Providers as stated in the Information Model Requirements.
Early warning	X25.3	The <i>Contractor</i> and the <i>Project Manager</i> give an early warning by notifying the other as soon as either becomes aware of any matter which could adversely affect the creation or use of the Information Model.
Information Execution Plan	X25.4	<p>(1) If an Information Execution Plan is not identified in the Contract Data, the <i>Contractor</i> submits a first Information Execution Plan to the <i>Project Manager</i> for acceptance within the period stated in the Contract Data.</p> <p>(2) Within two weeks of the <i>Contractor</i> submitting an Information Execution Plan for acceptance, the <i>Project Manager</i> notifies the <i>Contractor</i> of the acceptance of the Information Execution Plan or the reasons for not accepting it. A reason for not accepting an Information Execution Plan is that</p> <ul style="list-style-type: none"> • it does not comply with the Information Model Requirements or • it does not allow the <i>Contractor</i> to Provide the Works. <p>If the <i>Project Manager</i> does not notify acceptance or non-acceptance within the time allowed, the <i>Contractor</i> may notify the <i>Project Manager</i> of that failure. If the failure continues for a further one week after the <i>Contractor's</i> notification, it is treated as acceptance by the <i>Project Manager</i> of the Information Execution Plan.</p> <p>(3) The <i>Contractor</i> submits a revised Information Execution Plan to the <i>Project Manager</i> for acceptance</p> <ul style="list-style-type: none"> • within the <i>period for reply</i> after the <i>Project Manager</i> has instructed it to and • when the <i>Contractor</i> chooses to. <p>(4) The <i>Contractor</i> provides the Project Information in the form stated in the Information Model Requirements and in accordance with the accepted Information Execution Plan.</p>
Compensation events	X25.5	If the Information Execution Plan is altered by a compensation event, the <i>Contractor</i> includes the alterations to the Information Execution Plan in the quotation for the compensation event.
Use of the Information Mode	X25.6	The <i>Employer</i> owns the Information Model and the <i>Contractor's</i> rights over Project Information except as stated otherwise in the Information Model Requirements. The <i>Contractor</i> obtains from a Subcontractor equivalent rights for the <i>Employer</i> over information prepared by the Subcontractor. The <i>Contractor</i> provides to the <i>Employer</i> the documents which transfer these rights to the <i>Employer</i> .
Liability	X25.7	<p>(1) The following are <i>Employer's</i> liabilities.</p> <ul style="list-style-type: none"> • A fault or error in the Information Model other than a Defect in the Project Information. • A fault in information provided by Information Providers other than the <i>Contractor</i>.

Option X26: Lift and Escalator Subcontractors

Lift and Escalator X26 Subcontractors

Z1.55

X26.1 In this Secondary Option X26:

“**Escalators Subcontract**” means the subcontract for the design, supply, installation, testing and/or commissioning of escalators entered into by the *Contractor* and Escalators Subcontractor.

“**Escalators Subcontractor**” means the subcontractor for the design, supply, installation, testing and/or commissioning of escalators specified in the Works Information.

“**Lifts Subcontract**” means the subcontract for the design, supply, installation, testing and/or commissioning of lifts entered into by the *Contractor* and Lifts Subcontractor.

“**Lifts Subcontractor**” means the subcontractor for the design, supply, installation, testing and/or commissioning of lifts specified in the Works Information.

X26.2 Where this Secondary Option X26 is selected the *conditions of contract* are amended as follows:

- Clause 11.2(17): insert at the end of the definition of a “Subcontractor”: “and for the avoidance of doubt, except where otherwise stated, includes the Lifts Subcontractor and Escalators Subcontractor”.
- Clause 26: insert a new sub-clause 26.1A as follows: “This clause applies to all subcontracts except the Lifts Subcontract and Escalators Subcontract”.
- Clause 60.1: insert a new sub-clause 60.1(20) as follows: “A Lifts Subcontractor and/or an Escalators Subcontractor becoming insolvent within the meaning of section 113 of the Act.”
- Clause 90.2 (Termination Table): In the column entitled ‘Reason’ in the second row of the table, insert “R13A” after “R10A”.
- Clause 91.2: insert a new bullet at the end as follows: “Appointed a Lifts Subcontractor and/or Escalators Subcontractor without complying with the requirements of this contract (R13A)”
- Z2.2.1: insert after the first sentence of the clause: “This sub-clause does not apply to the Lifts Subcontractor and Escalators Subcontractors”.

X26.3 The *Contractor* appoints the Lifts Subcontractor using the form of Lifts Subcontract specified in the Works Information and the Escalators Subcontractor using the form of Escalators Subcontract specified in the Works Information.

X26.4 The *Contractor* is responsible for Providing the Works which are the subject of the Lifts Subcontract and Escalators Subcontract as if he had not subcontracted. This contract applies as if a Subcontractor’s employees and equipment were the *Contractor*’s.

X26.5 If any event arises which in the opinion of the *Contractor* entitles him to terminate a Lifts Subcontract and/or Escalators Subcontract, or to treat a Lifts Subcontract and/or Escalators Subcontract as having been repudiated by the Subcontractor,

the *Contractor* at once notifies the *Project Manager* who instructs the *Contractor* how to proceed having regard to the provisions of this Contract. The *Contractor* complies with any such instruction.

X26.6 If the Lifts Subcontractor and/or Escalators Subcontractor claims or gives any indication that he may be entitled to terminate the Lifts Subcontract and/or Escalators Subcontract, or to treat a Lifts Subcontract and/or Escalators Subcontract as having been repudiated by the *Contractor*, the *Contractor* notifies the *Project Manager* as soon as he is aware of any such claim, and the *Project Manager* instructs the *Contractor* how to proceed. The *Contractor* complies with any such instruction.

X26.7 The *Contractor* does not agree to assign, transfer, novate or charge a Lifts Subcontract and/or Escalators Subcontract (or any rights or obligations under them) without the prior written approval of the *Employer*.

X26.8 The *Contractor* does not agree to vary or amend the terms of a Lifts Subcontract and/or Escalators Subcontract nor waive or release any of the obligations of a Lifts Subcontractor and/or Escalators Subcontractor without the prior written approval of the *Employer*.

X26.9 Not used.

X26.10 The *Contractor* procures that the Lifts Subcontractor and Escalators Subcontractor duly execute and deliver to the *Employer*, within twenty one (21) business days (in the case of the Escalators Subcontractor) or thirty (30) business days (in the case of the Lifts Subcontractor) of the date of their appointment, deeds of warranty from the Lifts Subcontractor, Escalators Subcontractor and their sub-sub-contractors and sub-sub-consultants in the appropriate form attached to the Lifts Subcontract and Escalators Subcontract.

X26.11 In respect of IPRs which are subject to the Lifts Subcontract, the *Contractor* procures the grant of a non-exclusive, perpetual, irrevocable and royalty free licence to copy and use any IPRs and Documentation owned, controlled or used by the *Contractor* and/or the Lifts Subcontractor for the purposes listed in clause Z2.7(a)-(e) and for the purpose of training of personnel in connection with any of the above activities.

In the event that:

- (a) an act of Insolvency occurs in relation to the *Contractor* and/or the Lifts Subcontractor; or
- (b) the *Contractor* fails, within fourteen (14) days of a written request by the *Employer*, to correct a failure to Provide the Works which are the subject of the Lifts Subcontract or supply the Documentation or to develop, enhance, supplement, modify, interface, integrate and/or maintain the Documentation where required by the Lifts Subcontract,

the licence procured by the *Contractor* under this clause X26.11 in addition includes the right for the *Employer* to copy, use, develop, enhance, supplement, modify, interface, integrate and/or maintain the IPRs and Documentation for the purposes listed in this clause X26.11 and in addition for the purposes of designing, testing, commissioning, executing and completing the works.

Option X27: Not used

Option X28: Early Contractor Involvement

Early Contractor Involvement X28

Z1.56 **Identified and defined terms** X28.1 (1) Budget is the items and amounts stated in the Contract Data unless the amounts are later changed in accordance with the contract.

(1A) Notice to Proceed is a notice from the *Project Manager* to the *Contractor* in accordance with clause X28.5 and includes supplemental Contract Data and other information for Stage Two.

(2) Project Cost is the total paid or to be paid by the *Employer* to the *Contractor* and Others for the items included in the Budget.

(3) Stage One and Stage Two have the meanings given to them in the Works Information.

(4) Pricing Information is information which specifies how the *Contractor* prepares its assessment of the Prices for Stage Two, and is in the document which the Contract Data states it is in.

Forecasts

X28.2 (1) The *Contractor* provides detailed forecasts of the total Defined Cost of the work to be done in Stage One for acceptance by the *Project Manager*. Forecasts are prepared at the intervals stated in the Contract Data from the *starting date* until the issue of a Notice to Proceed to Stage Two.

(2) Within one week of the *Contractor* submitting a forecast for acceptance, the *Project Manager* either accepts the forecast or notifies the *Contractor* of the reasons for not accepting it. A reason for not accepting the forecast is that

- it does not comply with the Works Information or
- it includes work which is not necessary for Stage One.

(3) The *Contractor* makes a revised submission taking account of the *Project Manager's* reasons.

(4) The cost of any work that is not included in the accepted forecast is treated as a Disallowed Cost.

(5) The *Contractor* prepares forecasts of the Project Cost in consultation with the *Project Manager* and submits them to the *Project Manager*. Forecasts are prepared at the intervals stated in the Contract Data from the *starting date* until Completion of the whole of the *works*. An explanation of the changes made since the previous forecast is submitted with each forecast.

Proposals

X28.3 (1) The *Contractor* submits its design proposals for Stage Two to the *Project Manager* for acceptance in accordance with the submission procedure stated in the Works Information.

(2) The submission includes the *Contractor's* forecast of the effect of the design proposal on the Project Cost and the Accepted Programme.

(3) If the submission is not accepted, the *Project Manager* gives reasons. A reason for not accepting a *Contractor's* submission is that

- it does not comply with the Works Information,
- it will cause the *Employer* to incur unnecessary costs to Others or

the *Project Manager* is not satisfied that the Prices or any changes to the Prices have been properly assessed.

(4) The *Contractor* makes a revised submission taking account of the *Project Manager's* reasons.

(5) The total of the Prices for Stage Two is assessed by the *Contractor* using the Pricing Information stated in the Contract Data.

(6) The *Contractor* obtains approvals and consents from Others as stated in the Works Information.

(7) Any additional Works Information provided by the *Contractor* in Stage One becomes Works Information provided by the *Contractor* for its design.

(8) The *Contractor* completes any outstanding design during Stage Two.

(9) If the main Option for Stage Two is A or is C the *Contractor* submits the total of the Prices for Stage Two to the *Project Manager* in the form of an Activity Schedule or revisions to the Activity Schedule (as applicable). The Activity Schedule includes the Price for Work Done to Date in Stage One.

Key persons

-
- X28.4 The *Contractor* does not replace any *key person* during Stage One unless
- the *Project Manager* instructs the *Contractor* to do so or
 - the person is unable to continue to act in connection with the contract.
-

Notice to Proceed to Stage Two

-
- X28.5 (1) The *Project Manager* issues a Notice to Proceed to Stage Two when
- the *Contractor* has completed the *works* for Stage One,
 - the *Contractor* has obtained approvals and consents from Others as stated in the Works Information,
 - changes to the Budget have been agreed or assessed by the *Project Manager*,
 - the *Contractor* has met the conditions stated in the Works Information,
 - the *Project Manager* and the *Contractor* have agreed the total of the Prices for Stage Two and
 - the *Employer* (in its absolute discretion) has confirmed the *works* are to proceed.
-

(1A) The Notice to Proceed to Stage Two and any information provided with that notice is not a compensation event.

(2) If a Notice to Proceed to Stage Two is not issued for any reason, the *Project Manager* issues an instruction that the work required in Stage Two is removed from the Works Information. This instruction is not a compensation event and the *Contractor* is not entitled to any claim for loss of profit, business or opportunity arising from any such omission, whether or not the *Employer* appoints another contractor to complete the Stage Two *works*.

(3) If the *Project Manager* does not issue a Notice to Proceed to Stage Two

- the *Employer* may appoint another contractor to complete the Stage Two *works* and
- if clause 93.2 A4 applies the relevant amount due on termination uses the first forecast of the Defined Cost for the *works* for Stage One and not the first forecast of the Defined Cost for the whole of the *works*.

(4) The assessment of the Price for Work Done to Date for *works* provided prior to the date of issue of a Notice to Proceed to Stage Two is by reference to the

main Option applicable to Stage One and the assessment of the Price for Work Done to Date for *works* provided from and including the date of issue of a Notice to Proceed to Stage Two is by reference to the main Option applicable to Stage Two.

(5) From and including the date of issue of a Notice to Proceed to Stage Two, in the *Contractor's* applications for payment and in the *Project Manager's* assessments of the Price for Work Done to Date and payment certificates, the Price for Work Done to Date for Stage One and the Price for Work Done to Date for Stage Two are separately identified.

Changes to the Budget	<p>X28.6 (1) Before a Notice to Proceed to Stage Two is issued, if one of the following events happens, the <i>Project Manager</i> and the <i>Contractor</i> discuss different ways of dealing with changes to the Budget which are practicable.</p> <ul style="list-style-type: none"> • The <i>Project Manager</i> gives an instruction changing the <i>Employer's</i> requirements stated in the Works Information. • Additional events stated in the Contract Data. <p>(2) The <i>Project Manager</i> and the <i>Contractor</i> agree changes to the Budget within four weeks of the event arising which changes the Budget. If the <i>Project Manager</i> and the <i>Contractor</i> cannot agree the changes to the Budget the <i>Project Manager</i> assesses the change and notifies the <i>Contractor</i> of the assessment.</p> <p>(3) From and including the date of issue of a Notice to Proceed to Stage Two, if the Prices for the Stage Two <i>works</i> are adjusted by implementation of a compensation event the <i>Project Manager</i> adjusts the Budget by an equivalent amount and notifies the <i>Contractor</i> of the adjustment.</p>
Incentive payment	<p>X28.7 (1) Clause X28.7 does not apply unless the Contract Data states that it applies.</p> <p>If the final Project Cost is less than the Budget, the <i>Contractor</i> is paid the <i>budget incentive</i>. The <i>budget incentive</i> is calculated by multiplying the difference between the Budget and the final Project Cost by the percentage stated in the Contract Data.</p> <p>(2) The <i>Project Manager</i> makes a preliminary assessment of the <i>budget incentive</i> at Completion of the whole of the <i>works</i> and includes this in the amount due following Completion of the whole of the <i>works</i>.</p> <p>(3) The <i>Project Manager</i> makes a final assessment of the <i>budget incentive</i> and includes this in the final amount due.</p>

OPTION Y

Option Y(UK)1: **Not used**

Option Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996

Definitions

Note: incorporated in Appendix 1 and 12.6

Z1.57.

Y(UK)2

Y2.1 (1) The Act is The Housing Grants, Construction and Regeneration Act 1996 as amended by the Local Democracy, Economic Development and Construction Act 2009.

~~(2) A period of time stated in days is a period calculated in accordance with Section 116 of the Act.~~

Dates for payment

~~Y2.2 The date on which a payment becomes due is seven days after the assessment date.~~

~~The final date for payment is fourteen days or a different period for payment if stated in the Contract Data after the date on which payment becomes due.~~

~~The *Project Manager's* certificate is the notice of payment to the *Contractor* specifying the amount due at the payment due date (the notified sum) and stating the basis on which the amount was calculated.~~

Notice of intention to withhold payment

~~Y2.3 If either Party intends to pay less than the notified sum, he notifies the other Party not later than seven days (the prescribed period) before the final date for payment by stating the amount considered to be due and the basis on which that sum is calculated.~~

~~A Party does not withhold payment of an amount due under this contract unless he has notified his intention to pay less than the notified sum as required by this contract.~~

Suspension of performance

Y2.4 If the *Contractor* exercises his right under the Act to suspend performance, it is a compensation event.

Payment Y1

Z1.58

Y1.1 **NOTE: As incorporated into clauses 50 and 51 of these consolidated conditions of contract.**

Option Y(UK)3: Not used

Option Z: Additional conditions of contract

Additional conditions of contract

Z1.59

The *additional conditions of contract* stated in the Contract Data are ~~part of this contract~~ **incorporated into these consolidated conditions of contract.**

SCHEDULE OF COST COMPONENTS

This schedule applies where main Option C applies and/or applies to Stage One if main Option E applies to Stage One.

Z1.60

In this schedule the *Contractor* means the *Contractor* and not his Subcontractors. An amount is included only in one cost component and only if it is incurred in order to Provide the Works.

People 1

The following components of the cost of

- people who are directly employed by the *Contractor*, and whose normal place of working is within the Working Areas and
- people who are directly employed by the *Contractor*, and whose normal place of working is not within the Working Areas but who are working in the Working Areas.

11 Wages, salaries and amounts paid by the *Contractor* for people paid according to the time worked while they are within the Working Areas.

Z1.60.1

12 Payments to people for

- (a) [REDACTED]
- (b) Overtime
- (c) working in special circumstances
- (d) special allowances
- (e) absence due to sickness and holidays
- (f) severance related to work on this contract where such cost arises from a compensation event and has been authorised in writing by the *Project Manager*

13 Payments made in relation to people for

- (a) Travel
- (b) subsistence and lodging where such costs are incurred wholly and necessarily in connection with the works and are agreed in advance by the *Project Manager*
- (c) Relocation
- (d) medical examinations
- (e) passports and visas
- (f) travel insurance
- (g) items (a) to (f) for dependants
- (h) protective clothing
- (i) meeting the requirements of the law (save for employer's liability insurance)
- (j) pensions and life assurance
- (k) death benefit
- (l) occupational accident benefits
- (m) medical aid
- (n) a vehicle
- (o) safety training.

14 The following components of the cost of people who are not directly employed by the *Contractor* but are paid for by him according to the time worked while they are within the Working Areas.

Amounts paid by the *Contractor*.

Equipment 2

The following components of the cost of Equipment which is used within the Working Areas (including the cost of accommodation but excluding Equipment cost covered by the percentage for Working Areas overheads).

21 Payments for the hire or rent of Equipment not owned by

- the *Contractor*,
- his parent company or
- by a company with the same parent company

at the hire or rental rate multiplied by the time for which the Equipment is required.

- 22 Payments for Equipment which is not listed in the Contract Data but is
- owned by the *Contractor*,
 - purchased by the *Contractor* under a hire purchase or lease agreement or
 - hired by the *Contractor* from the *Contractor's* parent company or from a company with the same parent company

at open market rates, multiplied by the time for which the Equipment is required.

- 23 Payments for Equipment purchased for work included in this contract listed with a time-related on cost charge, in the Contract Data, of
- the change in value over the period for which the Equipment is required and
 - the time-related on cost charge stated in the Contract Data for the period for which the Equipment is required.

The change in value is the difference between the purchase price and either the sale price or the open market sale price at the end of the period for which the Equipment is required. Interim payments of the change in value are made at each assessment date. A final payment is made in the next assessment after the change in value has been determined.

If the *Project Manager* agrees, an additional item of Equipment may be assessed as if it had been listed in the Contract Data.

- 24 Payments for special Equipment listed in the Contract Data. These amounts are the rates stated in the Contract Data multiplied by the time for which the Equipment is required.

If the *Project Manager* agrees, an additional item of special Equipment may be assessed as if it had been listed in the Contract Data.

- 25 Payments for the purchase price of Equipment which is consumed.

- 26 Unless included in the hire or rental rates, payments for
- transporting Equipment to and from the Working Areas other than for repair and maintenance,
 - erecting and dismantling Equipment and
 - constructing, fabricating or modifying Equipment as a result of a compensation event.

- 27 Payments for purchase of materials used to construct or fabricate Equipment.

- 28 Unless included in the hire rates, the cost of operatives is included in the cost of people.

Plant and Materials 3 The following components of the cost of Plant and Materials.

- 31 Payments for
- purchasing Plant and Materials,
 - delivery to and removal from the Working Areas,
 - providing and removing packaging and
 - samples and tests.
- 32 Cost is credited with payments received for disposal of Plant and Materials unless the cost is disallowed.

Charges 4 The following components of the cost of charges paid by the *Contractor*.

- 41 Payments for provision and use in the Working Areas of
- water,
 - gas and

			<ul style="list-style-type: none"> electricity.
	42		Payments to public authorities and other properly constituted authorities of charges which they are authorised to make in respect of the <i>works</i> .
	43		Payments for <ul style="list-style-type: none"> (a) cancellation charges arising from a compensation event (b) buying or leasing land (c) compensation for loss of crops or buildings (d) Royalties (e) inspection certificates (f) charges for access to the Working Areas (g) facilities for visits to the Working Areas by Others (h) specialist services (i) consumables and equipment provided by the <i>Contractor</i> for the <i>Project Manager's</i> and <i>Supervisor's</i> offices.
	44		A charge for overhead costs incurred within the Working Areas calculated by applying the percentage for Working Areas overheads stated in the Contract Data to the total of people items 11, 12, 13 and 14. The charge includes provision and use of equipment, supplies and services, but excludes accommodation, for <ul style="list-style-type: none"> (a) Catering (b) medical facilities and first aid (c) Recreation (d) Sanitation (e) Security (f) Copying (g) telephone, telex, fax, radio and CCTV (h) surveying and setting out (i) Computing (j) hand tools not powered by compressed air.
Z1.60.2	45		Payments to a surety for the provision of any performance bond required under Option X13 if Option X13 is used and/or retention bond required under Option X16 if Option X16 is used.
Manufacture and fabrication	5		The following components of the cost of manufacture and fabrication of Plant and Materials which are <ul style="list-style-type: none"> wholly or partly designed specifically for the <i>works</i> and manufactured or fabricated outside the Working Areas.
	51		The total of the hours worked by employees multiplied by the hourly rates stated in the Contract Data for the categories of employees listed.
	52		An amount for overheads calculated by multiplying this total by the percentage for manufacturing and fabrication overheads stated in the Contract Data.
Design	6		The following components of the cost of design of the <i>works</i> and Equipment done outside the Working Areas.
	61		The total of the hours worked by employees multiplied by the hourly rates stated in the Contract Data for the categories of employees listed.
	62		An amount for overheads calculated by multiplying this total by the percentage for design overheads stated in the Contract Data.
	63		The cost of travel to and from the Working Areas for the categories of design employees listed in the Contract Data.
Insurance	7		The following are deducted from cost <ul style="list-style-type: none"> the cost of events for which this contract requires the <i>Contractor</i> to insure and other costs paid to the <i>Contractor</i> by insurers and the cost of excess payments or deductibles.
Z1.60.3			

SHORTER SCHEDULE OF COST COMPONENTS

Z1.61

An amount is included only in one cost component and only if it is incurred in order to Provide the Works.

People 1

The following components of the cost of

- people who are directly employed by the *Contractor*, and whose normal place of working is within the Working Areas,
- people who are directly employed by the *Contractor*, and whose normal place of working is not within the Working Areas but who are working in the Working Areas and
- people who are not directly employed by the *Contractor* but are paid for by him according to the time worked while they are within the Working Areas.

Z1.61.1

11

Amounts paid by the *Contractor* including those for meeting the requirements of the law (save for employer's liability insurance) and for pension provision.

Equipment 2

The following components of the cost of Equipment which is used within the Working Areas (including the cost of accommodation but excluding Equipment cost covered by the percentage for people overheads).

21

Amounts for Equipment which is in the published list stated in the Contract Data. These amounts are calculated by applying the percentage adjustment for listed Equipment stated in the Contract Data to the rates in the published list and by multiplying the resulting rate by the time for which the Equipment is required.

22

Amounts for Equipment listed in the Contract Data which is not in the published list stated in the Contract Data. These amounts are the rates stated in the Contract Data multiplied by the time for which the Equipment is required.

23

The time required is expressed in hours, days, weeks or months consistently with the list of items of Equipment in the Contract Data or with the published list stated in the Contract Data.

24

Unless the item is in the published list and the rate includes the cost component, payments for

- transporting Equipment to and from the Working Areas other than for repair and maintenance,
- erecting and dismantling Equipment and
- constructing, fabricating or modifying Equipment as a result of a compensation event.

25

Unless the item is in the published list and the rate includes the cost component, the purchase price of Equipment which is consumed.

26

Unless included in the rate in the published list, the cost of operatives is included in the cost of people.

27

Amounts for Equipment which is neither in the published list stated in the Contract Data nor listed in the Contract Data, at competitively tendered or open market rates, multiplied by the time for which the Equipment is required.

Plant and Materials	3	The following components of the cost of Plant and Materials.
	31	Payments for <ul style="list-style-type: none"> • purchasing Plant and Materials, • delivery to and removal from the Working Areas, • providing and removing packaging and • samples and tests.
	32	Cost is credited with payments received for disposal of Plant and Materials unless the cost is disallowed.
Charges	4	The following components of the cost of charges paid by the <i>Contractor</i> .
	41	A charge calculated by applying the percentage for people overheads stated in the Contract Data to people item 11 to cover the costs of <ul style="list-style-type: none"> • payments for the provision and use in the Working Areas of water, gas and electricity, • payments for buying or leasing land, compensation for loss of crops or buildings, royalties, inspection certificates, charges for access to the Working Areas, facilities for visits to the Working Areas by Others and • payments for the provision and use of equipment, supplies and services (excluding accommodation) for catering, medical facilities and first aid, recreation, sanitation, security, copying, telephone, telex, fax, radio, CCTV, surveying and setting out, computing, and hand tools not powered by compressed air.
	42	Payments for cancellation charges arising from a compensation event.
	43	Payments to public authorities and other properly constituted authorities of charges which they are authorised to make in respect of the <i>works</i> .
	44	Consumables and equipment provided by the <i>Contractor</i> for the <i>Project Manager's</i> and <i>Supervisor's</i> office.
	45	Specialist services.
	46	Payments to a surety for the provision of any performance bond required under Option X13 if Option X13 is used and/or advance payment bond required under Option X14 if Option X14 is used and/or retention bond required under Option X16 if Option X16 is used.
Manufacture and fabrication	5	The following components of the cost of manufacture and fabrication of Plant and Materials, which are <ul style="list-style-type: none"> • wholly or partly designed specifically for the <i>works</i> and • manufactured or fabricated outside the Working Areas.
	51	Amounts paid by the <i>Contractor</i> .
Design	6	The following components of the cost of design of the <i>works</i> and Equipment done outside the Working Areas.
	61	The total of the hours worked by employees multiplied by the hourly rates stated in the Contract Data for the categories of employees listed.
	62	An amount for overheads calculated by multiplying this total by the percentage for design overheads stated in the Contract Data.
	63	The cost of travel to and from the Working Areas for the categories of design employees listed in the Contract Data.
Insurance	7	The following are deducted from cost <ul style="list-style-type: none"> • costs against which this contract required the <i>Contractor</i> to insure and • other costs paid to the <i>Contractor</i> by insurers and • the cost of excess payments or deductibles.

Z1.61.2

The following notes should be read in conjunction with the relevant definitions of Defined Cost and Disallowed Cost and the Schedule of Cost Components/Shorter Schedule of Cost Components. Without prejudice to the effect of clause 52.1 (by virtue of which all items not included in the Defined Cost are deemed to be included in the Fee):

- ## Part A Notes

[illegible]

Any payments made to people in respect of sickness or holidays will only be considered Defined Cost if the people have worked continually within the Working Areas in excess of a three month time period. Payments to people in respect of absence arising from sickness or holidays lasting for a continuous period in excess of 3 weeks are not included in Defined Cost.

Only payments made to people for time spent working on this contract will be considered Defined Cost. Any payments made to people for attending internal company briefings, personnel meetings, appraisals, staff meetings, personal development training or the like is deemed to be included within the Fee.

Only payments made to people for providing or attending training as a direct requirement of this contract will be considered Defined Cost. Any costs incurred providing training for purposes of personal or company

development is deemed to be included within the Fee. Any costs incurred for time receiving or providing personal or company development training is considered allocated within the Fee.

The following components of the cost of people who are not directly employed by the Contractor but paid by the Contractor according to the time worked whilst they are within the Working Areas.

Only those people who are paid by the Contractor on a time only basis are included within this cost component, for example specialist consultants, agency staff, consultant or labour only subcontract staff.

An example of "people" who would not meet the criteria would be where the Subcontractor supplies labour and has the added requirement of providing any associated accommodation, equipment, supplies and services for those items listed within item 44 to support the provision of people. This would not be considered a time only cost component.

Section 2: Equipment

Payments made for overhead to group companies for Equipment

Only the reasonable equipment overhead cost of group companies subcontracted under this contract will be considered Defined Cost.

Section 3: Plant and Materials

Payments made for overhead to group companies for Plant and Materials

Only the reasonable plant and materials overhead cost of group companies subcontracted under this contract will be considered Defined Cost.

Section 4: Charges

A charge for overhead costs incurred within the Working Areas calculated by applying the percentage for Working Areas overheads stated in the Contract Data to the total of people items 11, 12, 13 and 14 (or in the case of the Shorter Schedule of Cost Components, item 11). The charge includes provision and use of equipment, supplies and services for items 44 (a) through (j) (or in the case of the Shorter Schedule of Cost Components, item 41).

Any costs relating to the provision by the Contractor of a parent company guarantee are deemed to be included in the Fee. Any costs relating to the provision of a replacement retention bond and/or provision of any replacement performance bond and/or replacement advance payment bond are deemed to be included in the Fee and are not admissible as Defined Cost.

Section 5: Manufacture and Fabrication

Payments made for overhead to group companies

Hourly rates for categories of employee represent the cost of employment, exclusive of any overheads and the percentage for manufacture and fabrication overhead represent the reasonable cost of local manufacture and fabrication related overheads only on a percentage basis as anticipated from the associated business plan for the facility.

Section 6: Design

Payments made for overhead to group companies for design:

Hourly rates for categories of employee represent the cost of employment, exclusive of any local and corporate overhead and the percentage for design overhead represent the reasonable cost of local design related overheads only on a percentage basis as anticipated from the associated business plan for the facility.

Design consultants – overhead charge

Only design undertaken outside the Working Areas by employees of the Contractor will attract the design overhead percentage. Design undertaken outside the Working Areas by consultants/Subcontractors or the like will not attract the design overhead percentage.

Section 7: Insurance

Insurance premiums:

Excess payments or deductibles on all insurance policies relating to this contract are not included in Defined Cost.

Part B Notes

Part B contains notes applicable to all cost components including requirements in relation to the presentation of costs by the *Contractor*, pre-conditions for costs reasonably incurred and requirements for the verification and payment of costs by the *Employer*.

Where the *Contractor* is unable to demonstrate that costs have been reasonably incurred by either the *Contractor* or his Subcontractors, such costs are Disallowed Costs and not payable as Defined Cost.

1 - Reasonably Incurred Costs

Costs are only considered reasonably incurred if they meet the following criteria:

- the *Contractor* can demonstrate that they represent competitive market rates;
- they do not fall within the definition of Disallowed Costs;
- they are not included within the *Contractor's* Fee or overhead percentages;
- they have been captured within systems for the collection of data either accepted by the *Project Manager* or stated in the Works Information.

2 - Cost Verification

An audit of the *Contractor's* financial controls and compliance procedures specified in this contract will be carried out by the *Employer* or his representatives to ensure the controls are operating effectively.

Without prejudice to the requirement of clause Z2.5, the *Employer* or his representatives will carry out a range of reviews and detailed open-book audits to verify and provide internal assurances that all costs have been reasonably incurred by the *Contractor* and his Subcontractors and that they accord with the Schedule of Cost Components (or Shorter Schedule of Cost Components) and these Supplementary Notes.

The *Contractor* is required to replicate a similar cost verification regime when dealing with the costs of his Subcontractors and other related parties and ensures that the *Employer* has rights of access to all Subcontractors and suppliers (including at lower tier levels) and their accounts to audit/verify Defined Cost.

APPENDIX 1

Additional Definitions

The following defined terms apply to this contract:

Act is The Housing Grants, Construction and Regeneration Act 1996 as amended by the Local Democracy, Economic Development and Construction Act 2009.

Adjudicator means any adjudicator appointed from time to time in accordance with the Dispute Resolution Procedure.

Background IPR means IPR owned by the *Contractor* or a Subcontractor or other third party and which is not assigned to the *Employer* pursuant to clause Z2.7.2.

Call-Off Contract means a Call-Off Contract issued pursuant to the terms of the Framework Agreement.

Centre for Civil Society means Centre for Civil Society Limited registered company in England (Company Number: 07333734) whose registered office is at 136 Cavell Street, London, E1 2JA.

Change of Control means a change of ownership of the *Contractor* (or *parent company* if applicable) where such change relates to fifty percent or more of the issued share capital of the *Contractor* (or *parent company* as the case may be).

Connected Persons means all and any of the *Contractor's* employees, directors, contractors, agents, Subcontractors, suppliers, shareholders, professional advisers (including lawyers, auditors, financial advisers, accountants and technical consultants) or underwriters.

Construction Industry Scheme means the provisions of Chapter 3 of Part 3 of the Finance Act 2004 (Construction Industry Scheme) together with any regulations made pursuant to these provisions, including the Income Tax (Construction Industry Scheme) Regulations 2005 and amendments to those regulations.

Coronavirus Pandemic means the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic designated as such by the World Health Organization on 11 March 2020 and which causes the disease known as "COVID-19", including any mutations of COVID-19.

Corporate IPRs are those trade marks, trade names and other IPRs listed in Schedule 17 of the Framework Agreement as amended by the *Employer* to (i) add further IPRs to the list of Corporate IPRs or (ii) remove or otherwise amend IPRs from or in the list of Corporate IPRs as a result of changes in the Standards.

Critical Defect means a Defect which appears on or before the *defects date* and which is:

critical to the operation and/or safety of the *Network*;

within a category of Defects identified in the Works Information as Critical Defects; or

deemed by the *Employer* to be critical to the carrying out and completion of the *works* and/or the work of others.

Data Protection Legislation means:

- (a) any legislation in force from time to time in the United Kingdom which implements the European Community's Directive 95/46/EC and Directive 2002/58/EC, including but not limited to the Data Protection Act 1998 and the Privacy and Electronic Communications (EC Directive) Regulations 2003;
- (b) from 25 May 2018 only, the Regulation (EU) 2016/679 on the protection of natural persons with regard to the Processing of personal data and on the free movement of such data (the "**General Data Protection Regulation**");
- (c) any other legislation in force from time to time in the United Kingdom relating to privacy and/or the Processing of Personal Data; and

(d) any statutory codes of practice issued by the Information Commissioner in relation to such legislation.

Dispute means any dispute, controversy or claim arising out of or in connection with this contract.

Documentation means all documents, items of information, data, reports, drawings, specifications, plans, software, designs, inventions and/or other material produced or supplied by or on behalf of the *Contractor* in the performance of this contract.

End User has the meaning given to it in Article 2 of the Value Added Tax (Section 55A) (Specified Services and Excepted Supplies) Order 2019.

FOI Legislation means the Freedom of Information Act 2000, all regulations made under it and the Environmental Information Regulations 2004 and any amendment or re-enactment of any of them; and any guidance issued by the Information Commissioner, the Department of Constitutional Affairs, or the Department for Environment Food and Rural Affairs (including in each case its successors or assigns) in relation to such legislation.

Framework Agreement means the framework agreement reference **1** between Rail for London Limited and the *Contractor* relating to London Rail Infrastructure Improvement Framework – Major Works (Lot 1.2).

Framework Employer has the meaning given in the Framework Agreement.

GLA Act means the Greater London Authority Act 1999.

Greater London means that term as it is used in the GLA Act.

Information means information recorded in any form held by or on behalf of the *Employer*.

Infraco means any of or all of LUL Nominee BCV, LUL Nominee SSL and TLL and their respective successors in title and assigns.

Infrastructure Manager has the meaning as ascribed to it in the Railways and Other Guided Transport Systems (Safety) Regulations 2006.

IPR means intellectual property rights including patents, trade marks, service marks, trade names, design rights, copyright (including rights in computer software and databases), moral rights, rights in know-how, rights in domain names and other intellectual property rights, (including any professional, manufacturer's or supplier's warranties and/or indemnities) in each case whether registered or unregistered, and including applications for the grant of any such rights and all rights or forms of protection having equivalent or similar effect anywhere in the world.

London Living Wage means the London rate for the basic hourly wage as updated and published annually by the Living Wage Foundation (or any relevant replacement organisation) on its website (www.livingwage.org.uk).

Losses means any expenses, liability, losses, claims, proceedings, compensation and costs whatsoever or howsoever arising.

Management Plans mean any management plans (including any plans relating to key person succession (if Option X23 applies), the Subcontractor Procurement Plan, the Risk Management Plan and the Quality Plan identified as such in the Works Information.

Mayor means the person from time to time holding the office of Mayor of London as established by the GLA Act.

Minimum Records means:

- (a) all necessary information for the evaluation of claims or compensation events, whether or not relating to the *Contractor* or to any Subcontractors (or sub-sub-contractors of any tier);
- (b) management accounts, information from management information systems and any other management records;
- (c) accounting records (in hard copy as well as computer readable data);
- (d) contract and subcontract files (including proposals of successful and unsuccessful bidders, bids, rebids, etc.);
- (e) original estimates;

- (f) estimating worksheets;
- (g) correspondence;
- (h) compensation event files (including documentation covering negotiated settlements);
- (i) schedules including capital works costs, timetable and progress towards Completion;
- (j) general ledger entries detailing cash and trade discounts and rebates;
- (k) commitments (agreements and leases) greater than £5,000 (five thousand pounds);
- (l) detailed inspection records;
- (m) such materials prepared in relation to the invitation to tender and subsequent tendering process relating to cost breakdowns, in each case which have not already been provided to the *Employer*;
- (n) accounts and records of the Price for Work Done to Date and all other amounts to be paid to the *Contractor* under this contract, and
- (o) test and commissioning results.

MTR means Mass Transit Railway

Network Rail means Network Rail Infrastructure Limited company number 2904587 or its successor in title or assignee

Operator means a person with statutory duties to provide or secure the provision for Greater London of public passenger services by railway.

Pay Less Notice means the notice referred to in clause Y2.3.

Personal Data has the meaning given to it in Data Protection Legislation.

Processing has the meaning given to it in Data Protection Legislation and “**Process**”, “**Processes**” and “**Processed**” will be construed accordingly.

Prohibited Act means:

- (a) offering or agreeing to give to any servant, employee, officer or agent of the *Employer* or the TfL Group any grant, gift or consideration of any kind as an inducement or reward:
 - for doing or not doing (or for having done or not having done) any act in relation to the obtaining or performance of this contract or any other contract with the *Employer*; or
 - for showing or not showing favour or disfavour to any person in relation to this contract or any other contract with the *Employer*;
- (b) entering into this contract or any other contract with the *Employer* in connection with which commission has been paid or has been agreed to be paid by the *Contractor* or on his behalf or to his knowledge unless, before the relevant contract or document is entered into, particulars of any such commission and the terms and conditions of any such contract or document for the payment thereof have been disclosed in writing to the *Employer*;
- (c) committing any offence:
 - under the Prevention of Corruption Acts 1889-1916 and/or the Bribery Act 2010,
 - under any law or legislation creating offences in respect of fraudulent acts, or
 - at common law in respect of fraudulent acts

in relation to this contract or any other contract with the *Employer*; or

- (e) defrauding or attempting to defraud the *Employer*.

Project means the project to carry out and complete the *works*.

Relevant Individual means, for the purposes of Z2.20, any servant, employee, officer, consultant or agent of the *Contractor* or any Subcontractor carrying out, or intended to carry out, any aspects of the *works*.

Relevant Conviction means, for the purposes of Z2.20, any unspent criminal conviction relating to actual or potential acts of terrorism or acts which threaten national security.

Responsible Procurement Principles mean the seven principles of responsible procurement more particularly described in the GLA Group Responsible Procurement Policy dated March 2006, as updated in January 2008 and as may be further updated from time to time.

Restricted Countries means any country outside the European Economic Area as may be constituted from time to time or the UK.

Reverse Charge Order means the Value Added Tax (Section 55A) (Specified Services and Excepted Supplies) Order 2019/892.

Safety Breach means a material breach of the contract caused by the gross incompetence, wilful default or reckless disregard to safety of the *Contractor* or any Subcontractor (or anyone employed or acting on behalf of the *Contractor* or any Subcontractor) which has materially affected (or which had the potential to materially affect) the safe provision of the *works*, the safe operation of the Underground Network and/or the safety of the *Employer's* Customers, staff or any other person.

Senior Representative means a representative of a Party at senior executive level and not engaged day to day in the management of this contract.

Standards means the various standards documents and associated codes of practice identified in the Works Information as applicable to the *works*.

Statutory Requirement means any act of parliament, any instrument, rule or order made under any act of parliament and any regulation or by-law of any local authority or of any Statutory Undertaker which has jurisdiction with regard to the *works* or with whose systems the same are or will be connected including any statutory provisions and any decisions of a relevant authority under the statutory provisions which control the right to develop the site in connection with which the *works* are to be provided;.

Statutory Undertaker means any governmental or local authority or statutory undertaker:

- which has any jurisdiction with regard to the *works* and/or the Project including any jurisdiction to control development of the Site or any part of it;
- with whose requirements the *Employer* is accustomed to comply; or
- with whose systems and/or utilities the Project and/or the *works* will be connected.

Supplementary Notes means the notes entitled "Schedule of Cost Components/Shorter Schedule of Cost Components Supplementary Notes" included in this contract.

TfL Group means Transport for London ("TfL"), a statutory body set up by the Greater London Authority Act 1999 and any of its subsidiaries and their subsidiaries. The *Employer* is a member of the TfL Group.

TLL means Tube Lines Limited (No. 03923425) (or its successor in title or assignee).

VATA means the Value Added Tax Act 1994.



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.03

Contract Data Part 1

1.031

Contract Data

PART ONE – DATA PROVIDED BY THE *EMPLOYER*

Statements given in all contracts

1.

General

If Option X28 does not apply the *conditions of contract* are the core clauses and the clauses for main Option C, dispute resolution Option W2 and secondary Options clauses **X1, X2, X5, X7, X18, X20, X22, X23, X24, X25, X26,** and Y(UK)2 of the amended NEC3 Engineering and Construction Contract April 2013 (including Option Z) as set out in Part B of Schedule 2 to the Framework Agreement.

If Option X28 applies Option X28 does not apply.

- Option **X15** applies [~~does not apply~~]

- The *works* are to extend the Maintenance Facility Building at Beckton Depot with Southern sidings, train temporary fit out shed and associated works as more fully described in the Works Information

- The *Employer* is

Name: Docklands Light Railway Limited

Address: 5 Endeavour Square, London, E20 1JN, United Kingdom

- The *Project Manager* is

Name: [REDACTED]

Address: Beckton Depot, Armada Way, London, E6 7AB

- The *Supervisor* is

Name: [REDACTED]

Address: Beckton Depot, Armada Way, London, E6 7AB
- The *Adjudicator* is an independent person appointed to act as an adjudicator in accordance with clause W2.2
- The Works Information is in Volume 2.0 of this contract
- The Site Information is in Volume 3.0 of this contract
- The *boundaries of the site* are in Volume 3.0 of this contract
- The *language of this contract* is set out in the Framework Data, Schedule 1 to the Framework Agreement
- The *law of the contract* is set out in the Framework Data, Schedule 1 to the Framework Agreement
- The *period for reply* is 4 (four) weeks unless longer where stated in the Works Information
- The *Adjudicator nominating body* is set out in the Framework Data, Schedule 1 to the Framework Agreement
- The *tribunal* is set out in the Framework Data, Schedule 1 to the Framework Agreement
- The following matters will be included in the Risk Register:
 - Maintaining depot operations throughout the works
 - Ground Conditions not as established from surveys
 - Wheel Lathe access limited by Depot
 - Availability of construction materials impacting cost

time of quality of the *works*

- Increasing costs of People, Equipment, Plant and Materials associated with inflation.

3. Time •

The *starting date* is: 23 January 2023

- The *access dates* are:

Part of the Site (as described in the Site Information)	Date
1. Maintenance Facility Building and Road BK,BL, BM (Non-intrusive access only) (Subject to WI1100)	██████████
2. Maintenance Facility Building and Road BK,BL, BM (all other access) (Subject to WI1100)	█ ██████
3. Southern Sidings (Subject to WI 1100)	██████████
4. Train Temporary Fit Out shed (Subject to WI 1100)	██████████

- The *Contractor* submits revised programmes at intervals no longer than 4 (four) weeks.

4. Testing and Defects •

The *defects date* is fifty-two (52) weeks after Completion of the whole of the *works*.

- The *defect correction period* is four (4) weeks except that;
 - the *defect correction period* for Defects which the

Supervisor reasonably considers may have an impact on the carrying out and completion of the work of Others is two (2) weeks

- the *defect correction period* for Defects that have or may have an impact on health and/or safety and/or security is twenty-four (24) hours

5. Payment •

The *currency of this contract* is set out in the Framework Data, Schedule 1 to the Framework Agreement

- The *assessment interval* is set out in the Framework Data, Schedule 1 to the Framework Agreement
- The *interest rate* is 2% per annum (not less than two) above the Base rate of the Bank of England.
- The *Employer* is an End User for the purposes of this contract.

6. •
Compensation
events

The place where weather is to be recorded is London, St. James Park Met Office Climate Station

The *weather measurements* to be recorded for each calendar month are

- the cumulative rainfall (mm)
- the number of days with rainfall more than 5 mm
- the number of days with minimum air temperature less than 0 degrees Celsius
- the number of days with snow lying at 09.00GMT

and these measurements:

- number of days where wind speed is more than 80 km/h

The *weather measurements* are supplied by Met Office, FitzRoy Road, Exeter, Devon EX1 3PB

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at London, St. James Park Met Office Climate

Station and which are available from the Met Office and which are available from Met Office, FitzRoy Road, Exeter, Devon EX1 3PB

- Where no recorded data are available

Assumed values for the ten year weather return *weather data* for each *weather measurement* for each calendar month are

Not applicable

- If there is to be a compensation event for physical conditions:

Clauses 60.1(12), 60.2 and 60.3 apply

8. Risks and insurance

Insurances taken out by the *Employer*

- **Construction All Risks Insurance** - details and minimum limit of indemnity as set out in the Insurance Table in clause 84.2 of the consolidated conditions of contract.
- **Public liability insurance** - details and minimum limit of indemnity as set out in the Insurance Table in clause 84.2 of the consolidated conditions of contract.

Insurances taken out by the *Contractor*

- **Employer's liability insurance** - details as set out in the Insurance Table in clause 84.2 [REDACTED]
[REDACTED]
[REDACTED]
- **Contractor's equipment loss insurance** - details and minimum limit of indemnity as set out in the Insurance Table in clause 84.2 of the consolidated conditions of contract.

- **Professional indemnity insurance** - details as set out in the Insurance Table in clause 84.2 [REDACTED]

Optional statements

If the *Employer* has decided the *completion date* for the whole of the *works*

- The *completion date* for the whole of the *works* is [REDACTED]

If the *Employer* is not willing to take over the *works* before the Completion Date

- The *Employer* is not willing to take over the *works* before the Completion Date.

If no programme is identified in part two of the Contract Data

- The *Contractor* is to submit a first programme for acceptance within four (4) weeks of the Contract Date.

If the *Employer* has identified work which is to meet a stated *condition* by a *key date*

- The *key dates and conditions* to be met are

Not applicable

If clause 46 (Critical Defects) is to apply

- Clause 46 applies

If Y(UK)2 is used and the final date for payment is not 14 days after the date when payment is due

Not applicable

If there are additional *Employer's* risks

- These are the additional *Employer's* risks
- The Operational Track Crossing is available during possession hours. Any impact to this is an *Employer's risk*.
- The *Employer* will book all necessary possessions within T- 15 prior to Contract award to maintain the *Contractor's* programme.
- The *Contractor* has assumed that all design stage credits (RIBA Stage 2-4 by Others) which contribute to the current projected score of 70.93% have been assessed and will be awarded in full at the time of assessment. The *Contractor* will carry out a review of the design stage credits to ensure that they meet the BREEAM requirements and highlight where there is any shortfall. The *Contractor* will support with the *Employer* to ensure any of these outstanding credits are closed out.
- All obstructions within 0.5m is a *Contractor's* Risk and included in the Price and Programme. Any obstruction encountered below 0.5m is an *Employer's* risk.
- Any works required to remove, control, or dispose of a UXI follow discovery is an *Employer's* risk. UXO surveys have been allowed for in the Price and Programme.
- Works required to remove and dispose of Asbestos within the Southern Sidings sub-station is an

Employer's risk.

- The *Contractor* will be able to reuse all track materials for the construction of the BL line that are drawn in black on 65204-AEC-TRK-TD350_0-DR-RE-3002 C01. Any change to this is an *Employer's risk*.
- Item highlighted in 65204MF-ARC-MAC-TD350_00-RPT-IN-0006 §3.0 (contained in Volume 2.0 of the contract) as "Some of the external interface boundaries of work have not been clearly defined or demarcated." is an *Employer's risk*.
- Any works required to the existing drainage network unless stated in the Works Information including all Appendices is an *Employer's risk*.
- Non-compliances for design delivered by Others is an *Employer's risk*

Cover/deductibles for insurances provided by the Employer

1

Construction All Risks Insurance (as stated in the Insurance Table)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

■ [REDACTED]

■ [REDACTED]
[REDACTED]
[REDACTED]

However in respect of defective design, plan, specification, materials or workmanship the following will apply where option is selected by the Insured:

■ [REDACTED]
[REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]
[REDACTED]

2

Public liability insurance (as stated in the Insurance Table)

[REDACTED]

[REDACTED]

[REDACTED]

If additional insurances are to be provided

- The *Contractor* provides these additional insurances

Not applicable

If there are *specified termination events*:

Not applicable

If *Contractor's* warranties are to be provided

- clause Z2.1 applies

If Subcontractor's warranties are to be provided

- clause Z2.2 applies

If liquidated damages for disruption are to apply

- clause Z2.12 does not apply

If Main Option C applies

- The *Contractor's share percentages* and the *share ranges* are

<i>Share range</i>	<i>Contractor's share percentage</i>
less than 100%	[REDACTED]
greater than 100%	[REDACTED]
greater than 140%	[REDACTED]

The *share termination threshold* is [REDACTED] of the final total of the prices

- The *Contractor* prepares forecasts of Defined Cost for the *works* at intervals no longer than four (4) weeks.
- The *exchange rates* are those published in Bank of England daily spot exchange rates against Sterling

If Option X1 is used

- The *base date* for indices is 05 July 2022
- The proportions used to calculate the Price Adjustment Factor are:

[REDACTED]	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
[REDACTED]	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
	[REDACTED]
100%	

Option X3 is not used

If Option X5 is used

- The *completion date* for each *section* of the *works* is
-

Section	Description	Completion date
1	Temporary Fit Out Shed Bring into Use	██████████
2	Southern Sidings Bring into Use	██████████ ██████████
3	BK-BL-BM roads western entry and western stabling berths Bring into Use	██████████ ██████████
4	Maintenance Facility Building Bring into Use	████████████████████

Where "Bring into Use" means an asset has achieved a state of acceptance as determined by the DLR Change Assurance Panel (CAP) of an asset/system and can be used in operational service but has not achieved Handover or Handback. This is detailed in the Glossary of the Works Information.

If Options X5 and X6 are used together

Not applicable

If Options X5 and X7 are used together

- Delay damages for each *section* of the *works* are

Section	Description	Amount per day

1	Temporary Fit Out Shed Bring into Use	██████████
2	Southern Sidings Bring into Use	██████████
3	BK-BL-BM roads western entry and western stabling berths Bring into Use	██████████
4	Maintenance Facility Building Bring into Use	██████████

Remainder of the *works* ██████████

Where "Bring into Use" means an asset has achieved a state of acceptance. As determined dictated by the DLR Change Assurance Panel (CAP) of an asset/system and can be used in operational service, but however has not achieved Handover or Handback. This is detailed in the Glossary of the Works Information.

If Option X6 is used (but not if Option X5 is also used)

Not applicable

If Option X7 is used (but not if Option X5 is also used)

Not applicable

Option X12 is not used

If Option X13 is used

Not applicable

Option X14 is not used

If Option X16 is used

Not applicable

Option X17 is not used

If Option X18 is used

- The *Contractor's* liability to the *Employer* for indirect or consequential loss is limited for each and every claim to the figure in respect of professional indemnity insurance stated in the Contract Data
- For any one event, the *Contractor's* liability to the *Employer* for loss of or damage to the *Employer's* property is, without prejudice to clause 83.3 of the contract, [REDACTED].
- The *Contractor's* liability for Defects due to his design which are not listed on the Defects Certificate is for each and every claim to the figure in respect of professional indemnity insurance stated in the Contract Data
- The *Contractor's* total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters is limited to a sum equal to [REDACTED] of the total of the Prices.
- The *Contractor's* liability for delay damages applicable under clause X5 and X7 is limited to [REDACTED] of the total of the Prices.

If Option X20 is used

- The *incentive schedule* for Key Performance Indicators is in Volume 1.0 of this contract
- A report of performance against each Key Performance Indicator is provided periodically.

If Option X24 is used

- The *fee cap* is [REDACTED] of the Prices

If Option X25 is used

If no
information
execution plan
is identified in
part two of the
Contract Data

- The period after the Contract Date within which the *Contractor* is to submit a first Information Execution Plan for acceptance is four (4) weeks

If Option X28 is used

Not applicable

Option Z



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.03

Contract Data Part 2

1.032

PART TWO – DATA PROVIDED BY THE *CONTRACTOR*

- The *Contractor* is

Name: Morgan Sindall Construction & Infrastructure LTD
(Reg 04273754)

Address: Kent House, 14-17 Market Place, London W1W 8AJ
- **Where main Option C applies**

The *direct fee percentage* is [REDACTED]

The *subcontracted fee percentage* is [REDACTED]
- The *working* areas are the Site and any other offices utilised by staff Providing the Works and the homes of any people working from home in connection with Providing the Works (limited to 2/3 days per week working from home)
- The key people are
 1. Name: [REDACTED]

Job: Project Director

Responsibilities:

Overseeing Morgan Sindall's activities across the Beckton Depot project. Providing DLR with a single point of accountability for project delivery and performance.

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

██████████

[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

3. Name: [REDACTED]

Job: Senior Project Manager (Delivery Director)

Responsibilities:

Leading delivery of the Beckton Depot project. Co-ordinating teams on key deliverables at discipline and contract level to enable successful handover and completion

Qualifications:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

- The following matters will be included in the Risk Register
- Programme milestones
- BREEAM excellent
 - Existing services – buried and surface supplies
 - Stakeholders and Other's interfacing with the works
 - Design Information

**Optional
Statements**

If the *Contractor* is to provide Works information for his design

Not applicable

If a programme is to be identified in the Contract Data

- The programme identified in the Contract Data is

Not applicable – See Contract Data Part 1

- The *activity schedule* is in Volume 1 Section 1.034 of the Contract

- [REDACTED]
[REDACTED]
[REDACTED]

If Option X23 is used

- The *handover period* for [REDACTED] is 1 week
- The *handover period* for [REDACTED] is 1 week
- The *handover period* for [REDACTED] is 1 week

If an **If Option X25 is used**

information

execution

plan is to be

identified in

the Contract

Data

Not applicable – See Contract Data Part 1

Data for Schedule of Cost Components

- The listed items of Equipment purchased for work on this contract, with an on cost charge, are
Not applicable
- The rates for special Equipment are
Not applicable
- The percentage for Working Areas overheads is ■ %
- The hourly rates for Defined Cost of manufacture and fabrication outside the Working Areas are
Not applicable
- The percentage for manufacture and fabrication overheads is ■ %

Data for both schedules of cost components

The inclusive rates for People are

category of employee	weekly rate
Apprentice Cost Manager	■
Assistant Planner	■
Assistant Project Manager	■
Assistant Quality Manager	■
Assistant Quantity Surveyor	■
BIM Manager	■
Commercial Manager	■
Construction Manager	■
Cost Manager	■
Design Manager	■

Document Controller	████████
Engineering Manager	████████
Environmental manager	████████
HSE Administrator	████████
HSE Manager	████████
Independent Inspector	████████
Logistics Manager	████████
Managing Quantity Surveyor	████████
Materials Manager	████████
MEP Manager	████████
MEP Site Manager	████████
Office Manager	████████
Procurement Manager	████████
Project Director	████████
Project Manager	████████
Project Planner	████████
Project Quantity Surveyor	████████
Quality Manager	████████
Quantity Surveyor	████████
Risk Manager	████████
Section Engineer	████████
Senior HSE Manager	████████
Senior Planner	████████
Senior Planning Manager	████████
Senior Project Manager	████████
Senior Quantity Surveyor	████████
Site Agent	████████
Site Engineer	████████
Site Engineer Apprentice	████████
Site Safety Officer	████████
Stakeholder Manager	████████
Sub Agent	████████
Supply Chain Manager	████████

Works Manager

██████████

The above rates are based on a minimum of 8 hours, based on Monday – Friday normal hours working. Any out of hours working will be subject to the percentage adjustment for rates for out of hours included in Part B: Pricing Schedule of the Framework Agreement between the parties.

- The hourly rates for Defined Cost of design outside the Working Areas are

category of employee

hourly rate

Principal Designer

██████████

Senior Designer

██████████

Designer

██████████

Assistant Designer

██████████

- The percentage for design overheads is ██████████

The categories of design employees whose travelling expenses to and from the Working Areas are included as a cost of design of the *works* done outside the Working Areas are

- Senior Designer
 - Designer
-

Data for Shorter Schedule of Cost Components

- The percentage for people overheads is ██████████
- The published list of Equipment is set out in the Framework Data, Schedule 1 to the Framework Agreement.
- The percentage for adjustment for Equipment in the published list is set out in the Framework Data, Schedule 1 to the Framework Agreement.
- The rates for other Equipment are

Not applicable



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.03

Incentive Schedule

1.033

X20 INCENTIVE SCHEDULE APPLICABILITY			SCORING						
REFERENCE	MEASURE LINKED TO INCENTIVE SCHEDULE	AMOUNT	CATEGORY	KEY PERFORMANCE INDICATOR	MEASURE	RED	AMBER	GREEN	REPORTING FREQUENCY



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.03

Activity Schedule

1.034

Activity Schedule

	Total Price £
Maintenance Facility Building, Southern Sidings and Temporary Fit Out Shed	
[REDACTED]	[REDACTED]

Maintenance Facility Building, Southern Sidings and Temporary Fit Out Shed					
ACTIVITY SCHEDULE					
	Description	Qty	Unit	Rate	£
	Preliminaries and Management				
1	Project Resources - Office staff - Complete Schedule				
2	Project Resources - Site staff - Complete Schedule				
3	Accommodation				
4	Accommodation, equipment				
5	Accommodation consumables				
6	Lifting equipment incl cranes				
7	Scaffolding				
8	Temporary signage				
9	Surveying/Setting out				
10	Temporary lighting and power				
11	Temporary water				
12	Traffic management				
13	Possession / Isolation management				
14	Insurances				
15	Security				
16	Inspections				
17	Delivery charges				
18	Dust suppression				
19	Wheel cleaning/road cleaning				
20	Track monitoring				
21	Other Items				
	Optimized Contractor Involvement				
22	Phase 1 - Meetings & RFI's				
23	Phase 2 - Site visit, report				
24	Phase 3 - Proposals to change the Works Information				
	Design				
25	Steelwork				
26	Roofing & cladding				
27	Mechanical & electrical				
28	Lift				
29	Overhead gantry cranes				
30	Train lifting system				
31	Piling mat				
32	Other design				
	Procurement				
33	Groundworks / RC Contractor				
34	Rail Contractor				
35	Piling				
36	Steelwork				
37	Cladding & Roofing				
38	Fit out Contractor				
39	M&E Contractor				
40	Lift (Wheel Lathe Building)				
41	Overhead gantry cranes				
42	Train Lifting System				
43	Other subcontractors				
44	Materials				
	Site Set Up & Enabling Works				
45	Hoarding				
46	Heras fencing				
47	Trial pits				
48	Surveys				
49	UXO survey				
50	Services diversions				
51	Dewatering				
52	Make up and maintenance of access roads				
53	Temporary walking routes				
54	Material handling area set up				
	Train Temporary Fit Out Shed (TFOS)				
55	Project Resources - Office staff - Complete Schedule				
56	Project Resources - Site staff - Complete Schedule				
57	Design				
58	Procurement				
59	Site setup and enabling works				
60	Surveys				
61	Site levelling, clearance and remediation				
62	Temporary facilities (e.g., water, drainage/ soakaways, LV power supplies, flood lighting, level working surfaces,				
63	Concrete slabs and foundations				
64	Drainage				
65	Pit construction				
66	Rails and equipment inside shed				
67	Rails and equipment for train delivery track				
68	Traction power				
69	Signalling				
70	SCADA				
71	Prefabricated building installation				
72	Mechanical and electrical incl ventilation and shore power				
73	Telecommunications				
74	Fit out of shed to provide welfare, office and storage facilities				
75	Hoist				
76	Lightning protection				
77	Test and commissioning				
78	External walkways and parking facilities				
79	Maintenance of TFOS				
80	Removal of TFOS on completion complete with removal of external works				
81	Other items				
	MFB Enabling Works				
82	Site strip				
83	Removal of obstructions				
84	Removal of existing train wash				

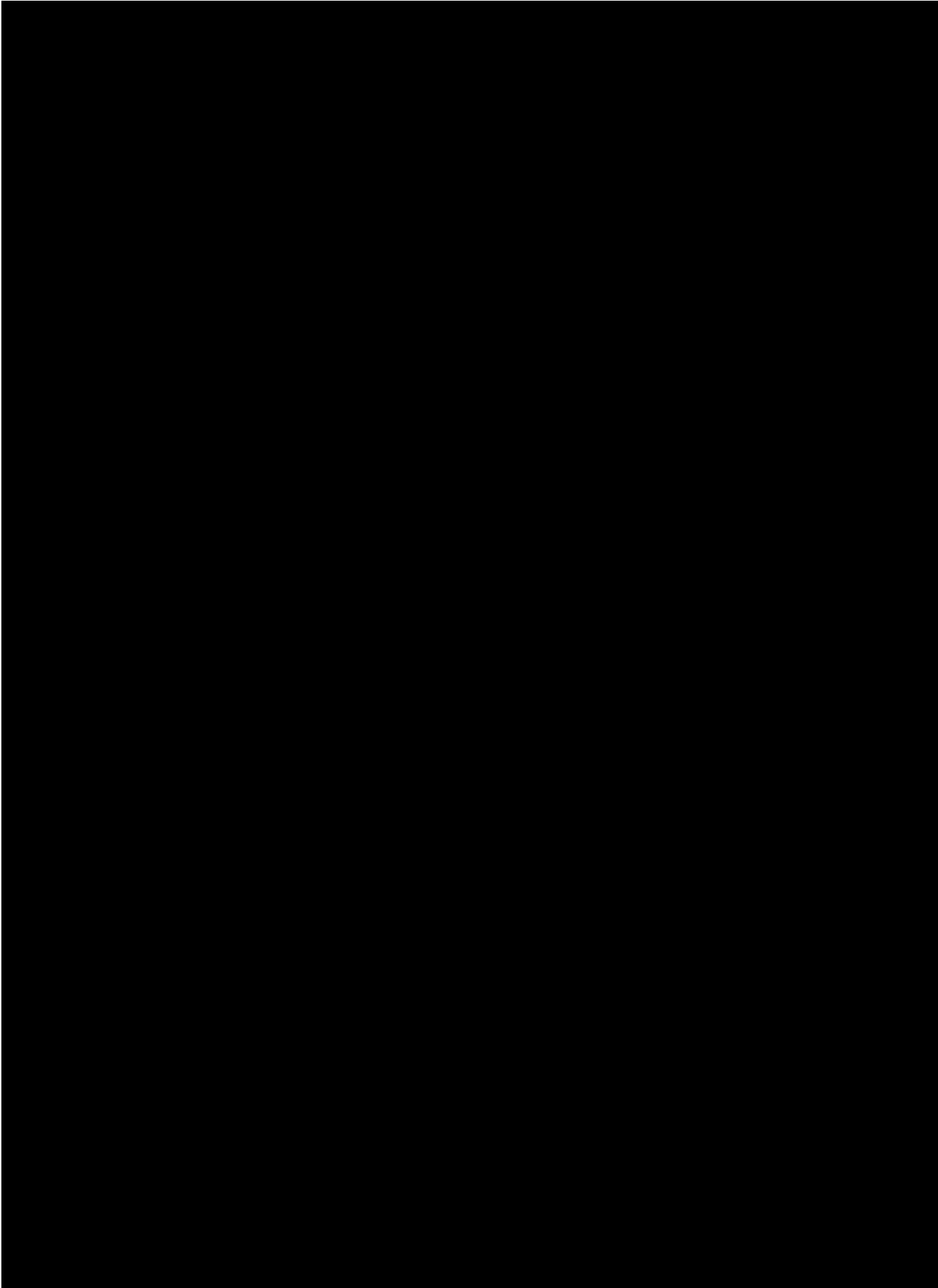
Maintenance Facility Building, Southern Sidings and Temporary Fit Out Shed					
ACTIVITY SCHEDULE					
	Description	Qty	Unit	Rate	£
85	Break out existing slab North				
86	Piling mat				
87	Dewatering as necessary				
88	Dilapidation survey				
MFB Construction					
<u>Jacking Pit Construction</u>					
89	Piling - Construct guide walls for secant piles				
90	Piling - Secant piles - Road 6				
91	Piling - Install deep wells for dewatering jacking pit construction				
92	Remove guide walls / break down piles				
93	Construct capping beam				
94	Construct cross beams				
95	Dewater - after piled box complete & in advance of excavation				
96	Excavate Phase 1				
97	Disposal incl contaminated material				
98	Install temporary props / wailers - Install as excavation progresses				
99	Excavate Phase 2 to formation				
100	Disposal incl contaminated material				
101	Cast concrete base slab				
102	Construct RC walls (Piling wall prep / waterproofing etc)				
103	Construct Jacking pit over slab				
104	Paint to pit walls				
<u>Foundations</u>					
105	Break out hard pavings				
106	Piling - CFA piles - Roads 7,8,9 & steel frame				
107	Piling - Load test				
108	Pile cap - Excavate to formation level - West section				
109	Pile cap - Excavate to formation level - East section				
110	Disposal incl contaminated material				
111	Pile cap - Breakdown pile				
112	Construct RC pile caps				
113	Building drainage & ducts				
114	Fill around pile caps - Provision of access level for cranage				
115	Removal of piling mat				
<u>Steelwork</u>					
116	Steel work - Install frame				
117	Steel work - Install secondary steel				
118	Steel work - Install emergency stair case				
<u>Reinforced Concrete Upstand</u>					
119	RC Upstand - Requirement for wall cladding				
<u>Gantry Crane</u>					
120	Install gantry crane				
<u>Cladding</u>					
121	Roof cladding - Set up loading bay (West end gable end)				
122	Roof cladding - Install 1st phase safety netting				
123	Roof cladding				
124	Roof cladding - Remove loading bay (West end gable end)				
125	Wall Cladding				
<u>Roof Installations</u>					
126	Install smoke ventilators (with flashing follow up)				
127	Install walkways & hand rails				
128	Install PV solar panels				
<u>M&E Fitout</u>					
129	M&E fitout incl radiant heating				
<u>Mezzanine Level</u>					
130	Mezz floor structure				
131	Mezz floor partition walling				
132	Mezz Floor Fitout - Mez plant & equipment				
<u>RC Ground Floor</u>					
133	Maintenance pit base slab - Road 7 - GL B to H				
134	Maintenance pit base slab - Road 7 - GL H to P				
135	Maintenance pit base slab - Road 8 - GL B to H				
136	Maintenance pit base slab - Road 8 - GL H to P				
137	Maintenance pit base slab - Road 9 - GL B to H				
138	Maintenance pit base slab - Road 9 - GL H to P				
139	Upstand - GL 1a				
140	Maintenance pit upstands - Road 7				
141	Ground slab - GL A to B - To include ramp & steps				
142	Ground slab - GL B to H				
143	Ground slab - GL H to P				
144	Ground slab - GL P to Q - TBC - To include ramp & steps				
<u>Way Beams & Rails</u>					
145	Steel columns & waybeams - (Access via slab between ground beams)				
146	Shed rails				
147	Track power				
148	Shore supply				
<u>Fitout</u>					
149	Fitout - Roller shutter doors				
150	Windows				
151	Doors internal				
152	Doors external				
153	Internal walls				
154	Blockwork				
155	Wall finishes				
156	Floor finishes				
157	Line marking				
158	Suspended ceilings				
159	Handrails and bollards				
160	WC / Urinals / Rest Room / Kitchen / Locker Room				
161	Fire protection and stopping				
162	MEPFC fit out				
163	External services including lighting				
164	Compressed air system				
165	Train jacking system fitout - Installation				
166	Depot Personnel Protection System (DPPS)				
167	Overhead trolleys				
168	Fire alarm				
169	Building management system				
170	Lighting control				
171	Fittings, furnishings & equipment				
172	Equipment storage				
173	Data systems				

Maintenance Facility Building, Southern Sidings and Temporary Fit Out Shed ACTIVITY SCHEDULE					
	Description	Qty	Unit	Rate	£
174	Communication systems				
187	Wheel Lathe Interface Works <u>Enabling works</u> Included <u>Enabling Works - M&E</u> Included <u>Enabling Works - Structural</u> Provide Access to Mezz Floor Rooms Remove Control Room overhang Cut back the cantilever steel beams at roof level for disposal Cut back the other steel sections at roof level for disposal Strip out at Second Floor Level Strip out at First Floor Level Strip out at Ground Floor Level Strengthening Works at First Floor Level Roof Level Steelwork Demolition <u>MFB Foundations</u> Ground Stabilisation to existing shed column foundations Other works included <u>Demolition - Cladding</u> Erect scaffolding as required Demolish / remove cladding to existing lathe building external wall from MEWP towers Remove Existing Gutter <u>Steelwork (GL A) & Gutter</u> Erect scaffolding as required Remove roof elements Fabricate and install steelwork to second floor landing structure Fabricate and install steelwork columns for staircase enclosure; Fabricate and install steelwork to below the existing first floor slab; Fabricate and install strengthening beam steelwork to Stair/Lift Enclosure under existing beam and fill the gap using shim plates; Lift Core Beam at Second Floor Increase the column height along gridline 3 Fabricate and install roof purlins above roof level; Metsec purlin 232 Z 20 at 750mm centres; Install new gutter <u>New Roof Vents</u> Installing roof vents <u>Separation Hoarding & Lathe Recommissioning</u> Erect separation hoarding inside building to facilitate the works Remove temporary separation hoarding <u>Works to GL A Wall</u> Included <u>Construct UPS & DC Switchroom</u> Construct blockwork walls Replace roof that was removed Roof covering to wheel lathe <u>MEP Installations</u> Included <u>Temporary Staircase Removal & Access Route to Mezz Floor</u> Included <u>Recommission Lathe</u> Included <u>UPS & DC Switchroom Fitout</u> Included <u>Lathe Road Welfare Building</u> 247 Demolish RC wall below stair landing 248 Builders work, strip out existing, form new opening, refit welfare 250 Fit out MEP to Ground Floor 274 Lift - Carry out Lift installation, (specialist) Other works included				
287	External Works <u>BL BM BK Sidings</u> Build Up BL & BM Sidings Drainage and Ballast (incl. UTXs) Installation of Platforms, Walkways and Lighting (BL & BM) Track Installation BL & BM Track power Installation of Tamping roads BL and BM Comms & CCTV Works Signalling Works including T&C Signal power Lighting Drainage Northern flank slab Central Siding Roads Commissioned <u>Level Crossing - Decommissioning</u> Level crossing - No longer in use Test track level crossing - Remove concrete ramps & reinstate (Main line possession requirement) Main line level crossing - Remove section of track and temp precast slab / make good formation (possession) Main line level crossing - Reinstatement Install remaining sections of test track fence / boundary fence Test Track Fencing Ancillary Civils P'Way Signalling Traction Power & Conductor Rail Rail Systems Civils Remove gates & construct section of footpath <u>Train Delivery Road</u> Delivery road - Set up site / remove fencing, gate & foundations Delivery road - Utility enabling works (Assumed duration) Delivery road - Break out / excavate to formation Disposal incl contaminated material Delivery road - Construct new concrete road (edging / subbase / membrane /slab) Delivery road - Construct rail crossing				

Maintenance Facility Building, Southern Sidings and Temporary Fit Out Shed					
ACTIVITY SCHEDULE					
	Description	Qty	Unit	Rate	£
311	Delivery road - Finishing				
312	Delivery road - Delivery road available for use				
	East End Fan - Track & Apron Slabs				
313	Drainage				
314	Apron slab				
315	Insert rails				
316	Slot drainage				
317	Build Up Drainage and Ballast (incl. UTXs)				
318	Track Installation				
319	Comms & CCTV Works				
320	Signalling Works including T&C				
321	Lighting				
322	Traction power				
323	Signalling Works including T&C				
324	Signal power				
	West End Fan - Track & Apron Slabs				
325	Ballast				
326	Panels and sleepers				
327	Rails				
328	Apron slabs				
329	Lighting				
330	Drainage				
331	Rainwater harvesting tank				
332	Traction power				
333	Signalling Works including T&C				
334	Signal power				
	MFB External Works				
335	Drainage				
336	Groundwater and gas protection				
337	Around MFB - Containment				
338	Cycle storage				
339	External lighting				
	Construction Southern Sidings				
340	Ground Clearance (Including Removal of Contamination)				
341	Ground Levelling				
342	Installation of Attenuation Tank (Southern Sidings)				
343	Replacement of Existing Surface Water Drainage & Installation of New Surface				
344	Water Drainage				
345	Signalling Enabling Works				
346	CRMS Installation Works				
347	Power Installation Works				
348	Installation of Platforms, Walkways and Lighting				
349	Installation of Ballast				
350	Track Installation (Including Turnouts, Plain Line & Conductor)				
351	S&C units				
352	Communications/ CCTV Works				
353	Installation of Train Arrestor (inc. Fixed Red Lamps)				
354	Signalling Works including T&C				
355	Tamping Works				
356	Track power				
357	Energise Track for Southern Sidings				
	Test & Commissioning				
358	Test & Commissioning - Maintenance facility Building				
359	Test & Commissioning - Train Jacking System				
360	Test & Commissioning - Southern sidings				
	Completion Activities				
361	Hoarding decommissioning & removal				
	Handover Documentation				
362	Final Inspection				
363	Hand back Site & Demobilise				
364	Submit ITPs and Assurance Documentation				
	Sub Total				

Maintenance Facility Building, Southern Sidings and Temporary Fit Out Shed											
ACTIVITY SCHEDULE											
	Project Resources	Maintenance Facility Building/Southern Sidings/BKBLBM					Temporary Fit Out Shed				
		Qty	Weeks	Allocation %	Rate	£	Qty	Weeks	Allocation %	Rate	£
	Staff/Operative Rates inclusive of all employment costs, overheads and profit; excluding Inflation (Secondary Option X1 applies)										
	Office staff										
1	Contracts Manager										
2	Project Manager										
3	Assistant Project Manager										
4	Project Planner										
5	Site Manager										
6	Assistant Site Manager										
7	Quality Manager										
8	Commercial Manager										
9	HSE Manager										
10	Site Supervisor										
11	Quantity Surveyor										
12	Senior Quantity Surveyor										
13	Document Controller										
14	Risk Manager										
15	Design Co-ordinator										
16	Design Manager										
17	Environmental manager										
18	Quality Manager										
19	Other: Project Director										
20	Other: Senior Project Manager										
21	Other: Construction Manager										
22	Other: Works Manager										
23	Other: Site Agent										
24	Other: Sub Agent										
25	Other: Section Engineer										
26	Other: Site Engineer										
27	Other: Site Engineer Apprentice										
28	Other: Engineering Manager										
29	Other: BIM Manager										
30	Other: Senior Planning Manager										
31	Other: Senior Planner										
32	Other: Assistant Planner										
33	Other: Managing Quantity Surveyor										
34	Other: Project Quantity Surveyor										
35	Other: Assistant Quantity Surveyor										
36	Other: Supply Chain Manager										
37	Other: Procurement Manager										
38	Other: Cost Manager										
39	Other: Apprentice Cost Manager										
40	Other: Office Manager										
41	Other: Assistant Quality Manager										
42	Other: Independent Inspector										
43	Other: Senior HSE Manager										
44	Other: HSE Administrator										
45	Other: Stakeholder Manager										
46	Other: Site Safety Officer										
47	Other: MEP Manager										
48	Other: MEP Site Manager										
49	Other: Logistics Manager										
50	Other: Materials Manager										
	Sub Total										
	Site Staff										
51	Plant Operative										
52	Foreman										
53	Site Manager/Agent										
54	Ganger										
55	Chainman										
56	General Labourer										
57	Semi-Skilled Labourer										
58	Senior Semi-Skilled Labourer										
59	Trade Foreman										
60	Labourer										
61	Other: Traffic Marshall										
62	Other: Carpenter										
63	Other: Slinger										
64	Other: ALO Co-ordinator										
65	Other: Crossing Keeper										
	Sub Total										

RISK INFORMATION						PRE-MITIGATED ASSESSMENT			MITIGATION PLAN			POST-MITIGATED ASSESSMENT			RISK VALUE BUDGET PRICE
Risk ID	Risk Title	Cause	Description	Effect	Risk Owner	Likelihood of occurrence	Expected Cost Impact	Expected Schedule Impact	Mitigation	Actionee	Action Due Date	Likelihood of occurrence	Expected Cost Impact	Expected Schedule Impact	Risk value included by the tenderer in the total of the Prices
		Due to	There is a risk that	Resulting in	Contractor / Employee	%	£k	Wks				%	£k	Wks	£



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.04

Amended Schedules

1.040



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.04

Schedule 9 - Form of Warranty from Contractor

1.041

SCHEDULE 9

Form of warranty from *Contractor*

THIS DEED is made on ● 202●

BETWEEN:

- (1) ● whose registered office is situate at ● (the "**Beneficiary**"); and
- (2) ● whose registered office is situate at ● (the "**Contractor**").

WHEREAS:

- A) Rail for London Limited has entered into a framework agreement with the *Contractor* dated [date] enabling [● (whose registered office is at ●)]¹ (the "**Employer**", which expression shall include its successors in title and assigns), from time to time, to enter into a call-off contract with the *Contractor* for provision of services and/or works.
- B) By a call-off contract dated ● (the "**Contract**") the *Employer* appointed the *Contractor* for the provision of certain [**works**][**services**] as defined in the Contract at ● (the "**works**").
- C) [The Beneficiary [intends to enter into] [has entered into] an agreement to provide finance for the carrying out and completion of the *works*.] [The Beneficiary [intends to enter into] [has entered into] an agreement with the *Employer* under which it will agree that on or following Completion of the *works* it will [purchase] [take a lease of] the whole or part of the *works*.] [The Beneficiary has an interest in the whole or part of the *works* as a developer and [intends to enter into] [has entered into] an agreement with the *Employer* in respect of [●]].]/[the Beneficiary is a member of the TfL Group and has an interest in the *works* as ●.]²

NOW IT IS AGREED:

- 1. Terms and expressions defined in the Contract shall where the context so permits have the same meanings in this Deed.
- 2. The *Contractor* warrants and undertakes to the Beneficiary that:
 - (a) it has exercised and will continue to exercise all the reasonable skill, care and diligence to be expected of a competent contractor experienced in carrying out works and/or services of a similar scope, size and complexity to the *works*; and

¹ Insert the details of the relevant member of the TfL Group.

² Select appropriate recital depending on whether the Beneficiary is (i) funder; (ii) purchaser/tenant; (iii) developer, (iv) member of the TfL Group

- (b) it has complied with and will continue to comply with the terms of the Contract.
 - (c) Insofar as the *Contractor* has designed the *works*, the *Contractor* has exercised and will exercise all reasonable skill, care and diligence to be expected of a competent designer experienced in carrying out works and/or services of a similar scope, size and complexity to the *works*.
- 3. The *Contractor* warrants and undertakes to the Beneficiary that it has not selected or specified for use, and that it will not select or specify for use or allow to be used any substance or material which are not in accordance with the Standards, general good building and engineering practice and the requirements of the [Works Information][Scope].
- 4. Provided that nothing in this Clause 4 shall impose a greater duty on the *Contractor* than that owed under Clause 2(a) of this Deed, the *Contractor* further warrants and undertakes to the Beneficiary that:
 - (a) the *works* will on Completion satisfy all performance or output specifications and other requirements contained or referred to in the Contract;
 - (b) the *works* and all materials comprised in them will correspond as to description, quality and condition with the requirements of the Contract and will be of sound manufacture and workmanship;
 - (c) the *works* are integrated with the designs of Others as specified in the Contract;
 - (d) the *works* will on Completion comply with all applicable law and all relevant Standards; and
 - (e) the *works* will be carried out and completed timeously in accordance with the Accepted Programme.
 - (f) Nothing in this clause 4 imposes a duty of fitness for purpose in relation to the design of the *works* by the *Contractor*.
- 5. The *Contractor* warrants and undertakes to the Beneficiary that it has maintained and will continue to maintain all insurances required to be maintained pursuant to the terms of the Contract and that it has professional indemnity insurance with a limit of indemnity of not less than £[amount]³ in respect of each and every claim which may be made against the *Contractor* in relation to the *works*. The *Contractor* shall maintain such professional indemnity insurance for a period of 12 years from Completion of the whole of the *works* provided such insurance remains available at commercially reasonable rates and shall notify the Beneficiary forthwith if such insurance ceases to be so available. When deciding whether such insurances are available at commercially reasonable rates, no account shall be taken of any increase in the premium or imposition of terms which arise as a result of the *Contractor's* insurance claims record.

³ The PI figure should be the same as the figure inserted in the Contract Data.

6. As and when reasonably requested by the Beneficiary, the *Contractor* shall produce for inspection documentary evidence that the insurance referred to in Clause 5 is being properly maintained and that payment has been made of the last premium due in respect of such insurance.
7. To the extent that the intellectual property rights in any and all documents, items of information, data, reports, drawings, specifications, plans, software, designs, inventions and any other materials provided by or on behalf of the *Contractor* in connection with the *works* (whether in existence or to be made) ("**Documents**") have not already vested in the *Employer*, the *Contractor* grants to the Beneficiary an irrevocable, non-exclusive, non-terminable, royalty-free licence to copy and make full use of any and all Documents and all amendments and additions to them and any works, designs or inventions of the *Contractor* incorporated or referred to in them for the following purposes:
- (a) understanding the *works*;
 - (b) operating, maintaining, repairing, modifying, altering, enhancing, re-figuring, correcting and replacing the *works*, any Equipment or Plant and Materials;
 - (c) interfacing with, integrating with, connection into and adjusting the *works* and/or the works of Others;
 - (d) enabling the *Employer* to carry out the operation, maintenance, repair, renewal and enhancement of the Network;
 - (e) enabling the *Employer* to perform his function and duties as Infrastructure Manager and Operator of the Network;
 - (f) executing or completing the *works*; and
 - (g) designing, testing and commissioning the *works*

provided always that the *Contractor* shall not be liable for the consequences of any use of the Documents as aforesaid for any other purpose. Such licence shall carry the right to grant sub-licences and shall be transferable to third parties without the prior consent of the *Contractor*.

8. The *Contractor* agrees:
- (a) on request at any time to give the Beneficiary or any persons authorised by the Beneficiary access to the material referred to in Clause 7 and at the Beneficiary's expense to provide copies of any such material; and
 - (b) at the *Contractor's* expense to provide the Beneficiary with a set of all such material on Completion of the *works*.
9. If called upon to do so by the Beneficiary, the *Contractor* shall provide the Beneficiary with such information relating to the *works* as the Beneficiary may reasonably require including without limitation, copies of and extracts from Documents prepared or provided by the

Contractor for the purposes of the *works* provided that neither the provision of such information nor any inspection of the *works* by the Beneficiary or its agents nor the approval by the Beneficiary or its agents of any material shall limit or discharge, or be deemed to limit or discharge the obligations of the *Contractor* under the Contract or relieve the *Contractor* from any liability which it has in relation to the *works*.

10. This Deed may be assigned by the Beneficiary to any member of the TfL Group without limitation and otherwise to any other person on two occasions without the consent of the *Contractor* being required and the *Contractor* shall do all such acts, deeds and things as may be reasonably necessary to give effect to any such assignment. No further assignment shall be permitted without the consent of the *Contractor*. For the purposes of this clause, "TfL Group" means Transport for London, a statutory body set up by the Greater London Authority Act 1999 and any of its subsidiaries and their subsidiaries. The *Employer* is a member of the TfL Group.
11. The *Contractor* shall not be entitled to contend that any person to whom this Deed is assigned in accordance with Clause 10 is precluded from recovering under this Deed any loss incurred by such assignee resulting from any breach of this Deed (whenever happening) by reason that such person is an assignee and not a named promisee under this Deed.
12. The liability of the *Contractor* under this Deed shall cease 12 years following Completion of the whole of the *works*.
13. The rights and benefits conferred upon the Beneficiary by this Deed are in addition to any other rights and remedies the Beneficiary may have against the *Contractor* including without limitation any remedies in negligence.
14. Not used.
- 15.1 Notwithstanding any other provision of this Deed, the *Contractor* shall owe no greater obligations to the Beneficiary than he owes to the *Employer* under the Contract as if the Beneficiary was named in the Contract as a joint employer with the *Employer*.
- 15.2 The *Contractor* shall be entitled in any actions or proceedings by the Beneficiary to rely on any limitation in the Contract and to raise the equivalent rights in defence of liability as he would have against the *Employer* thereunder (excluding rights of set-off and counterclaim).
16. Any notice to be given hereunder shall be deemed to be duly given if it is in writing and delivered by hand at or sent by registered post to the registered office or principal place of business in the United Kingdom for the time being of the party to be served and in the case of any such notice sent by registered post shall be deemed to have been received 48 hours after being posted.
- 17.1 Any dispute or difference arising out of or in connection with this Deed may be referred to adjudication in accordance with the Contract which shall be deemed to be included in this Deed as if they were recited herein in full (with the necessary changes).
- 17.2 The Adjudicator's decision shall be binding on the parties until the dispute or difference is finally determined by the Courts in accordance with Clause 17.3.

- 17.3 The Courts of England and Wales shall have jurisdiction over any dispute or difference arising out of or in connection with this Deed. The law of England and Wales shall be the proper law of this Deed.
18. Nothing in this Deed confers or is intended to confer on any third party any benefit or the right to enforce any term of this Deed pursuant to the Contracts (Rights of Third Parties) Act 1999.

IN WITNESS whereof this Deed has been executed and unconditionally delivered as a Deed by the parties the day and year first above written.

EXECUTED AND DELIVERED AS A DEED

by affixing the Common Seal of

[]⁴

In the presence of:

Authorised Signatory

OR

**[EXECUTED AND DELIVERED AS
A DEED by**

[THE BENEFICIARY]

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary]

**[EXECUTED AND DELIVERED AS
A DEED by**

[THE CONTRACTOR]

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary]

⁴ Insert name of member of TfL Group

**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.04

**Schedule 10 A&B - Subcontractor Warranty to
Employer/ Beneficiary**

1.042

Schedule 10- Part A

Form of warranty from Subcontractor to *Employer*

THIS DEED is made on ● 202●

BETWEEN:

- (1) [● (whose registered office is at ●)]¹ (the "**Employer**" which expression shall include its successors and assigns);
- (2) ● whose registered office is situate at ● (the "**Subcontractor**"); and
- (3) ● whose registered office is situate at ● (the "**Contractor**").

WHEREAS:

- A) Rail for London Limited has entered into a framework agreement with the *Contractor* dated [date] enabling the *Employer*, from time to time, to enter into a call-off contract with the Contractor for provision of services and/or works.
- B) By a call-off contract dated ● (the "**Contract**") the *Employer* appointed the *Contractor* for the provision of certain *works* as defined in the Contract at ● (the "**works**").
- C) The Subcontractor [has entered] [will shortly enter] into a subcontract (the "**Subcontract**") with the *Contractor* for the design and carrying out of certain parts (the "**subcontract works**") of the *works* more particularly defined in Annex ● hereto².

NOW IT IS AGREED:

1. Terms and expressions defined in the Subcontract shall where the context so permits have the same meanings in this Deed. The following expressions have the meanings set out herein:
- (a) "Connected Persons" means of any of the Subcontractor's employees, directors, consultants, agents, subcontractors, subconsultants, suppliers, shareholders, professional advisers (including lawyers, auditors, financial advisers, accountants and technical consultants) or underwriters.
- (b) "Documents" means documents, items of information, data, reports, drawings, specifications, plans, software, designs, inventions and any other materials

¹ Insert the details of the relevant member of the TfL Group.

² A description of the works should be provided in the Annex.

provided by or on behalf of the Subcontractor in connection with the *subcontract works* (whether in existence or to be made).

- (c) "Infrastructure Manager" has the meaning ascribed to it in the Railways and Other Guided Transport Systems (Safety) Regulations 2006.
- (d) "Minimum Records" means all records relating to the Subcontractor's operations, method statements, costs and expenses, subcontracts, claims relating to compensation events and financial arrangements and any document referred to therein or relating thereto and any similar records which the *Employer* may reasonably request.
- (e) "Network" means the stations and depots (wherever situate), assets, systems, track and other buildings, which are used in the maintenance and provision of the underground service known as the "London Underground and/or the overground service known as the "London Overground" as applicable".
- (f) "Operator" means a person with statutory duties to provide or secure the provision for Greater London of public passenger services by railway.
- (g) "Prohibited Act" means:
 - (i) offering or agreeing to give to any servant, employee, officer or agent of the *Employer* or the *Contractor* any grant, gift or consideration of any kind as an inducement or reward for doing or not doing (or for having done or not having done) any act in relation to the obtaining or performance of the Subcontract or any other contract with the *Employer* or the *Contractor* or for showing or not showing favour or disfavour to any person in relation to the Subcontract or any other contract with the *Employer* or the *Contractor*;
 - (ii) entering into the Subcontract or any other contract with the *Employer* or the *Contractor* in connection with which commission has been paid or has been agreed to be paid by the Subcontractor or on his behalf or to his knowledge unless, before the relevant contract or document is entered into, particulars of any such commission and the terms and conditions of any such contract or document for the payment thereof have been disclosed in writing to the *Employer* or the *Contractor*;
 - (iii) committing any offence under the Prevention of Corruption Acts 1889-1916 and/or the Bribery Act 2010, under any law or legislation creating offences in respect of fraudulent acts, or at common law in respect of fraudulent acts in relation to the Subcontract or any other contract with the *Employer* or the *Contractor*; or
 - (iv) defrauding or attempting to defraud the *Employer* or the *Contractor*.
- (h) "Safety Breach" means a material breach of the Subcontract caused by the gross incompetence, wilful default or reckless disregard to safety of the Subcontractor (or anyone employed or acting on behalf of the Subcontractor) which has materially

affected (or which had the potential to materially affect) the safe provision of the *subcontract works*, the safe operation of the Network and/or the safety of the *Employer's* employees, or the public or any other persons.

- (i) "TfL Group" means Transport for London, a statutory body set up by the Greater London Authority Act 1999 and any of its subsidiaries and their subsidiaries.
2. The Subcontractor warrants and undertakes to the *Employer* that:
- (a) he has exercised and will continue to exercise all the reasonable skill, care and diligence to be expected of a competent subcontractor experienced in carrying out works of a similar scope, size and complexity to the *subcontract works*; and
 - (b) he has complied with and will continue to comply with the terms of the Subcontract.
3. The Subcontractor warrants and undertakes to the *Employer* that it has, used reasonable skill and care to not select or specify for use, and that it will not select or specify for use or allow to be used any substance or material which are not in accordance with the Standards, general good building and engineering practice and the requirements of the Works Information.
4. Provided that nothing in this Clause 4 shall impose a greater duty on the Subcontractor than that owed under Clause 2(a) of this Deed, the Subcontractor further warrants and undertakes to the *Employer* that:
- (a) the *subcontract works* will on Completion satisfy all performance or output specifications and other requirements contained or referred to in the Subcontract;
 - (b) the *subcontract works* and all materials comprised in them will correspond as to description, quality and condition with the requirements of the Subcontract and will be of sound manufacture and workmanship;
 - (c) the *subcontract works* are integrated with the designs of the *Employer*, the *Contractor* and others as specified in the Subcontract;
 - (d) he has exercised and will continue to exercise all reasonable skill, care and diligence in the design of the *subcontract works* insofar as they have been or will be designed by or on behalf of the Subcontractor;
 - (e) the *subcontract works* will on Completion comply with all applicable law and all relevant Standards;
 - (f) he shall not commit a Prohibited Act and/or Safety Breach; and
 - (g) the *subcontract works* will be carried out and completed timeously in accordance with the time constraints set out in the Subcontract.
5. The Subcontractor warrants and undertakes to the *Employer* that he has maintained and will continue to maintain all insurances required to be maintained pursuant to the terms of the

Subcontract and that insofar as he is responsible for the design of the *subcontract works*, he has professional indemnity insurance with a limit of indemnity of not less than £[amount]³ in respect of each and every claim which may be made against the Subcontractor in relation to the *subcontract works*. The Subcontractor shall maintain such professional indemnity insurance for a period of 12 years from Completion of the whole of the *works* provided such insurance remains available at commercially reasonable rates and shall notify the *Employer* forthwith if such insurance ceases to be so available. When deciding whether such insurances are available at commercially reasonable rates, no account shall be taken of any increase in the premium or imposition of terms which arise as a result of the Subcontractor's insurance claims record.

6. As and when reasonably requested by the *Employer*, the Subcontractor shall produce for inspection documentary evidence that the insurances referred to in Clause 5 are being properly maintained and that payment has been made of the last premiums due in respect of such insurances.
7. To the extent that the intellectual property rights in any and all Documents have not already vested in the *Employer* or the *Contractor*, the Subcontractor grants to the *Employer* an irrevocable, non-exclusive, non-terminable, royalty-free licence to copy and make full use of any and all Documents and all amendments and additions to them and any works, designs or inventions of the Subcontractor incorporated or referred to in them for the following purposes:
 - (a) understanding the *works*;
 - (b) operating, maintaining, repairing, modifying, altering, enhancing, re-figuring, correcting and replacing the *works*, any Equipment or Plant and Materials;
 - (c) interfacing with, integrating with, connection into and adjusting the *works* and/or the works of Others;
 - (d) enabling the *Employer* to carry out the operation, maintenance, repair, renewal and enhancement of the Network;
 - (e) enabling the *Employer* to perform his function and duties as Infrastructure Manager and Operator of the Network;
 - (f) executing or completing the *works*; and
 - (g) designing, testing and commissioning the *works*

provided always that the Subcontractor shall not be liable for the consequences of any use of the Documents for any purpose other than that which they were originally provided. Such licence shall carry the right to grant sub-licences and shall be transferable to third parties without the prior consent of the Subcontractor.

³ The PI figure should be the same as the figure inserted in the Contract Data.

8. The Subcontractor agrees:
- (a) on request at any time to give the *Employer* or any persons authorised by the *Employer* access to the material referred to in Clause 7 and at the *Employer's* expense to provide copies of any such material; and
 - (b) at the Subcontractor's expense to provide the *Employer* with a set of all such material on Completion of the *subcontract works*.
9. If called upon to do so by the *Employer*, the Subcontractor shall provide the *Employer* with such information relating to the *subcontract works* as it may reasonably require including without limitation copies of and extracts from Documents prepared or provided by the Subcontractor for the purposes of the *works* provided that neither the provision of such information nor any inspection of the *works* by the *Employer* nor the approval by the *Employer* of any material shall limit or discharge, or be deemed to limit or discharge the obligations of the Subcontractor under the Subcontract or relieve the Subcontractor from any liability which he has in relation to the *subcontract works*.
10. The Subcontractor warrants and undertakes to the *Employer* that he shall maintain and retain the Minimum Records for a minimum of 12 years from Completion of the *works* with respect to all matters for which the Subcontractor is responsible under the Subcontract. The Subcontractor further warrants and undertakes to the *Employer* that the Subcontract contains open-book audit rights in favour of the *Employer* and its authorised representatives and that he shall undertake his obligations and exercise his rights under the Subcontract on an open-book basis. The *Employer* and his authorised representatives may from time to time audit on an open-book basis and check and take copies of and extracts from any document or record of the Subcontractor including, without limitation the Minimum Records. The Subcontractor further warrants that it shall promptly provide all reasonable co-operation in relation to any audit or checking including, without limitation, granting access to premises, equipment, systems and senior personnel and making documents available. Without prejudice to the foregoing, the Subcontractor acknowledges and agrees that the *Employer* may audit and check any and all records as are necessary in order to monitor compliance with the Subcontractor's obligations under the Subcontract with respect to Prohibited Acts and Safety Breaches at any time during performance of the Subcontract and during the 12 years thereafter.
11. The Subcontractor shall provide such assistance to the *Employer* as it may reasonably require in connection with the *subcontract works*.
12. In the event that the Contract or the employment of the *Contractor* thereunder is determined for any reason whatsoever including but not limited to the insolvency or winding-up of the *Contractor* (voluntary or otherwise), the Subcontractor shall without allowing any break or intermission to occur in the performance of his duties:
- (a) continue to observe and carry out his obligations under the Subcontract and this Deed;
 - (b) if so required by notice in writing from the *Employer* treat the *Employer* as *Employer* under the Subcontract to the exclusion of the *Contractor* whereupon all

rights and obligations of the *Contractor* under the Subcontract shall thereafter be exercisable and performed by the *Employer*; and

- (c) accept and enter into any deeds or other documents as are required to put into legal effect any further novation of the Subcontract reasonably required by the *Employer*.
- 13.1 The Subcontractor warrants and undertakes to the *Employer* that he will promptly inform the *Employer* of any default by the *Contractor* under the Subcontract and that he will not, without first giving the *Employer* at least 21 days' notice in writing, exercise any right he may have to terminate the Subcontract or to treat the same as having been repudiated by the *Contractor* or to suspend performance of his obligations under the Subcontract.
- 13.2 The Subcontractor's right to terminate the Subcontract or to treat the same as having been repudiated or to suspend performance of his obligations thereunder shall cease if within the period of the aforesaid notice and subject to Clause 14 hereof the *Employer* shall have given notice in writing to the Subcontractor requiring the Subcontractor to accept the instructions of the *Employer* or its appointee to the exclusion of the *Contractor* in respect of the carrying out and completion of the *subcontract works* upon the terms of the Subcontract.
14. The provisions of Clauses 12 and 13 hereof are conditional upon any notice given by the *Employer* pursuant thereto stating that the *Employer* or its appointee accepts liability for payment of the last unpaid invoice submitted by the Subcontractor. Upon the issue of any such notice by the *Employer*, the Subcontract shall continue in full force and effect as if no right of termination on the part of the Subcontractor had arisen and the Subcontractor shall be liable to the *Employer* or its appointee under the Subcontract in lieu of its liability to the *Contractor*. If any notice given by the *Employer* under Clauses 12 or 13 requires the Subcontractor to accept the instructions of the *Employer's* appointee, the *Employer* shall be liable to the Subcontractor as guarantor for the payment of all sums from time to time due to the Subcontractor from the *Employer's* appointee. For the avoidance of doubt neither the *Employer* nor his appointee shall be liable for any work carried out prior to the date of the *Employer's* notice.
15. The *Contractor* has agreed to be a party to this Deed for the purposes of acknowledging that the Subcontractor shall not be in breach of the Subcontract by complying with the obligations imposed on it by Clauses 12 or 13 hereof.
16. This Deed may be assigned by the *Employer* to any member of the TfL Group without limitation and otherwise to any other person on two occasions without the consent of the Subcontractor being required and the Subcontractor shall do all such acts, deeds and things as may be reasonably necessary to give effect to any such assignment. No further assignment shall be permitted without the consent of the Subcontractor.
17. The Subcontractor shall not be entitled to contend that any person to whom this Deed is assigned in accordance with Clause 16 is precluded from recovering under this Deed any loss incurred by such assignee resulting from any breach of this Deed (whenever happening) by reason that such person is an assignee and not a named promisee under this Deed.
18. The liability of the Subcontractor under this Deed shall cease 12 years following Completion of the whole of the *works*.

19. The Subcontractor hereby covenants that if required by the *Employer* it will enter into further deeds of warranty with all and each of such persons who shall acquire or agree to acquire an interest in the whole or any part of the *subcontract works*. Each such deed of warranty shall be in the same form mutatis mutandis as this Deed or in such substantially similar form as may reasonably be required by the *Employer*.
- 20.1 Without limitation to Clause 2 above, the Subcontractor hereby warrants to the *Employer* that:
- (a) except as provided under deeds of warranty required pursuant to the Subcontract, it shall not, without the prior written approval of the *Employer*, at any time for any reason disclose to any person or publish or make any statement concerning the Subcontract, this Deed or the project to which the *subcontract works* relate;
 - (b) he shall treat all information obtained under, arising from or in connection with the Subcontract, this Deed and the project as confidential, and that other than for the purpose of providing the *subcontract works*, it shall not disclose any information or documents concerning the Subcontract to any other person; and
 - (c) he shall not, without the prior written consent of the *Employer*, disclose any information obtained by him concerning the *Employer* or the TfL Group to any other person.
- 20.2 The *Employer* may require as a precondition to the granting of such consent that any such third party provides a confidentiality undertaking in terms satisfactory to the *Employer*.
- 20.3 Clause 20.1 does not apply to the disclosure of:
- (a) any information which is already in the public domain at the time of its disclosure other than by breach of these provisions,
 - (b) any information disclosed by the Subcontractor to any Connected Persons provided that such recipients agree in writing to be bound by the terms of this confidentiality provision; and
 - (c) any information which is required to be disclosed by any applicable law or statutory requirement, the regulations of any stock exchange, any taxation authorities or by an order of a court or other tribunal of competent jurisdiction or any relevant regulatory body.
- 20.4 The Subcontractor shall procure that the Connected Persons comply with the provisions of this Clause 20 and is responsible to the *Employer* for any act or omission of any Connected Person in breach of such obligations.
- 20.5 The Subcontractor shall notify the *Employer* promptly if the Subcontractor becomes aware of any breach of confidence by a Connected Person and shall give the *Employer* all assistance the *Employer* may reasonably require in connection with any proceedings the *Employer* may bring or other steps the *Employer* may take against that Connected Person or any other person for such breach of confidence.

- 20.6 The Subcontractor acknowledges that damages would not be an adequate remedy for any breach of this Clause 20 by the Subcontractor and that (without prejudice to all other remedies to which the *Employer* may be entitled to as a matter of law) the *Employer* shall be entitled to any form of equitable relief to enforce the provisions of this Clause 20.
- 20.7 At the *Employer's* request and in any event upon the termination or expiry of the Subcontract, the Subcontractor shall promptly deliver to the *Employer* or destroy as the *Employer* may direct all documents and other materials in the possession, custody or control of the Subcontractor (or the relevant parts of such materials) that bear or incorporate the whole or any part of the confidential information and if instructed by the *Employer* in writing, remove all electronically held confidential information, including the purging of all disk-based confidential information and the reformatting of all disks.
- 21.1 The Subcontractor shall owe no greater obligations to the *Employer* than he owes to the *Contractor* under the Subcontract as if the *Employer* was named in the Subcontract as a joint employer with the *Contractor*.
- 21.2 The Subcontractor shall be entitled in any action or proceedings by the *Employer* to rely on any limitation in the Subcontract and to raise the equivalent rights in defence of liability as he would have against the *Contractor* thereunder (excluding rights of set-off and counterclaim).
22. The rights and benefits conferred upon the *Employer* by this Deed are in addition to any other rights and remedies the *Employer* may have against the Subcontractor including without limitation any remedies in negligence.
23. The *Contractor* agrees that he will not take any steps which would prevent or hinder the *Employer* from exercising his rights under this Deed and confirms that the rights of the *Employer* in Clauses 12 and 13 override any obligations of the Subcontractor to the *Contractor* under the Subcontract.
24. Any notice to be given hereunder shall be deemed to be duly given if it is in writing and delivered by hand at or sent by registered post to the registered office or principal place of business in the United Kingdom for the time being of the party to be served and in the case of any such notice sent by registered post shall be deemed to have been received 48 hours after being posted.
- 25.1 Any dispute or difference arising out of or in connection with this Deed may be referred to adjudication in accordance with the Contract which shall be deemed to be included in this Deed as if they were recited herein in full (with the necessary changes).
- 25.2 The Adjudicator's decision shall be binding on the parties until the dispute or difference is finally determined by the Courts in accordance with Clause 25.3.
- 25.3 The Courts of England and Wales shall have jurisdiction over any dispute or difference arising out of or in connection with this Deed. The law of England and Wales shall be the proper law of this Deed.

26. Nothing in this Deed confers or is intended to confer on any third party any benefit or the right to enforce any term of this Deed pursuant to the Contracts (Rights of Third Parties) Act 1999.

IN WITNESS whereof this Deed has been executed and unconditionally delivered as a Deed by the parties the day and year first above written.

EXECUTED AND DELIVERED AS A DEED

by affixing the Common Seal of
[]⁴

In the presence of:

Authorised Signatory

**[EXECUTED AND DELIVERED AS
A DEED by
[THE SUBCONTRACTOR]**

acting by:

Signature of Director

.....

Print name of Director

.....

Signature of Director/Secretary

.....

Print name of Director/Secretary

.....

**[EXECUTED AND DELIVERED AS
A DEED by
[THE CONTRACTOR]**

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary

]

⁴ Insert name of member of TfL Group

ANNEX

(subcontract works)



Schedule 10- Part B

Form of warranty from Subcontractor to Beneficiary

THIS DEED is made on ● 20●

BETWEEN:

- (1) ● whose registered office is situate at ● (the "**Beneficiary**")
- (2) ● whose registered office is situate at ● (the "**Subcontractor**"); and
- (3) ● whose registered office is situate at ● (the "**Contractor**").

WHEREAS:

- A) Rail for London Limited has entered into a framework agreement with the *Contractor* dated [date] enabling [● (whose registered office is at ●)]¹ (the "**Employer**", which expression shall include its successors in title and assigns), from time to time, to enter into a call-off contract with the Contractor for provision of services and/or works.
- B) By a call-off contract dated ● (the "**Contract**") the *Employer* appointed the *Contractor* for the provision of certain *works* as defined in the Contract at ● (the "**works**").
- C) The Subcontractor [has entered] [will shortly enter] into a subcontract (the "**Subcontract**") with the *Contractor* for the design and carrying out of certain parts (the "**subcontract works**") of the *works* more particularly defined in Annex ● hereto².
- D) [The Beneficiary [intends to enter into] [has entered into] an agreement to provide finance for the carrying out and completion of the *works*.] [The Beneficiary [intends to enter into] [has entered into] an agreement with the *Employer* under which it will agree that on or following Completion of the *works* it will [purchase] [take a lease of] the whole or part of the *works*.] [The Beneficiary has an interest in the whole or part of the *works* as a developer and [intends to enter into] [has entered into] an agreement with the *Employer* in respect of [●].]/[the Beneficiary is a member of the TfL Group and has an interest in the *works* as ●].³

NOW IT IS AGREED:

¹ Insert the details of the relevant member of the TfL Group.

² A description of the works should be provided in the Annex.

³ Select appropriate recital depending on whether the Beneficiary is (i) funder; (ii) purchaser/tenant; (iii) developer, (iv) member of the TfL Group

1. Terms and expressions defined in the Subcontract shall where the context so permits have the same meanings in this Deed. The following expressions have the meanings set out herein:
 - (a) "Documents" means documents, items of information, data, reports, drawings, specifications, plans, software, designs, inventions and any other materials provided by or on behalf of the Subcontractor in connection with the *subcontract works* (whether in existence or to be made).
 - (b) "Infrastructure Manager" has the meaning ascribed to it in the Railways and Other Guided Transport Systems (Safety) Regulations 2006.
 - (c) "Network" means the stations and depots (wherever situate), assets, systems, track and other buildings, which are used in the maintenance and provision of the underground service known as the "London Underground and/or the overground service known as the "London Overground" as applicable".
 - (d) "Operator" means a person with statutory duties to provide or secure the provision for Greater London of public passenger services by railway.
 - (e) "TfL Group" means Transport for London, a statutory body set up by the Greater London Authority Act 1999 and any of its subsidiaries and their subsidiaries.
2. The Subcontractor warrants and undertakes to the Beneficiary that:
 - (a) he has exercised and will continue to exercise all the reasonable skill, care and diligence to be expected of a competent Subcontractor experienced in carrying out works of a similar scope, size and complexity to the *subcontract works*; and
 - (b) he has complied with and will continue to comply with the terms of the Subcontract.
3. The Subcontractor warrants and undertakes to the Beneficiary that it has, used reasonable skill and care to not select or specify for use, and that it will not select or specify for use or allow to be used any substance or material which are not in accordance with the Standards, general good building and engineering practice and the requirements of the Works Information.
4. Provided that nothing in this Clause 4 shall impose a greater duty on the Subcontractor than that owed under Clause 2(a) of this Deed, the Subcontractor further warrants and undertakes to the Beneficiary that:
 - (a) the *subcontract works* will on Completion satisfy all performance or output specifications and other requirements contained or referred to in the Subcontract;
 - (b) the *subcontract works* and all materials comprised in them will correspond as to description, quality and condition with the requirements of the Subcontract and will be of sound manufacture and workmanship;

- (c) the *subcontract works* are integrated with the designs of the *Employer*, the *Contractor* and others as specified in the Subcontract;
 - (d) the *subcontract works* will on Completion comply with all applicable law and all relevant Standards; and
 - (e) the *subcontract works* will be carried out and completed timeously in accordance with the time constraints set out in the Subcontract.
5. The Subcontractor warrants and undertakes to the Beneficiary that he has maintained and will continue to maintain all insurances required to be maintained pursuant to the terms of the Subcontract and that insofar as he is responsible for the design of the *subcontract works*, he has professional indemnity insurance with a limit of indemnity of not less than £[amount]⁴ in respect of each and every claim which may be made against the Subcontractor in relation to the *subcontract works*. The Subcontractor shall maintain such professional indemnity insurance for a period of 12 years from Completion of the whole of the *works* provided such insurance remains available at commercially reasonable rates and shall notify the Beneficiary forthwith if such insurance ceases to be so available. When deciding whether such insurances are available at commercially reasonable rates, no account shall be taken of any increase in the premium or imposition of terms which arise as a result of the Subcontractor's insurance claims record.
6. As and when reasonably requested by the Beneficiary, the Subcontractor shall produce for inspection documentary evidence that the insurances referred to in Clause 5 are being properly maintained and that payment has been made of the last premiums due in respect of such insurances.
7. To the extent that the intellectual property rights in any and all Documents have not already vested in the *Employer* or the *Contractor*, the Subcontractor grants to the Beneficiary an irrevocable, non-exclusive, non-terminable, royalty-free licence to copy and make full use of any and all Documents and all amendments and additions to them and any works, designs or inventions of the Subcontractor incorporated or referred to in them for the following purposes:
- (a) understanding the *works*;
 - (b) operating, maintaining, repairing, modifying, altering, enhancing, re-figuring, correcting and replacing the *works*, any Equipment or Plant and Materials;
 - (c) interfacing with, integrating with, connection into and adjusting the *works* and/or the works of Others;
 - (d) enabling the *Employer* to carry out the operation, maintenance, repair, renewal and enhancement of the Network;

⁴ The PI figure should be the same as the figure inserted in the Contract Data.

- (e) enabling the *Employer* to perform his function and duties as Infrastructure Manager and Operator of the Network;
- (f) executing or completing the *works*; and
- (g) designing, testing and commissioning the *works*

provided always that the Subcontractor shall not be liable for the consequences of any use of the Documents for any purpose other than that which they were originally provided. Such licence shall carry the right to grant sub-licences and shall be transferable to third parties without the prior consent of the Subcontractor.

8. The Subcontractor agrees:

- (a) on request at any time to give the Beneficiary or any persons authorised by the Beneficiary access to the material referred to in Clause 7 and at the Beneficiary's expense to provide copies of any such material; and
- (b) at the Subcontractor's expense to provide the Beneficiary with a set of all such material on Completion of the *subcontract works*.

9. If called upon to do so by the Beneficiary, the Subcontractor shall provide the Beneficiary with such information relating to the *subcontract works* as it may reasonably require including without limitation copies of and extracts from Documents prepared or provided by the Subcontractor for the purposes of the *works* provided that neither the provision of such information nor any inspection of the *works* by the Beneficiary nor the approval by the Beneficiary of any material shall limit or discharge, or be deemed to limit or discharge the obligations of the Subcontractor under the Subcontract or relieve the Subcontractor from any liability which he has in relation to the *subcontract works*.
10. This Deed may be assigned by the Beneficiary to any member of the TfL Group without limitation and otherwise to any other person on two occasions without the consent of the Subcontractor being required and the Subcontractor shall do all such acts, deeds and things as may be reasonably necessary to give effect to any such assignment. No further assignment shall be permitted without the consent of the Subcontractor.
11. The Subcontractor shall not be entitled to contend that any person to whom this Deed is assigned in accordance with Clause 10 is precluded from recovering under this Deed any loss incurred by such assignee resulting from any breach of this Deed (whenever happening) by reason that such person is an assignee and not a named promisee under this Deed.
12. The liability of the Subcontractor under this Deed shall cease 12 years following Completion of the whole of the *works*.
- 13.1 The Subcontractor shall owe no greater obligations to the Beneficiary than he owes to the *Contractor* under the Subcontract as if the Beneficiary was named in the Subcontract as a joint employer with the *Contractor*.

- 13.2 The Subcontractor shall be entitled in any action or proceedings by the Beneficiary to rely on any limitation in the Subcontract and to raise the equivalent rights in defence of liability as he would have against the *Contractor* thereunder (excluding rights of set-off and counterclaim).
14. The rights and benefits conferred upon the Beneficiary by this Deed are in addition to any other rights and remedies the Beneficiary may have against the Subcontractor including without limitation any remedies in negligence.
15. The *Contractor* agrees that he will not take any steps which would prevent or hinder the Beneficiary from exercising his rights under this Deed.
16. Any notice to be given hereunder shall be deemed to be duly given if it is in writing and delivered by hand at or sent by registered post to the registered office or principal place of business in the United Kingdom for the time being of the party to be served and in the case of any such notice sent by registered post shall be deemed to have been received 48 hours after being posted.
- 17.1 Any dispute or difference arising out of or in connection with this Deed may be referred to adjudication in accordance with the Contract which shall be deemed to be included in this Deed as if they were recited herein in full (with the necessary changes).
- 17.2 The Adjudicator's decision shall be binding on the parties until the dispute or difference is finally determined by the Courts in accordance with Clause 17.3.
- 17.3 The Courts of England and Wales shall have jurisdiction over any dispute or difference arising out of or in connection with this Deed. The law of England and Wales shall be the proper law of this Deed.
18. Nothing in this Deed confers or is intended to confer on any third party any benefit or the right to enforce any term of this Deed pursuant to the Contracts (Rights of Third Parties) Act 1999.

IN WITNESS whereof this Deed has been executed and unconditionally delivered as a Deed by the parties the day and year first above written.

EXECUTED AND DELIVERED AS A DEED

by affixing the Common Seal of

[]⁵

In the presence of:

Authorised Signatory

OR

[EXECUTED AND DELIVERED AS

A DEED by

[THE BENEFICIARY]

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary]

[EXECUTED AND DELIVERED AS

A DEED by

[THE SUBCONTRACTOR]

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary

[EXECUTED AND DELIVERED AS

A DEED by

[THE CONTRACTOR]

acting by:

Signature of Director

Print name of Director

⁵ Insert name of member of TfL Group

Signature of Director/Secretary

Print name of Director/Secretary

A large, faint, diagonal watermark or signature across the page, possibly reading "Signature of Director/Secretary".

ANNEX

(subcontract works)



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 1.04

**Schedule 11 A&B - Subconsultant Warranty to
Employer/ Beneficiary**

1.043

Schedule 11- Part A

Form of warranty from Subcontractor to *Employer* where Subcontractor is providing consulting services

THIS DEED is made on ● 20●

BETWEEN:

- (1) [● (whose registered office is at ●)]¹ (the "*Employer*" which expression shall include its successors and assigns);
- (2) ● whose registered office is situate at ● (the "*Subconsultant*"); and
- (3) ● whose registered office is situate at ● (the "*Contractor*").

WHEREAS:

- A) Rail for London Limited has entered into a framework agreement with the *Contractor* dated [date] enabling the *Employer*, from time to time, to enter into a call-off contract with the Contractor for provision of services and/or works.
- B) By a call-off contract dated ● (the "*Contract*") the *Employer* appointed the *Contractor* for the provision of certain [works][services] as defined in the Contract at ● (the "*works*").
- C) The Subconsultant has been invited to design certain parts (the "*design works*") of the works and [has entered] [will shortly enter] into a deed of appointment with the Contractor (the "*Appointment*") for the design works.

NOW IT IS AGREED:

1. Terms and expressions defined in the Appointment shall where the context so permits have the same meanings in this Deed. The following expressions have the meanings set out herein:
 - (a) "Connected Persons" means of any of the Subconsultant's employees, directors, consultants, agents, subcontractors, subconsultants, suppliers, shareholders, professional advisers (including lawyers, auditors, financial advisers, accountants and technical consultants) or underwriters.
 - (b) "Documents" means documents, items of information, data, reports, drawings, specifications, plans, software, designs, inventions and any other materials

¹ Insert the details of the relevant member of the TfL Group.

provided by or on behalf of the Subconsultant in connection with the *design works* (whether in existence or to be made).

- (c) "Infrastructure Manager" has the meaning ascribed to it in the Railways and Other Guided Transport Systems (Safety) Regulations 2006.
- (d) "Minimum Records" means all records relating to the Subconsultant's operations, method statements, costs and expenses, subcontracts, claims relating to compensation events and financial arrangements and any document referred to therein or relating thereto and any similar records which the *Employer* may reasonably request.
- (e) "Network" means the stations and depots (wherever situate), assets, systems, track and other buildings, which are used in the maintenance and provision of the underground service known as the "London Underground and/or the overground service known as the "London Overground" as applicable".
- (f) "Operator" means a person with statutory duties to provide or secure the provision for Greater London of public passenger services by railway.
- (g) "Prohibited Act" means:
 - (i) offering or agreeing to give to any servant, employee, officer or agent of the *Employer* or the *Contractor* any grant, gift or consideration of any kind as an inducement or reward for doing or not doing (or for having done or not having done) any act in relation to the obtaining or performance of the Appointment or any other contract with the *Employer* or the *Contractor* or for showing or not showing favour or disfavour to any person in relation to the Appointment or any other contract with the *Employer* or the *Contractor*;
 - (ii) entering into the Appointment or any other contract with the *Employer* or the *Contractor* in connection with which commission has been paid or has been agreed to be paid by the Subconsultant or on his behalf or to his knowledge unless, before the relevant contract or document is entered into, particulars of any such commission and the terms and conditions of any such contract or document for the payment thereof have been disclosed in writing to the *Employer* or the *Contractor*;
 - (iii) committing any offence under the Prevention of Corruption Acts 1889-1916 and/or the Bribery Act 2010, under any law or legislation creating offences in respect of fraudulent acts, or at common law in respect of fraudulent acts in relation to the Appointment or any other contract with the *Employer* or the *Contractor*; or
 - (iv) defrauding or attempting to defraud the *Employer* or the *Contractor*.
- (h) "Safety Breach" means a material breach of the Appointment caused by the gross incompetence, wilful default or reckless disregard to safety of the Subconsultant (or anyone employed or acting on behalf of the Subconsultant) which has

materially affected (or which had the potential to materially affect) the safe provision of the *design works*, the safe operation of the Network and/or the safety of the *Employer's* employees, or the public or any other persons.

- (i) "TfL Group" means Transport for London, a statutory body set up by the Greater London Authority Act 1999 and any of its subsidiaries and their subsidiaries.
2. The Subconsultant warrants and undertakes to the *Employer* that;
- (a) he has exercised and will continue to exercise all the reasonable skill, care and diligence required by the Appointment in the performance of his duties to the *Contractor* under the Appointment; and
 - (b) he has complied with and will continue to comply with the terms of the Appointment.
3. The Subconsultant warrants to the *Employer* that he has used reasonable skill and care to not select or specify for use, and that he will not select or specify for use or allow to be used any substance or material which are not in accordance with the Standards, general good building and engineering practice and the requirements of the [Works Information][Scope].
4. Provided that nothing in this Clause 4 shall impose a greater duty on the Subconsultant than that owed under Clause 2(a) of this Deed, the Subconsultant further warrants and undertakes to the *Employer* that:
- (a) the *design works* will on Completion satisfy all performance or output specifications and other requirements contained or referred to in the Appointment;
 - (b) he has exercised and will continue to exercise all reasonable skill, care and diligence in the selection of goods and materials for the *design works* in so far as such goods and materials have been or will be selected by or on behalf of the Subconsultant;
 - (c) the *design works* are integrated with the designs of the *Employer*, the *Contractor* and others as specified in the Appointment;
 - (d) the *design works* will on Completion comply with all applicable law and all relevant Standards;
 - (e) he shall not commit a Prohibited Act and/or Safety Breach; and
 - (f) the *design works* will be carried out and completed timeously in accordance with the time constraints set out in the Appointment.
5. The Subconsultant warrants and undertakes to the *Employer* that he has maintained and will continue to maintain all insurances required to be maintained pursuant to the terms of the Appointment and that he has professional indemnity insurance with a limit of indemnity of

not less than £[amount]² in respect of each and every claim which may be made against the Subconsultant in relation to the *design works*. The Subconsultant shall maintain such professional indemnity insurance for a period of 12 years from Completion of the whole of the *works* provided that such insurance remains available at commercially reasonable rates and shall notify the *Employer* forthwith if such insurance ceases to be so available. When deciding whether such insurances are available at commercially reasonable rates, no account shall be taken of any increase in the premium or imposition of terms which arise as a result of the Subconsultant's insurance claims record.

6. As and when reasonably requested by the *Employer*, the Subconsultant shall produce for inspection documentary evidence that the insurances referred to in Clause 5 are being properly maintained and that payment has been made of the last premiums due in respect of such insurances.
7. To the extent that the intellectual property rights in any and all Documents have not already vested in the *Employer* or the *Contractor*, the Subconsultant grants to the *Employer* an irrevocable, non-exclusive, non-terminable, royalty-free licence to copy and make full use of any and all Documents and all amendments and additions to them and any works, designs or inventions of the Subconsultant incorporated or referred to in them for the following purposes:
 - (a) understanding the *works*;
 - (b) operating, maintaining, repairing, modifying, altering, enhancing, re-figuring, correcting and replacing the *works*, any Equipment or Plant and Materials;
 - (c) interfacing with, integrating with, connection into and adjusting the *works* and/or the works of Others;
 - (d) enabling the *Employer* to carry out the operation, maintenance, repair, renewal and enhancement of the Network;
 - (e) enabling the *Employer* to perform his function and duties as Infrastructure Manager and Operator of the Network;
 - (f) executing or completing the *works*; and
 - (g) designing, testing and commissioning the *works*

provided always that the Subconsultant shall not be liable for the consequences of any use of the Documents for any purpose other than that which they were originally provided. Such licence shall carry the right to grant sub-licences and shall be freely transferable to third parties without the prior consent of the Subconsultant.

8. The Subconsultant agrees:

² The PI figure should be the same as the figure inserted in the Contract Data.

- (a) on request at any time to give the *Employer* or any persons authorised by the *Employer* access to the material referred to in Clause 7 and at the *Employer's* expense to provide copies of any such material; and
 - (b) at the Subconsultant's expense to provide the *Employer* with a set of all such material on Completion of the *design works*.
- 9. If called upon to do so by the *Employer*, the Subconsultant shall provide the *Employer* with such information relating to the *design works* as the *Employer* may reasonably require including without limitation copies of and extracts from Documents prepared or provided by the Subconsultant for the purposes of the *works* provided that neither the provision of such information nor any inspection of the *works* by the *Employer* or its agents nor the approval by the *Employer* or its agents of any material shall limit or discharge, or be deemed to limit or discharge the obligations of the Subconsultant under the Appointment or relieve the Subconsultant from any liability which he has in relation to the *design works*.
- 10. The Subconsultant warrants and undertakes to the *Employer* that he shall maintain and retain the Minimum Records for a minimum of 12 years from Completion of the *works* with respect to all matters for which the Subconsultant is responsible under the Appointment. The Subconsultant further warrants and undertakes to the *Employer* that the Appointment contains open-book audit rights in favour of the *Employer* and its authorised representatives and that he shall undertake his obligations and exercise his rights under the Appointment on an open-book basis. The *Employer* and his authorised representatives may from time to time audit on an open-book basis and check and take copies of and extracts from any document or record of the Subconsultant including, without limitation the Minimum Records. The Subconsultant further warrants that it shall promptly provide all reasonable co-operation in relation to any audit or checking including, without limitation, granting access to premises, equipment, systems or senior personnel and making documents available. Without prejudice to the foregoing, the Subconsultant acknowledges and agrees that the *Employer* may audit and check any and all records as are necessary in order to monitor compliance with the Subconsultant's obligations under the Appointment with respect to Prohibited Acts and Safety Breaches at any time during performance of the Appointment and during the 12 years thereafter.
- 11. The Subconsultant shall provide such assistance to the *Employer* as it may reasonably require in connection with the *design works*.
- 12. In the event that the Contract or the employment of the *Contractor* thereunder is determined for any reason whatsoever including but not limited to the insolvency or winding-up of the *Contractor* (voluntary or otherwise), the Subconsultant shall without allowing any break or intermission to occur in the performance of his duties:
 - (a) continue to observe and carry out his obligations under the Appointment and this Deed;
 - (b) if so required by notice in writing from the *Employer* treat the *Employer* as client under the Appointment to the exclusion of the *Contractor* whereupon all rights and obligations of the *Contractor* under the Appointment shall thereafter be exercisable and performed by the *Employer*; and

- (c) accept and enter into any deeds or other documents as are required to put into legal effect any further novation of the Appointment reasonably required by the *Employer*.
- 13.1 The Subconsultant warrants and undertakes to the *Employer* that he will promptly inform the *Employer* of any default by the *Contractor* under the Appointment and that he will not, without first giving the *Employer* at least 21 days' notice in writing, exercise any right he may have to terminate the Appointment or to treat the same as having been repudiated by the *Contractor* or to suspend performance of his obligations under the Appointment.
- 13.2 The Subconsultant's right to terminate the Appointment or to treat it as having been repudiated or to suspend performance of his obligations thereunder shall cease if within the period of the aforesaid notice and subject to Clause 14 hereof the *Employer* shall have given notice in writing to the Subconsultant requiring the Subconsultant to accept the instructions of the *Employer* or its appointee to the exclusion of the *Contractor* in respect of the carrying out and Completion of the *design works* upon the terms of the Appointment.
14. The provisions of Clauses 12 and 13 hereof are conditional upon any notice given by the *Employer* pursuant thereto stating that the *Employer* or its appointee accepts liability for payment of the last unpaid invoice submitted by the Subconsultant. Upon the issue of any such notice by the *Employer*, the Appointment shall continue in full force and effect as if no right of termination on the part of the Subconsultant had arisen and the Subconsultant shall be liable to the *Employer* or its appointee under the Appointment in lieu of its liability to the *Contractor*. If any notice given by the *Employer* under Clauses 12 or 13 requires the Subconsultant to accept the instructions of the *Employer's* appointee, the *Employer* shall be liable to the Subconsultant as guarantor for the payment of all sums from time to time due to the Subconsultant from the *Employer's* appointee. For the avoidance of doubt neither the *Employer* nor his appointee shall be liable for any work carried out prior to the date of the *Employer's* notice.
15. The *Contractor* has agreed to be a party to this Deed for the purposes of acknowledging that the Subconsultant shall not be in breach of the Appointment by complying with the obligations imposed on the Subconsultant by Clauses 12 or 13.
16. This Deed may be assigned by the *Employer* to any member of the TfL Group without limitation and otherwise to any other person on two occasions without the consent of the Subconsultant being required and the Subconsultant shall do all such acts, deeds and things as may be reasonably necessary to give effect to any such assignment. No further assignment shall be permitted without the consent of the Subconsultant.
17. The Subconsultant shall not be entitled to contend that any person to whom this Deed is assigned in accordance with Clause 16 is precluded from recovering under this Deed any loss incurred by such assignee resulting from any breach of this Deed (whenever happening) by reason that such person is an assignee and not a named promisee under this Deed.
18. The liability of the Subconsultant under this Deed shall cease 12 years following Completion of the whole of the *works*.
- 19.1 Without limitation to Clause 2 above, the Subconsultant hereby warrants to the *Employer* that:

- (a) except as provided under deeds of warranty required pursuant to the Appointment, it shall not, without the prior written approval of the *Employer*, at any time for any reason disclose to any person or publish or make any statement concerning the Appointment, this Deed or the project to which the *design works* relate;
 - (b) he shall treat all information obtained under, arising from or in connection with the Appointment, this Deed and the project as confidential, and that other than for the purpose of providing the *design works*, it shall not disclose any information or documents concerning the Appointment to any other person; and
 - (c) he shall not, without the prior written consent of the *Employer*, disclose any information obtained by him concerning the *Employer* or the TfL Group to any other person.
- 19.2 The *Employer* may require as a precondition to the granting of such consent that any such third party provides a confidentiality undertaking in terms satisfactory to the *Employer*.
- 19.3 Clause 19.1 does not apply to the disclosure of:
 - (a) any information which is already in the public domain at the time of its disclosure other than by breach of these provisions,
 - (b) any information disclosed by the Subconsultant to any Connected Persons provided that such recipients agree in writing to be bound by the terms of this confidentiality provision; and
 - (c) any information which is required to be disclosed by any applicable law or statutory requirement, the regulations of any stock exchange, any taxation authorities or by an order of a court or other tribunal of competent jurisdiction or any relevant regulatory body.
- 19.4 The Subconsultant shall procure that the Connected Persons comply with the provisions of this Clause 19 and is responsible to the *Employer* for any act or omission of any Connected Person in breach of such obligations.
- 19.5 The Subconsultant shall notify the *Employer* promptly if the Subconsultant becomes aware of any breach of confidence by a Connected Person and shall give the *Employer* all assistance the *Employer* may reasonably require in connection with any proceedings the *Employer* may bring or other steps the *Employer* may take against that Connected Person or any other person for such breach of confidence.
- 19.6 The Subconsultant acknowledges that damages would not be an adequate remedy for any breach of this Clause 19 by the Subconsultant and that (without prejudice to all other remedies to which the *Employer* may be entitled to as a matter of law) the *Employer* shall be entitled to any form of equitable relief to enforce the provisions of this Clause 19.
- 19.7 At the *Employer's* request and in any event upon the termination or expiry of the Appointment, the Subconsultant shall promptly deliver to the *Employer* or destroy as the *Employer* may direct all documents and other materials in the possession, custody or control

of the Subconsultant (or the relevant parts of such materials) that bear or incorporate the whole or any part of the confidential information and if instructed by the *Employer* in writing, remove all electronically held confidential information, including the purging of all disk-based confidential information and the reformatting of all disks.

- 20.1 The Subconsultant shall owe no greater obligations to the *Employer* than he owes to the *Contractor* under the Appointment as if the *Employer* was named in the Appointment as a joint employer with the *Contractor*.
- 20.2 The Subconsultant shall be entitled in any action or proceedings by the *Employer* to rely on any limitation in the Appointment and to raise the equivalent rights in defence of liability as he would have against the *Contractor* thereunder (excluding rights of set-off and counterclaim).
- 21. The Subconsultant hereby covenants that if required by the *Employer* it will enter into further deeds of warranty with all and each of such persons who shall acquire or agree to acquire an interest in the whole or any part of the *design works*. Each such deed of warranty shall be in the same form mutatis mutandis as this Deed or in such substantially similar form as may reasonably be required by the *Employer*.
- 22. The rights and benefits conferred upon the *Employer* by this Deed are in addition to any other rights and remedies the *Employer* may have against the Subconsultant including without limitation any remedies in negligence.
- 23. The *Contractor* agrees that he will not take any steps which would prevent or hinder the *Employer* from exercising his rights under this Deed and confirms that the rights of the *Employer* in Clauses 12 and 13 override any obligations of the Subconsultant to the *Contractor* under the Appointment.
- 24. Any notice to be given hereunder shall be deemed to be duly given if it is in writing and delivered by hand at or sent by registered post to the registered office or principal place of business in the United Kingdom for the time being of the party to be served and in the case of any such notice sent by registered post shall be deemed to have been received 48 hours after being posted.
- 25.1 Any dispute or difference arising out of or in connection with this Deed may be referred to adjudication in accordance with the Contract which shall be deemed to be included in this Deed as if they were recited herein in full (with the necessary changes).
- 25.2 The Adjudicator's decision shall be binding on the parties until the dispute or difference is finally determined by the Courts in accordance with Clause 25.3.
- 25.3 The Courts of England and Wales shall have jurisdiction over any dispute or difference arising out of or in connection with this Deed. The law of England and Wales shall be the proper law of this Deed.
- 26. Nothing in this Deed confers or is intended to confer on any third party any benefit or the right to enforce any term of this Deed pursuant to the Contracts (Rights of Third Parties) Act 1999.

IN WITNESS whereof this Deed has been executed and unconditionally delivered as a Deed by the parties the day and year first above written.

EXECUTED AND DELIVERED AS A DEED

by affixing the Common Seal of

[]³

In the presence of:

Authorised Signatory

[EXECUTED AND DELIVERED AS

A DEED by

[THE SUBCONSULTANT]

acting by:

Signature of Director

.....

Print name of Director

.....

Signature of Director/Secretary

.....

Print name of Director/Secretary

.....

[EXECUTED AND DELIVERED AS

A DEED by

[THE CONTRACTOR]

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary

³ Insert name of member of TfL Group

Schedule 11- Part B

Form of warranty from Subcontractor to Beneficiary where Subcontractor is providing consulting services

THIS DEED is made on ● 202 ●

BETWEEN:

- (1) ● whose registered office is situate at ● (the "**Beneficiary**");
- (2) ● whose registered office is situate at ● (the "**Subconsultant**"); and
- (3) ● whose registered office is situate at ● (the "**Contractor**").

WHEREAS:

- A) Rail for London Limited has entered into a framework agreement with the *Contractor* dated [date] enabling [● (whose registered office is at ●)]¹ (the "**Employer**", which expression shall include its successors in title and assigns), from time to time, to enter into a call-off contract with the Contractor for provision of services and/or works.
- B) By a call-off contract dated ● (the "**Contract**") the *Employer* appointed the *Contractor* for the provision of certain [**works**][**services**] as defined in the Contract at ● (the "**works**").
- C) The Subconsultant has been invited to design certain parts (the "**design works**") of the *works* and [**has entered**] [**will shortly enter**] into a deed of appointment with the *Contractor* (the "**Appointment**") for the *design works*.
- D) [The Beneficiary [intends to enter into] [has entered into] an agreement to provide finance for the carrying out and completion of the *works*.] [The Beneficiary [intends to enter into] [has entered into] an agreement with the *Employer* under which it will agree that on or following Completion of the *works* it will [purchase] [take a lease of] the whole or part of the *works*.] [The Beneficiary has an interest in the whole or part of the *works* as a developer and [intends to enter into] [has entered into] an agreement with the *Employer* in respect of r []].]/[the Beneficiary is a member of the TfL Group and has an interest in the *works* as ●.]²

NOW IT IS AGREED:

¹ Insert the details of the relevant member of the TfL Group.

² Select appropriate recital depending on whether the Beneficiary is (i) funder; (ii) purchaser/tenant; (iii) developer, (iv) member of the TfL Group

1. Terms and expressions defined in the Appointment shall where the context so permits have the same meanings in this Deed. The following expressions have the meanings set out herein:
 - (a) "Documents" means documents, items of information, data, reports, drawings, specifications, plans, software, designs, inventions and any other materials provided by or on behalf of the Subconsultant in connection with the *design works* (whether in existence or to be made).
 - (b) "Infrastructure Manager" has the meaning ascribed to it in the Railways and Other Guided Transport Systems (Safety) Regulations 2006.
 - (c) "Network" means the stations and depots (wherever situate), assets, systems, track and other buildings, which are used in the maintenance and provision of the underground service known as the "London Underground and/or the overground service known as the "London Overground" as applicable".
 - (d) "Operator" means a person with statutory duties to provide or secure the provision for Greater London of public passenger services by railway.
 - (e) "TfL Group" means Transport for London, a statutory body set up by the Greater London Authority Act 1999 and any of its subsidiaries and their subsidiaries.
2. The Subconsultant warrants and undertakes to the Beneficiary that;
 - (a) he has exercised and will continue to exercise all the reasonable skill, care and diligence required by the Appointment in the performance of his duties to the *Contractor* under the Appointment; and
 - (b) he has complied with and will continue to comply with the terms of the Appointment.
3. The Subconsultant warrants to the Beneficiary that he has used reasonable skill and care to not select or specify for use, and that he will not select or specify for use or allow to be used any substance or material which are not in accordance with the Standards, general good building and engineering practice and the requirements of the [Works Information][Scope].
4. Provided that nothing in this Clause 4 shall impose a greater duty on the Subconsultant than that owed under Clause 2(a) of this Deed, the Subconsultant further warrants and undertakes to the Beneficiary that:
 - (a) the *design works* will on Completion satisfy all performance or output specifications and other requirements contained or referred to in the Appointment;
 - (b) he has exercised and will continue to exercise all reasonable skill, care and diligence in the selection of goods and materials for the *design works* in so far as such goods and materials have been or will be selected by or on behalf of the Subconsultant;

- (c) the *design works* are integrated with the designs of the *Employer*, the *Contractor* and others as specified in the Appointment;
 - (d) the *design works* will on Completion comply with all applicable law and all relevant Standards; and
 - (e) the *design works* will be carried out and completed timeously in accordance with the time constraints set out in the Appointment.
5. The Subconsultant warrants and undertakes to the Beneficiary that he has maintained and will continue to maintain all insurances required to be maintained pursuant to the terms of the Appointment and that he has professional indemnity insurance with a limit of indemnity of not less than £[amount]³ in respect of each and every claim which may be made against the Subconsultant in relation to the *design works*. The Subconsultant shall maintain such professional indemnity insurance for a period of 12 years from Completion of the whole of the *works* provided that such insurance remains available at commercially reasonable rates and shall notify the Beneficiary forthwith if such insurance ceases to be so available. When deciding whether such insurances are available at commercially reasonable rates, no account shall be taken of any increase in the premium or imposition of terms which arise as a result of the Subconsultant's insurance claims record.
6. As and when reasonably requested by the Beneficiary, the Subconsultant shall produce for inspection documentary evidence that the insurances referred to in Clause 5 are being properly maintained and that payment has been made of the last premiums due in respect of such insurances.
7. To the extent that the intellectual property rights in any and all Documents have not already vested in the *Employer* or the *Contractor*, the Subconsultant grants to the Beneficiary an irrevocable, non-exclusive, non-terminable, royalty-free licence to copy and make full use of any and all Documents and all amendments and additions to them and any works, designs or inventions of the Subconsultant incorporated or referred to in them for the following purposes:
- (a) understanding the *works*;
 - (b) operating, maintaining, repairing, modifying, altering, enhancing, re-figuring, correcting and replacing the *works*, any Equipment or Plant and Materials;
 - (c) interfacing with, integrating with, connection into and adjusting the *works* and/or the works of Others;
 - (d) enabling the *Employer* to carry out the operation, maintenance, repair, renewal and enhancement of the Network;
 - (e) enabling the *Employer* to perform his function and duties as Infrastructure Manager and Operator of the Network;

³ The PI figure should be the same as the figure inserted in the Contract Data.

- (f) executing or completing the *works*; and
- (g) designing, testing and commissioning the *works*

provided always that the Subconsultant shall not be liable for the consequences of any use of the Documents as aforesaid for any other purpose. Such licence shall carry the right to grant sub-licences and shall be freely transferable to third parties without the prior consent of the Subconsultant.

8. The Subconsultant agrees:

- (a) on request at any time to give the Beneficiary or any persons authorised by the *Employer* access to the material referred to in Clause 7 and at the Beneficiary's expense to provide copies of any such material; and
- (b) at the Subconsultant's expense to provide the Beneficiary with a set of all such material on Completion of the *design works*.

- 9. If called upon to do so by the Beneficiary, the Subconsultant shall provide the Beneficiary with such information relating to the *design works* as the Beneficiary may reasonably require including without limitation copies of and extracts from Documents prepared or provided by the Subconsultant for the purposes of the *works* provided that neither the provision of such information nor any inspection of the *works* by the Beneficiary or its agents nor the approval by the Beneficiary or its agents of any material shall limit or discharge, or be deemed to limit or discharge the obligations of the Subconsultant under the Appointment or relieve the Subconsultant from any liability which he has in relation to the *design works*.
- 10. This Deed may be assigned by the Beneficiary to any member of the TfL Group without limitation and otherwise to any other person on two occasions without the consent of the Subconsultant being required and the Subconsultant shall do all such acts, deeds and things as may be reasonably necessary to give effect to any such assignment. No further assignment shall be permitted without the consent of the Subconsultant.
- 11. The Subconsultant shall not be entitled to contend that any person to whom this Deed is assigned in accordance with Clause 10 is precluded from recovering under this Deed any loss incurred by such assignee resulting from any breach of this Deed (whenever happening) by reason that such person is an assignee and not a named promisee under this Deed.
- 12. The liability of the Subconsultant under this Deed shall cease 12 years following Completion of the whole of the *works*.
- 13.1 The Subconsultant shall owe no greater obligations to the Beneficiary than he owes to the *Contractor* under the Appointment as if the Beneficiary was named in the Appointment as a joint employer with the *Contractor*.
- 13.2 The Subconsultant shall be entitled in any action or proceedings by the Beneficiary to rely on any limitation in the Appointment and to raise the equivalent rights in defence of liability as he would have against the *Contractor* thereunder (excluding rights of set-off and counterclaim).

14. The rights and benefits conferred upon the Beneficiary by this Deed are in addition to any other rights and remedies the Beneficiary may have against the Subconsultant including without limitation any remedies in negligence.
15. The *Contractor* agrees that he will not take any steps which would prevent or hinder the Beneficiary from exercising his rights under this Deed.
16. Any notice to be given hereunder shall be deemed to be duly given if it is in writing and delivered by hand at or sent by registered post to the registered office or principal place of business in the United Kingdom for the time being of the party to be served and in the case of any such notice sent by registered post shall be deemed to have been received 48 hours after being posted.
- 17.1 Any dispute or difference arising out of or in connection with this Deed may be referred to adjudication in accordance with the Contract which shall be deemed to be included in this Deed as if they were recited herein in full (with the necessary changes).
- 17.2 The Adjudicator's decision shall be binding on the parties until the dispute or difference is finally determined by the Courts in accordance with Clause 17.3.
- 17.3 The Courts of England and Wales shall have jurisdiction over any dispute or difference arising out of or in connection with this Deed. The law of England and Wales shall be the proper law of this Deed.
18. Nothing in this Deed confers or is intended to confer on any third party any benefit or the right to enforce any term of this Deed pursuant to the Contracts (Rights of Third Parties) Act 1999.

IN WITNESS whereof this Deed has been executed and unconditionally delivered as a Deed by the parties the day and year first above written.

EXECUTED AND DELIVERED AS A DEED

by affixing the Common Seal of

[]⁴

In the presence of:

Authorised Signatory

OR

[EXECUTED AND DELIVERED AS

A DEED by

[THE BENEFICIARY]

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary

]

[EXECUTED AND DELIVERED AS

A DEED by

[THE SUBCONSULTANT]

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary

⁴ Insert name of member of TfL Group

**[EXECUTED AND DELIVERED AS
A DEED by
[THE CONTRACTOR]**

acting by:

Signature of Director

Print name of Director

Signature of Director/Secretary

Print name of Director/Secretary]



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Volume 2

Works Information

2.000



Beckton Depot – Maintenance Facility Building, Southern Sidings and Temporary Fit Out Shed

65204MF-DLR-MAC-TD350_00-RES-CP-0001

WORKS INFORMATION

Ref	Description
WI_INTRO100	Description of the Works - Project Overview
WI_MFB100	Description of the Works - Maintenance Facility Building
WI_SS100	Description of the Works - Southern Sidings
WI_TFOS100	Description of the Works - Temporary Fit Out Shed
WI200	Constraints on how the Contractor provides the Works
WI300	The Contractors Design
WI400	Completion
WI500	Programme Requirements
WI600	Quality Assurance, Inspection and Testing
WI800	Management of the Works
WI900	Working with the Employer and Others
WI1000	Services and Other Things to be Provided
WI1100	Health, Safety and Environmental Requirements
WI1200	Subcontracting
WI1300	Title
WI1500	Accounts & Records
WI2000	Employer's Works Specification and Drawings



WORKS INFORMATION

Programme DLR Rolling Stock Replacement Programme

Project Maintenance Facility Building, Southern Sidings, Temporary Fit Out Shed and other associated works.

		Signature	Date
Prepared:	Anna Hladkyj Project Manager		11.03.2022
	Kanesh Ram Project Engineer	<i>Kanesh Ram</i>	11-March-2022
	Reemal Parbat Project Engineer		11/03/2022
	Stephen Oliver Commercial Manager	<i>Stephen Oliver</i>	11/03/2022
Approved:	Rosanna Butters Senior Project Manager		pp Paul Gammage 11/03/2022
	Tim Arianpour Principal Project Engineer		11/03/2022
	Sarah Davies Senior Commercial Manager	<i>Andy Coombe</i>	pp Andy Coombe 11/03/22
	Matthew Walker Systems Integration Lead Engineer		11/03/2022

ABBREVIATIONS

AFC	Approved for Construction
AiP	Acceptance in Principle
AoA	Acceptance of Asset
AoD	Acceptance of Design
ATO	Automatic Train Operation
AVI	Automatic Vehicle Inspection
BCC	Beckton Control Centre
BCP	(DLR) Business Critical Process
BEP	BIM Execution Plan
BIM	Building Information Modelling
BIU	Bring into Use
BREEAM	Building Research Establishment Environmental Assessment Method
CAMS	Contract Administration Management System
CAP	Change Assurance Panel
CDE	Common Data Environment
CMS	Cable Management System
CPET	Central Point of Expertise on Timber
CPM	Critical Path Method
CRMP	Construction Resource Management Plan
CSA	Canadian Standards Association
CTAP	Contractor Technical Assurance Plan
D&B	Design and Build
DC	Direct Current
DEFRA	Department for Environment, Food and Rural Affairs
DLR	Docklands Light Railway
DLRL	Docklands Light Railway Limited
DNO	Distribution Network Operator
DSAS	Document Submission & Approvals Schedule
DVTD	Dynamic Vehicle Test Device
EDOC	Electronic Duty of Care

E&P	Electrification and Plant
EDMS	Electronic Document Management System
EMC	Electromagnetic Compatibility
EPP	Emergency Preparedness Plan
ESMP	Engineering Safety Management Plan
ETE	Electrical Track Equipment
FORS	Fleet Operator Recognition Scheme
FSC	Forest Stewardship Council
GUI	Graphical User Interface
H&S	Health and Safety
HV	High Voltage
IO	Input Output
ITP	Inspection and Test Plan
IP	Internet Protocol
KAD	Keolis Amey Docklands
KPSP	Key Person Succession Plan
MCCB	Moulded Case Circuit Breakers
MFB	Maintenance Facility Building
MTIS	Master Track Isolation Switch
NCR	Non-Conformance Report
NRMM	Non-Road Mobile Machinery
NVER	Non-Vital Equipment Room
NOWRI	Notification of Works Ready for Inspection
OCI	Optimised Contractor Involvement
O&M	Operations & Maintenance
OTC	Operational Track Crossing
PEFC	Programme for the Endorsement of Forest Certification
PHCC	Points Heating Control Cubicles
PLC	Programmable Logic Controller
QCSs	Quality Check Sheets
RAG Process	Red, Amber, Green Process

REB	Relocatable Equipment Building
RSRP	Rolling Stock Replacement Programme
S&C	Switches and Crossings
SCADA	Supervisory Control and Data Acquisition
SER	Signalling Equipment Room
SFI	Sustainable Forestry Initiative
SPG	Supplementary Planning Guidance
SS	Southern Sidings
TAP	Technical Assurance Plan
TFOS	Temporary Fit Out Shed
THC	Trace Heating Cubicles
TIS	Track Isolation Switch
UKAS	United Kingdom Accreditation Service
UPS	Uninterrupted Power Supply
URX	Under Road Crossing
UTX	Under Track Crossing
VER	Vital Equipment Room
VLAN	Virtual Local Area Network
VOWD	Value of Work Done
WRF	Work Request Form
WoRM	Working on the Railway Manual

GLOSSARY

Approval of Asset (AoA)	A state of acceptance, as dictated by the DLR Change Assurance Panel (CAP) of an asset/system.
Approved for Construction (AFC)	Drawings and documentation approved for construction of the <i>works</i> , with all comments addressed and closed out.
Beckton Gas Works	Beckton Gas Works was a major London gasworks built to manufacture coal gas. Operations ceased in 1970 and is currently the Site of Beckton DLR Depot.
Bring Into (Operational) Use/Brought Into Use	Asset has achieved AoA and can be used in operational service, however has yet to achieve Handover or Handback.
Completion of Site Works	Completion of Site Works is when all temporary and permanent physical <i>works</i> are complete in accordance with the Works Information and temporary services, accommodation and <i>Contractor's</i> plant, equipment and materials have been removed from the Site and Working Areas, in line with the Employer's request.
Contractor Records	Records that the <i>Contractor</i> is required to retain and maintain in accordance with this Works Information.
Coronavirus Pandemic	The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic designated as such by the World Health Organization on 11 March 2020 and which causes the disease known as "COVID-19".
Deliverable Records	Records that the <i>Contractor</i> is required to supply to the <i>Employer</i> or Others, in respect of the <i>works</i> .
Design Information	The Detailed Design and all supporting information provided by the <i>Employer</i> .
Design Scope	A package of design work to be delivered under this contract.
Detailed Design	Technical design up to AFC stage. Design detail equivalent to RIBA Plan of Work Stage 4 (Technical Design) output.
Enabling Works	Enabling Works are the works undertaken prior to the <i>works</i> commencing.
Free Issue	Materials provided by the <i>Employer</i> to the <i>Contractor</i> at the <i>Employer's</i> expense.

Greenspace Information for Greater London CIC (GiGL)	GiGL is responsible for collating, managing and providing detailed information on London's wildlife, parks, nature reserves, gardens and other open spaces. Refer: https://data.london.gov.uk › publisher › gigl
Handback	From <i>Employer/Contractor</i> to KAD: Any existing asset(s)/system(s), affected by the <i>works</i> , which have achieved AoA (including meeting all conditions stated in AoA) and have also been accepted as fully commissioned and all associated supporting documentation has been accepted by KAD.
Handover	From KAD to <i>Employer/Contractor</i> : Any existing asset(s)/system(s), affected by the <i>works</i> , which has been handed over by KAD to the <i>Employer/Contractor</i> , in order to provide the <i>works</i> . From <i>Contractor</i> to <i>Employer/KAD</i> : Any new Asset(s)/System(s) which have achieved AoA (including meeting all conditions stated in AoA) and have also been accepted as fully commissioned and all associated supporting documentation has been accepted by the <i>Employer/KAD</i> .
Handover Plan	<i>Contractor's</i> plan to Handover assets to the <i>Employer/KAD</i> .
Hold Points	Mandatory interventions identified in the <i>Contractor's</i> ITP.
HSE Supplier Assessment Tool	Tool utilised by the <i>Employer</i> to measure the <i>Contractor's</i> performance in regards the Health, Safety and Environment.
Interim Maintenance Readiness Plan	<i>Contractor's</i> plan to maintain the newly installed assets in the period from BIU until Handover.
Key Person Succession Plan (KPSP)	The Key Person Succession Plan gives the <i>Project Manager</i> confidence that replacement Key Personnel will be properly appointed and inducted and the workload will be handed over to them in a structured and orderly fashion.
Maintenance Facility Building (Existing)	Main structure in the centre of Beckton DLR Depot where heavy maintenance of the existing fleet is carried out.
Maintenance Facility Building (New)	New structure where heavy maintenance of the new fleet will be carried out.

Method Statement	A plan submitted by the <i>Contractor</i> which describes the way in which the <i>works</i> shall be carried out in line with the applicable HSE requirements.
Non Conformance Report (NCR)	A statement raised to record a Non-conformity (Defect) in the product, workmanship, or system.
Northern Sidings	Sidings in the northern area of Beckton DLR Depot. Constructed as part of the RSRP by Others.
Review Points	With respect to Inspection and Testing, some interventions shall be defined as 'Review Points' to allow the <i>Project Manager</i> and/or representatives the opportunity to review current status.
Safety Critical Staff	Staff required to oversee <i>works</i> or a possession on behalf of the <i>Employer</i> . Includes PWTEH and T002.
Site Plan	Plan showing the position of all fencing/hoardings, Site entrance/ egress points, surveillance equipment, access control equipment, zoning security huts and any phasing requirements for the developing phases of the <i>works</i> , within the boundaries of the Site.
Site Works	All temporary and permanent physical <i>works</i> carried out within and around the Site.
Southern Sidings	Sidings to the southern area of Beckton DLR Depot and which form part the <i>works</i> .
Standards	Those standards produced by TfL and DLR and the British Standards Institution of 389 Chiswick High Road, London, United Kingdom.
Technical Requirements	Requirements specifying the technical aspects that the depot system must fulfil.
Package	One of several procurement scope packages in which the Beckton Depot Upgrade Project has been subdivided.
Weekly Work Plan	A plan produced by the <i>Contractor</i> to demonstrate one week looking back and three weeks activities planned, presented to the <i>Project Manager</i> on a rolling weekly basis.
Witness Points	Interventions identified in the Contractor's <u>ITP</u> to allow the <i>Employer</i> and/or representatives the opportunity to witness current status/ <i>works</i> .

Work Site	A defined area of the Site, as detailed in Contract Data Part 1 and this Works Information.
-----------	---



WORKS INFORMATION

WI_INTRO100

DESCRIPTION OF THE WORKS

PROJECT OVERVIEW

CONTENTS

WI 105	Project Objectives and Philosophy
WI 110	Beckton Depot Upgrade Programme Procurement Packages Overview
WI 115	Site Location and Working Areas

WI 105 Project Objectives and Philosophy

Docklands Light Railway (DLR) has embarked on the replacement of its current fleet of B92 class trains which are nearing the end of their design life with a new fleet of walk-through, air-conditioned trains.

The replacement of the ninety-four 28.8m long B92 fleet with forty-three new 5-car fixed formation trains (max. 88m length) will also provide over 25% additional capacity and will cater for projected growth in service demand. The existing B2007 fleet is not affected and will continue to operate.

DLR operates out of two depot facilities. One being Poplar depot which is central to the DLR network and is used for light maintenance. It has the capacity to stable up to forty-nine single vehicles from the current fleet. The other being Beckton depot which is located to the east and where all heavy maintenance activities take place. It has the capacity to stable up to one hundred and six single vehicles from the current fleet.

Beckton depot currently does not have the capacity required to stable and maintain the increase in fleet size. An additional maintenance facility and stabling capacity is required at Beckton. These are to be constructed whilst retaining the ability to service and maintain the existing B2007 fleet and without causing disruption to services.

WI 110 Beckton Depot Upgrade Programme Procurement Packages Overview

The depot works are to be procured under an overarching 'Managed Package Solution' (MPS) strategy. This strategy will see a series of discrete contracts let on a staged timeline. The proposed delivery model is to separate the work into different procurement Packages.

- Package 1: Multi-Disciplinary Detailed Design Package – Services (encompassing design elements of Package 2, 4, and 5 and other supporting depot-wide/overarching design) – **Complete***
- Package 2: Sidings Enabling Works Build – **Complete**
- Package 3: Substation Upgrade Design & Build – **Ongoing**
- Package 4: Southern Sidings Build – **See WI_SS100**
- Package 5: Northern Sidings Build – **Ongoing**
- Package 6: Maintenance Facility Building Design – **Complete***
- Package 7: SCADA Design – **Ongoing**
- Package 8: Maintenance Facility Building Build – **WI_MFB100**
- Package 9: Train Simulator Building – **Ongoing**
- Package 10: Temporary Fit Out Shed Outline Design – **Ongoing**
- Package 11: Temporary Fit Out Shed Detailed Design & Build- See **WI_TFOS100**
- Package 12: Housing Infrastructure Fund Depot Extension – **Ongoing**
- Package 13: Enabling works on Road 4 in the Existing Maintenance Building – **Ongoing.**

The packages covered by the *works* are: **package 4, package 8, and package 11.**

Details of package 4, package 8 and package 11 are covered by WI_SS100, WI_MFB100 and WI_TFOS100 respectively.

Design for package 4 is covered by package 1 and Design for package 8 is covered by packages 1 and 6.

*Refer also to technical notes: 65204-AEC-MAC-TD350-REP-CM-9001 (Appendix C6.1.2) and 65204MF-DLR-MAC-TD350_00-RPT-DM-0001 (Appendix C6.1.1.1) on future updates to Packages 1 and 8 respectively.

WI 115 Site Location and Working Areas

Beckton depot is located at Armada Way, London, E6 7AB at E544049, N181300; it covers an area of 10.56ha, broadly trapezoidal in shape. The site was formerly part of the Beckton Gas Works, owned by National Grid. The backfilled foundations of a former gas holder lie within the boundaries of the site to the north of the existing depot. Armada Way bounds the site to the north, east and south; the A1020 – Royal Dock Road and the DLR Beckton Branch are to the west of the depot. The main depot area is occupied by sidings, sheds and other ancillary structures; the site lies on flat land and is occupied by sidings and ancillary structures.

Refer to the drawing: 65204MF-DLR-BOU-TD350_00-SKE-GL-0003 (Site Information 3.6) for a high-level overview of the package locations within Beckton depot.

The new maintenance facility building (MFB) is located within the depot area immediately to the north of the existing maintenance facility building and staff facilities.

The new Southern Sidings (SS) are located to the south of the existing depot.

The Train Fit Out Shed (TFOS) is proposed to be located to the South of the new Southern Sidings (SS).

The new Northern Sidings (NS) are currently in construction by Others.



WORKS INFORMATION

WI_MFB100

DESCRIPTION OF THE WORKS

MAINTENANCE FACILITY BUILDING

CONTENTS

WI 110	General Description of the Works
WI 115	Site Location and Working Areas
WI 125	The Contractor's Design Responsibilities
WI 130	General Statement of any Constraints on how the Contractor provides the Works
WI 135	Contractor's Site Inspection
WI 140	Specialist Subcontractors
WI 150	Optimised Contractor Involvement (OCI)
WI 160	BK BL BM Bring into Use

WI 110 General Description of the Works

This section describes the *works* to undertake the build, testing and commissioning of **Package 8: Maintenance Facility Building Build** (refer to the drawing '65204MF-ARC-PRM-TD350_Z-DR-AR-1000' in Appendix C 6.30). Key items are listed below:

- The New Maintenance Facility Building (MFB) including enabling works, and wheel lathe modifications (Refer to Technical note: 65204MF-DLR-MAC-TD350_00-RPT-DM-0001 in Appendix B 5.7 for future design changes)
- Roads BK, BL and BM and associated services
- East and West fan areas

Train delivery road. (NOTE: No design was issued at Tender and therefore the cost of these works will be priced up and instructed post contract award)Note 1:

The Northern test track (NTT) was designed by AECOM. The construction of the NTT is split into two sections (East & West). The Western section is being constructed by the Northern Sidings (NS) contractor and The Eastern section by the Contractor, including the testing and commissioning of the overall NTT (covered via 65204DD-DLR-TRK-TD350_00-REQ-RE-0001).

Future design updates affecting this section of the *works* is described in the technical notes: 65204-AEC-MAC-TD350-REP-CM-9001 and 65204MF-DLR-MAC-TD350_00-RPT-DM-0001 (refer to Appendix B 5.7).

Note 2:

The design required for the delivery of this scope of works is covered by:

- Some elements of 'Package 1' designed by AECOM and
- 'Package 6' in its entirety, designed by Arcadis.

For instance, item 1 in the above list is covered under 'Package 6', Item 2 is covered under 'Package 1' and Items 3,4,5 are covered between the packages 6 & 8.

Refer to the drawing '65204MF-ARC-PRM-TD350_Z-DR-AR-1000' in Appendix C 6.30 for a high-level overview of the design split between the different design consultants.

The *works* also encompass all the disciplines below, including but not limited to:

- Geotechnical
- Civils and structures
- Premises
- Drainage
- Mechanical and electrical services
- Plant and Equipment
- Signalling
- Permanent way
- Traction power
- Points heating
- Fire
- Telecommunications
- BREEAM

- Discharge of Planning conditions

The *Contractor* is fully responsible and in control of the staging of the *works* (including signalling staging design) at all times to ensure the operational depot is not interrupted by any unplanned works. The *Contractor* plans on both a long-term and short-term basis in order to manage the migration interfaces with the operational depot. This plan should be agreed with the *Project Manager* and a sufficient number of berth and maintenance facilities should be maintained at every stage of construction.

Note 3:

The clearing of all operational items / non-building service items inside and immediately outside the wheel lathe building will be undertaken by *Others*. The *Contractor* will support these works as required.

WI 120 Detailed description of the works

WI 120.1 General

Employer's Design Information can be found in section WI 2000.

WI 120.2 Survey Requirements

The *Contractor* undertakes the following surveys as part of the *works*, including but not limited to:

- Pre-condition and dilapidation surveys of existing assets, including existing depot building, civils, signals, drainage, telecoms, electrical, mechanical, conductor rail & DC power and track assets prior to any physical works taking place. The *Contractor* is responsible for arranging and carrying out all the surveys. The *Contractor* submits the resulting survey reports to the *Project Manager* for acceptance.
- Monitoring of existing adjacent track and depot infrastructure during the *works*. Trigger levels for intervention shall be agreed with the *Project Manager* and in advance of any physical works starting that may affect existing assets.
- Survey and identify buried utilities.
- Signalling correlation survey.
- Confirmatory ground investigation survey.
- Survey for existing utilities prior to commencing any excavation
- Further surveys as required and deemed necessary by the *Contractor*.

Note 1 - Without prejudice to WI120.2, and excluding ground investigation verification surveys, surveys required to complete design works by *Others* are not the responsibility of the *Contractor*.

Refer also to WI 245 Survey and the Handover / Hand Back Plan (Appendix D7.125).

WI 120.3 Civils

The *works* include all the civils and structures works involved in the construction of the new Maintenance Facility Building (MFB) immediately north to the existing depot maintenance building and wheel lathe road, all associated apron and train delivery hardstand, plus ancillary civils works.

In addition to the MFB, there is also MFB phase works in the Northern Sidings area which include the installation of the boundary and internal fencing, P-Way works on Road BL & BM, raised walkways for siding roads, ground level walkways, new equipment and services.

The list should be read in conjunction with the outline GAs for the proposed site works. The following bullets provide a high-level summary of the *works*, including but not limited to:

- All site mobilisation and set up works including compounds, fencing, demarcations, temporary services and access provisions, haul roads etc., as necessary to enable the build.
- All associated site surveys, site clearance/demolitions, remediation, services diversions/protections, and etc. on the footprint of the proposed new build.
- The new MFB is a hybrid trussed steel portal framed structure with 75m radius curved rafters and curved profile roof. The building measures circa 34.3m x 112m on plan, with a max building height of circa 14.7m. Inclusive of the gable ends the structure has 15 portal frames, which are spaced at 8.25m c/c except for the two west most bays where the portals are at 6m c/c. The spacing are such as to avoid the foundations of the existing shed columns. The foundations shall be piled. The cladding shall be of non-combustible long span structural cladding panel system.
- The curved roof shall have roof lights, and vents. There shall be grids of PV panels with access walkways covering the southern third of the new roof area.
- The new concrete shed floor consists of a synchronised lifting road (Rd 6) with a fixed jack system within a 5m deep pit, a standard DLR pitted maintenance road (Rd 7), and two swimming pool roads (Roads 8 and 9) with steel pedestals and way-beams to support the track. All roads shall be piled with the floor slab suspended between the piled foundations. Cast in ducts within the floor slab and new buried cable/services under the slab are required within the proposed footprint.
- Ground Stabilisation (including the design) is expected to be required to the shallow pad foundations for the north elevation of the existing shed to enable the construction of the new shed foundations. It is known that the existing maintenance shed building is generally built on vibro-stone column improved ground.
- The 5m deep continuous pit shall be formed from secant piled walls. Dewatering is anticipated to be required at the site taking full consideration of the site environment and known ground contaminations.
- Earthworks to enable the build including any remediation works.
- A 12m span 20T travelling crane installation is required at the 4 widened bays of Road 6 at the east end. A 2T travelling crane will be required over the remaining length of Road 6, and Road 7. Road 8 and Road 9 will each be fitted with a 2T monorail hoist. Shore supply support beams will run along all four roads.
- Within the new shed there shall be a second-floor accommodation over Road 6 consists of composite concrete/profiled steel deck floor slab supported on grid of steel beams spanning between internal columns and the southern portal columns. The accommodation floor shall be accessed via a high-level gantry walkway along the western gable with a stair down to the north east end of the new shed.
- Modifications to the northwest block of the existing steelwork framing of the shed structure is required to provide linked access between existing and the new accommodation floor within the new MFB shed plus installation of new lift. The cladding along the full north elevation of the existing maintenance shed will need to be removed and the roofing modified to interface with the new shed constructions.
- Modifications to the existing switch rooms and access layout.
- Installation of all necessary building fabrics, secondary fix, partitions, new CMS and

services for the new shed plus ancillary builders works.

- Perimeter aprons to three sides of the building will be required. The two gable aprons shall be piled. A bogies and trains delivery hardstand area to the east of the new shed will consist of bespoke infill panels/solid polymeric crossing panels as well as the traditional ground bearing concrete hardstand. To the west there will be a small hardstand area extending to surround the new Distribution Shed (by Others - Work package 3).
- Construction of new raised walkway for Road BM (South of the road). Construction of raised walkway for Road BL/BK (extensions at both ends of existing road E/F) including all civil works required for the track bed & drainage assets). Demolition of all other walkways and assets (P-way, drainage, lighting columns, CCTV Columns, specified signalling assets from and including existing Road G up to and including existing Train Wash Road N, track works.
- Construction of new internal fencing, lighting columns, CCTV, signals and ancillary equipment and their associated foundations within the northern sidings MFB phase package.
- Construction of new and relocation of buried CRMS route and access chambers.
- Construction of new and relocation of track, surface, and foul drainage.
- A train delivery road from depot entrance through to the new proposed MFB, which shall involve demolition of existing access road, new kerb works, local buried services diversions and construction of suspended reinforced road slab to protect sensitive services that is to remain in place.
- A new permanent track crossing on the Train Delivery Road using solid polymeric panels.

The *Contractor* is responsible for the following surveys and assured designs, including but not limited to:

- All temporary works required including but not limited to access scaffold, trenching, dewatering, piling platform, haul road, hoarding/temporary fencing, crash deck, and access etc.
- Survey and verification of buried services alignments.
- Survey and verification of existing build for the proposed MFB interfaces.
- All steelwork fabrications drawings production.
- Steelwork connection design optimization.
- Gas vapour/waterproofing membrane sealing detailing (supplier specific).

WI 120.4 Geotechnical

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- Site Clearance;
- Disposal of contaminated soil;
- Soil remediation;
- Undertake phase of confirmatory ground investigation (GI) ahead of construction;
- Ground Stabilisation of the existing Wheel Lathe Building ahead of excavation for the construction of the new MFB foundations - the performance specification for the stabilisation shall be found in the geotechnical section of the Civil specification (4.1.1 XI) - 65204MF-ARC-BAS-TD350_Z-REQ-SE-0001 (Appendix 6.276);
- The Contractor shall be responsible for both undertaking the design of the

geotechnical elements, as well as any stability analysis required on the existing Wheel Lathe (WLB) and MFB buildings. This includes provision of the assurance documents and obtaining DLR CAP approval for their proposed design.

- Piled foundations for MFB - Note: The pile setting out schedule: 65204MF-ARC-BAS-TD350_1-DR-CE-3010, the final toe level of the piles is subject to the findings of the confirmatory GI and there is potential for an increase in pile length to 25m;
- Piled foundations for the lifting jack system for Road 6;
- Piled foundations for the tracks for Road 7 to 9;
- Integrity testing for all foundation piles;
- Pile load testing on working piles;
- Secant pile retaining wall for Road 6;
- Integrity testing on secondary piles;
- Piled foundation for Apron;
- Apron raft foundation;
- Transition from Apron to ballasted track;
- Rainwater harvesting tank;
- Excavation and earthworks;
- Drainage works;
- Cable route excavation and connection;
- Groundwater and gas protection measures;
- Groundwater and gas monitoring;
- Instrumentation and monitoring;

WI 120.5 Mechanical and Electrical

The Detailed Design for the Mechanical and Electrical scope of the *works* can be found in Appendix C6.503-6.534.1

WI 120.5.1 Mechanical Services

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

New Gas Main & Gas Fired Heaters:

- A new gas main shall be installed from a capped and isolated gas supply provided in a manhole by Others within the site boundary to serve the new maintenance shed.
- The main area of the shed shall be heated using gas fired radiant heaters which are proposed to be installed at high level within the trusses of Roads 7, 8 & 9 and at highlevel under the mezzanine floor to serve Road 6.

Smoke Ventilation to the new MFB:

- The MFB roof shall have smoke ventilators installed using five fire zones formed by smoke curtains secured to the trusses. The smoke ventilators shall also be used as natural ventilators to the shed in the summertime for temperature control.
- The Roof Mounted Smoke ventilators shall operate either open or closed and are not modulating.
- Temperature sensors to be installed and interfaced with a Colt control panel.

New Compressed Air System:

- The roads in the MFB shall be provided with a new compressed air system from a

new duty/standby compressor arrangement which shall be installed in the compressor room.

New Heating & Cooling to 2nd Floor Accommodation;

Booster pump & associated pipe work for MFB including hot & cold-water services to 2nd floor accommodation;

Removal, addition, and modifications to the existing ventilation louvres within the north wall of the existing maintenance facility;

Controls to the Heating, Cooling and Ventilation systems to the new MFB;

Installation, testing and commissioning of the Building Management System (BMS). BMS shall be integrated to the existing TREND system that supports the existing maintenance facility.

Supply and installation of:

- Water Dispensing sets on platforms serving roads BK, BL & BM.
- Gas supplies pipe work in eastern approach to MFB.

Affected Existing Assets, including but not limited to:

- The existing toilets within the existing maintenance facility to be reconfigured.
- The existing extract ventilation units shall be removed and replaced by extract grilles which shall be connected to the new toilet extract system serving the mezzanine floor in the new MFB.
- The existing ground floor HV & LV switch rooms in the existing maintenance facility shall be decommissioned remodelled and reused for the new compressor room and LV switch panel room. To facilitate the works by the *Contractor*, services that are decommissioned by *Others* will be removed prior to the *Contractor* undertaking any work in this area. The existing gas and water services which are buried services running externally along the north side of the existing maintenance facility will require to be removed and re-routed as necessary.

WI 120.5.2 Electrical Services

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- Main LV switch panel in MFB LV switch room at first floor level.
- Incoming sub-main cable from UKPN LV switch panel to MFB main LV switch panel.
- Uninterruptible power supply (UPS) system and outgoing switch panel in UPS room at ground floor level.
- 2no. sub distribution LV section panels in the maintenance facility.
- 230V/110V transformer distribution units located in the MFB area and in LV switch rooms.
- Lighting (normal & emergency) and small power final circuit distribution boards to serve the MFB, staff accommodation and external areas.
- Normal and emergency lighting in the MFB, pits, switch rooms, plant rooms, staff accommodation areas, external perimeter walkways and apron areas.
- DALI lighting control system.
- 230V/400V power supplies to mechanical services (heating, cooling and ventilation

systems, smoke vents, compressed air systems, water boosters, etc.).

- 230V/400V power supplies to depot plant and equipment (cranes, lifting jacks, hoists, roller shutters, etc.).
- 230V/400V power supplier to other services (i.e. fire, telecoms, DC power, etc.).
- 110V maintenance sockets in shed area, pits, switch rooms, plantrooms, etc.
- 230V and 400V small power socket outlets in shed area, switch rooms, plantrooms, staff accommodation, etc.
- Photovoltaic (PV) system.
- Lightning protection system for the MFB.
- LV earthing and bonding within the MFB.
- Sub-mains and final circuit cabling associated with above LV distribution system.
- Cable containment system (CMS) for electrical, fire alarm, telecommunication, and data/control cabling within the MFB.
- Lighting (lighting columns & bulkhead luminaires) on platforms serving roads BK, BL & BM.
- Power cluster units on platforms serving roads BK, BL & BM.
- Power supplies to mechanical services (i.e. trace heating, leak detection, etc.), on platforms serving roads BK, BL & BM.
- Distribution boards.
- Cabling and cable containment for above platform service.
- Lighting columns in east fan area.

The *Contractor* decommissions and removes the existing electrical services as part of the *works*, including but not limited to:

- Existing electrical services (lighting, small power, associated cabling & CMS) on existing platform serving roads BK & BL.
- Existing lighting columns/masts (and associated cabling) in the proposed MFB footprint, and the east & west fan areas.

WI 120.6 Signalling

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- All signalling works - Track circuits, Points, and Signals on Roads BK, BL & BM and MFB Roads in the East and West approaches to the MFB including testing & commissioning of all the Roads;
- System Integration Testing of Roads BK, BL & BM and the MFB Roads;
- Commissioning of the MFB East & West fan roads;
- Update (including but not limited to the design) to the Control Centre Depot Controller's GUI display during each of the migration stages;
- Without prejudice to clause 26.1 of the conditions of contract, the signalling supplier is ICONSYS. The contact details of ICONSYS are as follows:

Independent Control Systems Ltd.
ICONSYS House
Hortonwood 33
Telford
Shropshire

TF1 7EX

Ph. +44 (0) 1952 607 300

For the avoidance of doubt, any appointment of ICONSYS by the *Contractor* is not treated as appointment of a 'nominated' subcontractor.

- The Iconsys system shall be connected to the Depot Personnel Protection System (DPPS) via the signalling interface box (refer to WI120.8 for more details).
- The new shunt signals shall be controlled via the depot control system (refer to WI120.8 for more details).
- The depot control system shall also connect to the Over-head Status Indicator and klaxons (refer to WI120.8 for more details).
- The *Contractor* shall integrate the Iconsys system with all elements of the DPPS (signals, derailer / wheel stop, panels) including vital interlocking.
- The *Contractor* shall be responsible for the overall testing, commissioning, and bringing into use of the Integrated DPPS.

The *Contractor* shall be responsible for the correlation survey of signalling assets. And the contractor shall be responsible for any design updates that shall be required post survey works.

- Signalling works requiring the use of a Tester in Charge (TiC) shall be arranged with the co-operation and agreement of the TiC in the design stage, or as early as possible in the works planning stages.

The *Contractor* shall comply with all DLR standards. If the DLR standards are found to be inadequate or where information is not available, then Network Rail standards are to be referred to. This shall be agreed with the *Project Manager* in advance of committing to any works. It shall be noted, the standards (including but not limited to): 'Signalling Works Testing Handbook' shall be used for commissioning works and 'Signalling Design Handbook' for signalling design works. Signalling works requiring the use of a Tester in Charge (TiC) shall be arranged with the co-operation and agreement of the TiC in the design stage, or as early as possible in the works planning stages.

- The *Contractor* shall be responsible for the below signalling design works (including but not limited to):
 - Signalling staging design including production of the signal sighting forms (Refer to WI120.15 for details on migration stages).
 - The *Contractor* shall be responsible for the correlation survey of signalling assets. And the contractor shall be responsible for any design updates that shall be required post survey works.
- The *Contractor* shall be responsible for any required parallel working agreements and manage the parallel design work requirements by undertaking appropriate risk assessments.
- AECOM were the Designer for the end state signalling design. Should the *Contractor* choose an alternative design consultant for the signalling design works, they shall be of comparable experience/standard and in any event shall meet the requirements of WI1200 and the requirements of clause 26 of the contract.

Note:

- New route Indicator that is different to that of the currently installed onsite is being implemented as part of Northern Sidings build works. These would have been already approved and installed in the Northern Sidings before the MFB/SS works begin.

WI 120.7 Permanent Way

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

Roads BL and BM – Northern Sidings Platform Stabling Roads North of MFB Building:

- Installation of S&C unit (1460 Pts) and Supply & installations of track circuits.
- Installation of approximately 120m of plain line ballasted track on the west end of Road BL and 120m at east end of Road BL.
- Installation of approximately 280m of plain line ballasted track on Road BM.

MFB Ballasted Track Fan Areas:

- Installation of 8 S&C Units 7 on ballasted track and 1 direct fix on the eastern apron. Composite sleepers and bearers to be used on ballasted track.
- Supply & installations of track circuits
- Ballasted Track Depot Fans either side of new MFB Facility (Roads 6, 7, 8 & 9) - approximately 500m of Ballasted Track (including S&C).
- Additional Bogie Road access from Road 6. Note Bogie Roads in addition will require 3No. Wheel Stops.
- Installation of 1461 Pts and Realignment of Track (different to A Design) between 1461 Pts and 1460 Pts.
- Removal of Temporary Track Crossing & Passengers Crossing and Reinstatement of Final Track-form (ballasted) including the provision of checkrail.
- Note: S&Cs and HVIs are free issue from the *Employer*.

MFB Shed Pit Roads and Concrete Apron:

- Concrete Apron length approximately 10 m Embedded Track across the width of the new MFB (both ends).
- MFB Roads all approximately 130m in length. All Track within the MFB is straight on 0% Grade.
- (Roads 8 and 9) 2 Swimming Pool roads. Track (Vertical 80A Rail) supported on steel girder with Lindapter Rail Fixing.
- (Road 7) 1 Inspection Pit / Calibration Road. Track (Inclined 113A Rail) installed on Ho Pan Baseplates with Epoxy levelling grout, supported by pit walls. Twist and Forged Transition Rails on internal apron prior to start of pit (both ends).
- (Road 6) 1 Lifting Road with short sections of embedded track between Train Liftingjacks.

WI 120.8 Traction power

The *Contractor* installs, tests and commissions the following as part of the *works*, some items may require design, including but not limited to:

Vicinity of substation:

- 2No. MTIS BE9 and BE10 including all civil works; Note: Programme to be carefully considered as these MTIS may have to be installed at an early stage.

- Protective conductor connected from the MTIS to the nearest traction return.
- CRMS from the substation demarcation point to new MTIS BE9 and BE10 including wall penetration between the cable chamber.
- Installation of all cables from new MTISs to substation Circuit breakers, LVAC DB and SCADA panel.
- All appropriate labelling.

CRMS and cable installation from existing substation on west of the depot to new MFB shed and existing shed junction box.

- To accommodate all DC cables (positive and negative) from substation to MTIS to MFB switch room and existing shed junction box.
- All appropriate labelling.

Vicinity of existing shed (west end):

- 1No. coupling switch to be installed including all civil works and associated protective conductor.
- 1No. junction box including civil works.
- CRMS for DC cables from MTIS BE9 and BE10 (Positive) and from substation (negative).
- New DC cables including termination.
- All appropriate labelling.

New Maintenance Facility Building:

- Emergency Stop buttons (ESB) and associated lights.
- Overhead busbars DC, AC and earth (1 set per road) including hospital bays.
- Overhead shore supply trolleys including trolley lead and pendant (3No. per road).
- Overhead Status Indicators (OSI) including beacons and klaxon.
- Road Remote Control panels (RCCP) (2No. per road).
- Interlock Key insert panels (2No. per road).
- Pull cord Emergency stop system including reset box (Road 7).
- DPPS Road End Panels (REP) (2No. per road).
- Signalling interface box (2No. per road).
- Mimic panel in Team's leader office.
- Shed Negative busbar and associated panel.
- Roller shutter controller boxes (2No. per road).
- Hoist or Crane control panels (1No per road).
- All related CRMS including ducts, ladders, trays and wall penetration.
- All cables including any required joint and termination as well as lugs and glands supply for:
 - DC cable.
 - LVAC and control cables to OSI, RCCP, ESB.
 - Negative cables, bonds, and cross bonds to the running rails.
 - Earth cables.
- All appropriate labelling.

New DC Switch room

- Installation of new switchgear including any required civil works within the switch room:
 - 1No shed board isolators (SBI).
 - 4No Contactor panels (CP).
 - 1No. Extended panel for cable connection

- Installation of all 230V/110V, earthing and SCADA related equipment:
 - UPS.
 - UPS bypass.
 - MCCB.
 - Battery.
 - 400V/110V Centre Tap Earth Transformer.
 - UPS distribution boards (DB) (3No.).
 - Emergency Stop Control panel.
 - Klaxon Control panel
 - Earthing diode.
 - Earth bar.
- All cabling (DC, LVAC, SCADA related, Control, earthing) including termination and lugs and glands supply.
- All associated CRMS.
- All appropriate labelling.

Vicinity of new Maintenance Facility Building:

- CRMS for various DC, earth cables and control cable to apron barriers, including ducting and troughing.
- New positive cables including termination on conductor rail.
- New negative cables including cross bonding and termination on running rails.
- Insulating Block joints.
- All cabling and termination to new apron barriers.
- All appropriate labelling.

North of new Maintenance Facility Building:

- Installation, testing & commissioning of traction power works on Roads BL & BM.

DPPS system:

- 2kVA 230V/110V transformers (2No.);
- DPPS track equipment including:
 - Wheel stop system (6No.)
 - Derailer (2No.)
 - Laser optical guards and reflective mirrors (8No.).
 - Post mounted stop board
 - Ground mounted Shunt signal inbound
- All cabling including termination into appropriate equipment.
- All appropriate CRMS including troughs and ducts.

Team Leader's Office:

- New mimic panel displaying MFB equipment and alarms.
- Associated cabling, terminations and CRMS all the way back to the MFB.
- All appropriate labelling.

Yard works:

- Associated cabling, terminations and CRMS all the way back to the MFB.
- Conductor rail continuity bonds.
- Stray current return cables from the test track stray current collection mesh.
- All new negative bonding cables (transposition bonds, continuity bonds, cross track bonds) and modification of existing negative return cable arrangement.

- 15No. New TISs and associated civil works and cables including protective conductor connected from the TIS to the nearest traction return.
- All appropriate labelling.

WI 120.9 Premises and Architectural

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- Blockwork;
- Plastering;
- WC / Urinals / Rest Room / Kitchen / Locker Room;
- Flooring;
- Painting of floors and walls;
- Line marking on floors and walkways;
- Handrails;
- Cladding to the sides of the MFB;
- Roof sheeting;
- Doors / Windows;
- Labelling;
- Cycle storage

WI 120.10 Telecommunications

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- MFB LAN IT System – LAN/Network Termination Points (NTP) and interface existing IT System.
- MFB Wi-Fi System and interface to Ruckus Wi-fi System (Northern Sidings package).
- Northern Sidings Wi-Fi access points, (location and number contained within Northern Sidings Communications Detailed Design 65204-AEC-COM-TD350-REP-RS-3001).
- Telephone System, EVC & interface to existing system (extension & configuration with existing NEVER, allocated extension addresses and asset ID, Software configuration etc.).
- Installation of MFB Comms equipment cabinets.
- CMS Installation for all MFB communications assets.

WI 120.11 Drainage Works

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

Surface water system

- The *Contractor* provides construction of all above / below ground, attenuation structures and downstream defender associated with surface water falling on or around the building. This includes provision for constructing siphonic drainage system at roof level and all associated pipework to ground level.

Note - The attenuation tank associated with the depot works is located within the Northern Sidings and these works are being carried out by Others.

Foul / contaminated systems

- The *Contractor* provides all above / below ground foul water systems including pipework and pump station from all proposed required facilities for staff across the site including for all required venting systems. This includes kitchen, showering and WC facilities. The *Contractor* should also be aware that trackside pit drainage shall also drain into the foul water system, this shall require the laying of channels into the base of the proposed maintenance pit. During the design it has been noted that it is not possible to drain all system using gravity alone there is pumping stations as part of the proposed system.

WI 120.12 Plant and Equipment

The *Contractor* shall be responsible for the purchase, design, manufacture, installation, testing, commissioning, training, and handover of the individual equipment as well as the system integration and programming to meet the contract programme.

'The Plant & Equipment List' details the Plant & Equipment required and provides the suppliers (with exception to Mobile wheel lathe. This mobile wheel lathe shall be omitted from the current scope of works). The *Contractor* shall use the listed specialist suppliers or similar approved suppliers. The *Contractor* is required to gain acceptance from TfL of each supplier for each piece of equipment prior to contracts being awarded. For each piece of equipment, a specification shall be provided as part of the Tender. These shall take the form of a System Requirement Specification or a Technical Requirements Specification. The *Contractor* shall provide Assurance for each piece of Plant & Equipment shall follow the 'V' lifecycle as defined in S1538 "Assurance Standard" and S1191 "Rolling Stock specific plant & equipment". See also WI 600.

The *Contractor* shall comply with the following norms, regulations, and standards as a minimum:

- Health & Safety at Work Act 1974.
- Supply of Machinery (Safety) Regulations 2008.
- Provision and Use of Work Equipment Regulations 2008 (PUWER'08).
- Manual Handling Operations Regulations ACOP 1992 (L023) & Subsequent Amendments.
- BS EN 349:1993 Safety of Machinery, minimum gaps to avoid crushing of parts of the human body.
- Risk Assessment in line with BS EN 14121 Safety of Machinery.
- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).
- BS 7514 (EN 45014) General Criteria for *Contractor's* Declaration of Conformity.
- S1538 Assurance Standard.
- S1191 Version A1 Rolling stock specific depot plant and equipment.
- S1222 Version A2 Electromagnetic Compatibility (EMC).
- G222 Version A3 Guidance on Electromagnetic Compatibility

The *Contractor* shall provide a Handover Folder containing all relevant documentation that applies to the equipment. The Handover Folder shall be provided in the 10-section format and shall include but not be limited to the items listed in the table below.

Sec	Sub Sec	Document	Provided By	Process	Template	Comments
N/A	N/A	Project Completion & Handover Certificate	TfL	<u>PD0041</u>	<u>f-10005</u>	
N/A	N/A	Front Cover	Supplier	N/A	N/A	To include photo and asset numbers
N/A	N/A	Index	Supplier	N/A	<u>377604172</u>	
N/A	N/A	Folder Dividers	Supplier	N/A	<u>377598676</u>	
1	Handover Signature Sheet					

Sec	Sub Sec	Document	Provided By	Process	Template	Comments
	1.1	Project Handover Folder Signature Sheet	TfL	N/A	<u>378033936</u>	
	1.2	Fleet Handover Folder Signature Sheet	TfL	N/A	<u>378036669</u>	
	1.3	Maintenance Handover Folder Signature Sheet	TfL	N/A	<u>378042846</u>	
2	Quick Start Guides					
	2.1	Operator Quick Start Guide	Supplier			
	2.2	Maintenance Quick Start Guide	Supplier			
3	Manuals					
	3.1	O&M Manual	Supplier	N/A	Suppliers Own Format	Maybe multiple O&M manuals
4	Work Instructions					
	4.1	Fleet Process Instruction	Supplier	<u>TBC</u>	<u>TBC</u>	TBC
	4.2	Maintenance Work Instruction (W12126)	Supplier	N/A	<u>F7953</u>	Review existing & confirm applicability
5.1	Drawings					
	5.1.1	Supplier Drawings	Supplier	N/A	TfL CAD Format	All drawings to be listed separately.
	5.1.2	Component Drawings	Supplier	N/A	PDF	
5.2	Sourcing					
	5.2.1	Details of Suppliers of Products	Supplier	N/A	N/A	
5.3	Component Technical Data Sheets					
	5.3.1	Component	Supplier	N/A	PDF	All

Sec	Sub Sec	Document	Provided By	Process	Template	Comments
		Technical Data Sheets				component technical data sheets to be listed separately
6	Certificate of Conformity					
	6.1	Certificates of Conformity	Supplier		<u>F0923</u>	Plant / Equipment specific
7	Design Assessments					
	7.1	Product Risk Assessment.	Supplier			In-line with British Standard on the Safety of machinery – Risk Assessment (BS EN ISO14121-1:2007)
	7.2	EMC Certification	Supplier			
	7.3	Other	Supplier	N/A	N/A	
8	Specifications					
	8.2	Specification	Supplier	N/A	N/A	
9	Inspection and Testing					
	9.1	Inspection Test Plan (ITP)	Supplier	<u>pd-10743</u>	<u>f7610</u>	
	9.2	Factory Acceptance Test (FAT)	Supplier			
	9.3	Site Acceptance Test (SAT)	Supplier			
	9.4.1	NOWRI - Elementary - (one for each)	TfL			
	9.4.2	NOWRI – Bring In to Use (BIU) - (one for each)	TfL	<u>pd-10697</u>	<u>f0483</u> <u>f0484</u>	Supplier Involvement
	9.4.3	NOWRI – Handover (HO) - (one for each)	TfL	<u>pr0091</u>		
	9.5	Snagging List	TfL		<u>f0485</u>	

Sec	Sub Sec	Document	Provided By	Process	Template	Comments
	9.6	Load Test Certificate	Supplier			
10	Training					
	10.1	Operator Training Material / Check Sheet	Supplier	N/A	N/A	
	10.2	Operator Training Record of Attendance	Supplier	N/A	N/A	
	10.3	Maintenance Training Material / Check Sheet	Supplier	N/A	N/A	
	10.4	Maintenance Training Record of Attendance	Supplier	N/A	N/A	

WI 120.13 Cyber Security

- The *Contractor* shall ensure the *works* meets the required TfL Cyber Security Standards (including but not limited to S1744).
- The *Contractor* shall implement the cyber security measures as proposed in the CyberSecurity Management Plan.
- The *Contractor* shall ensure that any system it interfaces with is not compromised from a Cyber Security perspective.

WI 120.13 Fire Systems

High level overview of *works* related to Fire Systems and fire strategy are in document 65204MF-ARC-FRS-TD350_00-REQ-FE-0002 (refer to Appendix C6.196). The Fire deliverables for the *Contractor* are detailed within the appended MDLs.

The following Fire Strategies have been produced and developed by the Detailed Design Consultant (Arcadis). The *Contractor* is responsible for the management and updating of these documents as part of the *works*:

- Beckton Depot – Site Wide Fire Safety Strategy Construction Phase.
- Beckton Depot – Site Wide Fire Strategy (End State);
- Maintenance Facility Building (MFB) (End State).

In addition, the *Contractor* produces and manages the following fire strategy document as part of the *works*:

- Maintenance Facility Building (MFB) Construction Phase.

WI 120.14 Systems Engineering & Engineering Safety

The following deliverables are anticipated from the *Contractor* as part of the Systems Engineering & Engineering Safety *works*, including but not limited to:

- The *Contractor* shall take onboard the designer's Systems Engineering Management Plan (SEMP) and shall provide suitable updates to detail the processes they shall employ in managing requirements, interfaces, assumptions, engineering safety etc.
- Include suitable processes for adding Hazards, Requirements, Issues & Assumptions to the records developed by the designers where the *contractor* identifies additional items as part of their scope.
- As part of the Engineering Safety management – Review the designer's safety justification and supporting information and include in the *contractor's* safety management activities: suitable actions to bring these activities to conclusion and support the *contractor's* safety justification.
- All Hazards, Requirements, Issues & Assumptions not closed out by the Designer in the Hazard Records, V & V matrix, Issues & Assumptions record, are to be taken onboard by the *Contractor* and taken to completion by identifying and providing suitable validation evidence. If the *Contractor* is unable to close out any items, they will be required to identify a party to transfer the item to for closeout and engage with that party and ensure they are formally transferred. These documents shall be found in Appendix D7.
- The Technical Assurance Plan, document number: 65204MF-DLR-MAC-TD350-PLN-ZZ-00001 (refer to Appendix C6.577) sets out Assurance requirements. The *Contractor* shall submit for acceptance by the *Project Manager* the *Contractor's* Technical Assurance Plan (CTAP). The CTAP shall detail all Assurance and other deliverables listed in the 'Master Deliverables List (MDL)' and shall include the various assurance Gates for which approval is required from the 'Change Assurance Panel' (CAP) for works under various stages of the works.
- In addition, as part of the Technical Assurance of the *works*, suitable assurance deliverables shall be provided by the *Contractor* for each of the migration stages to enable the project to pass relevant assurance gates and meet operational readiness deliverables. All such assurance deliverables are to be agreed with the *Project Manager* a minimum of 12 weeks in advance of the stages taking place.

WI 120.15 Migration

The *Contractor* shall utilise and take ownership of the following migration/staging documents for the *works* to align with their final construction programme and staging:

- MFB BED Delivery Strategy - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0001
- MFB Beckton Depot Staging of Works - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0002
- MFB Sub Programme Migration Road Map - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0003
- MFB Sub Programme MRR-ORR - Migration Stage-wise Deliverables - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0004
- Maintenance Facility Building (MFB) & Southern Sidings (SS) Build Migration Stage Plan - 65204MF-DLR-BOU-TD350_00-PLN-GL-0001

Any deviations or changes required to the Migration Stage plan and Roadmap shall be

documented by the *Contractor* and communicated to the *Project Manager* for acceptance at the earliest opportunity.

The *Contractor* shall prepare Migration Plan (Operations & Maintenance Interface) detailing impact of works in each migration stage on to the Depot Operations and Maintenance. The format / sample of this plan -- document number 65204-DLR-MAC-TD350_Z-PLN-IN-0001A shall be found in the Appendix D7.105.

The *Contractor* shall own the activities in identifying and preparing any assurance deliverables for each of the migration stages set out in the Stage plan.

Note: The *Employer* has produced the above list of documents to support the *works* with the input from the migrations plans that the individual consultants have produced for their respective designs. All the consultant's migration plans are issued for references as well.

WI 120.16 Eastern Stretch of Northern Test Track, Road BA including Wash road decommissioning and Operational Track Crossing (OTC)

The Contractor shall be responsible for delivering the scope outlined in the document: 65204DD-DLR-TRK-TD350_00-REQ-RE-0001, (Appendix C).

WI 125 Contractor's Design Responsibilities

All permanent works designs are provided to the *Contractor* by the *Employer*, apart from the following designs which are to be procured and installed by the *Contractor* as part of the works subject to the approval of the *Employer*; including but not limited to:

- Train Lifting System;
- Shore Supply System including overhead busbars.
- Depot Personnel Protection System (DPPS)
- All termination diagrams and termination schedules for switch gears.
- Items as listed in the 'Plant & Equipment schedule'
- Systems within the E&M design such like 'BMS systems'
- Signalling staging designs for various migration stages as indicated in MFB Beckton Depot Staging of Works - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0002. Refer to WI120.6 for more details.

Any design changes as a result of the installation of the procured systems (including signalling staging designs) shall be delivered by the *Contractor*. The *Contractor* shall be responsible for any design works arising out of value engineering activities including items from Optimised Contractor Involvement (OCI) The *Employer* has assigned the roles of Principal Designer to Others.

WI 130 General Statement of any constraints on how Contractor Provides the Works

Detailed constraints of how the *Contractor* provides the *works* are more fully set out in WI 200, however the *Contractor* notes in particular the following constraints with respect to providing the *works*:

- Access, outages, and possessions must be booked in accordance with the WoRM (Refer to Appendix D7.65-7.82 and WI 250)

- KAD staff have limited availability, and any assistance/availability of resources must be requested 28 calendar days in advance or as noted in WI 250.
- Compliance with DLR's Standards.
- Compliance with DLR's requirements for the training and certification of the *Contractor's* Labour.
- National Grid Lease Agreement Heads of Terms (Refer to Site Information 3.9)

WI 135 The *Contractor's* Site inspection

The *Contractor* is deemed to have visited the *Site* and inspected and examined the *Site* and its surroundings in order to:

- Understand the access to the Site;
- Assess the condition and layout of the Site;
- Ensure all requirements for pre-construction surveys and testing required to complete the *works* are captured;
- Identify/understand any Site constraints.

If the *Contractor* considers that there are inadequacies in the information that pose potential risk to progressing the *works*, then the *Contractor* must notify the *Project Manager* at the earliest opportunity.

WI 140 Specialist Subcontractors

For the purpose of clause 26.2 of the conditions of contract, the following subcontractors are acceptable to the *Project Manager* for the relevant package of works identified below, but subject to compliance with clauses 26.3 and 26.4 of the conditions of contract and without prejudice to clause 26.1 of the conditions of contract. For the avoidance of doubt, if the one or more of the subcontractors listed below are appointed by the *Contractor*, such subcontractors are not treated as 'nominated' subcontractors.

PACKAGE	SPECIALIST SUBCONTRACTORS
Building Management System	TREND
SCADA system	Sella Controls
Shore supply	Brecknell Willis
Telecommunications	Telent
Telecommunications Software	CNL Software
Train Lifting system	Neuero

WI 150 Optimised Contractor Involvement (OCI)

The *Contractor* shall work with the *Employer* to undertake the Optimised Contractor Involvement (“OCI”) phase immediately following the *starting date*.

The objectives of OCI are:

To promote the *Contractor’s* understanding of the *Employer’s* Works Information and encourage open dialogue between the *Contractor* and *Employer* before the *Contractor* commences the *works*; and to provide a dedicated early phase for the *Contractor* to jointly review the Works Information with the *Employer*, and to propose options and mutually beneficial opportunities to the *Employer* for acceptance.

OCI shall be a collaborative phase between the *Employer* and *Contractor*, and is to be led by the *Contractor*.

Process of OCI:

The OCI phase comprises the following sequential activities:

- Within 10 Working Days of the starting date the *Contractor* shall hold an initial OCI kick-off meeting with the *Employer*, the objective of which is for the *Employer* to guide the *Contractor* as to areas of scope where focus should be placed by the *Contractor* during the OCI phase, as well as for the *Contractor* to advise the *Employer* of any site visits which are required during the OCI phase. The *Contractor* shall start submitting Requests for Information (RFIs) to the *Employer* which are relevant to the OCI phase from this point.
- Within 15 Working Days of the initial kick-off meeting, the *Contractor* shall:
 - Hold one OCI Site Visit with the *Employer* to each site at which OCI is required and
 - Review, produce and issue to the *Employer* an initial report describing which – if any – clauses within the Works Information could be changed to provide mutual benefit to the project. Each item within the initial report should contain the *Contractor’s* outline assessment of likely impact to Prices and Completion Date of the *works*, should any of the suggested changes be implemented. Following receipt of the initial report, the *Employer* reviews and provides indicative direction to the *Contractor* as to which items should (and which should not) be progressed by the *Contractor* within 10 Working Days. The indicative direction given by the *Employer* following review of the initial Report does not indicate or constitute in any way the *Employer’s* commitment or intention to accept any such formal request to change the *Employer’s* requirements.
- Within 15 Working Days following receipt by the *Contractor* of the *Employer’s* reply to the initial report, the *Contractor* is to submit their proposals to change the Works Information.
- The *Employer* shall review and respond to the *Contractor’s* proposals to change the Works Information.

Management of the OCI phase:

- The *Contractor* is to include all OCI activities on each programme submitted for acceptance by the *Employer*.
- The *Contractor* is to provide a weekly progress report to the *Employer*, detailing:
 - Planned dates for each OCI Site Visit, Initial OCI Presentation, and OCI Report submission date;
 - Risks to the planned dates;
 - A list of proposals for change being considered by the *Contractor*.

Constraints to OCI:

- OCI is to be undertaken for each site unless otherwise specified
- The *Contractor* is to allow a twelve-week duration to complete the OCI phase
- The *Contractor* is to schedule the OCI phase concurrent to all other contractual responsibilities including design and mobilisation, including without limitation any of its obligations
- The *Contractor* identifies any site visits which are required during the OCI phase and shall notify the *Project Manager* at the OCI kick-off meeting. The *Employer* will endeavor to arrange access as requested by the *Contractor*. Owing to the access requirements and timescales, intrusive surveys will not be undertaken during the OCI process however, this does not prevent the *Contractor* from planning and/or undertaking any surveys required as part of their mobilisation or detailed design activities.

Contractor's Proposals to change the Works Information:

Any proposal submitted by the *Contractor* to the *Project Manager* to change the Works Information contains:

- A detailed scope of the change, clearly identifying the specific sections of the Works Information which are proposed to be changed;
- A schedule detailing how the proposed change is to be affected, including activities and anticipated durations for any resulting design changes to be undertaken by the *Contractor*, additional or revised consents, additional or revised concessions, amended Completion Date, amended Key Dates and other relevant information;
- A proposed revised programme if the programme for the remaining work is affected; and Proposed changes to the Prices. The *Project Manager* replies within the *period for reply* set out in Contract Data Part 1. The reply is:
 - A rejection of the proposal; or
 - A request to submit more information, stating details of the information required; or
 - A request to submit a revised proposal to suit the *Project Manager's* broader considerations, stating details of the amendments; or
 - An acceptance of the change to the Works Information which arises from a fault of the *Contractor* and therefore the Prices, the Completion Date and the Key Dates are not changed; or
 - An acceptance of the proposal. The *Project Manager* may extend the time allowed for the *Contractor* to submit a revised proposal and the *Contractor* may extend the time for the *Project Manager* to reply to any proposal or revised proposal if the

Project Manager and the *Contractor* agree to the extension before the submission or reply is due. The *Contractor* ensures that the submission and review of the proposal to change the Works Information does not adversely affect the Completion Date(s) or Key Dates or Prices. The *Project Manager* is under no obligation to accept any proposal or revised proposal and does not need to give any reasons for doing so or not doing so.

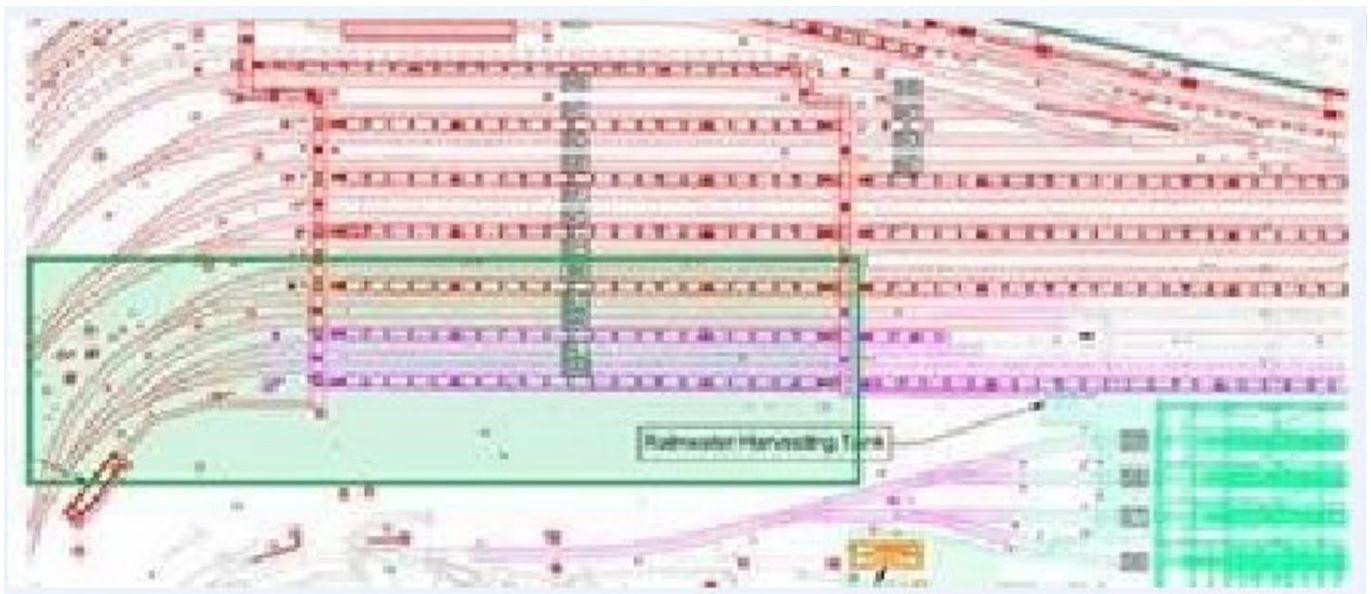
- The emphasis on any proposal is on a cost, schedule or risk reduction without impacting on safety. In the event the proposal is accepted and implemented by the Project Manager, the Prices and/or Completion Dates shall be changed by the *Employer* in accordance with 21A.

During the OCI phase or any period during which OCI works, services or activities are being undertaken, the Contractor shall identify and report any ambiguities, inconsistencies, or gaps in the documents which are part of the contract, including without limitation, the Employer's Works Information.

WI 160 BK BL BM Bring into Use

The *Employer* in Contract Data Part 1 includes the following as one of the Sectional Completions required: BK-BL-BM roads western entry and western stabling berths Bring into Use (the extent of this Sectional Completion is identified in the green box in the extract below):

The extent of this Sectional Completion is identified in the green box in the extract below:



BK-BL-BM Sectional Completion following scope includes but is not limited to:

- Bring into Use of: All civil works for the track bed & drainage for Roads BL and BM
- Platforms between the Roads BK and BL and on south of Road BM.
- Installation and subsequent decommissioning of temporary train arrestors and

trainstops.

- Installation of Tracks for Roads BL and BM from heels of Point 1434 covering fullstretch of the western berths.
- Installation, testing & commissioning of traction power works on Roads BL & BM.
- Commissioning of Signalling on western berths of Roads BK.
- All signalling works including testing & commissioning of Roads BL & BM.
- System Integration Testing of Roads BK, BL & BM.



WORKS INFORMATION

WI_SS 100

DESCRIPTION OF THE WORKS

SOUTHERN SIDINGS

CONTENTS

WI 110	General Description of the Works
WI 120	Detailed Description of the Works
WI 125	The Contractor's Design Responsibilities
WI 130	General Statement of any Constraints on how the Contractor provides the Works
WI 135	Contractor's Site Inspection
WI 140	Specialist Subcontractors
WI 150	Optimised Contractor Involvement (OCI)

WI 110 General Description of the works

This section describes the *works* to undertake the installation, testing and commissioning of **Package 4: Southern Sidings Build** – three additional stabling roads to the south of the existing Southern Sidings, connecting on the eastern and western ends to the existing layout.

The *Contractor* carries out the *works* according to the Design Information, drawings and supporting documentation. These can be found in Appendix C6 – Design & Specifications.

Future design updates affecting this section of the *works* is described in the technical notes: 65204-AEC-MAC-TD350-REP-CM-9001 and 65204MF-DLR-MAC- TD350_00-RPT-DM-0001 (refer to Appendix B 5.7).

The *works* also encompass all the disciplines below, including but not limited to: -

- Civils;
- Drainage;
- Mechanical and electrical services;
- Signalling;
- Permanent way;
- Traction Power;
- Points heating;
- Telecommunications

The *Contractor* is responsible for the design, implementation and control of the staging of the *works* (including signalling staging design) at all times to ensure the operational depot is not interrupted by unplanned works. The *Contractor* plans on both a long-term and short-term basis in order to manage the migration interfaces with the operational depot. This plan shall be agreed with the *Project Manager* and a sufficient number of berths and maintenance facilities shall be maintained at every stage of construction.

Note – Retaining wall shown in drawing 65204-AEC-BAS-TD350_0-DR-CE-2250 - Training Track Earthworks and Retaining Wall General Arrangement is no longer required as part of the works.

WI120 Detailed description of the works

WI120.1 General

Employer's Design Information can be found in section WI 2000.

WI120.2 Survey Requirements

The Contractor undertakes the following surveys as part of the work, including but not limited to:

- Pre-Condition and dilapidation surveys of existing civil and track assets, including drainage, prior to any works taking place. The *Contractor* is responsible for arranging and carrying out the surveys. The Contractor submits the resulting survey reports to the *Project Manager* for acceptance.
- Monitoring of existing adjacent track and depot infrastructure during construction

works. Trigger levels for intervention shall be agreed with the *Project Manager* and in advance of any physical works starting that may affect existing assets.

- Survey for buried services and existing utilities prior to commencing any excavation.
- Signalling correlation survey.
- Confirmatory ground investigation survey.
- Further surveys as required and deemed necessary by the *Contractor*.

Note 1 - Without prejudice to WI120.2, and excluding ground investigation verification surveys, surveys required to complete design works by Others are not the responsibility of the *Contractor*.

Note 2 - Southern Sidings – Due to the referenced file “65204-AEC-TRK-TD350-CAL-RE-0006 SOUTHERN SIDINGS FORMATION MODELLING” not being provided in the tender pack, and as per the Project Manager response to MSTQ219, the *Contractor* shall make an allowance for the installation of a 150mm thick layer (maximum) of type 1 to take out any undulations in the 6F1 Fill following enabling and site clearance by Others (pre-contract). The 150mm layer is not across the whole footprint of the whole southern sidings area/width, but is limited to the area underneath the sleeper formation in areas requiring geogrid as per 65204-AEC-TRK-TD350-REP-REP-2001.

Refer also to WI 245 Survey and the Handover / Hand Back Plan (Appendix D7.125)

WI 120.3 Civils

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- Installation of walkways and permanent access routes to / from each stabling road.
- New raised walkways to accommodate the new track installations.
- Modifications to existing walkway track crossings to accommodate changes in track alignments.
- Foundations and bases for new lighting and CCTV columns and equipment to be installed in the Southern Sidings.
- New cable containment for new service routes through the Southern Sidings area including four undertrack crossings.

WI 120.4 Drainage

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- New perforated channels to drain the track formation of the new sidings and provide distributed storage volume to contribute to site attenuation requirements
- Extension of the existing drainage system via new pipes and catchpits to convey surface water from the perforated channels to the existing site drainage system.
- Installation of a UTX (Under Track Crossing) at the Western end of the new sidingsto act as an overflow to the Western outfall.
- Modification of existing catchpits south of existing road AG to raise the cover level to meet new ballast levels.

The *Contractor* is responsible for ensuring the connection of the new foul water system and the new surface water system to the existing networks is approved by Thames Water. New foul water discharge consent is to be sought by the *Contractor* and approved by Thames Water prior to Completion.

WI 120.5 Mechanical and electrical

WI 120.5.1 Mechanical services

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- New 63mm pipe to be extended from manhole chamber (installed by Others) in car park to supply new standpipes in Southern Sidings Platforms south of roads AH & AJ.
- A trace heating system and insulation to above ground water pipework.
- Provision of a BREEAM compliant water leak detection system for all pipework and water services.
- The *Contractor* shall ensure that all interfaces between gas supply and water supplies with the MFB are considered and allowed for in line with the Design Information throughout the installation of the *works*.

WI 120.5.2 Electrical services

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- Provision of 2 no. distribution boards within a GRP feeder pillar at the West end of the Southern Sidings, forming the point of isolation for all Southern Sidings LVAC systems
- Installation of new lighting columns adjacent to the new berthing platforms, designated walkways and general track areas. Lighting columns to receive a non- conductive coating to the casing as shown on drawings and to hinged for maintenance access.
- Provision of new power cluster units on platforms.
- Installation of new power supplies to mechanical services, including all required cabling and local isolators.
- Installation of trackside cable containment for cabling associated with above cabling.

The *Contractor* leads and liaises with the *Employer's* Substation Upgrade Contractor to agree the cable route from the cable point of entry to the Substation and Substation LVAC Switchboard. The *Contractor* installs and commissions into service the cable in conjunction with the *Employer's* Substation Upgrade Contractor.

WI 120.6 Signalling

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- All signalling works - Track circuits, Points, and Signals on Roads AH, AI & AJ
- System Integration Testing & Commissioning of Roads AH, AI & AJ
- Update (including but not limited to the design) but not limited to the Control Centre Depot Controller's GUI display during each of the migration stages.
- Without prejudice to clause 26.1 of the conditions of contract, the signalling supplier

is ICONSYS. The contact details for ICONSYS are as follows:

Independent Control Systems Ltd.
ICONSYS House
Hortonwood
33Telford Shropshire
TF1 7EX

Ph. +44 (0) 1952 607 300

For the avoidance of doubt, any appointment of ICONSYS by the *Contractor* is not treated as appointment of a 'nominated' subcontractor.

- The *Contractor* complies with all DLR standards. If the DLR standards are found to be inadequate or where information is not available, then Network Rail standards are to be referred to. This shall be agreed with the *Project Manager* in advance of committing to any works. It shall be noted, the standards (including but not limited to): 'Signalling Works Testing Handbook' shall be used for commissioning works and 'Signalling Design Handbook' for signalling design works.
- The contractor shall be responsible for the below signalling design works (including but not limited to):
 - Signalling staging design including the production of signal sighting forms (Refer to WI120.12 for details on migration stages)
 - The *Contractor* shall be responsible for the correlation survey of signalling assets and responsible for any design updates that shall be required post survey works
- The *Contractor* is responsible for any required parallel working agreements and manage the parallel design work requirements by undertaking appropriate risk assessments.
- AECOM were the Designer for the end state signalling design. Should the *Contractor* choose an alternative design consultant for the signalling design works, they shall be of comparable experience/standard and in any event shall meet the requirements of WI1200 and the requirements of clause 26 of the contract.

WI 120.7 Permanent Way

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

New plain line ballasted track for the siding roads. All running rails for the *works* will be free issued by the *Employer* to the *Contractor*.

- The *Contractor* shall install composite sleepers across all track works, including S&C bearers.
- Connections of the Southern Sidings upon construction into the existing sidings. These connections are to be undertaken during separate possessions at the west and east end of the berthing roads to minimize the operational impact.
- New S&C units feeding both ends of the Southern Sidings. 2 S&C units have been manufactured and are currently in storage for TfL, these will be made available as free issue to the *Contractor* following Contract Award.

WI 120.8 Traction power

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- DC electrical Sectioning
- Conductor rail design and modifications to existing conductor rails
- Installation of negative return cables from substation to traction return rail
- Installation of positive jumper cables and negative bonding cables
- Installation of new Track Isolator Switches (TIS)
- Installation of all cables from new TISs to substation Circuit breakers, LVAC DB and SCADA panel.
- All appropriate labelling.

The *Employer* requires the *Contractor* to lead and liaise with the *Employer's* Substation Upgrade contractor to agree the substation internal cable routes from the point of entry to the substation.

The *Contractor* installs, tests and commissions into service the cables in conjunction with the *Employer's* Substation Upgrade contractor.

WI 120.9 Points Heating

The *Contractor* installs, tests and commissions the following as part of the *works*, including but not limited to:

- Provision of new MCCB panel board to serve the Southern Sidings points heating installation.
- Provision of new PHCCs, including installation of new sub-main circuits to supply the PHCCs.
- Installation of new trackside connection boxes, strip heaters and associated 110V trackside cabling for new points.
- Installation of trackside cable containment for cabling associated with points heating cabling.

The *Contractor* is to lead and liaise with the *Employer's* Substation Upgrade *Contractor* to agree the cable route from the cable point of entry to the Substation and Substation LVAC Switchboard. The *Contractor* will be required to install and commission into service the cable in conjunction with the *Employer's* Substation Upgrade *Contractor*.

WI 120.10 Telecommunications

The *Contractors* scope and technical obligations are detailed within the AECOM Southern Sidings Telecommunications Design Report.

The *Contractor* shall install, test and commission the following systems part of the *works*, including but not limited to:

WIFI System:

- Installation of new Wi-Fi access points to cover Southern Sidings area, including all cabling and hardware as required.

- Commissioning of the new WIFI access points onto the existing Ruckus Cloud Controller.
- Ruckus: Telecommunications WiFi supplier for the depot works, to be engaged throughout the design and implementation of telecommunications scope.

CCTV System:

- New CCTV field equipment, cabling and hardware shall be installed and interfaced with the existing CCTV System.
- Commissioning of the new CCTV cameras onto the existing system including updates to the existing recording system and the MICA Control System at both Beckton and Poplar Control center to enable BTP to view the extended Southern sidings CCTV.
- The Contractor shall update the system to ensure onward transmission of the additional views to BTP.
- Without prejudice to clause 26.1 of the conditions of contract, the supplier of the (MICA) GUI system is Telent. The contact details for Telent are as follows:

Telent
Units A & B Pirin Court
7B South Crescent
London
E16 4TL

Tel: 0203 203 3555

- Without prejudice to clause 26.1 of the conditions of contract, the supplier of the software for transmission of the CCTV views to BTP is CNL. The contact details for CNL are as follows:

CNL Software
Building 11
Watchmoor Park
Camberley
Surrey
GU15 3YL

Tel: 01276 5874000

For the avoidance of doubt, any appointment of Telent or CNL by the *Contractor* is not treated as appointment of a 'nominated' subcontractor.

The *Contractor* is responsible for the overall cyber security deliverables for the integrated system, the *Contractor* shall produce a 'Cyber Security Management Plan' for implementation during the progress of works, testing, commissioning and handover of the system to the system maintainer.

WI 120.11 Systems Engineering & Engineering Safety

The following deliverables are anticipated from the *Contractor* as part of the Systems Engineering & Engineering Safety activities, including but not limited to:

- The *Contractor* shall take onboard the designer's Systems Engineering Management Plan (SEMP) and shall provide suitable updates to detail the processes they shall employ in managing requirements, interfaces, assumptions, engineering safety etc.
- Include suitable processes for adding Hazards, Requirements, Issues & Assumptions to the records developed by the designers where the *Contractor* identifies additional items as part of their scope.
- As part of the Engineering Safety management – Review the designer's safety justification and supporting information and include in the *Contractor's* safety management activities: suitable actions to bring these activities to conclusion and support the *Contractor's* safety justification.
- All Hazards, Requirements, Issues & Assumptions not closed out by the Designer (typically referenced in the V & V matrix) are to be taken onboard by the *Contractor* and taken to completion by identifying and providing suitable validation evidence. If the *Contractor* is unable to close out any items, then they will be required to identify a party to transfer the item to for closeout and engage with that party and ensure they are formally transferred.
- The Technical Assurance Plan, document number: 65204MF-DLR-MAC-TD350-PLN-ZZ-00001 (refer to Appendix C6.577) sets out Assurance requirements. The *Contractor* shall submit for acceptance by the *Project Manager* the *Contractor's* Technical Assurance Plan (CTAP). The CTAP shall detail all Assurance and other deliverables listed in the 'Master Deliverables List (MDL)' and include various assurance Gates for which approval is required from the 'Change Assurance Panel' (CAP) for works under various stages of the works.
- All such assurance deliverables are to be agreed with the *Project Manager* a minimum of 12 weeks in advance of the stages taking place. A matrix showing Operational and Maintenance Readiness deliverables for each migration stage of Southern Siding works is provided in Appendix D7.102-7.109

WI 120.12 Migration

The *Contractor* shall utilise and take ownership of the following migration/staging documents for the *works* to align with their final construction programme and staging.

- MFB BED Delivery Strategy - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0001
- MFB Beckton Depot Staging of Works - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0002
- MFB Sub Programme Migration Road Map - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0003
- MFB Sub Programme MRR-ORR - Migration Stage-wise Deliverables - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0004
- Maintenance Facility Building (MFB) & Southern Sidings (SS) Build Migration Stage Plan - 65204MF-DLR-BOU-TD350_00-PLN-GL-0001

Any deviations or changes required to the Migration Stage plan and Roadmap shall be documented by the *Contractor* and communicated to the *Project Manager* for acceptance at the earliest opportunity.

The *Contractor* shall prepare Migration Plan (Operations & Maintenance Interface) detailing

impact of works in each migration stage on to the Depot Operations and Maintenance. The format / sample of this plan -- Document Ref 65204-DLR-MAC-TD350_Z-PLN-IN-0001A) shall be found in the Appendix D7.105.

The *Contractor* shall own the activities in identifying and preparing any assurance deliverables for each of the migration stages set out in the Stage plan.

In the case of Migration staging for the Temporary Fit Out Shed (TFOS), a high-level description shall be included within an update to the consultants Migration Plan 65204-AEC-MAC-TD350-PLN-ZZ-9003. A more detailed TFOS Migration Plan will be produced by the consultant at TFOS Outline Design and will be issued to the Contractor to take ownership of, ensuring the works align with their final construction programme and staging.

Note: The *Employer* has produced the above list of documents to support the *works* with the input from the migrations plans that the individual consultants have produced for their respective designs. All the consultant's migration plans are issued for references as well.

WI 120.13 Handover & Assurance Documentation

The *Contractor* shall provide a Handover Folder containing all relevant documentation that applies to the equipment. The Handover Folder shall be provided in the 10-section format and shall include but not be limited to the items listed in the table below.

Sec	Sub Sec	Document	Provided By	Process	Template	Comments
N/A	N/A	Project Completion & Handover Certificate	TfL	<u>PD0041</u>	<u>f-10005</u>	
N/A	N/A	Front Cover	Supplier	N/A	N/A	To include photo and asset numbers
N/A	N/A	Index	Supplier	N/A	<u>377604172</u>	
N/A	N/A	Folder Dividers	Supplier	N/A	<u>377598676</u>	
1	Handover Signature Sheet					
	1.1	Project Handover Folder Signature Sheet	TfL	N/A	<u>378033936</u>	
	1.2	Fleet Handover Folder Signature Sheet	TfL	N/A	<u>378036669</u>	

	1.3	Maintenance Handover Folder Signature Sheet	TfL	N/A	<u>378042846</u>	
2	Quick Start Guides					
	2.1	Operator Quick Start Guide	Supplier			
	2.2	Maintenance	Supplier			

Sec	Sub Sec	Document	Provided By	Process	Template	Comments
		Quick Start Guide				
3	Manuals					
	3.1	O&M Manual	Supplier	N/A	Suppliers Own Format	Maybe multiple O&M manuals
4	Work Instructions					
	4.1	Fleet Process Instruction	Supplier	<u>TBC</u>	<u>TBC</u>	TBC
	4.2	Maintenance Work Instruction (W12126)	Supplier	N/A	<u>F7953</u>	Review existing & confirm applicability
5.1	Drawings					
	5.1.1	Supplier Drawings	Supplier	N/A	TfL CAD Format	All drawings to be listed separately.
	5.1.2	Component Drawings	Supplier	N/A	PDF	
5.2	Sourcing					
	5.2.1	Details of Suppliers of Products	Supplier	N/A	N/A	
5.3	Component Technical Data Sheets					
	5.3.1	Component Technical Data Sheets	Supplier	N/A	PDF	All component technical data sheets to be listed separately
6	Certificate of Conformity					
	6.1	Certificates of Conformity	Supplier		<u>F0923</u>	Plant / Equipment specific
7	Design Assessments					
	7.1	Product Risk Assessment.	Supplier			In-line with British Standard on the Safety of machinery – Risk Assessment (BS EN

Sec	Sub Sec	Document	Provided By	Process	Template	Comments
						ISO14121-1:2007)
	7.2	EMC Certification	Supplier			
	7.3	Other	Supplier	N/A	N/A	
8	Specifications					
	8.2	Specification	Supplier	N/A	N/A	
9	Inspection and Testing					
	9.1	Inspection Test Plan (ITP)	Supplier	<u>pd-10743</u>	<u>f7610</u>	
	9.2	Factory Acceptance Test (FAT)	Supplier			
	9.3	Site Acceptance Test (SAT)	Supplier			
	9.4.1	NOWRI - Elementary - (one for each)	TfL	<u>pd-10697</u> <u>pr0091</u>	<u>f0483</u> <u>f0484</u>	Supplier Involvement
	9.4.2	NOWRI – Bring In to Use (BIU) - (one for each)	TfL			
	9.4.3	NOWRI – Handover (HO) - (one for each)	TfL			
	9.5	Snagging List	TfL		<u>f0485</u>	
	9.6	Load Test Certificate	Supplier			
10	Training					
	10.1	Operator Training Material / Check Sheet	Supplier	N/A	N/A	
	10.2	Operator Training Record of Attendance	Supplier	N/A	N/A	
	10.3	Maintenance Training Material /	Supplier	N/A	N/A	

Sec	Sub Sec	Document	Provided By	Process	Template	Comments
		Check Sheet				
	10.4	Maintenance Training Record of Attendance	Supplier	N/A	N/A	

WI 125 *Contractor's* design responsibilities

All permanent works designs will be provided to the *Contractor* by the *Employer*, apart from the following designs which shall be procured and installed by the *Contractor* as part of the works subject to the approval of the *Employer*, including but not limited to:

- All termination diagrams and termination schedules for switch gears.
- Items as listed in the 'Plant & Equipment schedule
- Signalling staging designs for various migration stages as indicated in MFB Beckton
- Depot Staging of Works - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0002
- Integration to existing Telecommunication assets

Any design changes as a result of the installation of the procured systems (including signalling staging designs) shall be delivered by the *Contractor*. The *Contractor* shall be responsible for any design works raising out of value engineering activities including items from Optimised *Contractor* Involvement (OCI). The *Employer* has assigned the role of Principal Designer to Others.

WI 130 General Statement of any constraints on how *Contractor* Provides the Works

Detailed constraints of how the *Contractor* Provides the works are more fully set out in WI200, however the *Contractor* notes in particular the following constraints with respect to providing the works:

- Access, outages, and possessions must be booked in accordance with the WoRM (Refer to Appendix D7.65-7.82 and WI 250)
- KAD staff have limited availability, and any assistance/availability of resources must be requested 28 calendar days in advance or as noted in WI 250.
- Compliance with DLR's Standards.
- Compliance with DLR's requirements for the training and certification of the *Contractor's* labour.
- National Grid Lease Agreement Heads of Terms (Refer to Site Information 3.9)

WI 135 The *Contractor's* Site inspection

The *Contractor* is deemed to have visited the *Site* and inspected and examined the *Site* and its surroundings to:

- Understand the access to the Site
- Assess the condition and layout of the Site
- Ensure all requirements for pre-construction surveys and testing required to

- complete the works are captured
- Identify/understand any Site constraints

If the *Contractor* considers that there are inadequacies in the information that pose potential risk to progressing the *works*, then the *Contractor* must notify the *Project Manager* at the earliest opportunity.

WI 140 Specialist Subcontractors

For the purpose of clause 26.2 of the conditions of contract, the following subcontractors are acceptable to the *Project Manager* for the relevant package of works identified below, but subject to compliance with clauses 26.3 and 26.4 of the conditions of contract and without prejudice to clause 26.1 of the conditions of contract. For the avoidance of doubt, if the one or more of the subcontractors listed below are appointed by the *Contractor*, such subcontractors are not treated as 'nominated' subcontractors.

PACKAGE	SPECIALIST SUBCONTRACTORS
SCADA system	Sella Controls
Telecommunications	Telent
Telecommunications Software	CNL Software

WI 150 Optimised Contractor Involvement

The *Contractor* shall work with the *Employer* to undertake the Optimised *Contractor* Involvement ("OCI") phase immediately following the *starting date*, the *Contractor* shall refer to section WI 150 in WI_MFB100 for further details.



WORKS INFORMATION

WI_TFOS 100

DESCRIPTION OF THE WORKS
TEMPORARY FIT OUT SHED
(TFOS)

CONTENTS

WI 105	Project Objectives and Philosophy
WI 110	General Description of the works
WI 115	Site Location and Working Areas
WI 120	Detailed Description of the works
WI 125	The Contractor's Design Responsibilities
WI 130	General Statement of any Constraints on how Contractor Provides the Works
WI 135	Contractor's Site Inspection
WI 140	TFOS Pricing Information

WI 105 Temporary Fit-Out Shed Project Objectives and Philosophy

All new train assembly & maintenance was initially planned to be carried out at the new Maintenance Facility Building (MFB) however it is now not anticipated the MFB will be ready for Bringing into Use (BIU) until 2024. Train 1 and 2 are due to arrive at Beckton Depot by March 2023, followed by the rest of the fleet arriving from October 2023 so the new MFB will not be ready in time for delivery, assembly and testing of the new trains.

Trains 1 and 2 will be assembled in the existing maintenance facility. A Temporary Fit Out Shed (TFOS) is required to support the assembly and light maintenance of train 3 onwards, until the MFB is brought into use. The TFOS and Southern Sidings junction therefore needs to be Brought into Use by 15th September 2023. The TFOS will be used by both the train supplier (CAF) and train maintainer (KAD) staff for these activities. Following the Operational period of the TFOS (expected to be approximately 1 year) the superstructure is intended to be decommissioned and removed once the MFB becomes available.

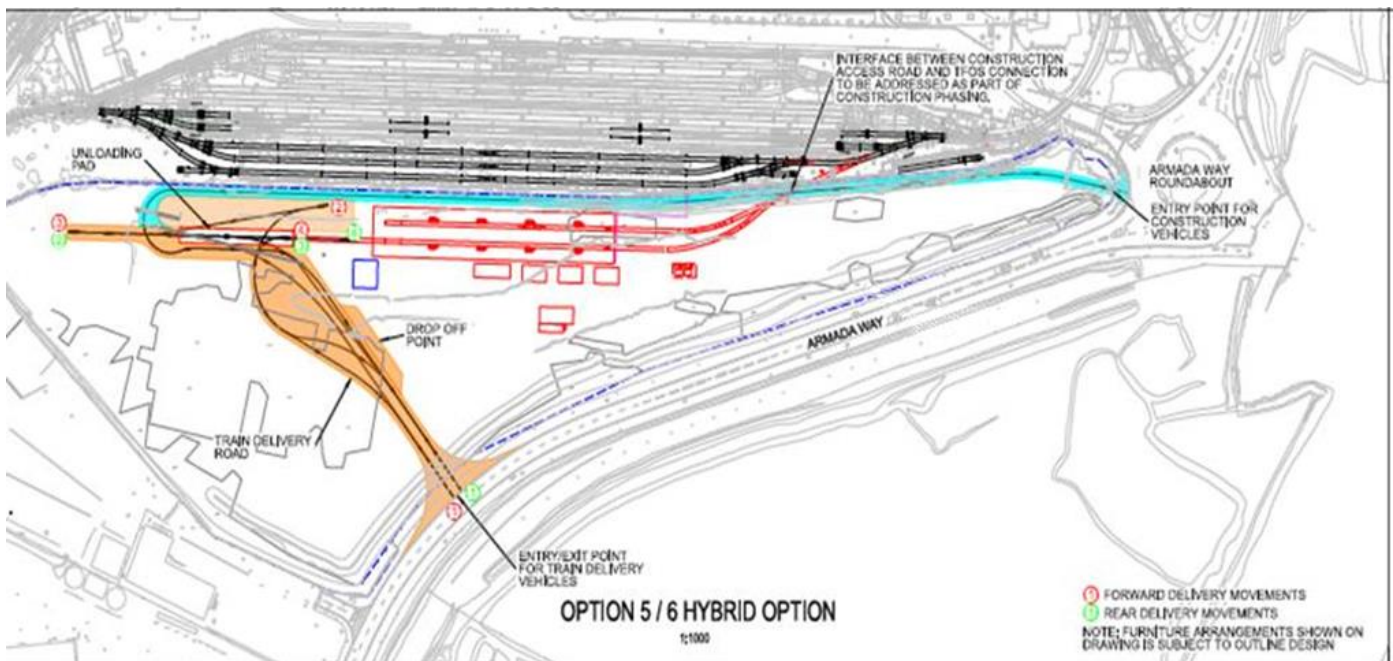


Figure 1 - TFOS Location and site Concept Layout

As far as practicable the TFOS shall be constructed from temporary, pre-fabricated modular structures that can be assembled and disassembled quickly and simply. The same philosophy shall be applied to the integration of systems, where all systems shall be standalone and not integrated with the existing Depot, unless explicitly stated within the

requirements. This is due to the temporary nature of the facility and in order to reduce complexity & delivery timescales.

For information, the permanent works funded by the Government Housing Infrastructure Fund (HIF) at this location will provide a new stabling facility for the 11 trains being purchased under HIF. These trains will supplement the 43 already being supplied by CAF for the Rolling Stock Replacement Programme. The HIF project will provide additional capacity on the DLR to support up to 12,000 new homes.

The depot works are to be procured under an overarching 'Managed Package Solution' (MPS) strategy. This strategy will see a series of discrete contracts let on a staged timeline. The proposed delivery model is to separate the work into different procurement Packages. Refer to WI_INTRO 100 for further detail.

WI 110 General Description of the Works

The scope of the *works* is to Design*, Supply, Install, Test & Commission, Maintain, Decommission and de-construct a Temporary Fit-Out Shed to the South of the existing Beckton DLR Depot. The full functional requirements for the TFOS are within Appendix C 6.676 .

*Responsibility for design elements has been allocated to different designers. For clarity, the below table designates design elements that the *Contractor* and *Others* are responsible for.

The Outline Design will be provided to the *Contractor* post-Contract Award. Detailed designs from

Others will become available progressively, dates to be agreed with the *Project Manager*.

TFOS Design Element	Designer
Concept Layout	<i>Others</i> (AECOM)
Systems Optioneering & Definition	<i>Others</i> (AECOM)
Outline Design	<i>Others</i> (AECOM)
Enabling Works Detailed Design	<i>Others</i> (AECOM)
Detailed Design elements:	
Track (SS to TFOS & internal TFOS roads)	<i>Others</i> (AECOM)
Switches & crossings	<i>Others</i> (AECOM)
Reception road (for delivery of train units)	<i>Others</i> (AECOM)
Access road from Armada Way	<i>Others</i> (AECOM)
Extension of Conductor rail section from the Southern Sidings (if required)	<i>Others</i> (AECOM)
Maintenance roads-Pitted roads & hard stand	<i>Others</i> (AECOM)
Shed superstructure	<i>Contractor</i>
Building superstructure foundations & footings	<i>Contractor</i>
Footings for ancillary equipment	<i>Contractor</i>

Drainage (sub-structure)	<i>Others</i> (AECOM)
Drainage (super-structure)	<i>Contractor</i>
Permanent service connections (drainage, water, power) as required	<i>Others</i> (AECOM)
Pedestrian & fork- lift truck routes to existing Depot	<i>Others</i> (AECOM)
Land levelling and remediation	<i>Others</i> (AECOM/ Arcadis)
Internal lighting, pit lighting	<i>Contractor</i>
LV power circuits & user access points	<i>Contractor</i>
Power supply (including UPS)	<i>Others</i> (AECOM)
Cable routes	<i>Others</i> (AECOM)
Cable containment (internal & external)	<i>Contractor</i>
Shore supplies (and associated safety systems)	<i>Others</i> (AECOM)
Electric Track Equipment (ETE)	<i>Others</i> (AECOM)
External lighting	<i>Others</i> (AECOM)
Heating, ventilation & cooling	<i>Contractor</i>
Compressed air	<i>Contractor</i>
Space allocation for offices, welfare, storage & parking	<i>Others</i> (AECOM)
Offices & welfare, storage & parking areas	<i>Contractor</i>
MEP systems for welfare & offices	<i>Contractor</i>
Fire system	<i>Contractor</i>
Depot protection system	<i>Others</i> (AECOM)
CCTV system	<i>Contractor</i>
Radio (extension of existing Depot system)	<i>Others</i> (AECOM)
Wi-Fi (extension of existing Depot system)	<i>Others</i> (AECOM)
SCADA updates (TBC if required)	<i>Others</i>

Table 1: TFOS designer allocation

AECOM are the Principal Designer for Beckton Depot, including the TFOS . Where designs/design information is to be provided by *Others*, the *Contractor* will be required to integrate their design with the design of *Others*. Attendance will be required on a periodic (4-weekly) basis at meetings with the Principal Designer to ensure successful integration and management of interfaces. The *Contractor* shall work collaboratively with *Others* to understand and mitigate against any design interface matters.

Detailed Design elements that are the responsibility of the *Contractor* will be developed according to the Outline Design provided by *Others*. This will be in accordance with all applicable DLR and British Standards. The *Contractor* shall be responsible for producing Approved for Construction (AfC) drawings for their design elements and delivering the *works* according to these.

The *works* encompass the following disciplines:

- Civils (including highways and groundworks)
- Track
- Drainage
- Mechanical and electrical services
- Traction DC Power
- Telecommunications
- Fire
- LV Power & lighting
- Premises

The *Contractor* shall be always fully aware and in control of the staging of the works to ensure the operational depot is not interrupted by unplanned *works*, other than planned possessions. The *Contractor* plans on both a long term and short-term basis to manage the migration interfaces with the Operational depot.

WI 110.1 Phasing of the works

The *Contractor* shall be responsible & accountable for the TFOS through the full lifecycle:

- Design
- Construction
- Testing & Commissioning
Delivery of train 3, TFOS and Southern Sidings BIU
- TFOS Operational Phase* - Maintenance
Delivery of train 12, Maintenance Facility Building BIU
- Deconstruction/Demolition of TFOS

*The TFOS Operational Phase is from the TFOS Bringing Into Use date to the MFB Bringing Into Use date.

Maintenance Facility Building (MFB) Interface

The *Contractor* will not be responsible for Operation of the TFOS facility, which will be undertaken by the *Employer*. It is expected that on delivery of the 12th train the TFOS will no longer have capacity for assembly and maintenance of all new trains arriving and in use. The MFB is therefore required to be Brought Into Use for the arrival of train 12. Following the MFB Bringing into Use the TFOS shall be decommissioned, and the facilities removed, excluding any permanent elements. This is reflected within the Sectional Completion dates given.

Southern Sidings (SS) Interface

The TFOS *Site* location is not within the current boundary of Beckton Depot, however it does directly interface with the Southern Sidings Site. During the Operational phase of the TFOS trains will be required to move to/from the TFOS, through the Southern Sidings and

to areas of Beckton Depot via track. It is envisaged that the connection to the Operational railway via the Southern Sidings will be Brought into Use at the latest practicable stage in the programme before the TFOS Operational phase. This is in order to minimise the interface with and impact to the Operational Depot.

Due to the interdependencies between delivery of the TFOS, MFB and SS *works*, the delivery of these workstreams shall be carried out in parallel. The *Contractor* shall be responsible for delivering the works in accordance with the Beckton Depot Migration Plan provided by *Others* and scheduling a logical sequence of activities across the *Sites* that fulfils the requirements of the overall project.

It is anticipated that the *Contractor* is to bring the TFOS into use in a single migration phase as per the Beckton Depot Migration Plan (phase B6c). If the *Contractor* requires to bring systems into use in a phased manner this approach shall be agreed with the *Employer*.

- As part of the TFOS Bringing Into Use Sectional Completion, the following Southern Sidings infrastructure and systems are required to bring TFOS into use: All track installed and assured within the areas shown in red in figure 1 and connection to the east
- Points 1490 (provisional number) linking the TFOS roads to AH installed and commissioned
- DC power commissioned for the section shown in red
- Signalling (Track circuiting of Point 1490, section of tracks and signals) commissioned for the section shown in red, including route indicators

WI 115 Site location

Beckton Depot is located at Armada Way, London, E6 7AB at E544049, N181300; it covers an area of 10.56ha, broadly trapezoidal in shape. The TFOS *Site* is located within the land purchased by TfL for the Beckton Depot expansion works funded by the Housing Infrastructure Fund (HIF). The *Site* is directly to the south of the existing Depot, bordering the area where the Southern Sidings will be constructed. The *Site* was formerly part of the Beckton Gas Works, owned by National Grid. For a plan layout drawing of the *Site* including indicative TFOS location refer to Appendix C 6.677: Preferred Option layout drawing- 65210-ARC-PRM-TD350_00-DR-AR-501.

The main depot area is occupied by sidings, sheds and other ancillary structures.

Refer to Section 3.0- *Site information* for further details.

WI 115.1 Access Requirements

The Contractor shall produce an Access Plan and Logistics Plan to define how access and logistics are to be managed during the Construction Phase.

For the Construction phase, a temporary haul road will be created off the Armada Way

roundabout. This road shall serve both the Southern Sidings and TFOS sites. The road will run along the Northern perimeter of the TFOS & HIF site and can be seen in blue on the TFOS Highway Options drawing 65204-AEC-MAC-TD350_Z-DR-ZZ-5003.

During the Operational phase, the TFOS *Site* will be accessed via the Eastern side of the HIF land, via a temporary access road off Armada Way. The *Contractor* shall be responsible for constructing this temporary access road designed by *Others* (AECOM). The access road will be utilised for deliveries, plant and for staff vehicles.

The TFOS *Site* during the Operational Phase will additionally be accessed via a two temporary routes to the North, enabling travel between the TFOS and Beckton Depot. These will be utilised for pedestrians and small site vehicles, such as forklift trucks. The *Contractor* shall be responsible for constructing these temporary routes designed by *Others*.

The TFOS requires a train delivery (reception) road for CAF deliveries and unloading of train cars to be transferred into the TFOS facility, also to be design by *Others*. Further detail is within WI120.5- Civils and Track.

The TFOS facility during the Operational phase will provide a drop-off area for staff, plant and equipment only, no additional parking spaces will be created.

WI 120 Detailed description of the Works

WI 120.1 General

Refer to WI 110 for the split of design responsibilities between the *Contractor* and *Others*.

Refer to drawing 65204-AEC-MAC-TD350_Z-DR-ZZ-5001 for the site layout general arrangement. The chosen highways layout is Option 5/6 (hybrid option) as shown on drawing 65204-AEC-MAC-TD350_Z-DR-ZZ-5003.

WI 120.2 Survey Requirements

The Survey requirements include, but are not limited to, the following:

- Identification (prior to Contract Award) of any additional surveys that are deemed required by the *Contractor* to enable the *Works* to be implemented.
- Completion of surveys as identified by the *Contractor*, as accepted by the *Project Manager*.
- Monitoring of existing adjacent track and depot infrastructure during construction works. Trigger levels for intervention will be agreed with the Employer and in advance of any physical works starting that may affect existing assets.
- Survey for buried services and existing utilities prior to commencing any excavation

Note 1 - Without prejudice to WI120.2, and excluding ground investigation verification surveys, surveys required to complete design works by *Others* are not the responsibility of the Contractor.

WI 120.3 Site Clearance, Land Levelling and Remediation

The area of the *Site* where the TFOS and associated infrastructure will be constructed is required to be cleared of light vegetation. Vegetation clearance of the whole of the HIF land including TFOS area will be undertaken by Others prior to the Contractor starting works on site. The Contractor must however allow for any vegetation that may return prior to works commencing. Any miscellaneous items identified are also to be removed from site at the start of the *works*.

Prior to commencement of works, hazardous materials removal should be undertaken from the HIF site in accordance with the Remediation Plan to be provided by Others. A boundary for the *Site limits* shall be established and secured with appropriate hoarding as specified by others.

Following the completion of the site set-up and clearance of the land required for the TFOS, the *Contractor* shall then undertake the clearance and remediation activities required for the remainder of the Housing Infrastructure Fund *site* in readiness for the remaining Project works. This shall be planned and undertaken in a way that does not delay the start of the build works for the TFOS. The remediation works shall be undertaken as per Scenario 2 summarised in the Conceptual Remediation Appraisal Report-65210-ARC-MAC-TD350-RPT-EN-0003.

The land has been surveyed and the following should be considered within the design:

Appendix C 6.678: Ground Investigation Factual Report - 65210-ARC-MAC-TD350-RPT-EN-0002

Appendix C 6.679: Geo-Environmental Assessment Report - 65210-ARC-MAC-TD350-RPT-EN-0001.

Appendix C 6.681: Beckton Depot Expansion (HIF) Conceptual Remediation Appraisal Report- 65210-ARC-MAC-TD350-RPT-EN-0003.

Appendix C 6.693: Beckton Depot HIF Survey Report - 46404

Appendix C 6.694: Beckton Depot HIF Project 3D Topographical Survey Drawing - 46404T-01-1 to 46404T-01-5

[REDACTED]

■ [REDACTED]

[REDACTED]

■ [REDACTED]

[REDACTED]

A detailed Land Remediation Plan based on the Remediation Concept is under development by *Others* (AECOM/Arcadis) and shall be implemented by the *Contractor*. The

Contractor is responsible for engaging competent resources to undertake the *works* including hazardous material removal in order to progress civils / ground works safely.

The TFOS *Site* shall be levelled appropriately to align with the height of the existing Beckton depot land to avoid gradient changes for the track installation. Land build up is expected to be to the same level for both the TFOS and Southern Sidings.

Ground improvement works where required to support the TFOS design will be undertaken by the *Contractor*, this excludes any ground improvement for the future HIF sidings.

An enabling works detailed design package by *Others* will be issued to the *Contractor* to undertake, ahead of the main installation works.

WI 120.4 TFOS (Temporary Fit Out Shed) Design & Build

The *Contractor* shall design, install, test and commission as part of the *works* a Temporary Fit-Out Shed within land shown in figure 1. This shall meet the requirements within the Technical Requirements Specification (refer Appendix 1) and be developed based on the Outline Design produced by *Others*:

- The TFOS Building shall have a minimum design life of 5 years.
- The TFOS shall have a watertight structure with a frame, walling and roof
- The TFOS shall have cladded wall panels to be insulated for temperature and sound control
- The design shall include an anchoring system for the structure to the TFOS base
- The TFOS shall have a drainage system of guttering & downpipes, with water ingress protection at the base of the cladding
- The TFOS dimensions will be determined within the Outline Design. The layout & size will allow for the length of trains, clearance for access, room for manoeuvring fork-lift trucks between roads and an allowance for building superstructure.

The *Contractor* shall design a superstructure that considers the following requirements: Length:

- (a) Accommodation of two new CAF full length trains parallel to each other on pitted roads (refer to Vehicle general description and dimensions, in section 3.5) + 5m at either end.
- (b) Sufficient clearance is needed at each end of the train to allow staff to access pits with a train in position and to ensure that there is clearance for all staff and equipment to pass and to couple the final car.

Width:

- (a) Accommodation of two new CAF full width trains parallel to each other on pitted roads (refer to Vehicle general description and dimensions, in section

3.5)

(b) Have sufficient space between roads and between outside of the maintenance roads and TFOS walls for forklift truck operation & turning and the shore supply system.

Height:

(a) Refer to the cross-sectional drawing – 65204-AEC-MAC-TD350-Z-DR-ZZ-5011 and Technical Requirements Specification

- The TFOS superstructure shall be of a temporary nature, using materials equivalent to the indicative specification provided in appendix C 6.683. Further indicative drawings and specifications are provided in appendix C 6.684 and C 6.685. Note that the information within appendices C 6.683-6.685 are for information only and the dimensions shown are not the final dimensions. Dimensions are driven by the design requirements and will be specified within the Outline Design.
- The TFOS shall be provided with a static 750v shore supply system with 6 fixed shore supplies in locations accessible to train receptacle points (to be designed by *Others*) and clearance for the trains to be moved in and out of the TFOS.
- Temporary facilities (e.g., water, drainage/ soakaways, LV power supplies, flood lighting, level working surfaces, etc.) shall be provided to enable staff (cleaners and maintainers) to undertake work safely and efficiently.
- The TFOS shall be provided with COSHH (Control of Substances Hazardous to Health) needed to store the maintenance materials and other dangerous materials needed for manufacturing related activities.
- Lightning protection should also be considered.
- Design to allow for cables to equipment and CRMS routes.
- A switch room for LV and DC distribution

The train specification can be found in Appendix C 6.680- Vehicle Description- C.M0.94.600.00A.

The two pitted roads within the TFOS shall be design by *Others*, reflecting best industry practice. The design shall consider safety, performance, efficiency and take account of staff (Maintainers, Cleaners etc.) requirements both in accessing the trains and undertaking their normal activities.

WI 120.5 Civils & Track

The *Contractor* shall install, test and commission as part of the works the below Civils & Track elements of the TFOS, to be designed by *Others*. This includes the following:

- Hard stand material and foundations to support the pitted roads (as required). Loading capacity must be sufficient to support the trains on rail. (See appendix C 6.680 for the train specification)
- A separate foundation for the TFOS structure, note: The TFOS building shall be provided with shallow foundations to minimise disturbance of contaminated ground. This will be captured within the Outline Design provided by Others.
- Two sets of points are required, one to enable entry/exit to the Southern Sidings and one to provide access to both TFOS roads. The points will be manually operated, and no further detection will be required apart from the extension of the track circuit to the stop board for the TFOS within the Southern Sidings design.
- Two pitted level calibrated tracks / roads for train assembly, testing and maintenance (Inclined 113A Rail) installed on Ho Pan Baseplates with Epoxy levelling grout, supported by pit walls. These are to be 1.5m depth from top of rail. Pitted roads will be formed of 5m long precast units in line with building frame and spanning between pile caps. Steps are required at intervals along the pits for access / egress in accordance with the fire strategy to be developed at Outline Design.
- Track is to be laid enabling level entry & exit from east end of the TFOS via two roads, in addition to entry from the west via a single road for train delivery.
- A train delivery road shall be provided at the western entrance to the southern TFOS road, allowing individual cars to be unloaded into the TFOS.

Operational vehicle unloading area: This information considers the unloading and shunting per car. In order to provide a feasible unloading, as soon as each car has been unloaded, it would be necessary to shunt it out of the unloading track. Therefore:

- 75m straight line considering:
 - 47m of practicable s straight line.
 - 28m of embedded s straight track.
- 5.3m of free high area.
- S lope of the route: 2.5% maximum.
- Soil: prepared for holding 15 tonnes load per axle of the loaded transport

equipment.

- Access road and route to the unloading point must have a minimum width of 3m and turning radius of 15m.

The unloading area (height and width) must be free of barriers (catenary, lights electricity posts) as well as totally flat (no slopes due to sidewalks, pedestrian crossing).

- The slab or hard stand design will allow for traction return bonding and prevent the mitigation of stray DC current.

The *Contractor* shall design, install, test and commission as part of the works any foundations or footings required to support the superstructure.

WI 120.6 Premises

The *Contractor* shall design, install, test and commission the following as part of the *works* (Including but not limited to):

- Design & build of security features- fencing/hoarding and standalone CCTV (Closed CircuitTelevision)
- Standalone CCTV with remote viewing functionality is to be provided by the Contractor and is required for both the Construction and Operational phases of works. During the Construction phase, the fencing / hoarding boundaries and standalone CCTV may need to increase or reduce with the various stages (also see 120.10). The Employer will not be responsible for the security of the Contractors tools, plant and material on site.
- The location allocated within site layout at Outline Design by *Others* (AECOM) shall be utilised for welfare, offices and storage units
- Storage units shall be provided, approximately 50 sqm for small and medium materials equivalent to 4 x 20-foot containers.
- Welfare facilities are required to accommodate up to 23 staff in proximity of the TFOS.
- Office equipment and accommodation shall be provided alongside the TFOS for 13 personnel to support the train assembly and maintenance. This includes:
 - Desks – 13 desks for single person use
 - Computer screens – 13 screens for single person use
 - Internet connection – wifi capable of general internet access
 - Printers – 2 colour printers
 - Furniture – office chairs for 13 single person use
 - Stationary – general stationary equipment
- Access for persons of reduced mobility is required to both office and welfare facilities and could be provided via ramps or other appropriate solution. For the TFOS, personnel need to be fully ambulant due to the need to access over, under and around trains and track and therefore access for persons of reduced mobility does not need to be considered.
- Messing facilities for staff. The mess room should be large enough to accommodate 5-6people (fulfilling with the recommended social distancing).
- Sufficient canteen/ kitchen facilities shall be provided alongside the TFOS, including microwave and kettle
- Changing rooms for all genders with lockers for personal items for 23 people shall be provided alongside the TFOS
- Sufficient Toilet / Washing facilities for all genders for 23 people shall be provided alongside the TFOS.

- Changing rooms for all genders with lockers for personal items for 23 people shall be provided alongside the TFOS
- Sufficient Toilet / Washing facilities for all genders for 23 people shall be provided alongside the TFOS
- Electric showers (including emergency showers) shall be provided
- Walkways and drop off point for staff access.
- The TFOS shall be provided with storage facilities for appropriate train spares and plant including batteries.
- The TFOS shall be provided with COSHH cabinets would be needed to store the maintenance materials and other dangerous materials needed for manufacturing related activities.

WI 120.7 Drainage

The *Contractor* shall design, install, test and commission the following as part of the *works* (Including but not limited to):

- The TFOS shall be provided with a Temporary sewerage and drainage system.
- The TFOS shall be provided with a Temporary water supply for cleaning purposes
- The Office facilities shall provide drinking water supplies for the number of people using the facilities.

The following elements shall be designed by *Others* and installed, tested and commissioned by the *Contractor*:

- Sub-surface drainage system. Surface water will be discharged into Southern Sidings drainage system via above ground attenuation as required to prevent flooding.
- Temporary Oil interceptors to be included as part of the pit and foul drainage system design for the TFOS building

WI 120.8 Mechanical and Electrical

The *Contractor* shall design, install, test and commission the following as part of the *works* (Including but not limited to):

- The TFOS shall be provided with a suitable portable temperature-controlled heating ventilation and cooling system. Total number will be confirmed in the outline design.
- The TFOS shall be provided with a filtered/dried compressed air supply (8.5-10bar) in line with ISO 8573-1: 2010: [2:3:2]

- The pits within the TFOS shall be provided with 110V power supplies "reyrolle- type" socket to BS196.
- Suitable Earth Fault Protection arrangements shall be provided for the two new roads and TFOS to ensure that LVAC (Low Voltage Alternating Current) electrical protection systems are not compromised by stray DC (Direct Current) earth leakage or DC earth fault. There shall be no electrical path between the TFOS LV / HV (High Voltage) systems and TFOS foundations reinforcement.
- A Low Voltage switch room or feeder pillar shall be provided in the TFOS and will be detailed within the Outline Design.
- Installation of new power supplies to mechanical services, including all required cabling and local isolators.
- TFOS internal, external lighting and domestic LV power.
- The two new roads and TFOS shall be provided with task lighting, security lighting, pit lighting and emergency lighting as per BS 5266 Part 1 and ES-610

-
- Full electrical bonding in compliance with DLR Earthing and Bonding Strategy ref. 1499901- DLR-RSTK-TR600_Z-IE-K-0117 and DLR Earthing and Bonding ES-604 shall be provided for the two new roads and TFOS.
 - Lightning protection
 - Installation of trackside cable containment for cabling associated with above cabling.

The *Contractor* shall install, test and commission the following to be designed by *Others*:

- The TFOS 750V shore supply system shall either be supplied from suitably rated generators or from an existing Beckton Depot supply point. A power assessment during Outline Design will determine the design solution.
- Shore supplies - The TFOS shall be provided with a static 750v shore supply system, and shall be provided with 6 fixed shore supplies in locations accessible to train receptacle points (to be designed by *Others*) and clearance for the trains to be moved in and out of the TFOS.
- Full electrical bonding in compliance with DLR Earthing and Bonding Strategy ref. 1499901- DLR-RSTK-TR600_Z-IE-K-0117 and DLR Earthing and Bonding ES-604 shall be provided for the two new roads and TFOS.
- Critical systems within the TFOS shall be provided with an Uninterruptible Power Supply (UPS). Detail of which systems require UPS will be confirmed through a study at Outline Design.
- Installation of new lighting columns adjacent to the new TFOS, designated walkways & Access Road and general track areas. Lighting columns to receive a non-conductive coating to the casing as shown on drawings and to hinged for maintenance access.
- Review Busbar capacity & CRMS (Cable Route Management System) route for cables from existing depot.
- LV and DC route from the relevant power source to the TFOS, via a route to be determined within the Outline Design.
- Depot protection system to include as a minimum:
 - Power emergency cut out buttons to align as far as possible with the existing

depot

- A lock out tag system incorporated into the shore supply design that all staff can add their padlocks to the road to ensure 750VDC isolation integrity
- Warning lights & audible warning for train movements
- Considerations: Shore supply interlock, roller shutter doors, preventing train conflicts, derailleurs, warning Claxons and lights
- Interface between DPS, third rail and shore supply system to be reviewed further at Outline Design.

The *Contractor* shall liaise with the *Employer's* appointed Substation Upgrade Contractor to install the cable routes within the Substation to the LVAC Switchboard. The *Contractor* shall install and commission into service the cable in conjunction with the *Employer's* nominated Substation Upgrade Contractor.

WI 120.9 Fire

The *Contractor* shall design, install, test and commission the following as part of the *works* (Including but not limited to):

- The *Contractor* shall describe the fire precautions for the TFOS and impacted areas in a Fire Strategy compliant with S1080, DLR-JMS-PROC-019 and DLR standards and integrated with the requirements of the Site Wide Fire Strategy for agreement with DLR, KAD and London Fire Brigade. The TFOS design shall be in accordance with the requirements of the fire strategy.
- A fire engineering assessment during Outline Design will confirm design to life safety only or protection of assets. Fire subsystem requirements are to be defined as an output of this assessment. An Outline Design Fire Strategy is to be provided to the *Contractor* to develop with the Detailed Design.
- The TFOS is required to have a fire system in accordance with the Fire Strategy for the **Operational Phase**. As per S1080, this shall describe (at a strategic level) the provisions to be made for the following:
 - A. Means of escape (including for mobility impaired and other disabled persons).
 - B. Fire-fighter access.
 - C. Fire-fighting equipment (fixed and portable).
 - D. Fire detection and fire warning systems.
 - E. Fire suppression systems.
 - F. Fire ventilation and pressurisation systems.
 - G. Fire separation, compartmentation, and structural fire protection.
 - H. Control of the reaction-to-fire properties of materials.
 - I. Fire safety signs.
 - J. Emergency lighting.

K. Fire safety management controls and procedures that will be required to support the Fire Safety Strategy.

- The supplier shall describe the fire precautions for the TFOS and impacted areas during the construction phases in a Construction Phase Fire Strategy compliant with S1080, DLR-JMS- PROC-019 and DLR standards demonstrating how depot operations can continue safely during the works, for agreement with DLR, KAD and London Fire Brigade prior to completion of the Detailed Design stage.

- As per S1080, the **Construction Phase** Fire Strategy shall describe (at a strategic level) the provisions to be made for the following:
 - A. means of escape (including for mobility impaired and other disabled persons);
 - B. fire-fighter access;
 - C. fire-fighting equipment (fixed and portable);
 - D. fire detection and fire warning systems;
 - E. fire suppression systems;
 - F. fire ventilation and pressurisation systems;
 - G. fire separation, compartmentation and structural fire protection;
 - H. control of the reaction-to-fire properties of materials;
 - I. fire safety signs;
 - J. emergency lighting;
 - K. Fire safety management controls and procedures that will be required to support the Fire Safety Strategy.

WI 120.10 Signalling

The *Contractor* shall install, test, and commission the following as part of the *works*, as designed by

Others:

- A track connection is required between the TFOS and Southern Sidings. The connection to the TFOS will be from the East side of the Depot. The new points will be numbered 1490 (number subject to confirmation with pump unit and detector trackside) shown in Figure 3. The track will align the track formation for the Southern Sidings and HIF end stated design as far as possible.

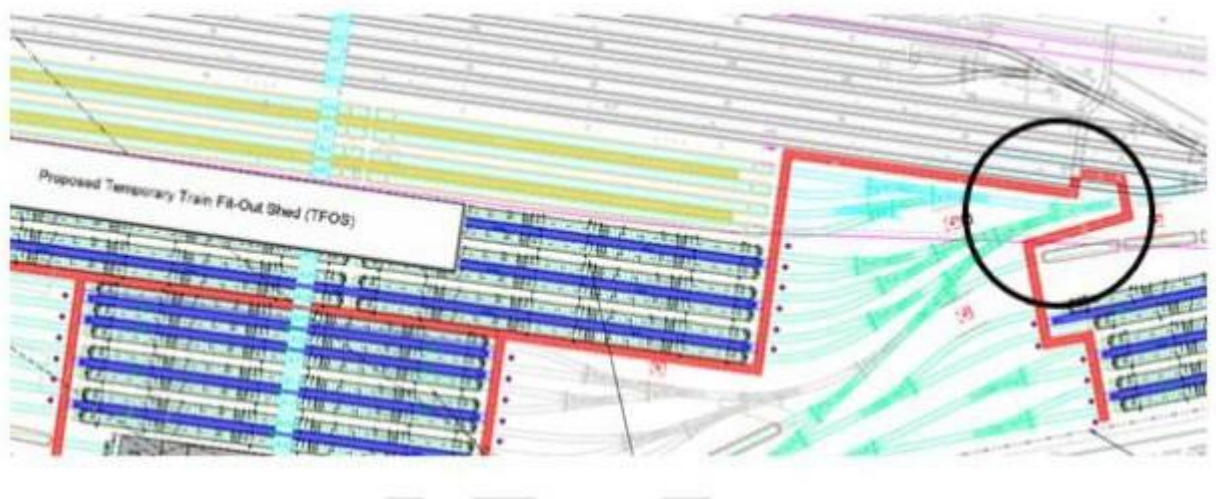


Figure 3 – Beckton layout indicating track connection to Southern Sidings

- The southern siding signalling must take into account the temporary nature of the TFOS and provide a temporary solution until the HIF works progress to the final end state prior to the decommissioning of the TFOS.
- All Earthing and bonding should be consistent with the connection to the southern sidings.
- The TFOS track shall be manually operated up to the transition point into the Southern Sidings. The transition from a signalled move to a manually operated move shall be defined within the Outline Design.
- The TFOS connection road is to be isolated from the Southern Sidings. Track protection is required for the end of the TFOS road, Fixed train arrestor.

Note that the Southern Sidings design will incorporate Signalling scope associated with entry and exit from the TFOS via the Southern Sidings.

WI 120.11 Traction Power

The *Contractor* shall install, test, and commission the following as part of the *works*, as designed by *Others*:

- The Southern Sidings conductor rail (third rail) shall be extended to allow for the movement of trains under their own power from the TFOS exit signal into the main depot, and up to the TFOS stop board on entry (see TFOS signalling requirements section 1.07). A road rail vehicle to be procured by the Employer will be used to transfer cars on non-powered sections of track.
- Positive and negative cables for the conductor rail on approach to the TFOS, provided as part of the Southern Sidings power design.
- Design to enable safe isolation of non-powered TFOS track from the Conductor rail extended from the Southern Sidings
- The *Contractor* shall liaise with the *Employer* to agree any substation internal cable routes required, as specified in the Outline Design.

The Detailed Design for the Southern Sidings traction power *works* can be found in:

- 65204-AEC-ELC-TD350-REP-E-2001 Southern Sidings Traction Power Detailed Design Report
- 65204-AEC-MAC-TD350-REP-RS-9005 Southern Sidings - Upgraded Substation Interface Control Document

WI 120.12 Telecommunications

The *Contractor* shall design, install, test and commission the following as part of the *works* (Including but not limited to):

- A standalone CCTV system and equipment shall be provided for the TFOS facility with the ability to be viewed remotely
- The Contractor is responsible for the overall cyber security deliverables for the integrated system. The Contractor will consider the TFOS systems within the Cyber Security Management Plan for implementation during the progress of works, testing, commissioning and handover of the system to the system maintainer.

The *Contractor* shall install, test, and commission the following as part of the *works*, as designed by *Others*:

- Installation of new Wi-Fi access points to extend the current Depot system to cover TFOS area. Note configuration shall be undertaken by *Others*.
- The existing Depot radio System shall be extended to the TFOS.

WI 120.13 SCADA

The *Contractor* shall notify the *Employer* of any changes required to the LVAC system within the existing Depot as a result of the TFOS.

WI 120.14 Systems Engineering & Engineering Safety

The following deliverables are required from the *Contractor* as part of the Systems Engineering & Engineering Safety activities (Including but not limited) to: -

- Systems Engineering Management Plan (SEMP) to detail the *Contractor's* processes for identifying, managing and developing the requirements, identifying, managing and gaining agreements with other parties on interfaces, system architecture process, and how EMC, RAM and HF will be managed.
- Requirements Management and V&V- The Contractor will be required to take ownership of the applicable requirements stated within the TFOS Technical Requirements Specification, in addition to any requirements from Outline Design, and manage their implementation through the Contractors Detailed Design and Delivery. The Contractor shall provide evidence through a Verification & Validation process that these requirements are satisfied, in addition to any requirements set out within the

Works Information. The Contractor shall work with the Employer to agree any further requirements that arise from their design.

- Human Factors (HF) – A Human Factors Management Plan will be produced by Others and the Contractor is to support the Employer where required for HF Task Analysis Workshops and ensuring that the HF requirements continue to be understood, managed and implemented as the design develops. The Contractor's designs shall support the process to ensure Human Factors issues are resolved as their design progresses.
- Interface Management - At Outline Design the Contractor will be provided with Interface Control Agreements (ICA's) or similar produced by Others which describe other parties side of the interface with the Contractor's design scope. The Contractor will align their design to these interface requirements and work with Others to clarify and agree the interface design which will be populated within the ICA's
- As part of the Engineering Safety management – Review the safety justification and supporting information provided with the Outline Design and include the *Contractor's* safety management activities: suitable actions to bring these activities to conclusion and support the *Contractor's* safety justification.
- All Hazards, Requirements, Issues & Assumptions not closed out within the Outline Design (typically referenced in the V & V matrix) are to be taken onboard by the *Contractor* and taken to completion by evidencing suitable validation activities. If the *Contractor* is unable to close out any hazards prior to the facility being brought into use, then they will be required to identify a party to transfer the item to for closeout and agree this with the Project Manager.
- Detail suitable processes for adding and managing Hazards, Requirements, Issues & Assumptions to the records developed by the designers where the *Contractor* identifies items as part of their scope.

In addition, as part of the Technical Assurance of the *Contractor's* scope, suitable assurance deliverables shall be provided for each of the Project's migration stage(s) to enable the project to pass relevant assurance gates and meet operational readiness deliverables. All such assurance deliverables are to be agreed with the *Employer* in the *Contractor's* Assurance Plan.

WI 120.15 Environmental

The *Contractor* investigates innovative sustainable design and construction solutions that have the potential to lower the project's whole life carbon and whole life cost. The *Contractor* implements the investigated solutions, obtaining approval from the Project Manager when this increases contract, design or build costs.

To maximise the Project's sustainable performance, the Contractor will:

1. Use principles that consider the longer-term design life of assets and that will offer innovative solutions using the best available technology.
2. Design systems and install equipment that will reduce energy use and the operational cost of assets.
3. Ensure that the new systems are compatible with the energy system and load requirements at the existing site.
4. Design systems and install equipment that minimises water use during the asset's installation and operation.

5. Design assets (built and natural) that are resilient and maintainable throughout the design life of the asset, and support the resilience of other assets and the operation of the transport system to extreme weather and climate change.

WI 120.16 Maintenance of the TFOS

During the Operational Phase of the TFOS the facility will require both planned (preventative) and corrective maintenance to ensure it is in good working order. The *Contractor* will be required to develop a maintenance regime and communications process, to be agreed with the *Employer* and end users of the TFOS. The *Contractor* shall undertake the maintenance activities in accordance with these.

With reference to WI 430.3 Maintenance of completed works, the TFOS facility and associated assets should be treated as completed assets not handed over to the Employer. Maintenance schedules and processes should therefore be detailed in the Interim Maintenance Readiness Plan submitted to the Employer for acceptance.

The TFOS Operational stage is anticipated to be approximately 6-12 months from the TFOS Bringing Into Use date onwards. The duration of this period will be determined by the Bringing Into Use date of the MFB. The TFOS planned maintenance regime shall commence upon acceptance of the completion of TFOS facility Commissioning. This shall be triggered by the *Project Manager's* acceptance of a final Testing & Commissioning certificate.

The *Contractor* shall produce a Waste Management Plan and undertake waste management during the Operational Phase of the TFOS in accordance with this.

WI 120.17 Deconstruction and decommissioning of the TFOS

Once the MFB is fully Brought Into Use the TFOS facility shall be decommissioned, and non-permanent elements removed. This shall be undertaken at a date to be agreed with the *Project Manager* and prior to the date stated within any Local Authority planning conditions applied to the project. Any such restrictions shall be advised by the *Employer* once Planning Permission has been granted.

Elements of the *works* to be removed include the superstructure, office & welfare facilities, generators, storage facilities, isolation & protection systems, communications systems and any other assets or systems to be agreed with the *Project Manager*.

The principles outlined in WI 1160 Environmental Requirements should be applied to the TFOS. Where possible to support sustainable construction, materials should be re-utilised or recycled following deconstruction. The *Contractor* could explore hire agreements and/or resale of materials & assets. Any recovery of costs through re-sale of materials or assets shall be reflected in the project's target cost and passed on to *Employer*.

WI120.18 Plant and Equipment

A number of items from the Beckton Depot MFB Detailed Design Plant and Equipment Schedule 65204MF-ARC-PRM-TD350_Z-SCH-AR-1805 are also required for use within the TFOS facility.

The items marked in Appendix C 6.691 need to be available within the TFOS facility for the TFOS Bringing Into use milestone date. Any training and provision of applicable user manuals also needs to be completed by this date to support use of the equipment. The Contractor is required to provide all items except those marked NO LONGER REQUIRED or provided by Employer.

Further to the items within the plant and equipment schedule, a mobile hoist capable of serving both roads shall be provided to allow lifting and dropping of equipment into and out of the pits e.g. waste oil cart, pit manipulators. The loading requirements will be provided by the *Employer*.

Refer to WI 1010.2 Free Issue Materials for details of long lead items to be free-issued to the *Contractor*.

WI125 Contractor's Design Responsibilities

The *Employer* has assigned the role Principal Designer under CDM (Construction (Design and Management) Regulations) to *Others*. The Principal Designer is from the same organisation that supplying the Outline Design.

The *Contractor* shall undertake the role of Designer and provide design and assurance deliverables as defined within the Outline Design and Technical Assurance Plan (TAP) to be provided by the *Employer*. These shall include (but not limited to):

- Design Management Plan
- Systems Engineering Management Plan (SEMP) (could be combined with MFB & SS Scope)
- Assurance Plan (can be combined with MFB & SS scope)
- Engineering Safety Plan (can be combined with MFB & SS scope)
- Engineering Safety Report
- Interface Control Agreement/ Interface Definition Documents to be updated and populated
- Design Check Certificates
- Design Risk Assessment
- Design Drawings
- Design/product specifications
- Termination diagrams and termination schedules
- Systems architectures
- Accepted for Construction (AfC) drawings

- Temporary works drawings (if required)
- Red-line drawings
- As-built drawings
- Testing & commissioning Plans
- Test reports
- Operation & Maintenance manuals / Schedules
- Decommissioning plan
- Hazard log / updated from current logs
- V&V Report

The *Contractor* shall be responsible for any temporary works design, including undertaking the role of temporary works coordinator required to fulfil the scope of this contract. The Contractor must maintain a TW (Temporary Works) Register and submit to *Project Manager* at Contract Award, identifying all known TW requirements. Updates to be submitted to *Project Manager* as an ongoing concern throughout.

Design Reviews

All design & assurance documents shall be subject to a review period by the *Employer* of 20 working days.

Joint design review meetings shall be held by the *Contractor* at 50% and 100% design maturity prior to construction. Collaborative design development with the *Employer* and Principal Designer shall be undertaken to minimise changes required during review. Upon completion of the Commissioning of the facility, the *Employers'* Acceptance of the assurance documentation shall be required prior to the TFOS Operational Phase commencement.

WI 130 General Statement of any constraints on how *Contractor* provides the *Works*

Overarching constraints of how the *Contractor* provides the *works* are more fully set out in WI 200. In addition, the following constraints apply with respect to providing the *works*:

- The *Contractor* shall comply with any conditions set out within the Planning Approval.
- Deconstruction of the TFOS shall be undertaken at a date to be agreed with the *Project Manager* and prior to the date stated within any Local Authority planning conditions applied to the project. Any such restrictions shall be advised by the *Employer* once Planning Permission has been granted.
- Access, outages, and possessions must be booked in accordance with the WoRM (Refer to Appendix C3)
- KAD staff have limited availability, and any assistance/availability of resources must be requested 28 calendar days in advance.

- Compliance with DLR's Standards
- Compliance with DLR's requirements for the training and certification of the *Contractor's* labour if undertaking any works within the Operational Beckton Depot boundary.
- Dependent on programme alignment, a phase handover of the site area to the HIF build contractor may be required. HIF construction works may be in progress during the TFOS Operational Phase.

WI135 The *Contractor's* Site Inspection

The *Contractor* is deemed to have visited the *Site* and inspected and examined the *Site* and its surroundings to:

- Understand the access to the *Site*
- Assess the condition and layout of the *Site*
- Ensure all requirements for pre-construction surveys and testing required to complete the works are captured
- Identify/understand any *Site* constraints

If the *Contractor* considers that there are inadequacies in the information that pose potential risk to progressing the *works*, then the *Contractor* must notify the *Project Manager* at the earliest opportunity.

WI140 TFOS Pricing Information

The items highlighted orange in the Activity Schedule (and below) relates to the TFOS whether in whole or in Part.

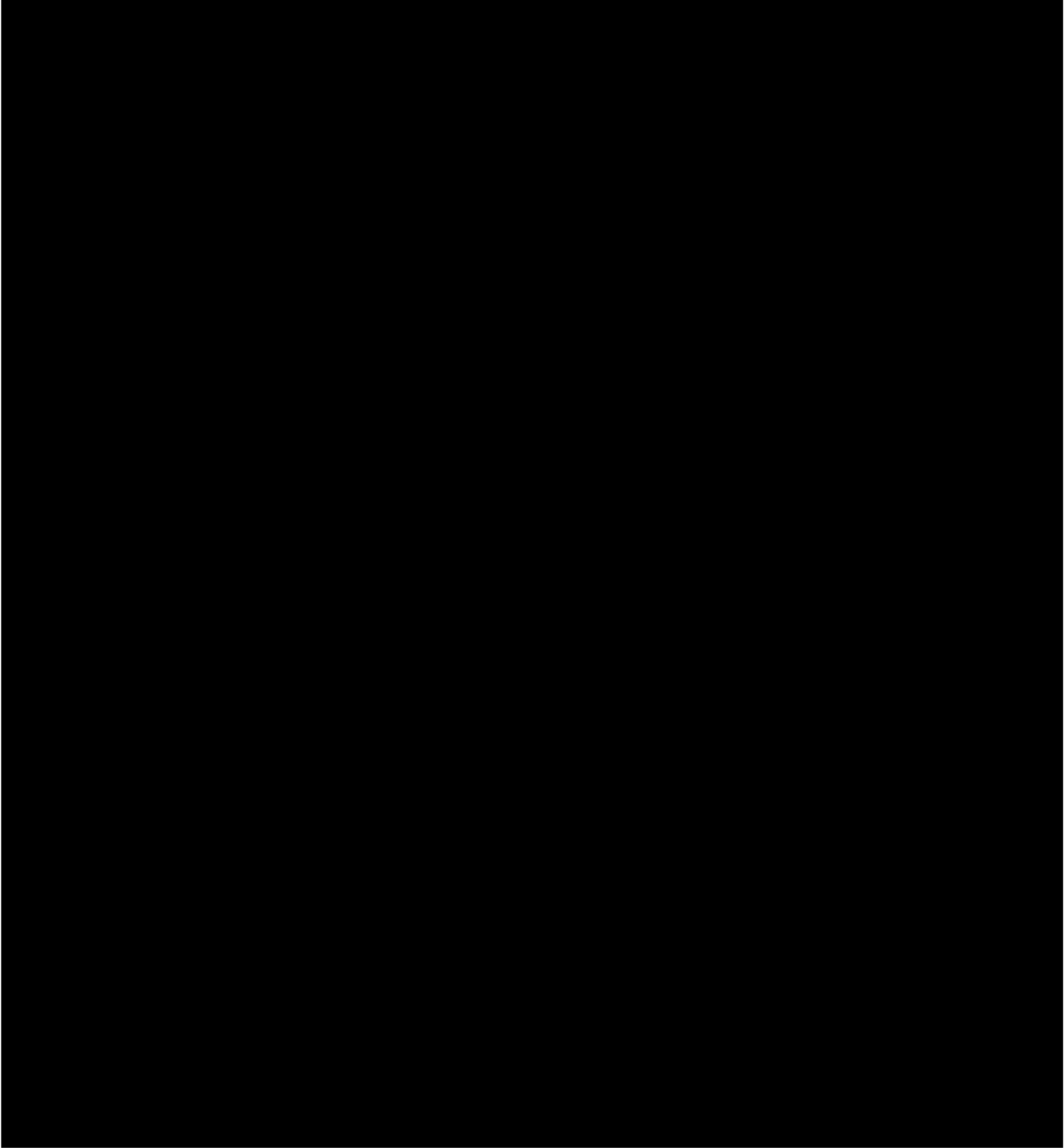
Both parties have a common understanding as reflected in the Works Information that the TFOS design will be instructed and subject to price and Programme amendments.

The *Employer* acknowledges the intent behind formalizing the TFOS related element within the tendered total of the Prices and highlights below the TFOS related activities or the proportions of activities which are related to the TFOS works.

Maintenance Facility Building, Southern Sidings and Temporary Fit Out Shed ACTIVITY SCHEDULE					
<u>Ref</u>	<u>Description</u>	<u>Qty</u>	<u>Unit</u>	<u>Rate</u>	<u>£</u>

TEQS Activities /
Proportions of Activities

Comments





WORKS INFORMATION

WI 200

CONSTRAINTS ON HOW THE
CONTRACTOR PROVIDES
THE *WORKS*

CONTENTS

WI 205	Overriding Constraints and Requirements
WI 210	General Constraints
WI 215	Access Arrangements
WI 220	Security and Identification of Workpeople
WI 225	Security and Protection of the <i>Site</i>
WI 230	Protection of Existing Structures and Services
WI 235	Protection of the <i>Works</i>
WI 240	Traffic Management
WI 245	Condition Survey
WI 250	Access Within the Railway Environment
WI 255	Consideration of Others
WI 260	Site Cleanliness
WI 265	Waste Materials
WI 270	Emergency Plan
WI 275	Programme Constraints

WI 205 Overriding Constraints and Requirements

The *Contractor* complies with all Quality, Environmental and Health and Safety standards. Please refer to WI600 and WI1100 for further detail.

The *Contractor* ensures that in performing the *works* they ensure that DLR is not in breach of its obligations under statutory regulations or standards.

The *Contractor* complies with and provides the *works*, in accordance with the Works Information and all other relevant legislation and/or Standards. The *Contractor* refers to the following documents to ensure compliance:

- DLR Standards (Refer to Appendix D7.0);
- Business Critical Processes (Refer to Appendix D7.48-7.54);
- The WoRM (Refer to Appendix D7.65-7.82);
- Planning Conditions (Refer to Appendix B5.3).
- The Technical Assurance Plan (Refer to Appendix C6.577)

The *Contractor* shall deliver and manage the *works* in compliance with guidance issued by Public Health England in connection with the Coronavirus Pandemic.

WI 205.1 Employer's Technical Requirements

The *Contractor* provides the *works* in accordance with the Works Information and the *Employer's* Technical Requirements provided in the Verification & Validation (V&V) Report (65204-AEC-MAC- TD350-REP-ZZ-2002 - Refer to Appendix C6.652). These requirements have been incorporated into the design provided by the *Employer*, however, the *Contractor* provides necessary evidence to validate and verify the same following completion of the construction *works*, and prior to BIU. The *Contractor* compiles this evidence by updating the relevant Verification & Validation (V&V) Reports and submitting to the *Project Manager* for acceptance.

WI 210 General Constraints

WI 210.1 Health and Safety

The *Contractor* complies with its duties as the Principal Contractor as defined in the CDM Regulations 2015 for all Work Sites defined by the Works Information.

As specified in the Works Information, the *Contractor* may be required to share access to Works Sites with Others. In these instances, the *Contractor* retains the Principal Contractor designation, unless otherwise specified by the *Project Manager*.

Please refer to WI 1100 for further details regarding HSE Requirements.

WI 210.2 Use of the Site

The site layout is shown on plan: "DLR Beckton Depot – Site Plan showing location of MFB, SS & TFOS". Refer to Site Information 3.6

The *sites* are shown on plan: “CDM Boundary Sketch”. Refer to Site Information 3.5 Access routes are shown on plan: “Access Route Sketch”. Refer to Site Information 3.4

The *Contractor* is deemed to have visited the Sites and allows for all the physical and or other working conditions, including without limitation constraints associated with; accessibility, surroundings, storage space for materials and any required additional handling and transporting for materials.

The *Contractor* is deemed to have carried out investigations as necessary in order to gain a complete understanding of the physical conditions and all matters that are associated with the Sites, including:

- visiting and examining the Sites and its surroundings and doing everything possible to inform themselves fully as to the physical conditions and/or features of the Sites;
- ascertaining the local conditions near or relevant to the Sites, or any other condition or characteristic of the Site affecting, or which may affect the *Contractor*;
- obtaining all necessary information as to risks, contingencies and other circumstances which could have an effect on the performance and cost of executing the *works*;
- informing themselves of the nature of the *works* and the means of access to and facilities at the Sites and transport facilities for deliveries of materials to or from the Sites;

Access for the *Contractor* to the MFB worksite will be via an operational track crossing (OTC), which will be installed by the *Contractor* as part of the *works*. The OTC will be available for use during construction hours and will be subject to depot operational procedures. The OTC will be installed across road BA and the eastern section of the Northern Test Track (to be installed by the Contractor). For further details on the OTCs and operational procedures please refer to WI_MFB100.

Access to the Southern Sidings worksite will be via a temporary haul road and access gate. Hoardings, fencing, access gate, site demarcation, ground levelling and the demolition of any redundant structures within the worksite will be carried out by the *Contractor* as part of the *works*. The *Contractor* shall install the temporary haul road to facilitate their *works*.

Access to the TFOS and Southern Sidings sites will be via the land purchased for the additional Housing Infrastructure Fund (HIF) sidings, that when complete will form part of Beckton's Operational Depot. The TFOS *site* is identified within the "CDM Boundary Sketch". Refer to Site Information 3.5. The main Depot is currently accessed via a four-arm roundabout on Armada Way. The TFOS and Southern Sidings *sites* will be accessed via the dropped curve minor access point just South of the main Depot roundabout exit. A construction haul road will be created from this location by the *Contractor* as part of the *works*.

This will be the preferred entry so as not to disrupt Depot Operations and will need to be managed by the *Contractor*. It is envisaged that vehicles will egress from the same gate until the second south access gate is installed as part of the TFOS build. This south gate is shown within the TFOS Highways Options Drawing 65204-AEC-MAC-TD350_Z-DR-ZZ-5003, refer to the preferred Hybrid Option 5/6. The Ringway Jacobs exit may also be used on approval from the Ringway Jacobs team following the agreed process.

The TFOS throughout its construction phase will remain non-operational and as such KAD approval is not required for the works until the South Sidings has been tied into the TFOS

track and there is no physical barrier in place, the project will make the *Contractor* aware of this well in advance.

The *Contractor* does not have exclusive use of the HIF sidings land for the duration of the TFOS construction, operation and decommissioning as it is anticipated HIF sidings construction will begin during this time period. In this case a clear boundary between work sites within the land area will be agreed enabling commencement of the HIF Sidings works alongside TFOS works.

Construction hours are 08:00-18:00hrs Mon-Fri, 08:00-13:00hrs Sat. Additional working hours may be possible subject to the *Contractor* obtaining agreement with DLR, the local authority, see Planning Conditions (Appendix B5.3) and acceptance by the *Project Manager*.

The *Employer* provides access to the Work Sites in accordance with the access date, however should the Contractor require access to any additional areas within the *Site*, a request is submitted by the *Contractor* to the *Employer* for acceptance.

The *Contractor* allows the *Employer* and KAD 'reasonable access' for preventative and reactive maintenance to assets within the worksites which are not the responsibility of the *Contractor*. This access will be agreed by the *Employer* as reasonable.

The Contractor takes note of the restrictions applying to the existing contaminated spoil heaps from the construction of the existing MFB facility, i.e. do not disturb, do not walk over.

The *Contractor* takes note of the constraints as given in documents:

"Works Licence Relating To Haul Road At Beckton Gas Worksite, Armada Way, London" and "Works Licence Relating To Property At Beckton Gas Worksite, Armada Way, London". Please refer to Site Information 3.7 & 3.8

WI 210.3 Planning Permission

The *Contractor* complies fully with the Planning Conditions (Refer to Appendix B5.3) including but not limited to;

- Compliance with the Code of Construction Practice (Refer to Appendix D7.87);
- Compliance with Section 61 of the Control of Pollution Act 1974;
- Compliance with the Construction Logistics Plan (refer to Appendix D7.88) ;
- Ensure the works comply with the BREEAM target of Excellent. Please refer to WI1165 for further details.

WI 210.4 Construction

The *Contractor* is responsible for constructing and making available the *works* required in accordance with this Works Information, including but not limited to:

- Preparation of all working areas, to include the erection of temporary barriers when working at height or within/adjacent to excavations, and/or to provide a temporary exclusion zone to Others;
- Carrying out surveys and site investigations to confirm the location of all assets, services, utilities, etc. prior to commencing *works* on site;
- Provision of temporary power, general and task lighting;

- Enabling works, including the treatment and Site clearance of invasive species, cable diversions and temporary relocation of assets;
- Temporary works or falsework, including design and supporting calculations;
- All permanent works, as per the *Employer's* Detailed Design;
- Installation and maintenance of temporary accommodation & facilities;
- Maintenance of any compound areas;
- All assurance processes and documentation in accordance with the Technical Assurance Plan to ensure timely completion of the works;
- Planning, managing and coordinating of the above and any other *Site* activity required to complete the *works* in a safe, timely manner, to the acceptance of the *Project Manager* and, reasonably, any other stakeholder with vested interests, and with minimal disruption to the depot operations;
- Removal of temporary hoardings/fences, temporary services, accommodation and compound facilities.

The *Contractor* carries out all construction *works* in accordance with the DLR Standards, British and national Standards and in a way which minimises the impact on the operational railway, highway network, *Site* ecology, and the local environment surrounding the *Site* encompassing local residences, businesses, schools and other project stakeholders.

Specific hazards which are transferred to the *Contractor* can be found within the MFB HAZID Safety Analysis found within the Verification & Validation (V&V) Matrices and Report (Refer to Appendix C6.556).

Unless specified to the contrary, the *Contractor* 'makes good' any asset or area that is affected by the *works*.

The *Contractor* is required to submit a Crane Permit Application as per Appendix E8.32 (LCY COTE London City Airport Crane Permit Application Rev1.0), to London City Airport for any crane to be used on site at Beckton Depot. For any cranes less than 48m AGL (above ground level). A copy of the permit should also be submitted to the *Employer*.

WI 210.5 Utility Diversions

The *Contractor* plans and executes all enabling works and utility diversions of assets identified within the site information required to complete the *works*. This includes liaising with utility providers and gaining approvals for connections.

The *Contractor* notes information regarding utilities services within the boundaries of the *Site* is provided by the *Employer* in the Utilities Diversion Plan (Refer to Appendix F9.1). The *Contractor* shall carry out surveys and site investigations to confirm the location of all utilities and services prior to commencing *works* on site.

Any utility services, cables, etc. that require enabling or relocating to carry out the *works* must be protected by appropriate containment as proposed by the *Contractor* and submitted to the *Project Manager* for acceptance.

WI 210.6 Consent under Section 61 of Control of Pollution Act

It is the responsibility of the *Contractor* to meet the Section 61 requirements as noted within the Planning Conditions (Refer to Appendix B5.3) & Code of Construction

Practice(Refer to Appendix D7.87).

The *Contractor* is responsible for applying and managing the Section 61 process. Please refer to WI1160.13 for further details.

WI 210.7 Car Parking

Car parking is not provided by the *Employer*. The *Contractor* is expected to make their own arrangements which must be in accordance with the Construction Logistics Plan (Refer to Appendix D7.88). A limited number of parking spaces are available within the compound and will be shared with Others; the *Contractor* must ensure safe access/egress of all vehicles.

WI 210.8 Deliveries

The *Contractor* identifies the appropriate access and delivery routes to any site area. All deliveries shall be advised to the Project Manager at least 24hrs in advance, and provide the information included in WI225.6. Where deliveries have to use National Grid (NG) they shall comply with the allowed access times of 07.00 to 19.00. The *Contractor* shall work within the constraints of the Construction Logistics Plan and any applicable Standard, legislation, or protective agreement, ensuring safe access is maintained to the Depot at all times for staff, customers and the emergency services. The *Contractor* is responsible for obtaining all relevant licenses and permits.

The *Contractor* is responsible for obtaining all relevant licenses and permits. The *Contractor* ensures that all deliveries to site comply to the Fleet Operators Recognition Scheme (FORS) – Silver accreditation - as per the Code of Construction Practice (Refer to Appendix D7.87 and WI 1100).

WI 210.9 Hoardings

The *Contractor* is responsible for erecting and maintaining all hoardings necessary to safely carry out the *works*.

The *Contractor* complies with all standards for hoarding approval, storage license approvals and amendments of fire compliance plans where required.

The *Contractor* immediately removes all other notices, advertisements or similar, posted on *Site* by unauthorised persons. Additionally, the *Contractor* shall remove or obscure graffiti or any other form of defacement.

The *Contractor* ensures that any signage, decoration or enhancement of the hoardings, either for aesthetic purposes or for information, is in accordance with the *Employer's* corporate requirements. All Site wooden hoarding shall be painted by the *Contractor* in Corporate TfL blue as per:

Corporate Blue
PMS 072
C100 M88 Y0 K5 R0 G25 B168 NCS S 3560-R80B

The *Employer* has final acceptance of any hoarding design, which may require approval and/or input from National Grid and/or KAD/Depot/Union staff.

The *Contractor* implements measures to mitigate dust migrating into the depot by suitable mitigation measures such as installing dust barriers on the depot boundary fence. Proposed measures require acceptance by the *Project Manager*

WI 210.10 Temporary Works

The *Contractor* is responsible for any temporary works designs required by *works* on Site.

Temporary works are deemed to include the following;

- Scaffoldings and loading platforms
- Crash decking
- Hoarding/Fencing/sheeting
- Needling and propping
- Temporary raised walkways
- Falsework and Formwork
- Earthwork support
- Protection to the existing structure

The *Contractor* shall carry out Temporary Works in accordance with WI 300. Assurance of all temporary works designs shall be in accordance with the Works Information and the Technical Assurance Plan (TAP) (Refer to Appendix C6.577) and shall conform to BS5975 (Temporary Works Procedure).

WI 210.11 Plant and Materials, Equipment and Storage

Storage of materials, plant and equipment must be accommodated within the working areas. The *Contractor* manages these areas and shall relocate them within the boundaries of their worksite as necessary to accommodate the *works*.

The *Contractor* maintains records of all materials, plant and equipment stored on and off the *Site* and submits these to the *Project Manager* every four weeks for information.

An area of land, measuring a minimum of 25m x 100m, will be made available within the Housing Infrastructure Fund land (South of Beckton Depot) for use of the *Contractor* as an urban quarry. The *Contractor* is required to maintain records of all materials stored here via a project led storage license system.

If additional storage is required, the *Contractor* is expected to arrange their own storage facilities.

WI 210.12 Support to the Project Manager

The *Contractor* produces all documentation, presentations, samples or models necessary to support submissions to and by the *Project Manager*, *Employer* and to any external stakeholders, statutory bodies or approval authorities to whom the *Employer* has obligations to consult or seek approval.

WI 210.13 Legislation

The *Employer* is under a duty under section 76a of the Sex Discrimination Act 1975, section 71 of the Race Relations Act 1976 and under section 49a of the Disability Discrimination Act

1995 to have due regard to the need to eliminate unlawful discrimination on the grounds of sex or marital status, race or disability (as the case may be) and to promote equality of opportunity between persons of different racial groups and between disabled people and other people (as the case may be). In providing the works, the *Contractor* shall assist and cooperate with the *Employer* where possible in satisfying this duty.

The *Contractor* acknowledges that where the *Employer* is under a duty by virtue of a direction under Section 155 of the Greater London *Employer* Act 1999 in respect of section 404(2) of that Act to have due regard to the need to:

- Promote equality of opportunity for all persons irrespective of race, sex, disability, age, sexual orientation or religion;
- Eliminate unlawful discrimination; and
- Promote good relations between persons of different racial groups, religious beliefs and sexual orientation,

and in providing the works, the *Contractor* assists and co-operates with the *Employer* where possible to enable the *Employer* to satisfy its duty;

WI 210.14 Confidentiality

The *Contractor* keeps all details and information regarding the contract confidential and shall not, without the prior consent of the *Project Manager*, take or authorise the taking of any photographs of the project for use in any publicity or advertising nor publish alone or in conjunction with any other person any articles, photographs or other illustrations or information relating to the contract or any part of it, whether printed, or on any website or otherwise, nor shall he impart to any publication, journal or newspaper or any radio or television programme any information about the contract.

During the term of this contract and after its expiry or termination for any reason, each of the parties undertakes to the other to keep the Confidential Information confidential, except

- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

WI 210.15 Language

If the *Contractor* or any of their subcontractors employs operatives who do not speak English or who do not fully understand spoken or written English, the *Contractor* provides a supervisor who is fluent in English and fluent in the language of the operative.

WI 215 Access Arrangements

The *Contractor* accesses the railway environment in accordance with the WoRM (Refer to Appendix D7.65-7.82). Site attendance and access is strictly only once the *Employer* is in receipt of all approved requisite licences and documents.

All *Contractor's* staff that need to enter the *Site* must hold a valid Sentinel card which identifies their principal sponsor. Delivery drivers and visitors who do not have a valid Sentinel card must be supervised by the *Contractor* or *Employer* at all times whilst on Site.

The *Contractor* develops a Site-specific Site induction. This must be briefed to all staff and visitors before they are permitted on Site. The *Contractor* is to introduce a system whereby compliance can be checked and audited including individual training certification, hard hat stickers, smart security passes or similar.

As stated above the *Contractor* allows the *Employer* and KAD 'reasonable access' for preventative and reactive maintenance to assets which are not the responsibility of the *Contractor*. This access will be agreed by the *Employer* as reasonable.

In order to mitigate the risk of frustrated access, the *Contractor* is encouraged to determine contingency plans, where possible.

WI 215.1 Access Booking Responsibility

The *Contractor* is responsible for all access bookings in accordance with the

requirements of the WoRM (Refer to Appendix D7.65-7.82).

WI 220 Security and Identification of Workpeople WI 220.1 Security Pass

The *Contractor* is responsible for providing Site inductions and issuing permanent security passes for its personnel and subcontractors, and to the *Employer* and its representatives.

Contractor personnel and all levels of subcontractor personnel are only issued with permanent security identity passes after they have been inducted and passed the appropriate background vetting checks undertaken by the *Contractor*, and forms recording the following information have been completed:

- Name of person;
- Photograph of person;
- Pass number;
- Name and address of employer;
- Job description and position;
- National Insurance Number;
- Areas of permitted access;
- Expiry date of pass;
- Record of Induction.

Vetting checks on applicants from the *Contractor's* and all subcontractor staff and employees and workforce is the responsibility of the *Contractor*.

The *Contractor* retains application and vetting records on Site. Records are made available to the *Project Manager* within 24 hours of being instructed to by the *Project Manager*. If proper records are not made available, the applicant or pass holder will not be permitted further access to the Site.

The format for security passes indicate both visually and electronically the following information:

- Name of pass-holder;
- Pass number;
- Employer;
- Photograph of pass-holder;
- Expiry date

Passes will differentiate between:

- *Employer's* personnel (this includes *Project Manager's* personnel);
- *Contractor's* direct employees;
- Subcontractors;
- Others.

The *Contractor* submits the format for the passes to the *Project Manager* for acceptance.

WI 225 Security and Protection of the Site

The *Contractor* is responsible for all security of the *working areas* and associated

works. The *Contractor* shall supply adequate security for the *Site* 24 hours per day, seven days per week regardless of the level of activity on *Site*.

The *Contractor* provides a manned 24/7 contact number for emergency response.

WI 225.1 General Matters

The *Contractor* provides gates for the passage of people, plant and materials and equipment. These must be kept locked when not in use and all boundary fences must be kept secure to prevent unauthorised access. The specification of the locks used to secure the *Site* shall be agreed in advance of installation with the *Project Manager*. When requested, the *Contractor* shall make keys available to the *Employer*.

The *Contractor* ensures all security operatives are licensed by the Security Industry Authority (SIA). Any security guards required are to be employees of the *Contractor* (or the specialist security Subcontractor if appointed). Casual staff and self-employed personnel are not employed during the *works* as security operatives.

The *Contractor* ensures all prospective security personnel are screened and vetted to check their work history for suitability for the task. Formal applications and written records of the screening are to be maintained by the *Contractor*.

Security measures provided on *Site* by the *Contractor* must not worsen any existing security measures of the rest of the depot, this includes, but is not limited to, providing stepping aids to any fences or similar.

The *Contractor* allows immediate access to the *Site* for KAD in case of an emergency.

WI 225.2 Security Incident

In the event that a security incident occurs, the *Contractor* promptly advises the *Project Manager* and agrees and implements all actions requested or instructed by the *Project Manager*. Where a serious security incident occurs that impacts the operational DLR depot or running lines then the *Contractor* is to promptly advise the DLR Control Centre Duty Manager. They will implement their own emergency procedures as necessary.

The *Contractor* records and logs all steps taken and resources used as a consequence of or arising out of the security incident.

In the event of a security incident, or other emergency, occurring outside normal working hours, it may be necessary for the *Contractor* to immediately recall senior responsible personnel to the *Site*. The *Contractor* identifies senior responsible personnel within the emergency call out procedure and ensures that suitable senior responsible personnel are available at all times.

WI 225.3 Reporting of Crimes or Security Related Incidents

The *Contractor* records and brings to the immediate attention of the *Project Manager* all allegations of crimes and other security related incidents (e.g. trespass). The *Contractor* reports all such incidents following the DLR Incident Reporting Procedures (Refer to Appendix D7.55).

WI 225.4 Signage

The *Contractor* supplies, installs and maintains suitable and sufficient signage relating to the *works*, including access, security and safety requirements, to be agreed with the *Project Manager*.

WI 225.5 Emergencies

In the event of an emergency evacuation of the site or part of the site, the *Contractor*, within one hour, will provide an accurate list of all persons who were on site and forward this list to evacuation points to allow verification that all person(s) have been accounted for.

The *Contractor* establishes written emergency call out procedures with the emergency services and the *Project Manager* within 6 weeks of the starting date. The emergency services are advised of the Site security system, its layout and the emergency access routes.

The *Contractor* prepares, and submits for acceptance, a Site-specific Emergency Preparedness Plan as detailed further in WI270. This plan must comply with WI1160.8 (Emergency Preparedness and Response).

WI 225.6 Delivery or Collection Vehicles

The *Contractor* ensures all delivery and collection vehicles used in support of the *works* comply with the requirements for FORS Silver accreditation. (Refer to Appendix D7.87 COCP).

Written logs of all delivery and collection vehicles entering and leaving the Site are to be kept by the *Contractor* and made available to the *Project Manager* on request.

The delivery and collection logs include:

- Name of haulier;
- Vehicle registration number;
- Detailed inventory of all Plant and Materials and Equipment being collected or delivered;
- Driver's name and signature;
- Contractor's or Subcontractor's order number;
- Instructions for collection or delivery;
- Collection / delivery note number;
- Date, time of entry and departure.

WI 230 Protection of Existing Structures and Services

WI 230.1 Utility Supplies

The *Contractor* is responsible for the protection of existing utilities on or adjacent to the Site in connection with providing the *works*. Should the *Contractor* become aware of any damage to utilities during the *works*, the *Contractor* must notify the *Project Manager* and utility company as soon as practicable.

Should the *Contractor* require existing utilities to be enabled, disabled or relocated then

it is the *Contractor's* responsibility to make the arrangements directly with the utility company. The utilities diversions are administered in accordance with information provided in WI210.5 of this Works Information.

WI 230.2 Damage to Works and Protection to Adjoining Structures

The *Contractor* is responsible for bearing the cost of any making good required following damage caused by the *Contractor* (including any Subcontractors) to the structures, services, or finishes of the *Employer's* or Others' premises or assets.

WI 230.3 Protection of Plant Life

The *Contractor* reports to the *Project Manager* on finding any noxious plants within the boundaries of the site. The *Contractor* prepares a plan for the removal and disposal and removal of these plants within 2 days of their discovery, and submits this to the *Project Manager* for acceptance.

WI 230.4 Protection of Wildlife on Site

The *Contractor* immediately reports to the *Project Manager* on finding any protected wildlife.

WI 235 Protection of the Works

The *Contractor* is responsible for protecting the *works*.

Where applicable, the *Contractor* protects the *works* from inclement weather, pigeons (nesting & guano), public or staff access, accidental damage by third parties or its own operatives, in whichever form is required to ensure the *Works* are made available for Bringing Into Use in "as new" condition, regardless of when the elements of *works* were completed.

WI 240 Traffic Management

WI 240.1 Traffic Management – General

The *Contractor* produces a traffic management plan that sets out the arrangements for managing traffic, and is compliant with the depot project overarching Construction Logistics Plan (Refer to Appendix D7.88). The traffic management plan is submitted for acceptance by the *Project Manager* within 4 weeks of the *starting date*.

The *Contractor* ensures that their vehicles, those of their Subcontractors and their staff and personnel do not obstruct the use by the public or Others of adjacent premises or roads. The *Contractor* ensures that the access to and from the *Site* is clear of all Plant, Materials and Equipment on Completion of the *works*.

The *Contractor* ensures that trafficked areas are clean and fit for public use to the acceptance of the *Project Manager*.

The *Contractor* undertakes the *works* without danger to or interference with the *Employer's* operations and Others using the highway and adjacent properties.

WI 240.2 Damage to Highways

The *Contractor* is responsible for making good any damage to roads and footpaths and services underneath or adjoining, whether public or private, if caused by or attributable in any way to the cartage of equipment or materials by either the *Contractor* or any Subcontractor under the Contract. This includes, but is not limited to, claims from local authorities and/or others for damage to highway road, other route or footway by reason of the *Contractor's* operations.

WI 240.3 Cleanliness of Highways

The *Contractor* is responsible for keeping public and private roads free from mud, dust or rubbish in connection with providing the *works*. The *Contractor* makes provision for ensuring that all vehicles whether their own or those of any Subcontractor supplier or any other person coming to or leaving the *Site* are clean so as to ensure that such vehicles do not cause mud, dirt or other materials to be deposited upon any highway road or other route being used by such vehicles.

WI 245 Surveys

WI 245.1 Condition Surveys

Refer to WI120.2 (Survey Requirements).

WI 245.2 Intrusive Surveys

Intrusive surveys were undertaken as part of the Design Information. The survey reports have been provided by the *Employer* in the Site Information (Appendices). The *Contractor* shall review these reports prior to commencing *works* on site. The *Contractor* shall also carry out their own surveys and site investigations to confirm the location of all assets, services, utilities, etc. prior to commencing *works* on site.

If the *Contractor* determines that further surveys are required, the *Contractor* prepares and submits to the *Project Manager* a detailed report of any existing services, asset location or obstructions identified by subsequent surveys, but not identified in the Site Information and/or Works Information.

Should there be disturbance of an asset, the *Contractor* must leave the asset in a safe and operable condition until such a time as it is affected by the permanent *works*. If the asset disturbed is not affected by the permanent *works*, the *Contractor* makes it good, leaving it safe, operable and with its appearance commensurate with its immediate surroundings. The asset owner, and the *Employer*, must be informed of any disturbance of their asset.

WI 245.3 Asbestos Survey

The *Employer* maintains an asbestos register for the *works* (Refer to Appendix F9.9) which is updated and maintained throughout the *works*. The *Contractor* is required to have a specialist hazardous materials contractor on-call to attend Site should suspected asbestos be identified during the *works*. The *Contractor* is required to follow the relevant legislative procedure should suspected hazardous materials be encountered during the *works*.

WI 245.4 Surveys undertaken

Refer to WI 245.2.

WI 250 Access within the Railway Environment

WI 250.1 Access Booking Responsibility

The *Contractor* is responsible for all access bookings in accordance with the requirements of the WoRM (Refer to Appendix D7.65-7.82); The *Employer* will provide assistance where necessary.

Following *Contract Award* the *Contractor* will be added to the distribution of the monthly TfL Rail Closures Planning Six Month Lookaheads. These advise six month lookaheads on planned track closures and notable events that are likely to affect the rail network. The *Contractor* is to take due cognizance of these planned closures and events when planning their access and possession requirements.

WI 250.2 Possessions

Possessions may be possible but ought to be kept to a minimum. If the *Contractor* determines that they require a Possession justification must be provided. Possession planning and requests must be in accordance with the WoRM and the requirements as set out in the DLR RSRP Possession Planning and Integration document (refer to Appendix D7.124). Document name: 65204MF-DLR-ZZZ-TD350_00-PRO-PS-0001 DLR RSRP Possession planning and integration document final). Cancellation of Closure: In the event the closure is no longer required, the *Contractor* shall complete Part D of the Closure Request Form, advise all concerned, and update the Possession Planning Diary. Cancellation of a Closure requires a minimum of 6 weeks' notice. Any cancellations are the liability of the Contractor.

WI 250.3 Possession Planning Meetings

The *Contractor* is required to attend the weekly possession planning meetings held at Poplar DLR Depot whenever they have active DLR Works Requests submitted or when works within the operational depot are ongoing.

The *Contractor* must have competent representation at all planning meetings relevant to their work items. Representatives should be experienced in attending planning meetings, familiar with the works details and be able to respond to any queries raised in the meetings.

WI 250.4 Programme Critical Possessions

The Contractor is required to submit a possession plan showing activities to be carried out, along with a schedule which shows a full list of required possessions, within 2 weeks of the starting date for the Project Manager's acceptance, and in accordance with 250.2. A Master Document List showing the documents to be produced including but not limited to hand back acceptance, TiC approval et al should be submitted within 4 weeks of Contract Award for the Project Manager's acceptance.

This accepted list will be used during Possession planning meetings where the Contractor provides information and presents on all aspects of their readiness for each possession at Wk 15, 13, 10, 8, 6, 4 and 2 prior to the planned possession.

The Contractor is to ensure possession requests are formally submitted to the Employer and KAD no less than 13 weeks prior to the start of possession. Documentation required for review by KAD is to be submitted to the Employer no less than 8 weeks prior to the start of the possession.

WI 250.5 Safety Critical Staff

The Contractor is responsible for booking all Safety Critical Staff (including the depots franchise Operator, KAD), if required. The Contractor supplies all other rail / safety critical personnel required to carry out the works including but not limited to: -

- Signalling
- Power System [HV]
- Comms
- Track / PWay
- M&E [LV]
- Control room staff
- Security
- FLRT support.

These personnel will be reviewed and agreed with the Employer. In conjunction with the possession application, the Contractor shall book Safety Critical Staff at least 13 weeks in advance of the planned works.

WI250.6 Reporting

The *Contractor's* access reporting shall include meeting attendance and relevant content, prospective possession bookings, status of booking applications, planned *works* and any disruptive or late notice *works* applications with progress. Any issues with frustrated access or reduced access should be included in the report.

The *Contractor* submits a daily log/shift report to the *Employer*, details of which can be found in WI 825.

The *Contractor* submits a periodic progress report, details of which can be found in WI815.1.

WI 250.7 Possession Costs

The *Employer* is responsible for covering any costs or charges arising from any possessions (including, but not limited to KAD staff, consumables, expenses and replacement bus provision) included in the possession plan accepted at contract award included in **appendix D(7.0) 7.130**. The *Contractor* is responsible for these costs and charges for any additional possessions required outside of the accepted possession plan, which have not arisen from the events listed in Clause 60.1 of the Conditions of Contract. The *Contractor* will also be liable for any costs or charges incurred by KAD and the *Employer* as a result of abortive possessions, possessions that overrun or possessions that have been cancelled either by the Contractor or KAD, due to the Contractor's failure to comply with the possession

planning procedures, within 6 weeks of the planned possession agreed with the *Employer*.

An indication of costs typically incurred by KAD and the *Employer* during possessions at Beckton Depot are as follows:

Possession type	KAD incurred Possession Costs (2022 prices)
██████████	█ ██████████
██████ ██████████	█ ██████████
██████ ██████████	█ ██████████
██████ ██████████	█ ██████████
██████ ██████████	█ ██████████
██████ ██████████	█ ██████████

The cost for a replacement bus service for a DLR East Route closure is approximately ██████████ (2022 prices).

WI 250.8 Interference with Railway Plant and Track

The *Contractor's* staff and personnel must not operate or interfere with any railway plant or track in any manner whatsoever except as required by the *works*, and only with approval from the relevant authority.

The *Contractor's* staff and personnel must at no times trespass upon the railway.

During the *works*, the traffic along the railways will be continued and all rules and regulations must be strictly observed by the *Contractor*.

The *Contractor* provides the *works* in such manner as not to interrupt, endanger or interfere in any way with DLR operations. The *Contractor* must strictly observe any rules, regulations or instructions for the working and protection of traffic, as well as protection of cables, signals, permanent way, or other equipment or for the protection of persons employed on or adjacent to the Site.

If the *Contractor* obstructs, interrupts or hinders the *Employer's* railway traffic or the use of the *Employer's* premises without the prior agreement of the *Project Manager* the *Contractor* is responsible for any losses due to such obstruction, interruption or hindrance to the *Employer's* Railway traffic or the use of the *Employer's* premises.

WI 250.9 Interrupted or Delayed Access

The *Contractor* is reminded of the *Employer's* / Other's frequent operational need to run trains, both planned and unplanned, or to undertake maintenance activities.

The *Contractor* shall be familiar with and cognizant of such issues and allows for any planned train movements within the planning and programming of the *works*. The *Contractor* is expected to react, redeploy operatives and re-sequence the *works* to mitigate the effects in such circumstances where interrupted or delayed access may occur. The *Contractor's* programme, where possible, allows for and highlights such contingency work operations that can be carried to in the event that interrupted or delayed access occurs.

WI 255 Consideration of Others

The *Contractor* is to comply with the CoCP and other good industry practice (including national standards) with regard to stakeholder management, in relation to attendance at meetings and informing local residents, businesses and other interested parties on progress and upcoming works.

WI 255.1 Considerate Constructors Scheme

The *Contractor* is a member of the Considerate Constructors Scheme and ensure all operatives and subcontractors operate in compliance with this scheme.

WI 260 Site Cleanliness

WI 260.1 Site Clearance and Cleaning

The *Contractor* ensures that high standards of cleanliness and hygiene are maintained in all areas of the Site in line with good industry practice. If the *Project Manager* notifies the *Contractor* that they have failed to comply with the required levels of cleanliness and hygiene the Contractor resolves the problem within the agreed timescales to the acceptance of the *Project Manager*. Failure to rectify and maintain, may result in the *Project Manager* arranging additional cleaning to be carried out for which the *Contractor* will be liable for the cost thereof.

The *Employer* and its representatives will undertake regular inspections to ensure compliance of the above.

On Completion of the works the *Contractor* clears the working areas made available to them of all surplus materials, stores, equipment, spoil, and rubbish and reinstates the areas to their condition existing prior to the Contractor's occupation of those areas.

WI 265 Waste Materials

Details on waste management and the Construction Phase Resource and Waste Management Plan can be found in WI 1160.

WI 270 Emergency Preparedness Plan

Prior to commencing construction works on the Site, the *Contractor* is responsible for preparing and submitting an Emergency Preparedness Plan (EPP) to the *Project Manager* for acceptance. This EPP will reference the Contractor's Construction Phase Plan and includes:

- A brief description of the *works*
- A brief plan of the areas affected
- An assessment of the main risks posed by the construction *works* on the operation of the depot and safety of staff
- The key mitigations to address the above
- The means of communicating between *Contractor* and operator, in case of an emergency, including a list of contact details for the *Contractor's* site and office management.

WI 275 Programme Constraints

The *Contractor* ensures that any constraints on the *works* are adequately accounted for within their programme, including but not limited to;

- Third party commitments which may result in reduced working hours;
- 3rd party lead times;
- Materials to be Free Issued by the *Employer* (as defined in WI 1010.2;
- Depot access, if required, may be affected by KAD requirements;
- Documentation review periods and CAP approval.



WORKS INFORMATION

WI 300

THE *CONTRACTOR'S* DESIGN

CONTENTS

WI 305	Design Responsibility
WI 310	Design Submission Procedures
WI 315	Design Approvals from Others
WI 320	Contractor's Design Change Proposals

WI 305 Design Responsibility

WI 305.1 General

The *Contractor*, as Principal Contractor, must liaise with the Principal Designer from the *starting date* until the Defects Certificate has been issued and share relevant information with the Principal Designer in accordance with the CDM Regulations 2015.

Existing Design Information for the *works* is provided by the *Employer*. Refer to Appendix C for the Design Information.

Design Information at this stage are at "Issued for Construction (C01)". Drawings that are Approved For Construction (AFC) will be issued following the *starting date*.

High-level summary of design responsibilities are tabulated as below:

Design type	Responsible Party / Hybrid approach	Relevant contract section/s
RFI	Employer's Designers	WI305.2 Design Checks, Technical Queries, RFIs and Approvals
Defects (from design)	Employer's Designers	WI305.2 Design Checks, Technical Queries, RFIs and Approvals
Value engineering (on site)	The <i>Contractor</i>	WI830 Contractor's Proposal to change the Works Information
Value engineering (OCI)	The <i>Contractor</i> (Upon review of the change, The Employer may wish to use the Employer's designer)	WI830 Contractor's Proposal to change the Works Information
Minor Design changes (e.g. small design gap, field change that doesn't require full assurance process)	The <i>Contractor</i> (Upon review of the change, The Employer may wish to assign responsibility to the Employer's designer)	WI305.2 Design Checks, Technical Queries, RFIs and Approvals
Major Design changes (e.g. requirements change/scope gap initiated by client).	The Employer's designer (Upon review of the change, The Employer may wish to assign responsibility to the Contractor).	WI305.2 Design Checks, Technical Queries, RFIs and Approvals
Temporary works	The <i>Contractor</i>	WI210.10 Temporary works
All staging designs	The <i>Contractor</i>	WI120.15 Migration; WI125 Contractor's Design Responsibilities
Fabrication drawings	The <i>Contractor</i>	WI120.3 Civils
Plant and Equipment	The <i>Contractor</i>	WI120.12 Plant and Equipment
As built drawings	The <i>Contractor</i>	WI640.2 Red Line Drawings

It shall be noted, the responsible design party (*Employer* or *Contractor*) will also be responsible for the clash checking and integration of their respective design(s)

WI 305.2 Design Checks, Technical Queries, RFIs and Approvals

The *Contractor* submits designs, designers risk assessments, relevant calculations and design check certificates for all design works undertaken by the *Contractor* to the *Project Manager* for acceptance. The *Employer* responds within the *period for reply*. Design Certificate and Check Certificate shall be signed by a Chartered Engineer from the pertaining discipline

The *Contractor* ensures all temporary works designs comply with the *Employer's* assurance process as the Technical Assurance Plan (Refer to Appendix C6.577). The *Contractor* must maintain a temporary works register and submit to *Project Manager* following the *starting date* identifying all known temporary works requirements. Updates to be submitted to *Project Manager* as an ongoing concern throughout the project lifecycle where by all the relevant stakeholders such as TfL reviewers, approvers and Principle Designer are kept aware of the temporary works that are in pipeline in advance.

All bespoke Temporary Works (TW) design require a Temporary Works Conceptual Design Statement (CDS) to confirm the technical basis for design, to be submitted by the *Contractor* for acceptance by the Project Manager. Unless agreed otherwise with the Project Manager in writing that a CDS is not required.

The CDS is normally prepared by *Contractor's* Temporary Works Designer (TWD).

Examples where a CDS may not be required is when the temporary works are characterised as low risk in terms of:

- Impact on TfL or Third Party infrastructure or on any person other than those under the direct control of the Principal Contractor e.g. construction of a retained excavation with no adjacent asset
- Consequence of failure (should it occur)
- Design complexity
- Execution criticality

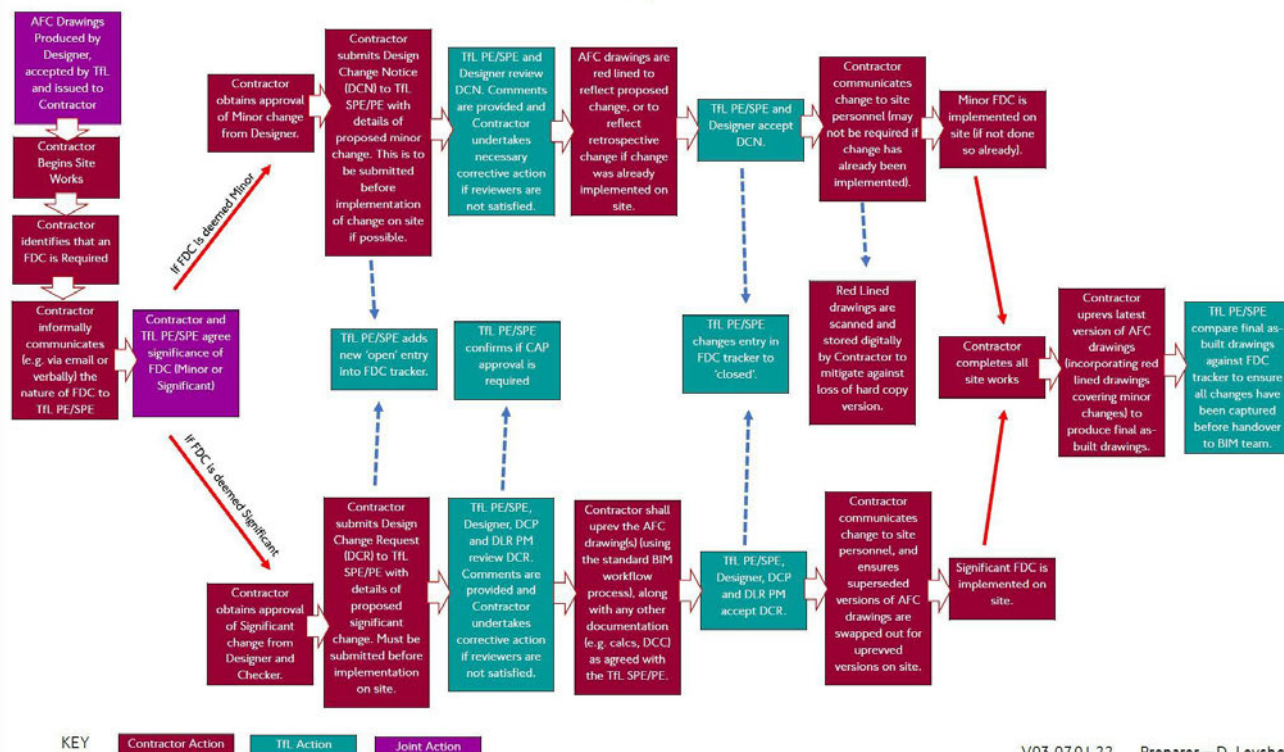
Conversely an example where a CDS will always be required is when temporary works are required for ground support in proximity to the operational railway. LU standard S1062 shall be refer to for further details.

The *Contractor* submits any technical queries and requests for information (RFIs) via the *Employer's* Contract Administration System. The *Employer* responds within the *period for reply*.

The *Contractor* shall follow the Field Design change process if and when necessary,

Field Design Change (FDC) Control - Process Flowchart

The process flowchart below describes the procedure to manage Field Design Change (FDC) control during the construction/delivery phase of the project.



V03 07.01.22 Preparer – D. Leyshor

WI 310 Design Submission Procedures

The *Contractor* prepares and submits “red line” drawings, and any design input to the Health and Safety File to the *Project Manager* for acceptance.

The *Contractor* ensures all design works comply with the *Employer's* assurance process as described further in WI 600 and the Technical Assurance Plan (Refer to Appendix C 6.577).

The following generic process shall be implemented for the *Contractor* submissions for Contractor's Design elements including all AoD / AoA deliverables:

- *Contractor* formally issues submission to the *Employer** (estimated duration = 1 working day).
- The *Employer* collates comments from all necessary reviewers and submits comments back to the *Contractor* (estimated duration = 10 working days)
- The *Contractor* responds to comments received and revises submission to address comments as required (estimated duration = 10 working days).
- Once comments have been sufficiently addressed (note that this may require more than one iteration of the steps above) and there are No Bars to Acceptance (NBTA) from DLR & KAD on the submission, the completed submission will be reviewed by the Designated Competent Persons (DCPs) (estimated duration = 10 working days). If

the completed submission is accepted by the DCPs, the Lead Designated Competent Persons (LDCP) will make a recommendation to CAP for approval with or without conditions and a CAP meeting will be arranged (estimated duration = 1 working day).

- The DCP and the *Employer* prepare the CAP presentation (estimated duration = 5 working days).
- The completed submission will be prepared between the *Employer* and the DCP and then be presented to the CAP by the DCP (with support from the *Employer* and the *Contractor* as required) (estimated duration = 1 working day)
- If the completed submission is not accepted by the DCPs or CAP then feedback will be provided (estimated duration = 5 working days).

*Note that the informal issue of a submission may be acceptable upon agreement between the *Employer* and the *Contractor* on a case-by-case basis, in order to speed up proceedings. All informal submissions are to be followed up by a formal submission in a timely manner.

The estimated durations detailed above are only estimates and will be subject to change based on the complexity of the CAP submission, the quality of the submission etc.

WI 310.1 Submission of the *Contractor's* Design

Refer to WI 125 for permanent designs that the *Contractor* is required to provide.

The *Contractor* submits designs to the *Project Manager* for acceptance.

The standard TfL/DLR approval period for documentation approval (including approval of *Contractor's* design submissions) is as per the *period for reply*, . This *period for reply* is applicable to the first review of the initial submission, and then a further *period for reply* would apply for each subsequent review of updated submissions (i.e. 4 weeks for the first review, another 4 weeks for the second review etc.).

The review period and number of reviews required on a submission is generally dependent on the quality and comprehensiveness of the initial submission, and the *Contractor's* ability to address the reviewer comments adequately once received. It is generally expected that most submissions will undergo at least 2 no. reviews as a minimum before all reviewer comments are adequately closed out.

The *period for reply* is also applicable to temporary works review across all packages

WI 310.2 Construction Information / Fabrication Drawings

The Detailed Design for the *works* is provided by the *Employer* as per WI 100.

Any further fabrication details for specialist items of *works* are developed by the *Contractor* or specialist supplier. The fabrication drawings are submitted by the *Contractor* to the *Project Manager* for acceptance.

WI 310.3 *Project Manager's* Acceptance

The *Contractor* must gain acceptance to amend the *Employer's* Detailed Design from the *Project Manager* before any related *works* commence.

WI 315 Design approvals from Others

Refer to the Technical Assurance Plan (TAP) - Document ref 65204MF-DLR-MAC-TD350-PLN-ZZ- 00001.

WI 320 *Contractor's* design change proposals

Acceptance of the design change must be gained in writing and through the formal change procedure before proceeding.

WI 320.2 Configuration Management

The objective of Configuration Management is to establish and manage the configuration of technical data / documents / media / files across this scope of works.

Configuration Management is applicable for the duration of this scope of works. The process and purpose for controlling and managing configuration will be:

- Ensure provision of accurate configuration information to assist decision making, e.g. the authorisation of changes, the planning of stage, and to help resolve incidents and problems faster.
- Minimise the number of quality and compliance issues caused by incorrect or inaccurate configuration of information, processes and assets.
- To define and control the components of the system.
- Provide information on the historical, planned and current state of the services and infrastructure.
- Establish and maintain a list of the types of products under configuration management.
- Establish and record the owner responsible for each product's configuration management.
- Establish the person responsible for approving updates to each product.
- Establish the version control arrangement for each product.
- Establish and record any configuration management tools used.

The *Contractor* shall have a Configuration Management System in place (part numbers, mod status etc.) and a Configuration Management Plan shall be submitted to the *Employer* as per the MDL.

WI 320.3 Non-Conformance with Design

Any deviation from the approved Detailed Design that is subsequently implemented by the *Contractor* may be considered a Non-Conformance by the *Employer*. The *Contractor* should bring to the *Employer's* attention, any non-conformances with the detailed design using the Non-Conformance Report (NCR) template (F5905) located in Appendix E8.34.

The *Employer* also reserves the right to submit a Non-Conformance Report (NCR) to the

Contractor if the *Employer* determines an installation has been installed by the *Contractor* that deviates from the approved detailed design. The *Employer* will use the same template in this instance.

In both cases, the NCR will remain open until an adequate solution has been agreed between the *Employer* and *Contractor* and this solution has been implemented on site.

WI 320.4 Records

The *Contractor* maintains a log of all proposed design changes sufficient to track the relevant correspondence, design particulars, and cost and programme impacts of each design change.

WI 320.5 Value Engineering

If the *Contractor* identifies opportunities for Value Engineering proposals, the *Contractor* shall notify the *Project Manager* and undertake to chair and manage a Value Engineering meeting.

The meeting is to be attended by key personnel as agreed by the *Project Manager*, including the designated Principal Designer who will be available during the Construction phase to review the proposals and the beneficial output.

The *Contractor* shall be responsible for any design works arising out of value engineering activities including items from Optimised Contractor Involvement (OCI).



WORKS INFORMATION

WI 400

COMPLETION

CONTENTS

WI 405	Completion Definition
WI 410	Training
WI 415	Final Clean
WI 420	Security on Completion
WI 425	Pre-Completion Arrangements
WI 430	Contractor's Maintenance Obligations
WI 435	Bringing Into Operational Use / Handover
WI 440	Spares
WI 445	Meetings after Completion
WI 450	Migration and Ops Readiness Flowchart

WI 405 Completion Definition

WI 405.1 Works to be done by the Completion Date

Without limitation to the provisions in the *Conditions of Contract*, the *Project Manager* does not certify Completion unless the below activities have been satisfactorily carried out. The *Contractor* shall ensure the following:

- Completion of all *works* in accordance with the Works Information except for any specific items that can remain outstanding or incomplete after completion as agreed in writing with the *Project Manager*.
- The *works* have been assured in accordance with the requirements of the Technical Assurance Plan (TAP). This will be confirmed by:
 - The *Project Manager's* acceptance of documents as listed in the MDL;
 - CAP approval of AoD for any designs by the *Contractor*;
 - CAP approval of AoA and CoC for all stages wherein existing assets are modified or new assets are installed & brought into use during the stage works and at completion;
 - Handover – Hand back documentation for all stages of works, wherein existing assets are modified or new assets are installed & brought into use during the stage works and at completion;
 - Updated Verification and Validation Report for all stages of works;
 - Updated Health & Safety File;
 - The *Project Manager* has confirmed in writing to the *Contractor* that CAP approval has been achieved and all relevant conditions closed.
- Delivered all information which accurately reflects the as-built *works*. All the information is required to be accepted by the *Employer* prior to Completion.
- Dismantled any temporary security hoardings/fencing to all *works* and removed these from Site.
- The Site is clear of all unused Materials, Plant and equipment and other items to ensure free and unobstructed access by the *Employer* and Others.
- Removed all temporary *works* put in place by the *Contractor* to facilitate the Contractor's delivery of the Works.
- Handed over the Principal Contractor duties if applicable.
- The *Employer* has accepted the updated Asset Data Information (Refer to Appendix D7.101 maximo asset capture sheet) submitted by the *Contractor*.
- All redundant assets have been decommissioned and removed off Site.
- All DLR assurance processes have been completed/achieved for their respective assets in line with the WoRM.
- All records, including documentation for asset data information, documents and drawings have been issued in line with the BIM Execution Plan, to, and accepted by,

the *Project Manager* and transferred to the relevant infrastructure maintainer, and Others as appropriate.

- Operations and maintenance data has been provided by the *Contractor* in accordance with the Works Information and the TAP and accepted by the *Project Manager*. The *Contractor* shall update the design stage asset list for each engineering discipline with assets actually installed. The As-built asset list shall be provided to DLR / KAD 4 weeks prior to assets being commissioned into operational use.
- All testing, inspections and commissioning has been certified in accordance with WI700 and accepted as complete by the *Project Manager*.
- All maintenance spares and tools have been provided to the *Employer*.
- All necessary training of the *Employer's* staff and Others for those assets and systems installed as part of the *works* has been provided.
- The *Project Manager* has been provided with accepted copies of the approved operation and maintenance manuals, completed Inspection & Test Plans, commissioning documents, FAT and SAT Test results, as-built asset registers and as-built drawings including fabrication drawings produced by the *Contractor*.
- Health and Safety File (refer to Appendix C6.660) is updated to incorporate relevant new information for acceptance by the *Employer* in line with DLR Standards.
- A final clean of the *working areas* has been undertaken.
- Provision of care, protection and maintenance (as required) of all completed *works* until handover.
- All notified Defects have been completed by the *Contractor*.
- All applicable comments from the AoD CAP have been addressed.
- The *Project Manager* has confirmed that the AoD CAP has been passed.
- The final As Built drawings have been submitted by the *Contractor*.

The *Contractor* submits a Handover Plan (signed by the *Contractor* and the relevant Others) to the *Project Manager* for acceptance at least 12 weeks in advance of the Completion Date.

The *Contractor* is compliant with the *Employer's* Handover / Handback Plan (Refer to Appendix D7.125) the *Contractor's* Handover Plan.

WI 405.2 Completion Inspections

The *Contractor*, the *Employer* and Others affected by Completion, carry out joint inspections of the *works*. The *Contractor* makes provision for time to correct Defects and any necessary re-inspection following correction. The *Contractor* also allows time for updating and

modifying any Completion documentation that may be required.

The *Contractor* provides the *Project Manager* with:

- Details of inspection plans including a 2 week rolling look ahead to be carried out, required attendees including the *Employer's* representatives, subcontractors or Others including the format for output of successful inspection/identification of Defects;
- Details of certificates, warranties and the like and evidence that all applicable statutory or regulatory approvals have been obtained;
- Details of tests to be completed including certification requirements/test results for work covered up and provision of copies as evidence – visibility alone is not acceptable;
- Details and programme for all off site tests, Factory Acceptance Tests (FATs), in sufficient time to enable the *Project Manager* to attend such tests with reasonable notice;
- Details of site cleanliness inspections, dust mitigation measures, removal of all temporary works, Plant and Equipment and making good for both permanent and temporary works;
- Details of identified Defects, time provision for correction of Defects, delivery of parts, materials and Equipment and updating Completion documentation as required;
- A Defect correction programme for acceptance by the *Project Manager*.

WI 405.3 Sectional Completion

The *Contractor* complies with the requirements of WI405 for each Sectional Completion.

WI 410 Training

Prior to Completion, the *Contractor* provides any necessary training to the *Employer's* staff to explain the purpose and function of the *works*.

The *Contractor* shall provide agreed days (number and dates to be agreed with *Project Manager*) prior to the *Works* being Brought into Use, to instruct operational staff and maintenance staff nominated by the *Employer*, in the day to day running of the new or altered assets.

The *Contractor* produces a Training Plan outlining all training activities and submits the Plan for acceptance by the *Project Manager* 12 months prior to commencement of training.

For maintenance related training, the Training Plan is to include all aspects, such as trouble shooting and preventative maintenance techniques. Training activities shall include familiarisation with all relevant pieces of Plant, systems and any special tools and equipment. The training is envisaged to comprise on-site training and classroom activities.

The *Contractor* provides training which includes the following as a minimum: -

- Operation of the overall system in accordance with the relevant sections of the O&M manuals prepared by the *Contractor*, and the *Employer's* drawings and specifications.
- Training to disseminate a thorough understanding of the purpose and intent of all Plant and systems for the purposes of safe operation, fault finding, maintenance, repair and overhaul.

The *Contractor* ensures that only competent trainers deliver sessions.

Supporting Training Manuals shall include the documents to develop and achieve the staff maintenance skill and competency required for maintenance of the facilities installed by the *Contractor* in performing the *works*.

WI 415 Final Clean

Prior to Completion the *Contractor* ensures that the Site is clear of all Equipment and unused Plant and Materials and other items to permit free and unobstructed access by the *Employer* and Others and that a “builders final clean” has been undertaken.

WI 420 Security on Completion

The *Contractor* submits an updated Handover Plan at least 12 weeks in advance of the Completion Date for the *Project Manager's* acceptance, detailing how the *Contractor* proposes to transfer the possession of the Site or part(s) thereof to the *Employer*.

The Handover Plan is to comply with the Asset Handover and Hand back procedure SOP PC3.12 found in the WoRM (refer to Appendix D7.73 – WoRM) as well as the *Employer/Maintainer's* Handover/Hand back Plan – Maintenance Facility Building (refer to Appendix D7.125).

Prior to submitting the Handover Plan to the *Project Manager* for acceptance, the *Contractor* shall:

- Carry out a joint inspection (including a photographic survey) of the relevant area in conjunction with the *Project Manager* or their representative and the Others to whom the area is to be transferred. The joint inspection and survey report are to be included in the Handover Plan.
- Consult with all relevant Others and with the *Project Manager* and takes account of their comments; and
- Obtain the agreement of the *Project Manager* and/or Others to whom the relevant area will be transferred. The relevant Others sign the agreed plan. In the event of any disagreement, the *Project Manager* instructs the *Contractor* and Others accordingly.

There is no Completion of the *works* or part(s) thereof until the *Project Manager* has accepted, amongst other documents, the Handover Plan and the hand back process has been successfully completed for the associated *Works*.

When accepted, the *Project Manager* arranges for the Handover Plan to be provided to Others if applicable.

The *Contractor* manages and implements the Handover Plan in conjunction with the *Project Manager* and Others.

WI 425 Pre-Completion arrangements

The *Employer* requires the *Contractor* to hold a pre-completion meeting with the *Project Manager* to review the *Contractor's* progress and planning 4 weeks prior to planned final Completion as shown on the Accepted Programme.

WI 430 Contractor's Maintenance Obligations

WI 430.1 Operational & Maintenance Manual and Health and Safety File

Not less than 4 weeks prior to the completion date, the *Contractor* submits to the *Project Manager* for acceptance, the O&M manual and updated health and safety file, including a plan for preventive maintenance.

The *Project Manager* either accepts the O&M manual / health and safety file or notifies his non-acceptance, giving reasons, within 4 weeks of receiving from the *Contractor*.

The *works* are not accepted as complete until, amongst other documents, the O&M manuals and health and safety file are accepted by the *Project Manager*.

WI 430.2 Planned and Reactive Maintenance

The responsibility for maintenance of assets is in accordance with the *conditions of contract* and includes:

- The maintenance of new temporary assets constructed or installed to enable the ongoing operability of the *Employer's* asset but not forming part of the permanent *works* remains the *Contractor's* responsibility.
- The responsibility for maintenance of existing assets is retained by the *Employer* or the relevant infrastructure maintainer, except where access to such assets is prevented by the *Contractor*, or the assets have been modified such that a material change to the existing maintenance regime is required. In this case the *Contractor* becomes responsible for the maintenance of the affected assets until Handover with the *Employer*.
- The maintenance of existing assets that are unchanged by the *Contractor* remains the responsibility of the *Employer*.

WI 430.3 Maintenance of completed works

The *Contractor* is responsible for maintenance of all items which have been installed in the *Works* and have not achieved Handover with the *Employer*.

The *Contractor* shall submit an Interim Maintenance Readiness Plan for acceptance by the *Project Manager* 8 weeks prior to an Operational Stage taking place. The Interim Maintenance Readiness Plan shall provide the clarity as to how the new assets installed in operational areas of the depot, shall be attended in case of fault during operational hours.

WI 430.4 Maintenance records

The *Contractor* submits to the *Project Manager* for acceptance, no less than 4 weeks prior

to the completion date, records detailing any planned or reactive maintenance completed by the *Contractor*. The format of these records shall be agreed beforehand with the *Project Manager* and the *Employer's* maintenance representatives.

WI 435 Bringing Into Operational Use/Handover

For any assets to be Brought into Use before Handover, the *Contractor* shall follow DLR's Business Critical Process (BCP- 3, 12, 14 and 18) for assuring the operational capability of new or altered DLR Assets. The *Contractor* shall also follow the requirements stated in Technical Assurance Plan (Refer to Appendix C6.577) which provides details of documents to be submitted by the *Contractor* to achieve AoA approval by the Change Assurance Panel.

The *Contractor* shall be responsible for carrying out system integration testing prior to Completion of the *works*, as required by the Works Information and the TAP. The *Contractor* is responsible for leading, identifying and carrying out any integration tests required to Bring the works Into Use, and for including durations for this testing in the programme. The *Project Manager* will support the *Contractor* in integration testing and arrange for trains to be available for the testing. Bringing Into Use and Handover cannot be achieved until, amongst other requirements, the systems integration testing has taken place to the satisfaction of the *Employer*.

The *Contractor* shall produce the Test Reports and shall submit them for acceptance by the *Project Manager*. Acceptance will be subject to review of the Test Reports by DLR / KAD and resolution of any comments / issues raised. The *Contractor* shall attend meetings and provide information as required by the *Employer* to facilitate this.

A Migration Plan is provided by the *Employer* (Refer to Appendix C6.659). The *Contractor* is to submit a detailed staged commissioning plan in consultation with stakeholders and submit to the *Project Manager* for acceptance within 4 weeks of the *starting date*.

The *Contractor* complies and follows the procedure noted in the WoRM (Refer to Appendix D7.65-7.82) and the *Employer's* Handover/Handback Plan – Maintenance Facility Building (Refer to Appendix D7.125) and the *Contractor's* Handover Plan.

WI 440 Spares

Unless otherwise stated and/or agreed with the *Project Manager*, the *Contractor* shall be responsible for procuring all spares. The *Contractor* shall be responsible for providing all the documentation, any special to type tools, test equipment and materials including software needed to conduct maintenance including diagnostics of the system. The *Project Manager* will advise the location for the delivery of the spares required within 8 weeks of the spares requirements being confirmed, or within 8 weeks of the *Contractor* notifying the *Project Manager* of the spares included in the design.

The *Contractor* submits to the *Project Manager* for acceptance a recommended list of spares, specials tools and consumables required for the operation and maintenance of the MFB, SS and TFOS following handover of the *works*. The compiled list is submitted in the form of a Bill of Materials which includes the description, part numbers, manufacturer, unit price and recommended quantity of the spares, special tools and consumables. Prior to submission, the format of the bill of materials is agreed with the *Project Manager*. The *Project Manager* may instruct the *Contractor* via Project Manager's Instruction which spares, specials tools and consumables from the bill of materials the *Contractor* is to procure and supply to the

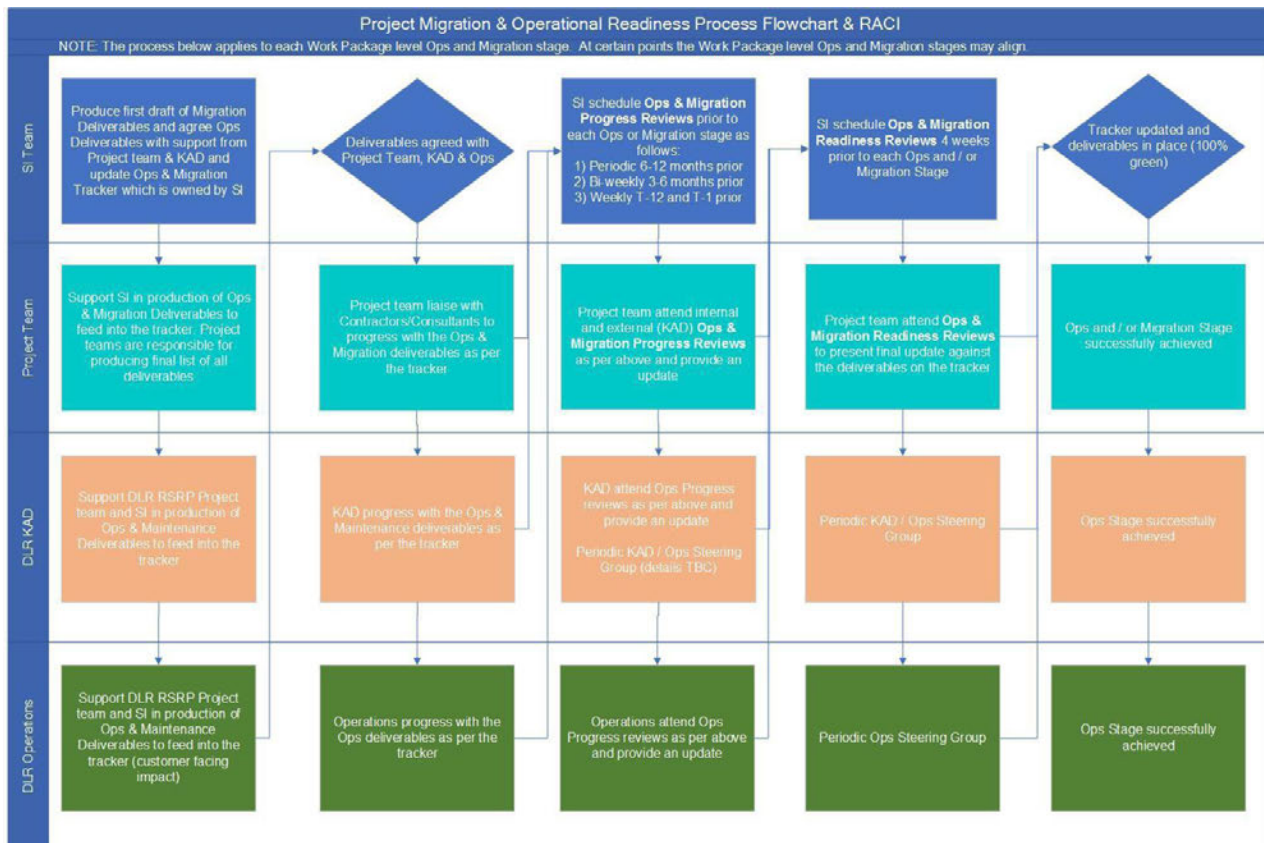
Employer. The aforementioned bill of materials is required to be submitted and agreed prior to submission of the Contractor's handover plan(s), and as soon as reasonably possible.

In addition, there may be the opportunity of utilizing spare parts/equipment/tools from TFOS when works transition to the new MFB after becoming operational. The *Contractor* shall notify the *Project Manager* of any opportunity to use spare parts from the TFOS.

WI 445 Meetings after Completion

The *Contractor* shall attend a Lessons Learned Workshop, in order to review the performance of the *works*.

WI 450 Migration and Ops Readiness Flowchart





WORKS INFORMATION

WI 500

PROGRAMME REQUIREMENTS

CONTENTS

WI 505	Programme Requirements
WI 510	Programme Arrangement
WI 515	Methodology Statement
WI 520	Work of the Employer and Others
WI 525	Revising Programmes
WI 530	Inspection, Test and Sample Schedule
WI 535	Earned Value Management
WI 540	Quantified Schedule Risk Assessment

WI 505 Programme Requirements

The *Contractor* submits within four weeks of the *starting date*, to the *Project Manager* for acceptance, detailed procedures for the establishment and revision of programmes including the responsibilities for and methods to be used to measure the actual progress achieved.

The *Contractor* submits programmes using Primavera Enterprise Version 8.2 or later. Primavera Project Planner settings are as advised by the *Project Manager*.

All programme submissions are clearly titled, numbered and dated.

All programmes submitted include the information listed in clauses 31.2, and 32.1 of the *conditions of contract* together with the following information:

- The dates the *Contractor* plans to submit survey information;
- The dates the *Contractor* plans to submit particulars of the design of any items of Equipment required by the Works Information.
- The dates on the *Contractor's* Subcontract procurement when key items of Plant and Materials and Equipment are required.
- All major milestones to Completion of the *works*.
- The agreed dates when documents are submitted, for acceptance by the *Project Manager*, in respect of design or third-party consents.
- The agreed dates when, in order to Provide the *works* in accordance with the programme, the *Contractor* requires design information or other information to be provided by the *Employer* or Others.
- The dates of commencement of all permanent and temporary construction and installation operations.
- The dates of factory and Site inspections and tests.
- All quality hold points and quality control points.
- The dates of all necessary approvals and consents from DLR or others including but not limited to DCP & CAP submissions.

In preparing the programme for acceptance the *Contractor* complies with the following: -

- The costs and resources are aligned and loaded by the *Contractor* onto a quantity of operations as to allow a detailed planned value baseline curve to be created by the *Contractor* for the purpose of earned value analysis as described in WI535.
- The programme has at least one critical path of 0 total float to the planned Completion and Sectional Completion Date, comprised of operations with individual durations of less than 28 calendar days each. No activity shall exceed 2 week duration without prior acceptance by the *Project Manager*. This critical path should be free of constraints, lags/leads, and SS/FF/SF links.
- The *Contractor's* schedule should not contain excessive and unwarranted use of

constraints which may compromise the integrity of the critical path. This will be considered non-compliance of the Works Information.

- Interfaces with other works controlled by the *Employer* are represented as a milestone to allow co-ordination and integration with the *works*.
- Includes the terminal float for the *works* (or for Key Dates or individual sections where Sectional Completion applies) as a separate operation.
- Includes *Contractor's* time risk allowances which must clearly be identified on relevant operations.
- Monitors progress at the lowest operation level agreed by the *Project Manager* to enable a suitable look-ahead to be generated and identifies the required corrective actions to avoid and mitigate any delay to the *completion date*.
- If the number of any operations of a repetitive or multiple nature is such that there is a risk of causing confusion by including them in the programme, the *Contractor* may present details of such operations in a tabular format subject to having obtained the prior consent of the *Project Manager*. The format provides cross- references to the programme by way of operation identification numbers to enable reconciliation with the remainder of the programme. When the relevant programme has been accepted, such details become part of the Accepted Programme.
- All implemented compensation events are to be clearly identified as separate operations and/or sub-operations and referenced in the operation ID in the format 'INCXXX' and operation name.
- All requirements identified as *Employer* or *Project Manager's* requirements are to be clearly identified in the operation ID in the format 'TFLXXX' and operation name.
- Includes, without limitation detailed supplier programmes which represent the *works*.
- The programme allows sufficient time in accordance with the Works Information for the review, revision and further review of all drawings, documents and other things to be submitted to the *Project Manager* so that such activities may be completed without delaying the execution of the *works*.

The *Contractor* takes account of the *Project Manager's* comments and submits a first programme to the *Project Manager* for acceptance within the period stated in the Contract Data Part 1 and in accordance with the Reporting Cycle (Refer to Appendix E8.30) unless otherwise instructed by the *Project Manager*. This programme is to be referred to as the first programme issued for acceptance and its data date will be the *starting date*. No progress shall be shown on this programme.

The programme shall be updated for progress on a weekly basis by the *Contractor*. The data date for updating purposes will be in line with the Reporting Cycle (Refer to Appendix E8.30).

All programme operations shall be logically linked in order to maintain the integrity of the critical path and float calculations. The programme start operation does not require a predecessor and the final operation does not require a successor.

The *Contractor* aggregates the time risk allowance identified within the programme prior to Key Dates and/or Sectional Completion.

The *Contractor* represents the work breakdown structure within the programme using the work breakdown structure development tool contained within Primavera enterprise version P6 8.2 or later.

The *Contractor* maintains the work breakdown structure throughout the duration of the works. The level of detail within the work breakdown structure together with the overall structure is submitted by the *Contractor* to the *Project Manager* for acceptance prior to the submission of the first programme.

The *Contractor* supplies a reference document which defines the scope of work represented by each element within the work breakdown structure (to the lowest level within the work breakdown structure). The work breakdown structure shall separate the Maintenance Facility Building, the Southern Sidings and the Temporary Fit Out Shed projects. All projects shall be in the P6 programme.

Each operation within the programme is coded to the project operation code list.

Operation IDs should always be unique; once set they should not be deleted or changed. The operation name must also remain the same. Any operations that need to be deleted and/or are no longer relevant to the programme, should be moved to a “retired” section within the P6 programme, with logic and coding removed.

The *Contractor* submits a programme in the following format:

- The full programme in logical linked Gantt chart form clearly showing the critical path(s), all operations, early start dates, late start dates and total float, in .pdf electronic file format; and
- The full programme Primavera xer file, and plf (Primavera layout) files by electronic data transfer. The export format of the xer file is to be advised by the *Project Manager* to ensure compatibility with the current version of the *Employer's* Primavera enterprise system. The change log is submitted with the data files and any changes to calendars particularly noted (refer to WI 525).

WI510 Programme Arrangement

In addition to the requirements of the *conditions of contract*, the *Contractor* shall maintain a hierarchy of programmes that support each other whilst keeping detail at the appropriate level within the hierarchy. The programme hierarchy is identified below, including performance graphs, derived from the programme as described below:

Programme Level	Description	Comments
Level 1	The <i>Contractor's</i> Summary Programme.	1-2 A3 page summary of the Accepted Programme showing key elements of the <i>works</i> and <i>works</i> phases to Completion of the <i>works</i> .
Level 2	The <i>Contractor's</i> Summary Design, Procurement, Fabrication, Construction and Commissioning Programme	Fully logic-linked Critical Path Method (CPM) network summary of the Level 3 Accepted Programme. The specific format and level of detail are to be agreed with the <i>Project Manager</i> . The programme is developed and maintained within Primavera Enterprise P6 8.2 or later.
Level 3	The <i>Contractor's</i> Accepted Programme	Cost and resource loaded logic linked CPM network, which the <i>Contractor</i> uses to plan the <i>works</i> report progress for earned value management (refer to section WI535) together with all requirements within Clauses 31.2, and 32.1 of the <i>conditions of contract</i> . The programme is developed and maintained within Primavera Enterprise P6 8.2 or later
Level 3	The <i>Contractor's</i> Design Programme	Fully logic linked CPM network, containing all design deliverables, and all design operations. The <i>Contractor's</i> design programme is a sub-network of the <i>Contractor's</i> Accepted Programme.
Level 3	The <i>Contractor's</i> Procurement Programme	The <i>Contractor's</i> procurement programme to include: <ul style="list-style-type: none"> • Sub-contract package listing. • Dates for procurement of subcontract <i>works</i> including tender period, scope and subcontract terms. • Start on Site dates for identified subcontract packages; and • Duration of subcontract <i>works</i>.
Level 3	<i>Contractor's</i> Commissioning and Start up Programme	Fully logic-linked CPM network for use in co-ordinating all operations involved in commissioning. The programme is developed and maintained within Primavera Enterprise P6 8.2 or later.
Level 4	The <i>Contractor's</i> Weekly Work Plan	See WI 510.2
	<i>Contractor's</i> Programme	A suite of graphs derived from the <i>Contractor's</i> performance measurement schedule, and latest

Level 4	Performance Graphs	Accepted Programme (or most recently submitted programme for review by the <i>Project Manager</i>).
Level 4 / Level 5	<i>Contractor's Possession Programmes</i>	See WI 510.1

All programmes created by the *Contractor* in relation to any of the *works* are to be made available to the *Project Manager* if requested in the software format in which they were created.

WI 510.1 Contractor's Possession Programmes

The *Contractor* submits programmes detailing all works planned during possessions, minor closures or major closures of the rail network and/or depot. These programmes shall have a maximum time unit of 1.0 hour unless agreed otherwise with the *Project Manager*. These programmes shall also be subjected to risk analysis by the *Contractor* to ensure that work is completed during the possession, minor closure or major closure, or that alternative action can be taken to ensure that infrastructure is handed back on time.

The *Contractor* submits the possession programme for review in line with the possession requirements as given in WI200.

WI 510.2 Weekly Work Plan

A weekly work plan is discussed at a weekly meeting with the *Project Manager*.

The weekly work plan shall include a 4-weekly rolling programme (1 week look back, 3 weeks look ahead) covering day to day operations.

WI515 Methodology Statement

The *Contractor* provides a narrative with each programme submitted for acceptance to explain how the programme has been put together, with reference to the safe system of work and include an explanation of: -

- Cycle times and work sequences;
- The time risk allowance against each operation;
- The deployment of *Contractor's* Equipment and labour;
- The production rates used in determining durations;
- The shifts assumed in determining durations;
- The breakdown of labour requirements by trades;
- Intended working hours; and
- The schedules of quantities used in developing the programme.

The programme narrative is in sufficient detail to enable the durations, leads and lags in the logic diagram to be reconciled and substantiated, and to enable the projected levels of labour (by trade) and staff and flows of goods, Materials and Equipment identified to be substantiated.

WI520 Work of the Employer or Others

The *Contractor* makes provision in the programme for the necessary co-ordination, design interface, operational timescales and access arrangements associated with any works by Others that may interface with the *works*.

WI525 Revising Programmes

Revised programmes submitted for acceptance to include the information listed in the *conditions of contract*, this Works Information together with the following information:

- any variance in available time risk allowance should be identified within the programme narrative together with reasons;
- details of any significant changes including revisions to critical path since the previous Accepted Programme;
- impacts on progress, details of changes to Key Dates, milestones and associated float;
- list of implemented compensation events included and their impact and any impact mitigation measures incorporated;
- any other changes the *Contractor* has made along with a description of their impact on the Accepted Programme;
- changes incorporated based on comments raised by the *Project Manager* regarding earlier Accepted Programmes; and
- any other proposed changes which the *Contractor* proposes to make to the programme.

The *Contractor's* Planning Manager meets regularly (as a minimum every 2 weeks) with the *Employer's* Planning Manager.

The *Contractor* submits an updated programme in '.xer' as well as PDF format on the Friday of week 3 of the *Employer* reporting period with the data date in the programme set to the Saturday (end) of week 4 (Refer to Appendix E8.30).

Physical progress is reported and recorded (updated) on programme operations by the *Contractor* each reporting period using physical % complete and operation remaining duration as the basis for 'progress status'.

WI530 Inspection, Test and Sample Programme

The *Contractor* identifies on the programme the nature and purpose of all dates or constraints in relation to inspections, tests and sampling that require to be notified and co-ordinated with the *Project Manager*.

WI535 Earned Value Management

WI 535.1 Cost Loading

The *Contractor* cost loads the programme at a suitable level, to be agreed by the *Project Manager*.

Each four weekly reporting period, the *Contractor* shall update, in the revised Programme, for Acceptance by the *Project Manager*, the cost loading to reflect the Value of Work Done (VOWD) and the *Contractor's* assessment of forecast costs to go, including the impact of implemented compensation events.

Sufficient cost shall be allocated to tail-end and finishing operations including snagging and

Completion package preparation, in order to avoid overvaluing work in the earlier stages.

WI535.2 Resource Loading

The *Contractor* shall resource load the programme with resources and quantities, at a suitable level, to be accepted by the *Project Manager*.

The *Contractor* updates their revised programme the resource loading to reflect actual resources used to date and the *Contractor's* assessment of forecast to go including the impact of trends and implemented compensation events.

WI535.3 Budget Maintenance within Primavera

The *Contractor* shall not change or move cost or resources between operations on the Accepted Programme without the *Project Manager's* acceptance.

WI535.4 Planned Expenditure (BCWS: Budgeted Cost of Work Scheduled)

The Accepted Programme will be the basis of the planned expenditure unless the *Project Manager* instructs otherwise.

Each four weekly reporting period, data shall be exported from Primavera at a summary level (the appropriate level to be agreed by the *Project Manager*) and formatted into a Performance Measurement Data Summary (PMDS) which will then translate the data into graphs for comparison with earned value, VOWD, forecast of the remaining expenditure (shown in 4- weekly reporting periods) and Defined Cost to completion data. The Earned Value graphs shall show the early start and late start BCWS profile envelope, which shall be generated from data downloaded from Primavera to the PMDS within Excel.

WI535.5 Performance Measurement Analysis

The *Contractor* presents the relevant performance measurement data in a project performance measurement data analysis report with accompanying performance curves in a format to be agreed with the *Project Manager*, for inclusion within the four weekly progress reports.

WI540 Quantified Schedule Risk Assessment

On the first Accepted Programme and at intervals to be proposed by the *Contractor* and accepted by the *Project Manager*, the *Contractor* must carry out a quantified schedule risk analysis (QSRA) on the Programme to assess the confidence levels of achieving key milestones. Dependent on the stage of the project these QSRA's may be on the entire programme or elements of the programme relating to key phases of the *works*.

The *Contractor* provides a report that outlines the assumptions made in carrying out the QSRA, the modelling parameters, along with details of any duration uncertainties that have been applied and the risk register with the probabilities and likely delays clearly linked to operations.



WORKS INFORMATION

WI 600 (incorporating WI 700)

QUALITY AND ASSURANCE, INSPECTION
AND TESTS

CONTENTS

WI 605 Quality Statement

WI 610 Quality and Assurance Management System

WI 615 Assurance Management

WI 620 Engineering Management

WI 625 Contractor's Project Quality and Assurance Plan

WI 630 Surveillance and Audits

WI 635 Contractor's Resources

WI 640 Self Certification

WI 645 Materials and Construction

WI 650 Site Protection

WI 655 Inspection and Testing

WI 660 Notification of Works Requiring Inspection (NOWRI)

WI 665 Snagging

WI 670 Covering up Completed Work

WI 675 Testing and Commissioning

WI 605 Quality Statement

The *Contractor* undertakes the *works* in accordance with Quality Management Principles [ISO 9000] and will ensure:

- achievement of all the Project objectives,
- sustainable culture of Continuous Improvement and Innovation to correct and prevent non-conformances,
- Enables a robust and adequate application of Quality Management Systems [ISO 9001].

The *Contractor* refers to the DLR Rolling Stock Replacement Programme – Beckton Depot Upgrade Project – Maintenance Facility Building (MFB) and Southern Sidings Build Package – Technical Assurance Plan (Refer to Appendix C6.577) for further quality and assurance information and requirements.

WI 610 Quality and Assurance management system

WI 610.1 Quality and Assurance Management Systems requirements

The *Contractor* provides a quality and assurance management system for acceptance of the *Project Manager* and is submitted within 4 weeks of the *starting date*. The quality and assurance management system identifies how the *Contractor*, by audit, inspection, self-certification, collation and provision of evidence, demonstrates that the *works* are designed and constructed in compliance with all the requirements of the contract relevant Standards and statutory regulations.

The *Contractor* submits plans and procedures for acceptance by the *Project Manager* to demonstrate how they will satisfy these requirements.

The *Contractor's* quality and Assurance documentation are set out to minimise the duplication of information between plans and procedures.

WI 610.2 Quality system requirements

The *Contractor*, their designers, Subcontractors and suppliers establish and implement quality management systems which comply with BS EN ISO 9001.

The *Contractor* provides access to their quality system documentation for review, inspection, and audit by the *Project Manager*.

Any intervention by the *Project Manager* in Hold Point inspections, and critical interventions, in audits, or in oversight of the progress of the works, does not relieve the *Contractor* of their obligations under the contract.

Quality system documentation which supports Subcontractor and supplier activities in the *works* is reviewed and accepted by the *Contractor* before work starts on the relevant activities. The contract makes the documentation available to the *Project Manager* for audit on request.

The *Employer*, the *Project Manager* and Others including statutory authorities and Statutory Undertakers have the right to observe, witness, conduct audits, inspections and tests of all *works* that are being executed by the *Contractor*, their designers, Subcontractors, suppliers and sub-tiers thereof.

The *Contractor* provides all inspection and testing necessary to demonstrate compliance with the specified requirements. All Non-conformities are resolved before final acceptance of the whole of the *works* or any section thereof.

WI 610.3 Quality and Assurance Manager

The *Contractor* appoints a Quality and Assurance Manager to be responsible for all quality and Assurance matters on this contract. The Quality and Assurance Manager is suitably empowered and supported to enable the quality of work on the contract to be managed effectively.

The Quality and Assurance Manager is independent of the design and construction functions, and has an independent link to level. The Quality and Assurance Manager is full-time for the duration of the contract, dedicated to quality and Assurance matters on this contract, and is provided with adequate resources and authority to enable the quality of work on the contract to be managed effectively. The *Contractor* does not replace the Quality and Assurance Manager without the express written permission of the *Project Manager*.

The Quality and Assurance Manager:

- develops and implements a Project Quality and Assurance Plan as detailed in WI625 below;
- ensures the *Contractor's* Quality and Assurance Plan complies with BS/1501055.
- develops and provides quality training for all personnel to include induction and training for staff with specific quality responsibilities;
- manages all quality personnel;
- approves the quality elements of the *Contractor's* Safe Systems of Work;
- ensures compliance with legal and contractual requirements;
- provides advice and instruction to construction teams to deal rapidly and effectively with quality non-conformities and complaints;
- creates and maintains a register of all non-conformances and ensures all non-conformances are reported to the *Project Manager* as soon as the *Contractor* becomes aware of them;
- analyses individual quality non-conformities and complaints to identify trends, root causes and proposes the corrective and preventive actions needed for acceptance by the *Project Manager*, and proposes mitigation measures to avoid future recurrence;
- ensures the provision and review of ITPs;
- undertakes audits of the *Contractor* and Subcontractors including compliance with legal and contractual requirements;
- produces information for the Management Review with senior management, that as a minimum should comply with ISO 9001, and attend the Management Review meeting

to ensure that the quality management system remains suitable, adequate and effective; and

- reports to the *Project Manager* on all quality issues as soon as they become aware of it.

The Quality and Assurance Manager has the following key competencies:

- appropriate experience of quality management and the delivery functions of the *Contractor/supplier* under self-certification contracts;
- good knowledge and practical experience of developing, implementing and improving quality management systems;
- be a member of the Chartered Quality Institute (or an equivalent recognised quality body) or an appropriate engineering institute; and
- be a competent auditor or have access to competent auditors.

Designers, Subcontractors, suppliers and sub-tiers thereof each provides a quality assurance representative with adequate resources and appropriate authority and competency to ensure the quality of work and deliverables on the contract

The *Employer*, the *Project Manager*, and authorised Others including statutory authorities and Statutory Undertakers, have the right to observe, witness, conduct audits, inspections and tests of all *works* that are being executed by the *Contractor*, his designers, Subcontractors and supply chain.

The *Contractor* provides all inspection and testing necessary to demonstrate that all the requirements of the Works Information and the law have been met. All non-conformities are resolved before final acceptance of the *works* or any section of the works.

All on-Site and off-Site testing is carried out by laboratories accredited by UKAS or by a similar national body or by persons accredited to a similar standard and are subject to acceptance by the *Project Manager*. The quality system provides procedures for witnessing the manufacturing, construction, installation, testing and commissioning of the works.

WI 615 Assurance management

WI 615.1 General

Contractor Assurance requires the *Contractor* to provide sufficient evidence to demonstrate to the *Project Manager* that the general and specific requirements of the Works Information and the Standards have been complied with.

The *Project Manager* monitors Assurance by a process of planned sampling and critical intervention.

The *Contractor* monitors, inspects, audits and verifies that his suppliers and Subcontractors and all tiers supplying the suppliers and Subcontractors are providing acceptable Assurance, through procedures and evidence, in compliance with general and specific requirements and the relevant Standards.

WI 615.2 Design Assurance

For any design work undertaken by the *Contractor*, including design of temporary works, the *Contractor* provides Assurance to the *Project Manager*, that the proposed design is compliant with all standards and requirement of this Works Information. The *Contractor's* procedures for achieving Assurance are to be identified by the *Contractor* in their Project Quality and Assurance Plan.

Any design works carried out by the *Contractor* will undergo the DLR design assurance process as per the DLR Rolling Stock Replacement Programme – Beckton Depot Upgrade Project – Maintenance Facility Building (MFB) and Southern Sidings Build Package – Technical Assurance Plan (refer to Appendix C6.577). As a minimum this will involve passing through the Acceptance of Design (AoD) Assurance Gate, but may also include the Acceptance in Principle (AiP) Assurance Gate.

Where there is a Defect, the *Contractor* carries out such redesign as may be necessary to correct, rectify or prevent a recurrence of such Defect. Any such redesign ensures that the performance and operation of the *works* and the relevant part thereof is not degraded or reduced by virtue of such redesign from the Standards specified in the Works Information and/or in this contract or if no Standard is so specified, from the Standard reasonably inferred from this contract.

As a minimum, the design management process is documented in the *Contractor's* or Subcontractor's management system to meet the *Employer's* requirements for design.

The *Contractor* ensures that the Designer(s) have the appropriate professional qualifications to achieve the design assurance requirements. The Design Certificates and Check Certificates shall be signed off by a Chartered Engineer pertinent to the discipline.

WI 615.3 Technical Assurance

Any design work undertaken by the *Contractor* will be subject to the *Employer's* Change Assurance Process before it can be accepted. This may be applicable to temporary works designs depending on the complexity and/or associated risk. The *Contractor* is required to submit sufficient documentation to enable the design to be reviewed and approved by the Change Assurance Panel (CAP). The assurance process requires that a number of gates are passed in order to permit development of the *works*.

The *Contractor* complies with the DLR Rolling Stock Replacement Programme – Beckton Depot Upgrade Project – Maintenance Facility Building (MFB) and Southern Sidings Build Package – Technical Assurance Plan (Refer to Appendix C6.577), including any DLR Joint Management System (JMS) documents referenced therein.

The *Contractor* provides a Contractor Technical Assurance Plan (CTAP) for approval by the *Project Manager* within 4 weeks of the *starting date*. This will align with the technical assurance requirements set out in the package TAP.

TFOS Technical Assurance Plan 65210-DLR-BAS-TD350-PLN-PM-00001 has been completed to first draft and is currently awaiting the progression of the Change Notice Requirements Specification (CNRS). Upon completion and sign off, the document will then

be shared with the *Contractor*. The *Contractor* will be expected to submit a CTAP within 4 weeks of receipt, or within 4 weeks of Contract Award, whichever is later, as per WI615.3.

The minimum requirements for *Contractor* documented assurance evidence are detailed within the Master Document Lists (MDLs). These are located within the TAP. For each assurance deliverable it is permissible for the *Contractor* to propose another document already used by the *Contractor* to cover that assurance evidence, or it is permissible to reference part(s) of another document(s) as necessary, for acceptance by the *Project Manager*. The only consideration is that the data referenced must amount to the data and format required. This principle applies to all assurance gates.

The MDLs provided in the TAP shall be adopted by the *Contractor* and updated as required. The *Contractor* shall provide the updated MDLs to the *Project Manager* in Microsoft Excel format, for approval by the *Project Manager*. The agreed MDLs shall also be appended to the Contractor's CTAP for approval by the *Project Manager*.

The *Contractor* tracks the status of the assurance deliverables using the MDL(s); and this status shall be reported on a regular basis to be agreed between the *Project Manager* and the *Contractor*. This will be done at each assurance gate submission as a minimum. Each deliverable shall be provided to the *Project Manager* and included as part of the assurance submissions described herein.

Upon satisfactory completion of the MFB, SS and TFOS installation and testing activities for an Acceptance of Asset (AoA) assurance package, the *Contractor* shall provide a Technical Case for each AoA, with the minimum assurance evidence requirements detailed within the MDLs.

The AoA Technical Case shall include a statement by the Contractor's Chief Engineer declaring that the assurance package is acceptable for safe and reliable depot operations and satisfies the requirements. Any conditions and outstanding actions must also be declared.

The Technical Case is the front-end overarching document that summarises the assurance package and what the *Contractor* has done to achieve a complete and correct AoA submission. Each Technical Case should include the following:

- A section for each supporting document of that AoA which details the status of that document, any outstanding issues and make a statement as to its status.
- A summary extract from the MDL showing the status on a page.
- A consolidated section for all assumptions, dependencies and caveats identified in all supporting documents.
- Any outstanding issues and actions should be identified.
- Any derogations stated.
- Finally there should be a declaration whereby the Contractor's Chief Engineer declares that the package is complete and correct; and that the package will integrate with other packages (including with work packages delivered by other parties), with the existing depot, satisfies requirements and will be safe and reliable. This statement needs to be supported by suitable evidence that needs to be referenced and is aligned with the Contractor's Safety Management Plan.

The *Contractor* produces an Overarching AoA Technical Case which shall be supported by the documentary products detailed in the overarching MDL and the supporting work package technical cases. The Overarching Technical Case will demonstrate that systems integration has been achieved by each scope element within the package of works.

The Overarching AoA Technical Case can only be delivered when all the AoAs of the assurance packages have been successfully completed, and the AfT assurance requirements detailed above have been met.

Upon successful completion of the Train Systems Integration Tests (and approval of all WI / MDL documentary requirements), then the works are considered to be handed over to the *Employer* upon the CAP approval of CoC ('Closure of Change') as outlined in DLR-JMS-PROC-014.

At any point in the assurance process, it may be necessary to return to an earlier stage to correct an error or omission. This may require resubmission of assurance evidence that has previously been accepted and a repeat of the associated assurance gate.

In the event that any snags or Defects are encountered during the warranty period, the *Contractor* shall undertake the required rectification works, and the appropriate assurance gates are to be repeated as required.

WI 615.4 Construction

The *Contractor* provides the *works* in accordance with the assured design and with all applicable law, the Standards and the contract requirements.

The *Contractor* assures the *Employer*, through submissions to the *Project Manager*, that the *works* have been constructed in accordance with the contract. The *Contractor* prepares, retains and provides evidence to the *Project Manager* to that effect.

The *Contractor* implements self-certification processes to ensure that the *works* have been constructed in accordance with the contract. Such self-certification processes includes demonstrably independent scrutiny, monitoring, checking and audit regimes in accordance with the contract requirements. The *Contractor* ensures independence in assessment, and certification in the quality assurance, quality control and building control processes. The processes are identified in the *Contractor's* Project Quality and Assurance Plan which will indicate the relevant processes and procedures used.

WI 615.5 Field Design Changes

The change control process for the *works* follows the guidance set out in the following TfL procedure document:

- PR0653 A2 Engineering Design Change Control

This process has been summarised in the 'Field Design Change (FDC) Control – Process Flowchart' presented in Appendix D7.128.

Templates for both the Design Change Notice Form (for minor changes) (Refer to Appendix

E8.35) and the Design Change Request Form (for significant changes) (Refer to Appendix E8.36). These templates are to be used by the *Contractor* whenever a Field Design Change(FDC) is required.

Guidance on what constitutes a 'minor' change and what is a 'significant' (or major) change can be found in the PR0653 A2 Engineering Design Change Control. (Refer to Appendix D7.116).

Any changes that have a cost or programme implication may be subject to internal review by the *Employer* via the Employer's fortnightly Change Board. The *Contractor* should take the additional time required for this process (estimated duration = 20 working days) into account when planning to implement the change.

It should also be noted that CAP approval (estimated duration 30 working days) may be required for a 'significant' change but the need for this will be assessed by the *Employer* on a case-by-case basis, and confirmed by the *Employer* at the earliest opportunity.

WI 615.6 Asset Capture List

An Asset Capture List has been generated by the Detailed Design Contractor which details all the assets that are being removed, introduced, renewed, replaced etc. as a result of the Works. The *Contractor* shall take ownership of this document and shall submit an updated version to the *Employer* in order to pass this Closure of Change assurance gate. The *Employer* will then ensure that this information is uploaded to the applicable asset management system.

The updated version of the Asset List may also be required to be submitted by the *Contractor* during the execution of works. Some assets may become operational as soon as they are tested & commissioned under a possession or otherwise. For such assets, the *Contractor* shall submit the asset list well before they are brought into operational use so that the details may be provided to the Operator and Maintainer for activating the assets on to their Asset Management System as soon as they become operational.

WI 615.7 Systems Integration Testing

The *Contractor* shall lead the System Integration Testing activities with support from the *Employer*. Trains and the movement of trains for the testing shall be arranged by the *Employer*. System integration tests may have to be undertaken with both the existing and the new rolling stock.

In the case of the Maintenance Facility Building and Temporary Fit Out Shed, the following system integration testing will be required:

- Train to Infrastructure Testing
- Train to Plant and Equipment Testing
- Plant and Equipment to Infrastructure Testing

Only 'Train to Infrastructure' system integration testing will be required for the following sub-packages:

- Eastern and Western MFB approach fans.
- Roads BK-BL-BM

- Southern Sidings

At this gate, the CAP will consider the recommendations made by the DCP, that are made on the basis of the review of completed test documentation, system testing documentation and associated assurance evidence. The CAP would expect:

- The associated assurance evidence to be available to support asset / system level testing, including (as appropriate) results of factory testing and sub-system testing, conformance with standards and that the results of these are consistent with safety and performance targets.
- Planning for operations should be well advanced and mitigations identified for safety risk associated with testing activities.

Systems Integration testing will comply with the Acceptance for Test (AfT) assurance gate requirements set out in the TAP.

WI 620 Engineering Management

WI 620.1 Systems Engineering

The Systems Engineering process that shall be adopted by the *Contractor* is detailed within the Rolling Stock Replacement Programme Systems Engineering Management Plan (Refer to Appendix D7.83), and that document should be referred to by both the *Employer* and the *Contractor*.

WI 620.2 Engineering Safety Management

Engineering Safety Management activities being implemented by the *Employer* are detailed within the DLR Engineering Safety Management Plan [1499901-DLR-RSTK-TR600_Z-IE-K-0004] and the Hazard Management Process [65001-DLR-RSK-TR000-PRO-HS-0001]. These documents can be provided to the *Contractor* for guidance purposes and are available on request by the *Contractor*.

The *Contractor* shall ensure that their engineering safety management process and Hazard Record format is consistent with the *Employer* process and Hazard Record. The Employer Hazard record can be provided to the *Contractor* upon request and covers the *works* and other works within the RSRP Programme.

Hazard Records have been produced by the Arcadis and Aecom for the MFB and SS which have been suitably developed for the AoD stage. These will be distributed to the *Contractor* by the *Employer*. The *Contractor* will be responsible for the management of the MFB and SS Hazards as part of the *works* by:

- identifying and providing suitable evidence that assets have been constructed and commissioned in accordance with the design and as part of the *works*,
- the transfer of residual risks to relevant parties.

The Contractor submits the MFB and SS Build Hazard Record and associated safety justification as part of the H&S File at the project handover stage to the *Project Manager*. These documents will detail all residual risks including acceptance of transfer from the receiving parties.

The engineering safety management deliverables for the *Contractor* are detailed within the

MDLs appended to the TAP.

WI 620.3 Reliability, Availability and Maintainability

The RAM deliverables to be submitted by the *Contractor* are detailed within the MDLs.

WI 620.4 Human Factors

The Human Factors deliverables to be submitted by the *Contractor* are detailed within the appended MDLs.

WI 620.5 Environment and Sustainability

The Environmental Management and Sustainability deliverables to be submitted by the *Contractor* are detailed within the appended MDL.

WI 620.6 Electro-magnetic Compatibility

The EMC engineering process that shall be followed is detailed in the DLR RSRP EMC Strategy. This strategy describes how EMC interfaces shall be considered for compliance with the EMC Directive (2014/30/EU) and the BS EN 50121 series of standards, including EMC relationships between existing infrastructure and programme support projects.

The EMC deliverables to be submitted by the *Contractor* are detailed within the appended MDLs.

WI 620.7 Fire

The Fire deliverables to be submitted by the *Contractor* are detailed within the appended MDLs.

The following Fire Strategies have been produced and developed by the Detailed Design Contractor (Arcadis). The responsibility for the management and updating of these documents shall be with the *Contractor*.

- Beckton Depot – Site Wide Fire Safety Strategy Construction Phase
- Beckton Depot – Site Wide Fire Strategy (End State)
- Maintenance Facility Building (MFB) (End State).
-

In addition, the *Contractor* shall produce and manage the following fire strategy document:

- Maintenance Facility Building (MFB) Construction Phase

The following Fire Strategy will be produced at Outline Design by AECOM as part of the document deliverables (MDL). The responsibility for the management and updating of these documents shall be with the *Contractor*.

- - Temporary Fit Out Shed (TFOS) Construction Phase.

The TFOS report will establish standard requirement for managing fire scenarios, emergency and evacuation. It will make recommendations for design of assets and identify any derogations or deviations from standards.

WI 620.8 Information Security Management

The *Contractor* shall acknowledge that Security, Data Protection and Confidentiality are of fundamental importance in relation to the provision of the services and DLR's ability to retain public confidence. The *Contractor* shall at all times comply with TfL's Information Security Policy and apply good industry practice in the delivery of the services.

The Information Security Management deliverables to be submitted by the *Contractor* are detailed within the appended Overarching Level MDL (refer Appendix C6.613).

The *Contractor* is to undertake and provide to the Project Manager a 1.1 Data Protection Impact Assessment (DPIA) and implement a data system that meets legal and statutory obligations regarding privacy, confidentiality, and data protection including the GDPR 2018.

WI 620.9 Cyber Security

The *Contractor* adheres to TfL, National and International Cyber Security policies and standards:

- IEC 62443 Industrial Communication Networks Network and System Security
- Department of Transport Rail Cyber Security – Guidance to Industry
- S1744 Operational Technology – Cyber Security

For the purposes of the *Contractor* AoA one of the requirements is to keep the Wi-Fi system separate from the DLR Comms network to minimise cyber-attacks and security breaches.

Cyber security shall also be considered and addressed in the *Contractor's* approach to engineering safety management.

The Cyber Security deliverables to be submitted by the *Contractor* are detailed within the appended Overarching Level MDL.

WI 620.10 Requirements

Any incidences where the *Contractor* is unable to meet a project requirement, or only partially meet a requirement, should be raised to the *Project Manager* by the *Contractor* at the earliest opportunity so that an adequate solution can be agreed upon. The *Contractor* shall identify any new requirements as they become apparent and will add these to the existing list of requirements.

The Requirements deliverables to be submitted by the *Contractor* are detailed within the appended MDLs.

WI 620.11 Verification and Validation

Verification and Validation (V&V) shall be used by the *Contractor* to demonstrate that all requirements have been met.

The V&V activities to be undertaken by the *Contractor* shall determine that the defined requirements have been fulfilled in order to deliver the *works*.

The V&V deliverables to be submitted by the *Contractor* are detailed within the appended MDLs. The *Contractor* shall carry out V&V on all requirements, including any new ones identified by the *Contractor* and shall identify the Validation evidence to be provided for all requirements.

The *Contractor* shall inherit and manage the Detailed Design Contractor's Requirements V&V Matrices and Reports.

V&V shall be attained from a number of sources (e.g. testing, analysis, human factors assessment, safety assessment, RAM assessment, certification etc.).

WI 620.12 Migration

The *Contractor* utilises and take ownership of the migration/staging documents provided by the *Employer*, to align with the *Contractor's* final construction programme and staging. This includes the Migration Stage Plan (65204MF-DLR- BOU-TD350_00-PLN-GL- 0001) Refer to Appendix D7.106) and Migration Road Map (65204MF-DLR-ZZZ- TD350_00- PRG-PM-0003) (Refer to Appendix D7.108).

Any deviations or changes required to the Migration Stage Plan and Road Map shall be documented by the *Contractor* and communicated to the *Project Manager* at the earliest opportunity.

The *Contractor* shall deliver the *works* via various migration stages in order to keep any disruption to the Depot operations to a minimum. The Employer's Design Consultants have produced the following Migration Plans for their respective design packages:

- MFB Migration Plan (65204MF-ARC-MAC-TD350_00-PLN-RS-0009)
- Beckton Depot Migration Plan (65204-AEC-MAC-TD350-PLN-ZZ-9003)

For the overall *works*, the *Employer* has produced the following Migration documentation incorporating details from the Consultant's Migration Plans:

- MFB Sub Programme Migration Road Map (65204MF-DLR-ZZZ-TD350 00-PRG-PM-0003)
- MFB Beckton Depot Staging of Works (65204MF-DLR-ZZZ-TD350 00-PRG-PM-0002)
- MFB, SS Build Migration Stage Plan (65204MF-DLR-BOU-TD350 00-PLN-GL-0001)
- MFB Sub Programme MRR-ORR – Migration Stage-wise Deliverables (65204MF-DLR-ZZZ-TD350 00-PRG-PM-0004)

For migrating from one stage to next migration stage of works, the *Contractor* shall produce a number of operational and migration readiness documents, which will have to be reviewed and accepted by DLR / KAD well in time before migration. The details of documents required at each of the migration stage are provided in a matrix form in document - MFB Sub Programme MRR-ORR - Migration Stage-wise Deliverables - 65204MF-DLR-ZZZ-TD350_00-PRG-PM-0004. The progress of above deliverables shall be reviewed in weekly meetings with DLR / KAD and this will help ensure that the Project has the required operational assurance in place before moving to the next migration stage.

For migrating from one stage to next migration stage of works, Migration Readiness Reviews (MRRs) will also be held at T-12, T-8 and T-4 stages to assess the state of preparedness from operational and maintenance perspective. These reviews will be led by the DLR Project Team and the *Contractor* shall provide all necessary assurance evidence for passing the MRR Gate.

WI 625 *Contractor's Project Quality and Assurance Plan*

WI 625.1 Project Quality and Assurance Plan

Within four weeks of the starting date, the *Contractor* submits a Project Quality and Assurance Plan to the *Project Manager* for acceptance. The *Contractor* reviews and updates the plan if significant changes occur to the processes, organisation or requirements or as reasonably required by the *Project Manager*.

The *Contractor's* Project Quality and Assurance Plan is supported by applicable QCPs, ITPs, Safe Systems of Work and references to and extracts from Standards.

The *Contractor's* Project Quality and Assurance Plan include the controls to be applied by designers, Subcontractors, suppliers and sub-tiers thereof, both directly and by identifying the Quality and Assurance System documentation that designers, Subcontractors, suppliers and sub-tiers thereof are required to produce. The *Contractor* ensures that designers, Subcontractors, suppliers and sub-tiers thereof agree to and implement the applicable controls specified in the *Contractor's* Project Quality and Assurance Plan and the identified quality system documentation.

The *Contractor*, the designers, Subcontractors, suppliers and sub-tiers thereof do not commence any activity on any part of the *works* for which the *Contractor's* Project Quality and Assurance Plan, applicable QCPs and ITPs, have not been accepted by the *Project Manager*.

The *Contractor's* Project Quality and Assurance Plan, as a minimum, complies with the requirements of the guidelines set out in BS EN ISO 10005 and, as appropriate:

- Covers the relevant phases of the contract (design, assessments, procurement, manufacture, condition/defect surveys, construction, installation, monitoring, testing, commissioning and maintenance);
- Complies with BE EN ISO 9000, BS EN ISO 9001 and BS EN ISO 9004 (as applicable)
- Incorporates comprehensive quality system procedures for all identified risk and processes associated with this contract;
- Identifies clear and robust QCPs to provide independence of all inspection and checking processes to ensure that self-certification is in place and evidence provided to assure the design and construction;
- Indicates the inter-relationship of the *Contractor's* Project Quality and Assurance Plan with other associated documentation of the *Contractor*;
- Describes the relationships and activities of the *Contractor*, designers, Subcontractors, suppliers and consultants including organograms;
- Specifies the requirements of the quality systems to be operated by the *Contractor's* designers, Subcontractors and suppliers;
- Includes *Contractor's*, designers' and Sub-Contractors' design control systems/procedures;

- Identifies the requirements for self-certification, audit, intervention and inspection of all subcontracted processes;
- Incorporates a monitoring system for procurement, maintenance and condition of Plant and Materials to ensure that contract objectives can be fulfilled;
- Allows for external second and third party audits to be carried out as required by the *Project Manager* and Others as described above;
- Incorporates comprehensive Quality and Assurance System audit procedures including the preparation of audit reports;
- Specifies procedures to rectify non-conformities raised, including System Defects raised as a result of both internal and external audits;
- Describes the statistical process techniques to be used to prevent the occurrence of non-conformities;
- Provides for regular management reviews of the contract Quality and Assurance System;
- Includes records management procedures including for review and verification of records by the *Contractor's* quality assurance manager and compilation of Assurance packages at Handover of new and altered assets; and
- Identifies quality related Key Performance Indicators.

The *Contractor*, the designers, Subcontractors and suppliers shall complete the *works* in accordance with the accepted *Contractor's* Project Quality and Assurance Plan.

WI 630 Surveillance and Audits

WI 630.1 Surveillance

The *Contractor's* Quality Management System provides a process and procedure for surveillance of the design and construction of the *works* by a process of audits, certification and self-certification. The *Contractor* collates all the quality documentation from their inspection and testing processes and other verification activities.

WI 630.2 Audit Programme

The *Contractor* submits, with their *Contractor's* Project Quality and Assurance Plan, a schedule of internal, designer, Subcontractor and supplier audits that will be conducted by the *Contractor's* personnel. The schedule, scope and method of the audits enable the *Contractor* to verify that all aspects of the *works* are conducted in accordance with contractual requirements

The schedule and any amendments are subject to acceptance by the *Project Manager*. The schedule is reviewed by the *Contractor* with the *Project Manager*, every four weeks, to reflect all relevant aspects and the developing and changing nature of the Project and the construction programme. This review will consider trends from audit findings and the adequacy of preventative measures put in place.

WI 630.3 Audit Participation

The *Contractor* allows the *Employer*, the *Project Manager*, and Others (including the Maintainer) to observe or participate in audits. The *Contractor* provides the facilities and access necessary for these audits to be carried out effectively

The *Contractor* places similar requirements on his designers, sub-contractors, and suppliers with regards to audit participation.

WI630.4 Audit process and outputs

All audits performed by the *Contractor* are carried out as described in BS ENISO 19011 and all reports are, unless otherwise agreed by the *Project Manager*, to be submitted for acceptance

The *Contractor* maintains an audit / CARs / preventative action reports database for use by the *Contractor* and the *Project Manager*.

WI 635 Contractor's Resources WI 635.1 Resources

The *Contractor's* Project Quality and Assurance Plan includes organisation charts for the *Contractor* and all designers, Subcontractors, and suppliers to show the reporting structure of those personnel responsible for quality on the contract and particularly those personnel responsible for self-certification activities.

The *Contractor's* Project Quality and Assurance Plan includes curriculum vitae for all such quality personnel, including those of Subcontractors, designers, and suppliers and particularly those nominated for self-certification activities.

The *Contractor* demonstrates that adequate resources are provided to fulfil the contract.

The *Contractor* provides appropriate training to all personnel in the operation of the Quality Management System and maintains training records.

WI 640 Self Certification

WI 640.1 Self certification requirements

The *Contractor* implements a quality control system for the contract to include monitoring, inspection and corrective action to ensure that the specified requirements are achieved.

The *Contractor* submits, to the *Project Manager* for acceptance, his proposals for self-certification within the *Contractor's* Project Quality and Assurance Plan. This self-certification plan demonstrates the processes to be employed and proformas to be used to verify compliance with the specified requirements. The plan is based on the *Contractor's* existing company management system procedures and proformas. The *Contractor* submits the plan to the *Project Manager* for acceptance before commencement of the *works* and within 4 weeks of the *starting date*.

The plan identifies the means provided to achieve self-certification of designers, Subcontractors and suppliers. The plan states when the designers', Subcontractors' and suppliers' own systems will be employed, and where the *Contractor* will exercise quality control over the designer, Subcontractors or supplier.

There are specific requirements within the Works Information for independent checking and inspection of elements of the works.

The *Contractor* ensures that all quality control of construction of the *works* is independent of the production control of the works.

The *Contractor* submits, to the *Project Manager* for acceptance, the ITPs and inspection check lists for the elements of the works. The *Project Manager* may identify Hold Points at which *Project Manager* inspection and acceptance is required before work proceeds.

The *Contractor* produces appropriate self-certification records to demonstrate that the supporting documents (inter alia: ITPs, inspection check lists, supplier compliance certificates, concrete and other Site measurement commissioning records, audit records, “red-line” mark-ups, and “as-built” details) have been completed in accordance with contract requirements.

The *Contractor* raises a Non-Conformance Report (NCR) whenever corrective action for an identified Defect cannot be implemented within the shift, or in the event of non-conformance with the approved detailed design. The *Contractor* is to raise an NCR using the NCR template located in Appendix E8.34.

The *Contractor* submits NCR corrective proposals to the *Project Manager* for acceptance (if appropriate the *Project Manager* consults the infrastructure owner or maintainer). The work does not proceed until the *Project Manager* has accepted the relevant NCR corrective proposal. Records showing the successful corrective and preventative action shall be included in the quality control records.

The *Project Manager* reserves the right to submit a Non-Conformance Report (NCR) to the *Contractor* if the *Project Manager* determines an installation has been installed by the *Contractor* that deviates from the approved detailed design. The *Project Manager* will use the same template (Appendix E8.34) in this instance.

The *Contractor* maintains the quality control records in an accepted database to verify Assurance at Completion of a section of the works. The *Project Manager* may access and interrogate the database and records at any time during the progress of the works. The database is indexed and formally transferred to the *Project Manager* at Completion of a section of the works.

The *Contractor* carries out scheduled, structured audits on specific elements of quality control for the works, by trade or by location, to verify that the records are prepared and maintained in an acceptable form. The *Project Manager* may attend these audits.

The *Project Manager* audits the records and NCR registers and reports during the progress of the works.

The *Project Manager* monitors the effectiveness of the *Contractor's* self-certification system through:

- surveillance,
- witnessing appropriate key activities,

- review of certification and records,
- monitoring and participation in the *Contractor's* audit schedule,
- independent auditing.

WI 640.2 Red Line Drawings

The *Contractor* shall be responsible for ensuring any deviations from the approved detailed design are captured on design drawings using the processes presented on the Field Design Change (FDC) Control Process Flowchart appended in the Technical Assurance Plan. Depending on the nature of the deviation / change, this will involve the red-line mark-ups of AFC drawings as a minimum.

The *Contractor* shall be responsible for ensuring these red-line mark-ups communicate sufficient information as to the nature of the deviation / change so that accurate as-built drawings can be produced by the *Contractor* accordingly.

WI 645 Materials and Construction

WI 645.1 Quality System

The *Contractor* shall implement a quality control system for the contract to include monitoring, inspection and corrective action to ensure that the specified materials and construction methodology requirements are achieved.

WI 650 Site Protection

WI 650.1 Protection of Existing Assets

The *Contractor* shall protect the existing structures and services and does not overload them in the undertaking of the *works*.

The *Contractor* shall undertake a dilapidation survey of the work site and surrounding assets before works commence. This survey will be carried out in conjunction with the *Project Manager*.

The *Contractor* shall provide a dilapidation report subsequent to the aforementioned survey which provides adequate information on the current condition of all existing assets in the vicinity of the works that could be adversely affected by the *works*.

The *Contractor* shall protect all adjacent infrastructure

WI 650.2 Protection of the Works

The *Contractor* shall protect the *works* in respect of everything which a prudent and competent *Contractor* would protect and clears away on completion or when no longer required. The *Contractor* shall repair and make good any damage to the *works* arising from such protection to the satisfaction of the *Project Manager*

WI 650.2 Existing Services

The *Contractor* shall ascertain the positions of all services and shall make their own enquiries regarding the existing services prior to commencement of *works* on Site. This includes verifying the presence and location of any existing services presented in existing site drawings provided by the *Employer*. No claim in respect of lack of knowledge in respect of same will be entertained.

A number of the existing services crossing the Site may remain live during the course of the *works*. The *Contractor* shall take all reasonable precautions to protect such services and shall afford all reasonable access to the *Employer* or to Others to facilitate any urgent or emergency repair as required by the *Employer*. The *Contractor* shall repair any damage caused by the *Contractor* thereto.

The *Contractor* shall repair all existing sewers and drains which are displaced or blocked through the execution of the *works* to the satisfaction of the *Project Manager*. On completion of the *works* the *Contractor* shall provide evidence that all underground services, whether existing or new, are not displaced or blocked.

The *Contractor* shall apply to the appropriate statutory authorities for any discharge licences or temporary main supplies (other than those which are specifically to be provided by the *Employer*) and pays for all charges in connection therewith.

The *Contractor* indemnifies the *Employer* against any expense, liability, loss or claim, etc. whether received before or after Completion due to the failure to comply with the requirements of WI 650.2

WI 655 Inspection and Testing

The *Contractor* provides, within 4 weeks of the *starting date*, a schedule of inspections and associated Inspection and Test Plans (ITPs) prepared for all aspects of the *works*. These ITPs shall encompass all deliverables of the *Contractor* and subcontractors engaged in supply, manufacture, construction, installation, commissioning and testing or any other service required to provide the *works*.

The *Contractor*, their Subcontractors and suppliers engaged in design, supply, manufacture, construction, installation, commissioning and testing or any other service connected with the *works*, maintain ITPs to satisfy the requirements of ISO 9001, DLR Standards, and other relevant Statutory Requirements appropriate for the deliverables being provided, which have been accepted by the *Project Manager*.

The ITPs stipulate the necessary level and frequency of tests and inspections for each aspect of the *works* and shall also stipulate:

- Item(s) being inspected and tested;
- The inspection and test activity;
- Acceptance criteria;
- Involvement of various parties including Hold Points and witness points;
- Controlling specifications; and
- Certification/ documentation/ Quality Check Sheet records required as verification data.

Activities listed in the ITP shall include pre-construction activities such as material approvals, Temporary Works and completion activities such as close out of any NCRs arising. The *Contractor* completes the details to be stipulated in the ITPs including acceptance criteria. As a minimum the acceptance criteria shall comply with the requirements specified in the Works Information, this shall include the provision of samples/mock-up/prototypes (including test panels and benchmarking of standard finishes for acceptance by the *Supervisor* where identified in ITP). Where not specified the *Contractor* proposes acceptance criteria for the *Supervisor's* acceptance, including the method and frequency of inspection and testing. All materials that require acceptance, should be accepted in writing by the *Supervisor* prior to delivery and use on Site.

All materials proposed by the Contractor shall be submitted to the Project Manager for his acceptance. This includes any materials or products that already appear on either the DLR or LU Approved Products Registers. Any materials that are not explicitly included in approved designs must also be proposed by the Contractor for approval by the Project Manager. The use of materials novel to DLR may require approval through the CAP process.

The *Contractor* submits an ITP to the *Supervisor* for acceptance 4 weeks prior to the start of the relevant works. The *Contractor* shall not start the relevant works until the *Project Manager* or the *Supervisor* has accepted the ITPs for those works. The *Contractor* maintains a schedule of ITP submissions with a record of the status of review and acceptance.

Records and other deliverables generated as part of the inspection and test process shall be identified within the ITPs. The ITPs shall also make clear who is responsible for implementing the planned arrangements, as well as who is responsible for certifying that compliance with requirements has been achieved in practice.

The *Supervisor* carries out inspections and witness tests as stated in the Works Information and agreed ITPs.

Mandatory interventions shall be defined as 'Hold Points', other interventions may include activities such as 'Witness Points' and 'Review Points'. The *Contractor* shall ensure a minimum of 7 days' notice, or as locally agreed by the *Project Manager*, is provided for Hold Points.

The *Contractor* prepares a suite of Quality Check Sheets (QCSs) to verify conformance with the Works Information and which provide a detailed, step-by-step structure for progressively capturing the quality assurance evidence stipulated in the ITPs. The *Contractor's* verification is accomplished by examinations, tests, measurement and inspection and by verifying records including those of his Subcontractors and suppliers. The *Contractor's* verification procedures shall be developed using applicable testing and inspection methods along with acceptance criteria stipulated by the drawings and materials and workmanship & technical specifications.

The *Contractor* ensures that QCSs are progressively completed throughout the duration of the works and not left until the entirety of the works activity has been completed and back-filled respectively.

Whilst 'self-certification' represents a fundamental principle that shall be used, the *Supervisor* shall identify any activities in addition to those already identified on the ITPs / QCSs, which are required to be checked and/or witnessed by the *Project Manager* and/or third parties. The *Contractor* updates their QCSs to include these requirements.

The *Contractor* ensures that staff nominated for undertaking sampling, inspection and testing activities are appropriately trained and competent to carry out the particular activities to which they have been assigned. The *Contractor* shall maintain records of training and competence and make such records available to the *Supervisor* for inspection upon request.

The *Contractor* conducts inspections and tests in accordance with their detailed quality plans, agreed ITPs and quality check sheets. Key inspection activities shall be agreed with the *Supervisor* prior to construction, which shall include activities of structural or operational, significance, and inspections which are of a subjective nature or release work that is to be covered up. The *Contractor* shall record the completion of inspections and tests and identify records of the results.

All on-Site and off-Site testing shall be carried out by laboratories accredited by UKAS or similar, acceptable national body or by persons accredited to a similar standard. The samples shall be taken by staff appointed by the laboratory. The requirement for UKAS accreditation may be waived for the testing of systems and their components, subject to an alternative testing proposal by the *Contractor* and the acceptance of the proposal by the *Project Manager*.

Testing and sampling methodologies shall be in accordance with the standards contained in the Works Information and / or specified in the ITPs, unless otherwise specified by written agreement from the *Project Manager*.

The *Contractor* maintains a schedule of all inspection, measuring and test equipment used for the *works* that includes records of the calibration of such equipment to nationally recognised standards.

All records from the inspection and testing process are referenced to the location of the item in the *works*, and collated and assembled as part of the assurance documentation. Copies of all test plans, records and results will be made available to the *Supervisor*.

WI 660 Notification of Works Requiring Inspection (NOWRI)

Inspections and tests during construction are notified by the *Contractor* to the *Supervisor* utilising the Notification of Works Ready for Inspection (NOWRI) where the *Contractor* requires the following:

- Off-Site inspections
- The involvement of Others
- Specialist/functional involvement in:
 - Planned surveillance
 - Benchmarking
 - “first – offs” and trial builds
 - Mock-ups
 - Samples
- Completion of an activity as identified on the ITP.

The *Contractor* provides the *Project Manager* with 4 weeks' notice of inspections. The *Project Manager* has the right to attend (or send a *Project Manager's* representative) and witness as deemed necessary.

The Notification of Works Requiring Inspection (NOWRI) process is the fundamental activity for verifying and validating work is completed to an acceptable standard.

The NOWRI process for completed works consists of the following three stages:

1. Pre-NOWRI Submission:

- a) Prior to the submission of the NOWRI request, appropriate assurance and specifications relevant to the works shall be identified.
- b) The *Employer* and the *Contractor* ensure that the works in question will be in an adequate state of completion to enable the desired inspection activity to be performed.
- c) The *Contractor* submits a formal NOWRI request to the TfL NOWRI inbox, they will co-ordinate, track and report progress of the NOWRI.

2. Open NOWRI:

- a) A joint inspection is undertaken by the *Employer* and their representatives, the *Contractor*, DLR and the End User (KAD).
- b) Any snags / *Defects* identified in the inspection are recorded by the *Contractor* in the Snag Log.
- c) On completion of the inspection, a final status of for the NOWRI (Green or Red) shall be agreed.

3. Post Inspection Activities:

- a) If Green, the NOWRI form is completed to record a successful inspection and agreement to any minor snags and rectification timescales.
- b) If red, the *Contractor* addresses the outstanding issues within the agreed timescale. Follow up NOWRI inspections will be undertaken as required.

The NOWRI process is presented in detail in the following document:

- PR0091 A1 ISP Construction NOWRI (Refer to Appendix D7.129)

WI 665 Snagging

The *Contractor* is responsible for producing and managing the Snag Log(s) generated as a result of the NOWRI inspections. Regular reviews and updates of these Snag Logs will be undertaken by the *Contractor*, and photographic evidence of addressed snags shall be submitted to the *Project Manager* as evidence of the snag being resolved, before the snag can be agreed as closed on the Snag Log.

The *Project Manager* and *Contractor* may agree to carry out pre-emptive snagging inspections prior to the NOWRI inspection to help facilitate the NOWRI process. This will be agreed on a case-by-case basis.

The Contractor uses the Snag Log template (F0485) located in Appendix E8.37.

WI 670 Management of tests and inspections

The *Contractor* allows the *Project Manager* access at all times to carry out any tests and inspections. The *Contractor* shall allow for all these activities in the programme.

WI 675 Covering up completed work

Before any works are covered up, the *Contractor* provides reasonable notice to allow the *Project Manager* and/or the *Supervisor* to inspect the works before they are covered up. If the *Contractor* does not provide reasonable notice the *Contractor* uncovers and recovers such work if instructed by the *Project Manager* at no cost to the *Employer* and the *Project Manager's* instruction is not a compensation event.

WI680 Testing and Commissioning

The *Contractor* undertakes all testing and commissioning of all installations incorporated into the *works*.

Testing and commissioning shall be in accordance with the requirements of the relevant specifications and as set out in the Works Information.

An Inspection and Test Plan is provided by the *Contractor*, describing how the *works* will be inspected and tested at the factory, during the works and on completion of the *works*. The inspection and test plan shall include testing of the interfaces.

Inspection check sheets and inspection reports shall be produced for all factory and site inspection and submitted for acceptance.

Test specifications shall be produced for all factory and site tests and submitted for acceptance. The test specification shall include the following as a minimum:

- i. Scope
- ii. Equipment/ system to be tested
- iii. Competence requirements for tester
- iv. Test equipment required
- v. Method of testing
- vi. Measurements/records to be taken
- vii. Expected results

viii. Pass/Fail criteria

ix. Access requirements

Test reports shall be submitted. Type test reports are to be signed by the tester, and reviewed and approved by the relevant engineer within the *Contractor's* design team.



WORKS INFORMATION

WI 800

MANAGEMENT OF THE WORKS

CONTENTS

WI 805	The Contractor's Representative
WI 810	Progress Meetings
WI 815	Reporting
WI 820	Work Plan
WI 825	Daily Log
WI 830	Contractor's Proposals to change the Works Information
WI 835	Geological Records
WI 840	Record Drawings
WI 845	Risk Management
WI 850	Accounts and Records of Defined Cost
WI 855	Procurement Procedures
WI 860	Computer Set-up and Electronic Data Transfer
WI 865	Project Team
WI 870	Communications
WI 875	Labour and Plant Returns
WI 880	Key person succession plan
WI 885	Contractor's Resource Plan

WI 805 The *Contractor's* Representative

WI 805.1 Site Management and Supervision

The *Contractor* provides full time experienced and competent site management and supervision staff accepted by the *Project Manager* on the Site at all times when the *Contractor* is carrying out works.

The *Contractor* does not replace any accepted site management or supervision without the prior written approval of the *Project Manager* and replaces them with site management or supervision accepted by the *Project Manager*.

The *Contractor* removes any site management or supervision from the Site if the *Project Manager* reasonably believes that the Site management or supervision does not provide the management and quality control required for the works.

Any person employed for the works by the *Contractor*, who in the opinion of the *Project Manager* is incompetent or who acts in an improper or unsafe manner, shall be removed from the Site. Such persons shall not return to the Site for employment in any capacity without the permission of the *Project Manager*.

The *Contractor* appoints a Contractor's Representative to act on behalf of the *Contractor* throughout the project.

As part of the *Contractor's* mobilisation duties the *Contractor* understands the structure and format of the *Employer's* project team, in particular the appointment of the *Project Manager* and *Supervisor* and any delegations thereto and submits to the *Project Manager* within 4 weeks of the *starting date* for acceptance a communication plan such that there are clear lines of communications between the *Contractor* and the *Project Manager*.

The communication plan is to facilitate:

- Receipt of instructions
- Understanding of levels of authority to receive instructions by the *Project Manager* or *Supervisor*
- Receipt of other contractual communications

The *Contractor* ensures that their project team and Site organisation are established and changed as necessary to facilitate effective communications between the *Employer's* representatives.

WI 805.2 Project Execution Plan

Within 2 weeks of the *starting date*, the *Contractor* submits for acceptance a Project Execution Plan (PEP) which sets out in detail how the *Contractor* plans to provide the works to achieve Completion on or before the *Completion Date*, within the forecast total of the Prices and in accordance with statutory requirements and the requirements of the Works Information.

The PEP is based on the *Contractor's* own procedures and includes additional topics agreed between the *Project Manager* and the *Contractor*. The PEP describes the interrelationship of the plans and procedures requested by this and other parts of the Works Information.

WI 810 Progress Meetings

The *Contractor* and *Project Manager* have joint weekly progress meetings. These meetings include reviews on:

- health and safety,
- progress,
- environment,
- cost,
- risk,
- performance,
- quality,
- design,
- Requests for Information (RFIs) and Technical Queries (TQs)
- Subcontracting,
- Third party liaison, and
- special subjects as the need arises.

The *Contractor* and Subcontractors must attend these meetings as required by the *Project Manager*.

The *Contractor* and *Project Manager* agree timing, chair and attendees for the meeting schedule prior to the first progress meeting taking place. Actions from meetings are to be agreed, documented and logged with action/completion dates. Meetings may be combined or re-scheduled with the agreement of the *Project Manager*. The *Contractor* is responsible for taking and distributing minutes of all progress meetings. The meeting minutes shall be submitted to the *Project Manager* for acceptance within 2 days of the progress meeting taken place. The *Project Manager* either accepts or responds with comments within 2 days of receiving the progress meeting minutes.

The *Contractor* holds a weekly Visual Management meeting (format to be agreed with the *Project Manager* within 4 weeks of the *starting date*) where key project issues are discussed and actioned using a Red Amber Green (RAG) process to maintain a high level focus by both *Contractor* and *Project Manager*. This meeting is supplementary to and does not replace normal *Contractor* requirements.

The *Contractor* holds a weekly Site Safety meeting, attended and presented by the *Contractor's* Health and Safety representative and Construction Manager. The *Contractor* invites the *Employer's* Health & Safety representative and Construction Manager (as well as other attendees as decided by the *Employer*). This meeting will be used to attend and observe the *works* and provide updates on safety measures being undertaken.

Other meetings are agreed between the *Contractor* and *Project Manager* as required.

WI 815 Reporting

WI 815.1 Periodic Progress Report

The *Contractor* issues a comprehensive Period Progress Report at the end of each accounting period in line with Reporting Cycles. (Refer to Appendix E8.30). The report focuses on how to improve issues, trending and risk mitigation going forward.

The *Contractor* submits one printed copy and an electronic copy of each form of progress report to the *Project Manager*.

The *Contractor* prepares a Periodic Progress Report for:

- Maintenance Facility Building and Southern Sidings
- Temporary Fit Out Shed

The detailed format of the report shall be agreed with the *Project Manager* prior to the submission of the first Period Progress Report - the submission includes the following as a minimum:

- Executive summary and key issues
- Health and safety, security and loss prevention
- Progress
- Programme narrative and delay analysis as described in WI 500
- Resources (manpower and Equipment)
- Design (including design slip charts) if applicable
- Requests for Information (RFIs) and Technical Queries (TQs)
- Procurement, if applicable
- Commercial
- Construction Documentation & Site Specific Training
- Ground Movement – Monitoring and Control, if applicable
- Risk and opportunity management
- Quality and assurance
- Possessions & Access
- Consents
- Environment activities
- Community and stakeholder relations
- Progress Photographs

Details of key parts of the report are set out in the following paragraphs.

• Executive Summary and Key Issues

This part contains one A3 dashboard, summarising the achievements, key issues, interfaces experienced during the period, a summary of safety statistics, the current commercial position, value of work done and forecast final total of the Prices.

Achievement of Key Performance Indicators shall be reported here.

- **Health and Safety, Security and Loss Prevention**

This part contains a summary of all activities related to health and safety, security and loss prevention such as meetings, instructions, inductions, and special achievements. Safety defects and security breaches are summarised together with a brief description of any lost time due to injury or damage to property and near misses. Safety statistics, accident frequency rates (AFR) including all lost time incidents and RIDDOR reportable incidents in the period and cumulative is also included. Trends are provided together with proposed action to improve safety performance. The fourweekly health and safety information in accordance with WI 1100, is also included within this part of the report.

- **Progress**

This part comprises a narrative report on the progress achieved against that planned in the relevant period, together with explanations of any delays incurred (apportioned by categories) and details of plans on how the delays are recovered. Progress in the period is reported against the latest Accepted Programme on a physical percentage complete basis by discipline and overall and on schedule performance indicators (SPI) measured against the latest accepted performance schedule baseline.

A project management dashboard displaying key performance indicators pertinent to the *works* are included in the reports showing RAG status against all disciplines. The report describes the work which is on the critical path/s, showing the amount of remaining work, the movement of time risk allowances and float in the period and that remaining.

- **Programme Narrative and Delay Analysis**

This part identifies the current Accepted Programme and summarises the information contained on each programme which the *Contractor* submits for acceptance. The *Contractor* comments on the progress of all aspects of the *works* including design, procurement and construction as well as the delay analysis described in WI 500.

Special emphasis is given to issues notified, or to be notified, as early warnings which may delay Completion, Sectional Completion or delay achievement of a Key Date.

- **Resources (Manpower and Equipment)**

This part shows in tabular and graphical form the planned and actual man hours (by discipline and trade), including Subcontractor manpower, deployed for each activity during the period and cumulatively. A narrative describes any items where a shortfall of manpower is affecting progress.

Productivity factors are apportioned by category, as rolled up from the analysis at the weekly work plan/last planner review.

The *Contractor* reports workforce turnover in the period and cumulatively, and the measures being taken to recover and maintain the planned workforce level.

The *Contractor* should report in accordance with S106, Planning Conditions and Responsible Procurement (refer Appendix B5.3), including the level of adherence to the use of Local Labour as described by London Borough of Newham, which can be found in the S106.

This part also schedules the actual equipment used and its performance versus that planned. Equipment breakdowns impacting progress are reported and measures being taken to recover lost production are identified.

- **Design**

This part describes the status of the design and engineering of the *works*. The percentage status of completion of each drawing and document proposed, the percentage of drawings completed and the number and category of drawings to be completed is recorded. The *Contractor* identifies the progress on preparation of the assurance deliverables as outlined in their CTAP.

Progress of design is shown graphically by the use of slip charts derived from the Primavera P6 programme/programme for acceptance and reports the status of design relative to the critical path and measures being taken to address any slippage.

- **Requests for Information (RFIs) and Technical Queries (TQs)**

This part describes the status of Requests for Information (RFIs) and Technical Queries (TQs), highlighting those which are critical.

- **Procurement**

This part describes the status of procurement (including procurement of Subcontractors) and purchasing, including delivery of all Equipment, Plant and Materials. It highlights those items that have long delivery times or where the procurement dates have limited float. A full list of long lead items is to be recorded and logged.

- **Commercial**

Compensation events:

The *Contractor* provides a summary and the current status of all compensation events in the period of report, and to date including any requests for quotations and any requests for Information.

Early Warning matters:

The *Contractor* provides a summary of all early warning matters raised in accordance with clause 16 of the *conditions of contract* giving the date raised, date of any risk reduction meeting held and a reference to records made by the *Project Manager*.

Cash flow forecasts:

The *Contractor* submits a cash flow forecast broken down to correspond with each activity within the Activity Schedule incorporating all the latest time and cost adjustments. All forecasts are submitted in electronic format via the CAMS. The *Contractor* provides a detailed bottom up estimate to activity level or accurate performance measurement of the work done.

Value of Work Done (VOWD) Forecasting:

The *Contractor* provides the forecast total of the Prices by financial year and period aligned with the latest programme submitted for acceptance. The Contractor provides a detailed narrative explaining any variances in the forecast phasing from the previous Periodic Progress Report submitted.

The *Contractor* must provide a separate VOWD submission for TFOS.

Risk drawdown:

The *Contractor* provides details of realised risk and associated costs against the *Contractor's* risk allowance.

- **Construction Documentation & Site-Specific Training**

ITPs, etc. with forecast submission dates and corresponding planned start on site dates.

Status of construction documentation

Site specific training including requirements, bookings and number completed.

- **Ground Movement – Monitoring and Control**

This part presents an overview of the status of Defects and condition surveys, of monitoring instrumentation, of the movements experienced in the period and to date, and details of any breaches of performance criteria and mitigation measures implemented.

- **Risk and Opportunity Management**

The *Contractor* identifies in this part of the period progress report, the top ten risks and opportunities to the *works* as assessed using the risk scoring scheme (post mitigated). This part addresses the following issues in relation to each of the identified ten risks and opportunities:

- Control measures for the risks identified and the cost of mitigation
- Opportunity implementation actions and the benefits
- Status of actions
- Action completion dates and owners
- Any further issues raised/residual risks

A narrative is provided in this part of the period progress report for each risk identified.

- **Quality and Assurance**

This part details:

- the latest revision of the *Contractor's* Project Quality and Assurance Plans
- The progress of the assurance documentation required as part of the TAP.
- A summary of changes to the *Contractor's* Project Quality and Assurance Plans
- Progress on safe system of *works*, procedures, inspection and test plans
- Any concerns or difficulties in providing certification or quality records to demonstrate the compliance of completed work.
- A summary of the assessment and monitoring of suppliers and Subcontractor quality systems that have been carried out
- Summary of recent ongoing and planned quality audits
- Status of all NCRs.
- Status of all corrective action requests
- Any other significant quality issues

- **Possessions & Access**

This part details:

- Possessions and access sought and the reasons for requirement.
- Status of Possessions and access sought.
- The actual Possessions and access used against the planned with reasons for not achieving the planned.
- Any Possessions and/or access cancelled, reduced or extended by the *Employer*.

- **Consents**

the identification of issues, risks and opportunities associated with consents.

- **Environmental Activities**

This part details:

- The Environmental Data as set out in WI 1100
- Details of any environmental incidents or near misses that occurred and, how the issue was resolved (i.e. what corrective action was implemented)
- Details of any interaction with environmental regulators.

- **Community Relations and Stakeholder Management**

This part details:

- the latest revision of the *Contractor's* Project Communications Plan
- the latest revision of the *Contractor's* Relations Management Plan
- records of all *works* notifications issued and requirements for further notification
- records of all complaints received and actions taken, lessons learnt and improvements planned
- records of all community relations initiatives made and contacts made

- **Progress Photographs**

The *Contractor* is to include photographs recording the progress of the works along with the following information:

- date of photograph
- brief description / location

WI 820 Work Plan

Please refer to WI 510.2

WI 825 Daily Log

The *Contractor* submits a daily log/shift report to the *Employer* by 09:00 am following each shift worked detailing:

- Resource planned / resource actual (labour and equipment – see WI875);
- Planned *works* / work completed;
- Safety and plant incidents;
- Work stoppages / delays and their causes;
- Key programme times, milestone performance and work remaining

The format of the daily log shall be agreed with the *Project Manager* and the log(s) made available by electronic data transfer.

WI 830 *Contractor's Proposal to Change the Works Information*

Any proposal submitted by the *Contractor* to the *Project Manager* to change the Works Information contains:

- A detailed scope of the change, clearly identifying the specific sections of the Works Information which are proposed to be changed;
- A schedule detailing how the proposed change is to be effected, including activities and anticipated durations for any resulting design changes to be undertaken by the *Contractor*, additional or revised consents, additional or revised concessions, amended Completion Date(s), amended Key Dates and other relevant information;
- A proposed revised programme if the programme for the remaining work is affected; and
- Proposed changes to the Prices.

The *Project Manager* replies in accordance with the *conditions of contract*. The reply is:

- A rejection of the proposal; or
- A request to submit more information, stating details of the information required; or
- A request to submit a revised proposal to suit the *Project Manager's* broader considerations, stating details of the amendments; or
- An acceptance of the change to the Works Information which arises from a fault of the *Contractor* and therefore the Prices, the Completion Date(s) and the Key Dates are not changed; or
- An acceptance of the proposal.

The costs of assessment and review of a rejected proposal submitted by the *Contractor* to change the works information, which are incurred by the *Project Manager* and *Employer* and Others shall be recoverable from the *Contractor*.

The *Project Manager* may extend the time allowed for the *Contractor* to submit a revised proposal and the *Contractor* may extend the time for the *Project Manager* to reply to any proposal or revised proposal if the *Project Manager* and the *Contractor* agree to the extension before the submission or reply is due.

The *Contractor* ensures that the submission and review of the proposal to change the Works Information does not adversely affect the Completion Date(s) or Key Dates or Prices.

The *Project Manager* is under no obligation to accept any proposal or revised proposal and does not need to give any reasons for doing so or not doing so. The emphasis on any proposal is on a cost, schedule or risk reduction without impacting on safety.

Acceptance of the proposal by the *Project Manager* is deemed to be implementation of a compensation event under the provisions of clause 65 of the *conditions of contract* (as amended)

WI 835 *Geological Records*

The *Contractor* observes and records the geological materials excavated or investigated during the course of the *works*. Such records are made of all excavations of whatever nature.

These records describe the nature of the materials at the base and in the sides of any excavations, the nature of the strata, the levels of the strata boundaries (lithology, weathering grades, nature of jointing etc.), location and quantities of groundwater inflow, groundwater levels and details of overbreak and any unanticipated movements of the ground or groundwater.

The records are made by a person with an appropriate knowledge of geology and descriptive terminology for the strata and shall be in accordance with BS 5930- "Code of practice for site investigations" 1999 and the ICE Yellow book "Specification for ground investigation" published by Thomas Telford, London.

Records are made of the results of any borehole drilling, exploratory probing, in situ or laboratory testing, instrumentation or ground treatment carried out from the ground surface. Typical details related to any exploratory probing carried out both prior to or after any ground treatment and include the core descriptions, laboratory test results, penetration rates, loss of drill fluids, water outflows, water pressures, grout pressure, grout quantities and permeability test results, etc.

Two copies of the records are submitted to the *Project Manager* not later than 24 hours after the record has been taken, in a format accepted by the *Project Manager*. The record is signed off as being agreed by representatives of the *Contractor* and by the *Supervisor*.

Summary record drawings of the encountered geology, ground conditions, borehole drilling, exploratory probing, ground treatment and installed instrumentation shall be produced by the *Contractor* for each cutting, heading, and deep excavation at completion of the relevant part of the *works*. The drawing(s) is signed off as being agreed by representatives of the *Contractor* and by the *Supervisor*.

WI 840 Record Drawings

The *Contractor* keeps a set of all drawings used for construction or fabrication, and associated data and specifications, on the Site marked up to record accurately all instructed changes during construction, and non- chargeable clarifications following responses to technical queries.

Drawings and specifications are to be marked up on a continuous basis by the *Contractor* in a format acceptable to the *Project Manager*. The *Project Manager* has access to these Site records at all times.

Within 2 weeks of all work shown on a specific drawing, associated data or specification being completed, the *Contractor* produces the as-built drawings and other information which are clearly marked "As Built". The *Project Manager* may audit the record information. For this package these drawings may be in the form of 'red line' mark-ups of the designer's drawings. The drawings need to be issued to the *Employer* as CAD files as well as PDF via the *Employer's* CAMS.

The *Contractor* includes or references these as-built drawings in the documentation to be provided to the *Project Manager* or Principal Designer (as applicable) for inclusion in the health & safety file.

WI 845 Risk ManagementWI 845.1 Requirements

The *Contractor* co-operates with the *Project Manager*, the *Employer*, and with Others in providing information needed in connection with risk management of this contract.

WI 845.2 Definition and Objectives

The *Employer* has adopted the following definition for risk:

“an uncertain event or set of circumstances that, should it occur will affect (positive or negative) the projects objectives”

The *Employer's* risk management approach aims to ensure that:

- Risks are systematically identified, understood, prioritised and managed by the correct parties and individuals in a consistent and efficient manner;
- Assurance is provided to the *Contractor*, *Project Manager*, *Employer* and other interested parties and stakeholders that risks are understood and managed;
- That all parties are fully aligned with and demonstrably meet the requirements of the *Employer's* risk management framework.

It is emphasized that the risk management process is an ongoing activity comprising regular review and the incorporation of measures so that contract risks shall be fully mitigated or to As Low As Reasonably Practical (ALARP) status as appropriate.

Having conducted a risk reduction meeting or other risk review, the *Project Manager*, with the *Contractor's* co-operation, ensures that the Risk Register is updated and provides the following information:

- Description of risk
- Probability of risk occurring
- Impacts if risk occurs (schedule and cost descriptions and level)
- Mitigation strategies and actions with dates
- Risk owner.

WI 845.3 Interface with other risk processes

The information developed under this section of the contract does not replace the Risk Register referred to in the conditions of contract and maintained by the *Project Manager* in relation to the early warning process. Nor does it relinquish or replace the requirement of the *Contractor* or *Employer* of notifying early warnings and holding risk reduction meetings.

The information developed under this section of the contract is not affected by nor does it affect the requirements of other risk assessments and risk based processes required for the delivery of the works, e.g.:

- Requirements to meet CDM regulations
- Geotechnical Risk Assessment
- Safety Hazards

However, such processes may make use of the outputs produced, and moreover risks identified through such processes that would adversely affect the achievement of the project objectives shall be incorporated.

WI 845.4 Contractor's Responsibility for Risk Management

The *Contractor* submits, within 4 weeks of the *starting date*, for acceptance by the *Project Manager*, a Risk Management Plan. The *Contractor* liaises with the *Project Manager* during this time to identify and agree the parameters to be used in the identification and evaluation of risk.

The focus of the Risk Management Plan should be reduction of risk exposure. It should be results-oriented and not place undue weighting on analysis at the expense of action. In conjunction with clause 16 of the conditions of contract the *Contractor* identifies any changes or newly identified risks to the *Project Manager*.

Most notably the *Contractor* must ensure that risks that could impact the *works* are systematically identified, understood, prioritised and managed whilst being continually reviewed and communicated in a collaborative manner with the *Project Manager*, including but not limited to:

- Facilitation of risk workshops;
- Participating in risk reviews and assessments;
- Providing information to support detailed quantification of risks;
- Formulating mitigation strategies to manage risk;
- Taking responsibility for the management of risks through the execution and supervision of risk controls and mitigation action plans;
- Maintaining and keeping risk data and records up to date;
- Making the *Project Manager* aware of any significant changes to existing risk information including scoring, new emerging risks, status, etc.;
- Providing risk information to the *Project Manager* when requested.

The *Contractor* shall:

- Appoint a Risk Lead who is suitably experienced and knowledgeable on risk management (CV will require acceptance by the *Project Manager*);
- Define clear accountability for the management of risk within the *Contractor's* organisation and for the maintenance of the risk management process;
- Ensure that risk management is carried out fully within their teams and that key staff have an appropriate level of competency and training in risk management and understand their responsibilities with regards to risk management;
- Make available specialist resource to undertake specialist risk management activities at the request of the *Project Manager* to support project delivery for e.g. quantified schedule risk analysis if required;
- Provide input to both regional and programme level risk management activities at the request of the *Project Manager*.

The *Contractor* identifies to the *Project Manager* any risks which have been realised and become issues.

The *Contractor* reports risks and provides risk related information in accordance with the requirements of this contract and their Risk Management Plan.

The *Contractor* submits an updated version of their Risks and Issues registers, as separate documents, for acceptance by the *Project Manager* with the 4 weekly period progress report or earlier as required by the *Project Manager*.

WI 845.5 Risk Review Meetings

The *Contractor* is required to meet with the *Project Manager* not less than once in each four week period to review the risk register. The *Contractor* provides the appropriate level of representation at the meetings to review and action the identified risks and notified early warnings.

WI 850 Accounts and Records of Defined Cost

WI 850.1 Commercial Administration

The *Contractor* submits, to the *Project Manager* for acceptance, within 4 weeks of the *starting date*, procedures to be implemented by the *Contractor* to provide maximum confidence that the contract will be properly administered and that the *Employer* will obtain value for money.

The procedures include detailed measures on how the *Contractor* intends to:

- Administer purchase orders, subcontracts and service orders in due time;
- Make timely payments to Subcontractors and suppliers;
- Maintain a cost and commitment ledger and reporting system;
- Monitor Equipment on and off hire dates;
- Control utilisation of Equipment;
- Maintain and review an Equipment register;
- Monitor, check and record deliveries of Plant and Materials;
- Provide Equipment and labour returns to the *Project Manager* on a weekly basis;
- Verify working hours claimed for all people involved in Providing the Works;
- Operate a labour control system based on time-sheets authorised by Site staff and coded according to the agreed code of cost allocations;
- Control Materials wastage, reconciliation and management;
- Code all costs in accordance with the agreed coding system by each activity and by each main element of the Schedule of Cost Components (People, Equipment and Plant and Materials etc.);
- Code compensation events and Disallowed Costs in accordance with the agreed coding system; and
- Carry out any other procedures to ensure that this contract is being adequately administered.

The *Contractor* shall note that any applications for payment and invoices requiresubmission in line with the *Employer's* WBS Structure.

The *Contractor* must provide a separate VOWD submission and WBS for TFOS.

WI 850.2 Accounting Procedure

The *Contractor* submits, to the *Project Manager* for acceptance, within 4 weeks of the *starting date*, the procedures by which the *Contractor* intends to carry out the accounting for all aspects of Defined Cost.

WI 855 Procurement Procedures

WI 855.1 General

The *Contractor* submits detailed procurement procedures, to the *Project Manager* for acceptance, within 4 weeks of the *starting date*. The procurement procedures defines the processes leading to the procurement of Equipment, Plant and Materials, Subcontractors and services including the acceptance by the *Project Manager* of Subcontractors and suppliers in accordance with the accepted Subcontract Procurement Plan. The *Contractor* shall comply with the accepted procedure.

The procedures as a minimum provides the following:

- a detailed Procurement Plan identifying purchase orders, subcontracts and service orders to be placed;
- procedures for the procurement of Plant and Materials, Equipment, subcontracts and services which will achieve best value;
- identifying means of achieving and verifying compliance with the TfL Responsible Procurement Principles;
- procedures for the procurement of Plant and Materials, Equipment, subcontracts and services using accurate documentation and latest information;
- procedures for the procurement of Plant and Materials, Equipment, subcontracts and services using contract conditions which adequately reflect the *Contractor's* obligations under the *conditions of contract*;
- control systems to ensure purchased Plant and Materials are supplied to the specified quality and are delivered to Site at the agreed times; and
- procedures for ensuring that Plant and Materials and Equipment received on Site are properly stored, cared for, and issued for construction.

The *Contractor's* procedures shall also include the details specified by London Borough of Newham as found in the S106 (Refer to Appendix B5.1).

WI 855.2 Responsible Procurement Principles

Refer to WI 1230 for further details regarding Responsible Procurement.

For the purposes of the Contract, the local region is considered to be the Newham region of East London.

The *Contractor* complies with the Section 106 local labour requirements (Refer to Appendix B5.1).

WI 860 Computer Set-up and Electronic Data Transfer

WI 860.1 Computer Hardware

The *Contractor* establishes a computer network to service the contract and makes access to certain central records available to the *Project Manager* and Others from the *Project Manager* or *Employer's* teams as notified by the *Project Manager*. The *Contractor* and *Project Manager* provide computer hardware and software for use by their own personnel.

WI 860.2 Data Transfer Methods

All data transfer shall be in accordance with DLRL BIM Standard, DLR-ENG-STD-

ES104(Refer to Appendix D7.5 Standards). BS EN ISO 19650 is an acceptable equivalent to PAS1192.

WI 865 Project Team

The *Contractor* issues within 2 weeks from the *starting date* an organogram detailing the following information:

- all Key Persons
- reporting lines
- names of staff allocated to roles
- Key Subcontractors

The organogram shall be reissued when any changes are made.

The *Contractor* shall notify the *Project Manager* with the contact details (including e-mail addresses and mobile phone numbers) of all key people set out in the organogram (as amended from time to time).

The *Contractor* establishes and deploys the *Contractor's* Key Persons and all other necessary support staff and resources in order to meet the Contract Programme.

WI 870 Communications

WI 870.1 General

The *Employer's* CAMS will be used as the method for communication. No variance from the agreed lines of communication will be permitted without the agreement of the *Project Manager*

The *Employer* is responsible for providing or procuring the provision of the necessary licenses and initial training required by the *Contractor* in order to utilize the CAMS. Twelve accounts will be set up for the *Contractor*. The *Contractor* confirms the staff that will require training, together with their names and disciplines.

With the exception of certain defined communications (including Requests for Information, Early Warning Notifications and Notification of Compensation Events), all communications from the *Contractor* to the *Project Manager* shall be submitted under cover of a Contractor's Communication.

Only one subject shall be included on any one Contractor's Communication, which shall be accurately titled accordingly.

All correspondence between the *Contractor* and other parties appointed or under the control of the *Project Manager* shall be through the *Project Manager* unless otherwise agreed.

WI 870.2 Document Management

The *Employer* shall provide the *Contractor* with access to a common data environment (CDE) for the management of formal communications and deliverables submissions. The operating EDMS system shall be ASite Adoddle. The *Employer* shall be responsible for support and maintenance including database administration

The *Employer* data control manager shall manage the system user accounts.

The *Employer* shall provide the *Contractor* with training of the key nominated persons for the required roles within CDE.

The *Contractor* shall nominate users for these systems and notify the *Project Manager* immediately of any changes necessary to user accounts to avoid mis-use of the systems.

The *Contractor* shall be held liable for any mis-use of these systems by its nominated users. The *Employer* shall provide training in the use of the systems to the *Contractor's* nominated representatives on a 'train the trainer' basis. It shall be the responsibility of the *Contractor* to train any further users.

The *Contractor* shall nominate an interface point within the *Contractor's* team to execute the functions required (including agreeing appropriate work and task breakdown structures, distribution lists for notices and communications).

The *Contractor* shall comply with the *Employer's* Category 1 Standard S1760 "Standard Method and Procedure and Common Data Environment" and *Employer's* information and document control procedures and protocols (refer to Appendix D7.99).

The *Contractor* shall develop a day-to-day document control methodology in collaboration and compliance with the *Employer's* document management procedures.

The *Contractor* is to provide adequately competent and experienced resources to ensure the requirements on the *Employer's* document controls procedures are compliant with the *Employer's* EDMS protocols.

WI 870.3 Stakeholder Communications and Engagement

The *Contractor* shall identify and appoint a member of their team responsible for stakeholder engagement during the *works*. This person shall have relevant experience to undertake the role which is referred to as the stakeholder engagement manager.

The *Contractor* shall within 2 weeks of the starting date, submit for acceptance, a Community Relations Management plan. The *Contractor* shall liaise with the *Employer's* Stakeholder Communications Representative to develop the plan and agree the contents.

The *Contractor* shall support the *Employer* to take reasonable steps to engage with all residents and businesses affected by construction of the *works*. The *Contractor* shall ensure that occupiers of nearby properties are informed in advance of the location, nature and duration of *works* taking place. Should access be required onto third party property, the *Employer's* Stakeholder Communications Representative and *Project Manager* shall be informed, and any necessary agreements made with the property owner. In the case of work required in response to an emergency, local residents shall be advised as soon as reasonably practicable that emergency work is taking place.

The *Contractor* shall maintain a complaints register, recording the nature of any complaints or enquiries concerning the *works* and any action taken against them. Both formal and informal complaints shall be included in the complaints register, be they made verbally, in writing, or via any other method.

The *Employer* will supply regular briefings for inclusion in the *Contractor's* toolbox talks detailing accepted responses to queries should the Site team be approached by members

of the public. If there is any doubt, members of the public should be directed to TfL customer services with any questions on 0343 222 1234. Alternatively they can visit www.tfl.gov.uk/contact

The *Contractor* works with the *Employer's* Stakeholder Communications Manager to proactively plan, respond to and monitor any stakeholder issues identified. With agreement from the *Employer's* Stakeholder Communications Representative, technical specialists and other individuals within the *Contractor's* team will be made available to meet stakeholders and discuss aspects of the project.

The *Contractor* works with the *Employer's* project team to keep stakeholders updated on all commitments made concerning the project.

The *Employer* retains responsibility for engaging with elected politicians including local councilors, Members of Parliament and Assembly Members. The *Contractor* will notify the *Employer* if they are contacted by a politician concerning the *works*, and will not respond without the consent of the *Project Manager*.

WI 870.3.1 Media

The *Employer* will retain responsibility for representing the project within the media. The *Contractor* and associated Subcontractors shall not undertake any media activity, including trade media, without prior acceptance from the *Employer*.

All filming of the site for external or internal use must have prior acceptance from the *Employer*. However, photography of the Site is permitted without any additional approvals to document the status and progress of the *works*.

The *Contractor* shall provide photographs and/or video files to suitably document the ongoing and completed *works*, as per the requirements WI 1520 Management System Records and found within the requirements for the Periodic Progress Report (WI815.1) and the Log Shift Report (WI825). The *Employer* will have full access to use these images in whichever way the *Employer* chooses. The images shall be suitable for sharing with the media, display online, or inclusion in other external and internal communications.

WI 870.3.2 Notification Letters

Notification letters shall be sent to residents and businesses impacted by the *works*. The *Contractor* is requested to support this process.

Notification letters will be drafted by the *Contractor* and reviewed by the *Employer* and *Employer's* Community Relations department. The letters should include information about what work is taking place, what areas will be affected by the *works*, the dates and times during which the *works* will be undertaken, and the likely impact of the *works* e.g. noise and traffic diversions. The *Employer's* name and branding shall be used on all outgoing notification letters.

All notification letters shall be submitted for review by the *Employer* at least 4 weeks prior to the *works* being undertaken.

The *Contractor* is responsible for the organisation, production, and timely distribution of these notification letters to all relevant parties at their cost.

The *Contractor* ensures that one single notification letter covers all activities in relation to the Beckton DLR Depot. In the event that there are multiple *Contractor's* working on different elements of the *works* simultaneously, the *Contractor* shall co-ordinate the notification letters to ensure that multiple letters are not sent to the same residents at the same time.

WI 875 Labour and Plant Returns

The *Contractor*, in addition to such other returns and reports, notices and the like required under the contract, shall submit the following in a form accepted by the *Project Manager*:

- Daily Labour returns giving the numbers, including trade classifications, of all personnel employed on the Site, including those of Subcontractors, and the number and position of supervisory and administrative staff.
- Details of *works* to be carried out each shift and the names of personnel involved (to be submitted by 12:00 hours on the day before the *works* or 12:00 hours Friday for weekend *works*).
- Incident notification reports for all incidents occurring on Site, in a form to be agreed with the *Project Manager*. All incidents or near hits will be reported using the TfL Incident Line as soon as reasonably practicable and without exception before the end of the shift on which the incident occurred.
- Timesheets are completed by all *Contractor* personnel. These are signed and endorsed by the relevant line manager. The timesheets are kept in a suitable single location within the *Contractor's* offices and be available for regular audit by the *Project Manager*. A weekly summary of timesheets to be submitted to the *Project Manager* by Thursday of the following week. The summary sheet includes a list of all staff working on the Project, the rate being charged, hours expended, and cumulative hours expended.

WI 880 Key Persons Succession Plan

The *Contractor* submits to the *Project Manager* a key person succession plan in accordance with clause X23 for acceptance within 2 weeks of the *starting date*. A reason for not accepting the key person succession plan is that it does not give sufficient confidence to the *Project Manager* that replacement key persons have the appropriate competencies to carry out the role, or will be properly inducted and their workload handed over to them in a structured and ordered fashion. The *Project Manager* accepts all replacement staff and closely monitors their performance during a 3 month probation period. The *Project Manager* accepts these staff only when satisfied that they have completed the probation period and met the previously agreed objectives.

The *Contractor* includes, as a minimum, in his Key Person Succession Plan the following:

- Details of any planned replacement of Key Persons
- Processes for handing over duties, including length of shadowing time. The *Contractor* is to provide and 4 week handover period.
- Submission of CVs,
- Details of how the *Contractor* proposes to effect any replacement such that there is no impact on the *Contractor* providing the Works.

WI 885 Contractor's Resource Plan

Requests for additional resource (i.e. those not identified on the resource plan) are submitted to the *Project Manager* for acceptance with a narrative as to why the role is required. In the event that new staff is required following a compensation event, this will be identified through the quotation submission process.

The cost for any additional resource employed by the *Contractor* without being identified in the resource plan and/or being accepted by the *Project Manager* may be disallowed.



WORKS INFORMATION

WI 900

WORKING WITH THE
EMPLOYER AND OTHERS

CONTENTS

WI 905	Sharing the Working Areas with the <i>Employer</i> and Others
WI 910	Co-operation & Coordination
WI 920	Collaboration
WI 925	Authorities and utilities providers
WI 930	Community Relations and Publicity

WI 905 Sharing the Working Areas with the Employer and Others

WI 905.1 General Requirements

Below is a list highlighting key interfaces and interfacing projects, please note this list is not exhaustive. The *Employer* maintains this list and amends the detail as required during the *works*;

Key Interface	Interest
DLR Operations	All <i>works</i> shall be in accordance with DLR Processes, Project Plans & Standards (Appendix D7).
DLR Maintainers	All <i>works</i> shall be in accordance with the WoRM planning procedures, and all <i>works</i> to be coordinated with DLR Maintainers, current franchisee: Keolis Amy Docklands (KAD) via possession meetings. Maintainers must always have access to maintain existing assets.
National Grid	Works are adjacent to National Grid (NG) owned land and access to the Site will be over NG land. Compliance with lease/access agreement is required.
Buckingham Group Construction Ltd (BGCL)	The Employer's contractor for the Northern Sidings work. Principal Contractor for worksite 3.
UK Power Network Services (UKPN)	Sub-station upgrade(s)
Other contractors employed by the <i>Employer</i>	Works may be undertaken at Beckton Depot by other contractors and must be coordinated.
Statutory Undertaking	The <i>Contractor</i> shall check utilities drawings and undertake Utilities Surveys.
London Borough Newham	Works will require liaison with Newham Council. Compliance with planning conditions is required.
TfL Highways	Works will require liaison with TfL Highways.
Ringway Jacobs / TfL Highways	Access route to the Southern Sidings area is through the Ringway Jacobs / TfL Highways yard.
AECOM	Principal Designer for the Beckton Depot Expansion Programme
CAF	Principal Contractor for the Rolling Stock and will be manufacturing the new trains
Arcadis	Designer of the Maintenance Facility Building (MFB)
Sella Controls	SCADA Contractor

Telent	Telecommunications Contractor
CNL Software	Telecommunications Software Contractor
Signalling	ICONSYS
Shore supply	Brecknell Willis
TREND	Building Management System
Neuero	Train Lifting system
HIF Contractor (to be appointed)	The <i>Contractor</i> shall liaise with the HIF Contractor during the TFOS decommissioning phase

Some operations not forming part of the *works* may be carried out within or adjacent to the Site by Others under separate arrangements with the *Employer*.

The *Contractor* exercises the duties of Principal Contractor in accordance with the CDM Regulations 2015, including in respect of:

- co-operation with (including access for Others);
- ensuring all contractors and Others co-operate on and outside the Site; and
- ensuring the safety of their workforce and Others.

The *Contractor* ensures that the progress of the *works* is not compromised.

The *Contractor* is responsible for the co-ordination of the *works* with the activities of Others on the *Site* in respect of programme and technical interfaces. Failure to demonstrate this within the programme may give grounds for non-acceptance by the *Project Manager*.

Where the *Contractor* is not the Principal Contractor as set out in the CDM Regulations 2015 for a particular area within the Site, the *Contractor* provides all necessary information required by the Principal Contractor for that area in order to ensure the safety of the *works*, and in order to comply with the CDM Regulations 2015.

Any communication required under this contract from the *Contractor* to Others is copied simultaneously to the *Project Manager*, unless otherwise stated in the Works Information.

WI 905.2 Operations / Maintenance

Keolis Amey Docklands (KAD) is responsible for the maintenance of the stations and the existing rail infrastructure across the DLR network, and its operatives may at any time require access into any area of the infrastructure in order to ensure the reliability of the infrastructure.

KAD is required to carry out modifications, planned and unplanned maintenance, and remedial *works* to assets throughout the area for which it is responsible, and specifically to any plant or equipment in the event of adverse movements caused by construction activity. Where applicable, the *Contractor* shall co-ordinate the *works* with KAD activities.

The *Contractor* may be required to undertake surveys to ensure *works* design integration and will make access arrangements direct to KAD whilst notifying the *Project Manager* of the date access is granted.

The *Contractor* is to take all steps to minimise the impact of construction activities on the Depot operations and co-operate with KAD operational staff in providing safe and alternative routes where necessary.

WI 905.3 Other Works Contractors

Others may be working in or near the project during the construction period, including but not limited to:

- Routine maintainers and emergency maintainers for KAD
- Road works, maintenance and repairs by LB Newham
- Utility works by utility providers
- Other TfL projects and programmes

The *Project Manager*, when made aware, will notify the *Contractor* if other works are scheduled in the vicinity with 2 weeks' notice when possible.

Operations which may require the *Contractor* to share the *Site* with Others include, but are not limited to:

- Maintenance works carried out by KAD and Others
- TfL Projects

The *Contractor* will liaise and co-ordinate on programme and technical interface matters with Others. The *Contractor* will co-ordinate the Works.

The *Contractor* makes suitable allowances within his programme submitted for acceptance for the interfaces with such *Contractor* activities where information is available.

WI 910 Co-operation & Coordination

WI 910.1 Responsibilities

The *Contractor* shall manage their interfaces with any interfacing parties to ensure that their interfaces are aligned with Others.

The *Contractor* shall ensure that they identify and make the *Project Manager* aware of any impacts on Others works with any design changes that might take place on site.

The *Contractor* co-operates with all parties having health and safety responsibilities on or adjacent to the *Site*. The *Contractor* holds regular general co-ordination meetings as specified below, to which the *Project Manager* shall be invited. All Others who share and/or are adjacent to the *Site* will be invited as required.

The *Contractor* regularly liaises with Others as to their actual progress and arranges the delivery schedules for its Equipment, and Plant and Materials accordingly.

Where the *Contractor* is required to use shared areas within or adjacent to the *Site*, the *Contractor* agrees who is to be the Principal Contractor for these parts of the *Site* and shall ensure that the limits of primacy are clearly delineated.

The *Contractor*, as Principal Contractor, must comply with its coordination duties including:

- to organise co-operation between each contractor;
- to co-ordinate implementation by each contractor of applicable health and safety laws; and
- to liaise with the Principal Designer for the duration of the works and share relevant information with the Principal Designer in accordance with the CDM Regulations 2015.

The *Contractor* is aware of and familiar with all works planned by all parties, including the Employer and Others, and understands how these planned works may impact the *Contractor's works* within the Site. The *Contractor*, mitigates against any potential impact from other works by coordinating the *works*, managing the interfaces between the *works* and Others, and managing the programme as Principal Contractor.

Please refer to the Principal Contractor Coordination Plan in Appendix B5.8

WI 910.2 Co-ordination Meetings

When necessary, the *Employer* requires the *Contractor* to attend co-ordination meetings with other TfL contractors and KAD.

In order to be able to co-ordinate the *Contractor's Works* being carried out by Subcontractors and by Others, the *Contractor* arranges regular co-ordination meetings which the *Contractor* will convene with the relevant personnel.

The *Employer* requires the *Contractor* to liaise with and manage co-ordination meetings with any other contractor(s) who need to carry out works that are required for the successful commissioning of the *works*.

WI 910.3 Management of shared access routes

Where shared access / egress routes are unavoidable, each Principal Contractor will be expected to liaise with all other contractors and stakeholders when planning deliveries, waste removal and all other people and vehicle movements.

In the first instance, it is expected that each Principal Contractor will work collaboratively with all other Contractors and stakeholders. Where a clash cannot be resolved at local level then the issue is to be escalated to the *Project Manager* who will decide the priorities.

Any activity that will cause disruption to a shared access route must be planned and agreed by all parties using that access route.

If an access route is used solely by one Principle Contractor, then that Contractor will be responsible for its maintenance. If an access route is used by more than one Principle Contractor, the *Project Manager* will confirm in writing which Principle Contractor will be responsible for the maintenance of the access route. In both instances the Principle Contractor will ensure all relevant duties under CDM are fulfilled.

WI 910.4 Working in another Principal Contractor's demise

CDM responsibilities will remain with the Principal Contractor who has been allocated the work area. Everybody else wanting to work in that area will need to comply with that Principal Contractor's processes, procedures and site rules, including the need for site inductions, PPE requirements etc. This is irrespective of whether the organisation wanting to carry out works holds Principal Contractor responsibilities elsewhere on the project. Access to another Principal Contractor's area is to be requested in writing and with sufficient time for affected Contractors to be able to assess, plan and implement any changes required to meet their CDM duties. All changes will be discussed prior to being implemented at 4 weekly Principal Contractor coordination meetings.

WI 910.5 Operational Track Crossing use

The *Contractor* will be responsible for the management and use of the Operational Track Crossing and will be the Principal Contractor. The Operational Track Crossing Procedure will govern the process for using the Operational Track Crossing during operational hours. Outside of operational hours the *Contractor* will remain the Principal Contractor for the area, however if possessions are taken then the Principal Contractor for the possession will be Principal Contractor.

WI 910.6 Possessions

If a single Principal Contractor is working in a possession, as possession "owner", the responsibility for ensuring CDM compliance within the possession boundary lays with them alone.

If multiple Principal Contractors are to be working within the same possession, provisions must be put in place to ensure coordination between all worksites and the possession owner. Each Principal Contractor will be responsible for ensuring CDM compliance within their designated worksite area.

To ensure coordination Principal Contractors must attend both DLR led possession meetings, the 4 weekly Principal Contractor coordination meetings as well as liaising directly with other Principal Contractors.

Please also refer to WI 250.

WI 920 Collaboration

The *Employer* and the *Contractor* engage with each other in a collaborative manner in a way that is described in BS11000. The objective of this collaborative approach is to facilitate the *Employer* and *Contractor* working more closely together so that the benefits of collaboration and the creation of additional values are achieved and realised by both parties.

The *Contractor* prepares a 'Relationship Management Plan', as envisaged by BS11000, within 4 weeks of the *starting date* that describes how they will work together collaboratively, including with key stakeholders and third party interests, for agreement with the *Project Manager*. Once agreed the parties implement the 'Relationship Management Plan'.

The Contractor will arrange a Lessons Learnt workshop with the Client, select Sub-contractors and Principal Designer within 3 months of Contract Award.

WI 925 Authorities and utilities providers

A number of services may run under, over and adjacent to the site. The *Contractor* liaises with the relevant utilities providers and/or authorities as appropriate in respect of their protection, connection and usage.

WI 930 Community Relations and Publicity

The *Contractor* includes all residents living in close proximity to the Sites in any stakeholder management plans and in any community and publicity activities.



WORKS INFORMATION

WI 1000

SERVICES AND OTHER THINGS TO BE PROVIDED

CONTENTS

WI 1000.1	Temporary Accommodation, Plant and Facilities
WI1000.2	Plant, Tools, Vehicles, etc.
WI1000.3	Hoisting
WI1000.4	Scaffolding
WI1000.5	Water for the <i>Works</i>
WI1000.6	Temporary Lighting and Power
WI1000.7	Temporary Roadways
WI1000.8	Temporary Name Boards, Display Boards etc.
WI1000.9	Temporary Works
WI1000.10	Scheme Sign Boards
WI 1010	Services and other Items to be provided by the <i>Employer</i> for use by the <i>Contractor</i>
WI 1010.1	Services and other Items provided by the Employer
WI 1010.2	Free Issue Materials

WI 1000.1 Temporary Accommodation, Plant and Facilities

The *Contractor* shall provide and erect, maintain and subsequently remove all temporary office accommodation, messing and welfare, storage, sheds, drying rooms, and other facilities within the *Contractor's* worksite area.

The *Contractor* shall provide a minimum of 6no. (or 30% of the total number whichever is greater) desks and chairs within the temporary office accommodation for sole use by the *Employer*.

The *Contractor* shall provide space and service connections for the *Employer's* printing and photocopying facilities.

The *Contractor* shall provide a meeting room within the temporary office accommodation for the sole use by the *Employer*. The *Contractor* shall furnish the meeting room with a meeting table and chairs to accommodate up to 8 people.

The *Contractor* shall provide the *Project Manager* with a proposed layout for the temporary accommodation and facilities and only erects same when accepted by the *Project Manager*.

The *Contractor* shall be responsible for all charges associated with the installation, maintenance, energy, (including all necessary utility and drainage connections of metered supplies), lighting, heating, consumables and everything else required for the temporary accommodation.

The *Contractor* shall make their own applications for temporary supplies from the relevant utility undertaker, including internet connection.

The *Contractor* and the *Project Manager* will carry out a joint inspection to record the meter readings of all relevant locations upon commencement and completion of the use of the supplies.

The accommodation and facilities provided by the *Contractor* shall be of good quality and comply with current fire safety codes and other regulations relating to temporary office accommodation.

The *Contractor* shall re-locate / re-site offices, sheds etc. as is necessary to facilitate any phasing of the works. The *Contractor* shall provide telephone, ISDN, ADSL and fax lines, e-mails, photo-copying for the works and pays all charges connected therewith for the duration of the works.

The *Contractor* shall remove all temporary accommodation and connections within a reasonable time of completion of the works as agreed with the *Project Manager* and shall make good and reinstate all areas affected.

WI1000.2 Plant, Tools, Vehicles, etc.

The *Contractor* shall provide, erect, maintain and remove on completion all necessary plant, tools equipment and vehicles that may be required for carrying out the *works* and pay all charges in connection therewith, including all associated fuel and consumables.

The *Contractor* shall ensure that all static plant have drip trays and that fuelling areas to all plant are bunded.

WI1000.3 Hoisting

The *Contractor* shall provide all facilities required for loading and unloading materials and hoisting where required.

WI1000.4 Scaffolding

The *Contractor* shall provide, erect, maintain and remove on completion all scaffolding, staging, temporary stairs and bridgeways required for the execution of the works, including paying all charges in connection therewith.

The *Contractor* shall ensure that all scaffolding is regularly inspected and 'Scafftags' registers are completed and maintained by the *Contractor*. All installations shall comply with all regulations.

The *Contractor* shall allow access to the *Employer* and the *Project Manager* or any of their agents or consultants onto such scaffolds / temporary stairs and / or bridgeways for the purpose of inspecting the works.

Mechanical Platforms should be utilised wherever practical. All mechanical platforms must carry current test certificates and be operated by qualified personnel. Drip trays must be fitted to platforms and all other mechanical plant operated within the buildings and/or being utilised on finished surfaces.

WI1000.5 Water for the Works

The *Employer* does not provide water for the works.

WI1000.6 Temporary Lighting and Power

The *Contractor* shall provide all temporary power and lighting for the *works* including all temporary wiring, leads and fittings, generators, switchboards, transforming equipment, etc., and all artificial task lighting as necessary for the carrying out the works.

The *Contractor* shall install, protect and operate the temporary lighting and power installations in a manner which complies with current statutory regulations.

WI1000.7 Temporary Roadways

The *Contractor* shall provide and maintain all temporary roads, paths, hard standings etc. on the worksites as are required for the *works* and the *Contractor* shall clear them away once the works are complete.

WI1000.8 Temporary Name Boards, Display Boards etc.

The *Contractor* shall not erect name boards unless permitted by the *Project Manager*.

WI1000.9 Temporary Works

The *Contractor* shall design, provide, install, maintain and remove all temporary works and temporary measures required for the proper carrying out and completion of the works.

The *Contractor* shall notify the *Project Manager* prior to dismantling any temporary works or scaffolding of their intention to dismantle. The temporary works or scaffolding must not be dismantled until the *Project Manager* has given his written approval to do so. Any temporary works or scaffolding dismantled before it is ascertained whether or not it is required for further use shall be re-erected free of charge by the *Contractor* if so directed by the *Project Manager*. The *Contractor* shall provide, maintain, erect, alter, adapt and maintain as necessary all temporary supports, needling, shoring and strutting, etc., required for the proper execution of the works.

The *Contractor* shall remove temporary supports on completion and all work disturbed by this shall be made good and reinstated by the *Contractor* to the *Project Manager's* satisfaction.

The *Contractor* shall pay all fees and charges (including rates and taxes) to Statutory Authorities or other bodies for all temporary works.

WI1000.10 Scheme Sign Boards

The *Contractor* shall only erect a scheme sign board as approved by the *Project Manager*.

WI 1010 Services and other Items to be provided by the Employer for use by the Contractor

WI 1010.1 Services and other Items provided by the Employer

There is existing temporary office accommodation and welfare facilities located in Worksite 3 (Refer to Site information 3.5). The Principal Contractor for Worksite 3 is Buckingham Group (BGCL). The *Employer* can make arrangements with BGCL for up to 12 no. desks within this existing temporary office accommodation to be made available for use by the *Contractor*.

Within one week of the *starting date* the *Contractor* is to confirm whether they require any, and if so the number, of desks within the existing temporary office accommodation.

These facilities will be available until the *Contractor's* own temporary accommodation and facilities are placed or until the existing facilities are to be removed by the Principal Contractor, whichever is the sooner.

The Contractor is to provide all their own IT equipment in using the existing facilities.

WI 1010.2 Free Issue Materials

“Free Issue Materials” means the following materials that will be provided free of charge by the *Employer* to the *Contractor*.

The Switches & Crossings are to be free issued and will include all components within the manufacturers supply limits.

Temporary Fit Out Shed:

The following items will be free issued for TFOS based on the quantities required for the design:

- BS80A Rail
- SV40 Switches & Crossings

Southern Sidings:

[illegible]

Maintenance Facility Building:

[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]		
[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

Spares:

[REDACTED]		
[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

The *Contractor* shall be responsible for the collection of the Free Issue Materials from UK locations. All risk of loss of and/or damage to the Free Issue Materials shall pass to and remain with the *Contractor* from the commencement of the *Contractor* loading of the Free

Issue Materials by the *Contractor* or on behalf of the *Contractor* at the *Employer's* storage depot.

The *Contractor* hereby acknowledges that the property in the Free Issue Materials provided to them by or on behalf of the *Employer* (whether or not incorporated in the *Works*) at no time passes or vests in the *Contractor* and that such Free Issue Materials at all times remains the property of the *Employer*. The *Employer* may retake possession of Free Issue Materials at any time without notice wherever the same may be located. The *Contractor* shall ensure that such Free Issue Materials are set aside and clearly marked as The Property of DLRL. The Free Issue Materials shall not be removed from the compound, the Site or the *Contractor's* premises without the written instruction of the *Employer* except for the purpose of fulfilling its obligations under the Contract. Further the *Contractor* shall not have and shall ensure that no third party shall have a lien on the Free Issue Materials or the *Employer's* property as hereinafter defined) for any sum due to the *Contractor* or such third party or any other person and the *Contractor* shall take such steps as may be necessary to ensure that the *Employer's* title to or possession of the said Free Issue Materials and such *Employer's* property is in no way jeopardised or hindered.

The *Employer* and any persons authorised by it shall have the right at all reasonable times to check and inspect the Free Issue Materials, the *Works* or any part thereof, any goods, materials, equipment or other things which are or have become the property of the *Employer* ("Employers property") and the *Contractor's* record thereof and the right to enter upon the *Contractor's* premises or those of its sub-contractors or its suppliers to carry out such checks and inspections. The *Contractor* shall at all time keep separate account of all the Free Issue Materials and will produce statements on request of the *Employer* giving detailed description and location thereof both before and after the Free Issue Materials has been incorporated in the *Works* or part(s) thereof (as the Case may be) as well as any other information as regarding the *Employer's* property required by the *Employer*."

The *Contractor* hereby agrees to indemnify the *Employer* against loss of or damage to the Free Issue Materials and to the *Employer's* property, during the time it is in the *Contractor's* possession, custody or control (including during delivery to the Site or the Compound). During such time the *Contractor* shall adequately insure and maintain insurance on the Free Issue Materials and to the *Employer's* property for its full replacement value in the name of and for the sole benefit of the *Employer* at the *Contractor's* expense with a reputable Insurance Company approved by the *Employer* against loss and/or damage arising from any cause whatsoever and shall produce to the *Employer* on request copies of the policies of such insurance and evidence of the payment of premiums paid thereon. The *Contractor* shall be responsible for any deductibles or excesses payable under the said policy of insurance."

The *Contractor* shall account to the *Employer* for all of the Free Issue Materials and/or the *Employer's* property taken possession of by the *Contractor* and shall account for any failure to take possession of Free Issue Materials and/or the *Employer's* property as would have been reasonably required to comply with the Contract."

The *Contractor* shall promptly pay to the *Employer* on demand the full value of any of the Free

Issue Materials and/or the *Employer's* property which is not returned or accounted for to the reasonable satisfaction of the *Employer* and the *Employer* shall be entitled to deduct such value from any monies owed to the Contractor or to otherwise recover it as a debt."

The *Employer* shall make the Free Issue Materials available to, and for collection by, the Contractor within eight weeks of receipt by the *Employer* of a written request from the Contractor specifying the quantity and nature of the Free Issue Material required for incorporation into the works. The *Employer* shall notify the Contractor of the confirmed date on which the Free Issue Materials are available and the Contractor will forthwith take possession of the Free Issue Materials so notified.

The anticipated date for availability of the Free Issue Materials to the Contractor by the *Employer* is 1st March 2023.

The Contractor's programme shall include an activity named 'Employer to provide HVI Track Circuits' and shall include the start date of the first required asset and the end date for the final required asset. In addition, the Contractor shall list each HVI Track Circuit installation separately within their programme.

Unless the Contractor gives the *Employer* written notice of incorrect materials, or a shortage in quantity or of damage to the Free Issue Materials within 24 hours of taking possession of the Free Issue Materials the lack of such notice shall be conclusive evidence that the Contractor took possession of the Free Issue Materials so notified to the *Employer*."

Should any issue or defect be found by the Contractor in regard to the specification or the quality of the Free Issue Materials, the Contractor shall report this to the *Employer* as soon as they become aware. All communications with the materials supplier shall be via the *Employer* in all instances.

The Contractor shall deliver free of charge to the *Employer* or as the *Employer* may direct all remaining or surplus Free Issue Materials not incorporated into the works and taken possession of by the Contractor.

The *Employer* does not provide any facilities or services for the use of the Contractor and Others unless included within the Works Information.



WORKS INFORMATION

WI 1100

HEALTH, SAFETY AND
ENVIRONMENTAL REQUIREMENTS

CONTENTS

WI1105	HSE General Requirements
WI1110	HSE Management Systems
WI1115	HSE Competence, Training and Supervision
WI1116	Work Related Road Risk
WI1120	The Construction (Design and Management) Regulations
WI1125	Hazardous Materials
WI1130	Site Rules
WI1135	Documentation
WI1140	Fire
WI1145	Electromagnetic Disturbance
WI1150	Work Related Road Risk
WI1155	(HSE) Supplier Assessment Against TfL Objectives
WI1160	Environmental Requirements
WI1165	BREEAM
WI1170	Sustainable Design and Assessment

WI 1105 HSE General Requirements

The *Contractor* complies with all current safety, health, welfare and environmental legislation and with all current approved Codes of Practice.

The *Contractor* complies with all applicable TfL, DLR and other Standards.

The *Contractor* ensures the provision at all times of a suitably competent health and safety manager to fully implement all the applicable health and safety requirements. The *Contractor* is to provide a CV for all members of the health and safety team in their proposal and ensure that these people once accepted are made available to provide the *works*.

The *Contractor* has explicit policy statements on good Site practice, horseplay, harassment and bullying. Such policies are supported by a confidential complaints procedure accessible to all.

The *Contractor* ensures, through his policies, training and supervision that all personnel are aware of basic requirements including:

- respect for good Site practice and avoidance of horseplay
- respect for other people, including no use of foul, abusive or racist language, no aggressive or violent behaviour, harassment or bullying, no spitting, urinating or defecating on Site
- avoid congregating outside worksites where this could cause concern or disruption.

The *Contractor* ensures that all employees and Subcontractors and suppliers of any tier are made aware of their responsibility for their own safety and the safety of others and for ensuring that the activities they undertake are and do not place others at risk. A banksman/signaller is used for all loading, unloading and lifting operations, for all vehicle movements across the public footway notwithstanding the presence of a dropped kerb, and for all vehicle movements where the vehicle is reversing or the driver's view is restricted. All vehicle entry and exit movements to each worksite are managed using a banksman. The *Contractor* ensures that employees do not enter any areas where they are putting themselves or others at risk in doing so.

The *Contractor* produces, cascades, communicates and circulates health and safety alerts and communications to all levels of the workforce. Records of these being briefed are retained by the *Contractor*.

WI 1105.1 Performance Monitoring

The *Contractor's* health, safety and environmental performance will be monitored by the *Employer* using the HSE Supplier Assessment Tool. The frequency for assessment shall be determined by the *Employer* in accordance with the *works*. The *Contractor* shall participate in the assessment through the provision of information and evidence requested by the *Employer* in respect of the criteria. The results of the assessment will be discussed with the *Contractor* upon completion. If required, the *Contractor* will be asked to prepare an action plan in response, progress against which is monitored as part of subsequent assessments.

WI 1105.2 HSE Meetings

Health, safety and environmental performance and issues shall be an agenda item on all progress meetings held between the *Employer* and the *Contractor*.

The *Contractor* responds promptly if the *Project Manager* requests a meeting with a senior representative from the *Contractor* (typically a director identified as responsible for the works) to discuss any reportable event, adverse trends or other evidence of a serious Non-Conformity with the legislation or health and safety requirements stated in the Works Information.

WI 1105.3 Particular Health and Safety requirements

The *Contractor* considers the following Site hazards identified by the *Employer* in providing the works;

- Working at Height.
- All hazardous materials.
- Contaminated land.
- Any demolition works.
- Working in close proximity to residents, general public & traffic.
- Bi directional movement of trains within a depot environment.
- Wildlife presence.
- Restricted depot environments.
- Buried and overhead services.
- Moving machinery.
- Working alongside live conductor rails.
- Risk of unexploded ordinance.
- Interface with operational staff and construction works.

The above list is not exhaustive and the *Contractor* is to consider Site hazards that are usually associated with working on a construction Site and railway environment. The *Contractor* is to undertake a Site hazard survey prior to commencing works on Site to verify Site Information (refer to Site Information 3.0) and identify any other risks that may affect the works.

WI1105.4 Employer's Peer Reviews

Medium / high risk works are subject to a review by panel members who are subject matter experts. The review is to consider operational, environmental, safety and reputation risks arising from construction works before they commence. The *Contractor* shall support the *Employer* and provide all information necessary for the *Employer's* peer reviews.

Medium (amber) category works include: Complex lifting, significant excavations, piling, possessions, commissioning of signalling or critical assets, non-standard working at height, newsite set up, demolition, heavy civils work and works where multiple medium to high risk activities such as confined space, works requiring mechanical or electrical isolation, work with hazardous materials. Low to medium risk potential to the operational railway or service.

High (red) category works include: Blockades, commencement of tunneling work, major or complex demolition, points and crossing renewal, works where a very high level of

reputational risk exists, works with a medium to high risk potential to the operational railway or service.

The *Contractor* shall give the *Project Manager* a minimum of 12 weeks notice of specific work that fall into the medium / high risk categories.

WI1110 HSE Management Systems WI1110.1 HSE Management System

Unless otherwise agreed with the *Project Manager*, the *Contractor* shall operate a health and safety management system that, as a minimum, meets the requirements contained in OHSAS18001, HSG65 or can be demonstrated as equivalent.

WI1110.2 HSE KPI Reporting

The *Contractor* reports on its own and its Subcontractors' HSE performance to the *Employer* on a periodic basis. The data shall be provided in the format prescribed by the *Employer*. The data at the end of each Reporting Cycle (refer to Appendix E8.30)

WI1110.3 Audit

The *Contractor* provides a risk-based Health, Safety and Environmental audit schedule within 4 weeks of the *starting date*. The reports completed after all audits are provided to the *Project Manager*, for information, within 2 weeks of the audit being completed. The report shall include details of any identified issues and any proposed corrective actions. The report is reviewed jointly by the *Contractor* and *Employer* during periodic HSE progress meetings. The *Contractor* grants access to the *Project Manager* to observe or participate in these audits and to conduct additional independent audits. The *Contractor* provides the facilities and access necessary for these audits to be carried out.

WI1110.4 Inspections

The *Contractor* undertakes regular Health, Safety and Environmental inspections of the Site at a frequency agreed with the *Project Manager* to monitor performance in respect of health, safety and the environment. Completed inspection reports are submitted to the *Project Manager* for information no later than 5 business days following the date of inspection.

The *Contractor* grants access to the *Employer* to observe or participate in these inspections and to conduct additional independent inspections, as they consider appropriate, to provide assurance that the *works* are being carried out in accordance with the contract requirements.

The *Contractor* addresses all actions and recommendations arising from inspections within the agreed timescales, regardless of who has undertaken the inspection.

WI1110.5 Incident Reporting and Investigation

The *Contractor* reports all HSE incidents, accidents and near miss events which occur during the Contract via the TfL's Info Exchange System on 02920 266780 before the end of the shift in which the incident occurred. Similarly, the *Contractor* also informs the *Project Manager* verbally or by text message, before the end of the shift in which the incident occurred.

The *Contractor* shall be provided with a Login and password for Info Exchange at the start of the contract. *Contractor's* employees who will be inputting data to Info Exchange shall receive a briefing on how to input and send data.

The *Contractor* undertakes prompt investigations of accidents and incidents and provides the *Project Manager* with a copy of the initial investigation report, including witness statements, within 24 hours of the incident.

The *Contractor* provides the *Project Manager* with a copy of the final investigation report, including actions to be undertaken and due dates, within five working days of the incident (or such extended period accepted by the *Project Manager* on an individual basis).

The investigation report details as a minimum the following:

- Description of the incident / accident / near miss.
- Immediate actions taken.
- Immediate causes.
- Root causes.
- Actions taken to prevent a recurrence.

All investigation reports compiled by the *Contractor* will be completed to establish root causes and to a level of detail acceptable at the time to the *Employer*. Any comments provided by the *Employer* are addressed by the *Contractor* and an updated report is submitted if required.

The *Contractor* provides any supplementary documentation, information and reports requested by the *Project Manager* and/or the *Employer* as part of an investigation to an agreed timescale.

The *Contractor* shares lessons learnt from the incidents with the *Project Manager* and/or the *Employer* and other *Contractors* on site.

The *Contractor* formally submits an incident tracker to the *Project Manager* on a 4 weekly basis. This includes details of incidents, dates and times, type of incident, area of the site it occurred, IRF number, part of the body affected, summary event, cause, trade skill of employee affected, remedial actions and final recommendations.

The *Contractor* undertakes analysis of common themes, immediate and underlying causes and trends of incidents.

Major injuries and Dangerous Occurrence (as defined in RIDDOR) are subject to a thorough formal investigation. The *Employer* reserves the right to take part in any investigation led by the *Contractor* and/or in certain instances lead their own investigation.

If the incident is serious enough to warrant press attention – all communications with the press will be via the *Employer*.

Nothing in this document supersedes the *Contractor's* responsibility for statutory reporting of incidents/accidents.

WI1115 HSE Competency, Training & Supervision

WI1115.1 Competency Management

The *Contractor* has a competency management system in place which takes into account skills, knowledge, experience and behaviors and covers the following:

- staff selection procedures (including labour competency)
- ongoing assessment of staff competency
- procedures for signing off staff as competent
- skills matrix to indicate mandatory and desired skills required for each role

The *Contractor* has documented procedures in place for the mentoring of new staff and the integration of new staff into work groups.

WI1115.2 HS&E Advice

The *Contractor* ensures their employees have access to competent Health, Safety and Environmental support to fully implement all the applicable HSE requirements and to ensure a presence on Site at regular periods for inspections, advice and instruction.

WI1115.3 Training

The *Contractor* ensures all operatives and management on Site employed directly or indirectly by the *Contractor* have received HS&E training for the work they are required to undertake and are fully aware of the techniques and procedures to be used during the *works* regarding their own health and safety and the health and safety of others and the protection of the environment.

Payments for training are assessed in accordance with the Schedule of Cost Components.

WI1115.4 Where the Contractors or Sub-Contractors staff are replaced (including Key Persons) for any other reason other than at the Employer's request, the Contractor will be responsible for the cost of training, including any required licences. This includes but is not limited to training for staff that have joined as a result of sickness, undisclosed absence, resignation, maternity or paternity leave.

WI1115.4 Sentinel

All *Contractor* and sub-contractor staff that require to undertake DLR track training must be sponsored by the company that they work for and hold a Sentinel card.

WI1115.5 Construction Skills Certification Skills

The *Contractor* is required to implement a system for demonstrating that its employees, sub-*Contractors* and suppliers are competent to carry out the duties they are being asked to undertake. CSCS is an industry recognised system that the *Contractor* may wish to implement.

It is acceptable for individuals to hold a valid card from CSCS, a CSCS affiliated or amalgamated scheme or other scheme, as agreed as acceptable by the *Employer*, which has been assessed by the *Contractor* as meeting similar standards.

WI1115.6 Licenses

The following licenses are required by the *Contractor's* employees, subcontractors and suppliers when working on non-operational DLR property:

- Site Specific Induction.
- Plant operators - licences appropriate for the type of plant being operated.
- Small tool users -small tools training.
- RPE users - Face fit test certificate and matching RPE as tested.
- Other task specific certification identified in the *Contractor's* safe system of work.

In addition to the above licences, the following licences are required when working within Beckton DLR Depot.

- Beckton Depot Induction – all personnel
- DLR Track Awareness (when working on or near the track). This requires an in date medical (including Drugs & Alcohol test) which complies with NR/L2/OHS/00124 (level 1-4)
- Briefing and Franchisee Substation Access Training for Substation access. Please refer to WoRM SOP PC 4.04-v4 working in restricted areas, found in Appendix D7.82
- Person in Charge of the Works (when controlling works on or near the track). This requires an in date medical (including Drugs & Alcohol test that is not more than 12 months old) which complies with NR/L2/OHS/00124 (level 1-4)

The *Contractor* is required to make all bookings related to licenses and training, make due allowance for booking timescales and undertake all training in advance of carrying out the *works*. It can be anticipated that from submission request, Induction training may take up to 4 weeks to arrange and for DLR track training may take up to 8 weeks to arrange.

WI1115.7 DLR Track Training

In addition, any operatives requiring DLR track training will require:

- A valid, in date medical which complies with NR/L2/OHS/00124 (level 1-4) that has been uploaded to Sentinel.
- To have passed a Drugs & Alcohol screen within the last 12 months which has been uploaded to Sentinel.
- Staff who hold the Person in Charge of Worksite (PICOW) competence will be required to have a device with the “Sentinel” app installed (available on Apple and Android) for signing workers on and off Site.

WI1115.8 Briefings

The *Contractor* attends any HSE briefings specified by the *Employer* and includes all relevant information from these in their own briefings.

The *Contractor* ensures that all visitors to the Site (including *Employer's* staff) are provided with a HSE briefing and a Site-specific induction, which will include as a minimum an overview of the activities taking place on Site, the likely hazards on Site, the areas where they are permitted to walk, emergency evacuation routes, PPE and First Aid. These briefings/inductions must be aligned with the *Employer's* local inductions where applicable.

The *Contractor* shall make available to the *Employer* records of training and the relevant certification for all of their Site operatives under their control in order to demonstrate that the operatives are suitably qualified for the operations they are carrying out.

The *Contractor* shall arrange regular relevant toolbox talks for their staff and maintains a register of attendees of these sessions for the *Project Manager* to inspect. The *Contractor* shall take a pro-active stance on promoting health, safety and environmental awareness on the Site and may be asked to participate acting reasonably in any *Employer* led HSE forums and campaigns.

WI1115.9 Non-English-Speaking Workers

The *Contractor* has adequate arrangements in place to communicate health and safety information to non-fluent English speakers on Site such that:

- They receive the required HSE training/briefing (including any emergency procedures before commencing the work).
- Instructions are effectively communicated to, and understood by, all such teammembers
- A process for validating understanding is applied.

WI1115.10 Safety Critical Work

The *Contractor* identifies all safety critical tasks (as defined by Railways and Other Guided Transport Systems (Safety) Regulations 2006 and amendments) associated with the *works* and agrees these with the *Employer*. The *Contractor* demonstrates that they have suitable and sufficient arrangements in place to monitor the competence and fitness of those carrying out safety critical tasks.

The *Contractor* provides a means of identification for all staff employed on safety critical tasks. The *Contractor* is required to demonstrate that all staff are competent.

WI1115.11 Covid-19

The *Contractor* is to comply with the latest Public Health England (PHE) requirements. When entering KAD premises the *Contractor* is to comply with KAD's Covid requirements.

WI1115.12 Personal Protective Equipment (PPE) and clothing

The *Contractor* shall assess and provide the appropriate PPE for his personnel, sub-*Contractors*, suppliers and visitors.

The minimum PPE requirements for working on the Site are:

- Full orange High Visibility clothing (top and trousers).
- Hard hat.
- Hand protection (gloves).
- Eye protection (safety glasses).
- Safety Boots (not Riggers) with toe and midsole protection.

This high visibility clothing shall carry the *Contractor's* company name. The *Contractor's* staff shall not wear DLR branded high visibility clothing, unless working under a 'labour only' contract and requested to by the *Project Manager*.

Contractors do not wear any garment or article that impedes their vision or hearing, unless required as part of a safe system of work.

Hats, clothing with hoods and any other headwear is prohibited from being worn on Site whilst Providing the *Works* except for:

- Hoods or headwear required as PPE in response to a risk assessment
- Headwear specifically designed:
 - To be compatible with PPE and
 - Not to impede vision or hearing

WI 1116 Work Related Road Risk

WI 1116.1 Fleet Operator Recognition Scheme Accreditation.

Upon Contract Award the Contractor and their sub-contractors will have attained the standard of Silver membership of Fleet Operators Recognition Scheme (FORS), or a similar accredited scheme that is agreed with the Project Manager.

WI 1116.2 Safety Equipment on Vehicles

The *Contractor* ensures that every Lorry, which it uses to provide the *works*:

- has Side Guards, unless the *Contractor* can demonstrate to the reasonable satisfaction of the *Employer* that the Lorry will not perform the function for which it was built if Side Guards are fitted; and
- has a front, side and rear blind spots completely eliminated or minimised as far as practical and possible, through the use of fully operational direct and indirect vision aids and driver audible alerts; and
- has equipment fitted with an audible means of warning other road users of the Lorry's left manoeuvre; and
- has prominent signage on the Lorry to warn cyclists and other road users of the dangers of passing the Lorry on the inside and of getting too close to the Lorry.

WI 1116.3 Driver Licence Checks

Where the *Contractor* operates Delivery and Servicing Vehicles to provide the *works* the *Contractor* ensures that:

- The *Contractor* has a system in place to ensure all its Drivers hold a valid driving licence for the category of vehicle that they are tasked to drive, along with recording

any endorsements, or restrictions on the Drivers licence; and

- each of its Drivers engaged in the provision of the *works* has a driving licence check with the DVLA or such equivalent before that Driver commences delivery of the *works* and that the driving licence check with the DVLA or equivalent authority is repeated in accordance with either the following risk scale (in the case of the DVLA issued licences only), or the *Contractor's* risk scale, provided that the *Contractor's* risk scale has been accepted in writing by the *Employer* within the last 12 months:
- 0 – 3 points on the driving licence – annual checks;
- 4 – 8 points on the driving licence – six monthly checks;
- 9 – 11 points on the driving licence – quarterly checks; or
- 12 or more points on the driving licence – monthly checks.

WI 1116.4 Driver Training

The *Contractor* ensures that each of its drivers who has not undertaken;

- undergoes approved progressive training (to include a mix of theoretical, e-learning, practical and on the job training) and continued professional development to include training covering the safety of vulnerable road users and on-cycle hazard awareness, throughout the term of the Contract.
- a FORS e-learning safety module in the last 12 months, undertakes a FORS e-learning safety module (or an equivalent safety module provided by the Alternative Scheme).

WI 1116.5 Collision Reporting

Where the *Contractor* operates Delivery and Servicing Vehicles to Provide the Works, the *Contractor*:

- ensures that it has a system in place to capture, investigate and analyse road traffic collisions that results in fatalities, injury or damage to vehicles, persons or property and for generating Collision Reports; and
- within 15 days of the Commencement Date, provides to the *Employer* a Collision Report. The *Contractor* provides the *Employer* with an updated Collision Report within five working days of a written request from the *Employer*.

WI 1116.6 Self Certification of Compliance

Within 30 days of the Commencement Date and where the *Contractor* operates Delivery and Servicing Vehicles to Provide the Works, the *Contractor* provides a written report to the *Employer* detailing its compliance with WI1116, WI1116.1, WI1116.2, WI1116.3, WI1116.4, WI1116.5 (the "WRRR Self-certification Report"). The *Contractor* provides the *Employer* with updates of the WRRR Self-certification Report on each three month anniversary of its submission of the initial WRRR Self-certification Report.

WI 1116.7 Obligations of the *Contractor* Regarding Subcontractors

The *Contractor* shall ensure that those of its subcontractors who operate Delivery and Servicing Vehicles to provide the works shall comply with all relevant parts of this WI 1116 as if those subcontractors were a party to this Contract.

WI 1116.8 Failure to Comply with Work Related Road Risk Obligation

Without limiting the effect of any other clause of this Contract relating to termination, if the *Contractor* fails to comply with the relevant parts of this WI 1116.

- the *Contractor* has committed a material breach of this Contract; and
- the *Employer* may refuse the *Contractor*, its employees, agents and Delivery and Servicing Vehicles entry onto any property that is owned, occupied or managed by the *Employer* for any purpose (including but not limited to deliveries).

WI 1116.9 Direct Vision Standard (DVS)

The *Contractor* complies with the DVS Schedule in Appendix D 7.132

WI 1120 The Construction (Design and Management) Regulations 2015

WI 1120.1 CDM Appointments

The *Employer* is the Client for the purposes of the CDM Regulations 2015.

The *Contractor* is appointed as the Principal *Contractor* as required by CDM Regulations 2015 from the starting date.

The role of Principal Designer has been appointed by the *Employer* to Others. Please refer to CDM Boundary Sketch in Site Information 3.5

WI 1120.2 Health, Safety and Environment Pre-Construction Information

The Health, Safety and Environment Pre-Construction Information is contained in Appendix C6.633.

WI 1120.3 Design Management Arrangements

If applicable, the *Contractor* (as Principal *Contractor*) shall review the pre-construction phase Design Management Plan (DMP) and liaise with the Principal Designer when developing the Construction Phase Health and Safety Plan (CHSP).

WI 1120.4 F10

The F10 will be provided by the *Employer* and shall be displayed in the Site offices by the *Contractor*.

WI 1120.5 Health and Safety File

The *Contractor* works with the *Employer* and Principal Designer to compile the Health and Safety File (based on the Health and Safety File developed by the designer (refer to Appendix C6.660 Health and Safety File) in a format specified by the *Employer*.

Where the Principal Designer appointment is terminated or where there is no Principal Designer appointment the *Contractor* shall be responsible for the compiling of the Health and Safety File.

WI 1125 Hazardous Materials

WI 1125.1 Control of Substances Hazardous to Health (COSHH)

A COSHH assessment must form part of any submitted safe system of work.

The *Contractor* notifies the *Employer* of any substances to be used in the *works* that are, or may be, classified as hazardous and which could impact on others in the vicinity of the work where the material is to be used. The *Contractor* provides full details of such substances, including storage details and the risk assessment for the *works* to be undertaken. These details are submitted to the *Project Manager* for acceptance prior to the work involving these materials commencing.

WI 1125.2 Asbestos

Details regarding asbestos within the Site can be found in Appendix C6.632. Based on this information, the *Contractor* liaises with the *Project Manager* to determine if and where additional surveys will be required and the type of survey to be undertaken.

If the *Contractor* believes that they have disturbed asbestos because of their works, they shall stop the activity immediately, inform the *Project Manager* and report the incident as a 'near miss' via the TfL's Info Exchange.

Works on the activity shall not restart until the *Contractor* has developed appropriate proposals to minimise the risk to the workforce and other potential receptors. A written risk assessment and updated Safe System of Work shall be produced identifying agreed mitigation. The proposals developed by the *Contractor* shall comply with all relevant statutory guidance and controls and the *Contractor* shall always undertake the works in compliance with the proposals.

The removal of asbestos will be undertaken by a suitability licensed asbestos removal *Contractor* and managed in accordance with the relevant statutory controls.

WI 1130 Site Rules

WI 1130.1 Agreement of Site rules

The *Contractor* proposes Site rules for acceptance by the *Project Manager* and ensures that all persons for whom the *Contractor* is responsible abide by the same. The Site rules shall be included in the Construction Phase Plan, method statements and Site induction.

WI 1130.2 Drugs and Alcohol

The *Contractor* operates a drugs and alcohol policy that mirrors DLR's Drugs and Alcohol procedure DLR-IMS-SAMS-PRC-00006 during the *works*.

The *Contractor* implements suitable arrangements to verify compliance with its policy including undertaking the necessary alcohol and drug testing. In addition, the *Contractor* co-operates with the *Employer* who may require the execution of random and/or for cause alcohol and drug tests. The *Contractor* provides records of testing if requested by the *Employer*. The testing arrangements shall be described in the Construction Phase Plan.

WI 1130.3 Smoking

Smoking (including e-cigarettes) within the Works Sites is prohibited except for designated smoking areas. The *Contractor* provides suitably signed designated smoking areas within the Work Sites close to welfare facilities but away from locations where the *works* are being constructed, Site access routes and sensitive neighbouring properties. The *Contractor* takes reasonable measures to prevent personnel under his control from smoking on the streets adjacent to the Site.

WI 1135 Documentation

WI 1135.1 Construction Phase & Environmental Plans – General

The *Contractor* prepares the CPP as required by the CDM Regulations 2015 before commencing any construction activities forming part of the *works*. Further to the *Project Manager's* acceptance of the initial CPP, subsequent updates are submitted to the *Project Manager* for review and comment. The *Contractor* responds accordingly to comments raised by the *Project Manager*.

The *Contractor* ensures that all Health, Safety and Environment Pre-Construction Information provided is considered and addressed in the Construction Phase Plan (CPP) and/or the Environmental Management Plan (EMP). The EMP may be included in the CPP or may be a separate document.

Construction *works* must not start before a suitable CPP and EMP are in place and accepted by the *Project Manager*.

Throughout the project the Principal *Contractor* must ensure that the CPP and EMP are appropriately reviewed, updated and revised every 3 months so the documents continue to be sufficient to ensure that construction work is carried out, so far as is reasonably practicable, without risks to health, safety or environment. Subsequent updates are submitted to the *Project Manager* for acceptance. The *Contractor* responds accordingly to comments raised by the *Project Manager*.

WI 1135.2 Emergency Preparedness Plan (EPP)

Details of EPP requirements can be found in WI270.

WI 1135.3 Method Statements / Work Request Form

The *Contractor* is responsible for producing all Method Statements in a format agreed with the *Project Manager*. The *Contractor* shall submit a schedule of Method Statements to the *Project Manager* for acceptance within 2 weeks of the *starting date*.

The *Contractor* describes in the Method Statements details of any measures to be taken to minimise the effect of the *Contractor's* operations on the public and the Rail Network, including as a minimum (where applicable):

- traffic safety and management plans.
- cleanliness of adjacent highways.
- intended working hours, and.
- Safety risk assessments.

The time allowed for review will be agreed with the *Project Manager*. Time will be required for the *Supervisor's* review, additional and prior to, the requirements given in the Working on the Railway Manual (WoRM) procedure SOP PC 2.01 (Refer to Appendix D7.66)

A Method Statement is produced for a 'work/activity' package. What activities are included in a package needs to be decided on a job-by-job basis – for example, a Method Statement could be produced per trade (e.g., demolition, piling, lift installation) or per area of works. *Method statements must contain all types of assessment e.g., manual handling and COSHH identified from the Risk Assessment.*

Task Briefing Sheet: Task Briefing Sheets are written for the workforce. There must be a Task Briefing Sheet for every activity in the Method Statement (e.g. tiling). Task Briefing Sheets capture today's activity, the risks specific to this activity, the Site where the works are to be carried out, and the Site-specific risks and controls. There is a sign off sheet to record the briefings, and evidence understanding of the brief for the workforce to sign.

For works that may impact the operational DLR network, the Method Statement and Works Request form should be submitted 8 weeks in advance of works taking place. The Person Responsible for Works Planning shall complete and submit the Works Request, Method Statement and Risk Assessment, Method Statement Review Sheet and supporting documents to the Franchisee Possessions Planning Manager and other Stakeholders for review.

All Method Statements submitted by the *Contractor* shall include the emergency arrangements for the works on Site, consider potential impacts beyond the Site boundary, especially where there are interfaces with neighbours, and operational assets. Any existing Site specific EPPs provided as part of the pre-construction information should also be incorporated in the *Contractor's* Method Statements.

No works shall commence without a Method Statement being produced and approved by the *Contractor* and being accepted by the *Employer* where required.

Within each Method Statement the *Contractor* shall include a risk assessment that demonstrates how potential HSE risks resulting from the works have been mitigated to ALARP status.

Where Subcontractors are used, the *Contractor* shall ensure that they have reviewed and approved all Method Statements produced by the Subcontractor before they are submitted to the *Employer*. If it can be shown that a PC approved Method Statement is not suitable and sufficient and will cause a delay to the scheduled activity, then the PC will be liable to the standards set out in the contract.

WI 1135.7 – Lifting Plans

The *Contractor* shall comply with the Lifting Operations and Lifting Equipment Regulations 1998 for all lifting activities.

The *Contractor* shall notify the *Project Manager* of all lifting operations in advance of those operations commencing.

The *Contractor* must be cognizant that lifting plans for all high risk lifting operations, unique lifting operations or those operations with the potential to foul the operational railway will require acceptance by the *Supervisor* and KAD in advance of those operations commencing. Time allowance for acceptance of Lifting Plans to be as for Method Statements.

WI 1140 Fire

WI 1140.1 General Requirements

The *Contractor* ensures all *works* are compliant with the relevant legislation, Standards, TfL guidance and industry best practice in terms of fire compliance.

The *Contractor* is aware of any existing fire evacuation arrangements for the Site, and co-ordinates arrangements with those of the Site landlord (if applicable) (as provided in the HSE pre-construction information).

The *Contractor* develops a fire evacuation procedure for acceptance by the *Employer*. During the construction works and upon completion, the fire safety arrangements shall be in line with the following Fire Strategy documents:

- Fire Safety Strategy - Construction Phase (Doc Ref 65204MF-ARC-FRS-TD350_00-STR-FE-0003)
- Site wide Fire Safety Strategy (Doc. Ref 65204MF-ARC-FRS-TD350_00-STR-FE-0002)
- MFB Fire Safety Strategy (Doc Ref 65204MF-ARC-FRS-TD350_00-STR-FE-0001)

The *Contractor* ensures that all persons working on Site or who may have authority to visit Site from time to time are aware of this procedure and receive any instruction that might be appropriate. These arrangements shall be recorded in the Construction Phase Plan and Method Statement.

The *Contractor* removes all superfluous flammable materials from Site daily.

The *Contractor* obtains the consent in writing from the *Employer* before storing or using plant, equipment or materials involving risk of fire or posing any hazard to any person and property.

The *Contractor* provides any additional fire extinguishers or other fire suppression systems on Site as may be required to deal with the *Contractor's* method of working and/or any materials, packaging and equipment brought or stored on Site by the *Contractor*.

The *Contractor* takes all precautions to prevent the outbreak of fire arising from the Works.

WI 1140.2 Isolations of Fire Detection and Suppression Systems

The *Contractor* agrees the proposed isolation plan to suit its method of working with the *Employer* and liaises with the *Project Manager* to make the necessary arrangements for these isolations.

WI 1140.3 Hot Works

The *Contractor* liaises with the *Employer* regarding any 'Hot Works' and the obtaining of any necessary permits associated with these *works*. Refer to Appendix D7.76 Restricted Works.

WI 1145 Electromagnetic Disturbance

The *Contractor* takes all necessary precautions to avoid excessive electromagnetic disturbance of apparatus outside of the Site. The *Contractor* ensures that all electrical equipment and plant is suppressed to cause no unacceptable electrical or other interference to surrounding properties and the operational depot or Railway.

WI 1150 Work Related Road Risk

Please refer to Appendix D7.127 Work Related Road Risk Document reference: 65204EW-DLR-MAC-TD350_1-REQ-CP-0001.

WI 1155 (HSE) Supplier Assessment against TfL Objectives

TfL's HSE objectives are as follows: -

- HSE Leadership & Culture: The *Contractor* (supplier) actively promotes a positive HSE culture and displays excellent HSE leadership
- Communication, Cooperation, Coordination & Information: The supplier effectively communicates with all affected parties to ensure that everyone receives the HSE information relevant to them and that all stakeholders are engaged in a timely manner. The supplier cooperates with all affected parties and coordinates works in such a way that ensures the safety of people, infrastructure and environment
- Competence: The supplier's project team and Site personnel are fully competent to carry out their work safely and in compliance with HSE legislation
- Managing HSE Risk Assessments, documentation and surveys: All works are planned in compliance with applicable legislation and TfL/LU standards and all HSE risks are adequately identified and managed
- HSE Site Management: All works Sites are managed in compliance with applicable legislation, agreed plans & TfL/LU standards
- Managing Incidents: All accidents, incidents and Near Misses are reported, investigated and managed in compliance with TfL standards and HSE legislation
- HSE Performance Review & Continuous Improvement: The supplier sets appropriate HSE targets and objectives and reliably monitors their performance against these.

Performance data is used by the Supplier to inform improvement plans with the aim of continuously improving their HSE performance

The supplier's performance against these objectives is regularly monitored and assessed by TfL using the Supplier Assessment Tool within Info Exchange. As a rule, Supplier Assessments are carried out on a quarterly basis. However, TfL may decide to vary timescales depending on the level of activity and the nature of the work carried out by the

supplier. The supplier will be informed of any amendments to the schedule.

Suppliers are required to cooperate with the TfL HSE managers during the assessment process and to provide requested information and evidence as required in a timely manner.

The supplier will be made aware of any issues identified by TfL and is required to put in place appropriate actions in order to address these within the timescales agreed as appropriate with the TfL HSE Manager. Actions can be managed and monitored to close-out by TfL using the Supplier Assessment function on Info Exchange.

The overall outcome of the assessment is summarised as a Red, Amber, Green (RAG) score. TfL requires:

- Red scores must be improved by the following quarter/next assessment – either to green or to amber
- Amber scores must turn green by the following quarter/next assessment
- Green scores must remain green

WI 1160 Environmental Requirements

This section contains the environmental and sustainability requirements that the *Contractor* shall always adhere to when undertaking the Works.

Where there is a requirement for the *Contractor* to submit documentation to the *Project Manager* (e.g., plans and reports), all such documentation shall be submitted for the *Project Manager's* acceptance.

If the *Project Manager's* acceptance is not provided, the *Contractor* shall revise and resubmit the documentation to the *Project Manager* until such time as acceptance is granted. After which, the *Contractor* shall comply with the accepted documentation.

As a minimum, the *Contractor* shall ensure that a suitably competent and experienced person is appointed to lead on environmental and sustainability matters and ensure the full implementation of all the requirements contained herein. The person must be able to demonstrate the attainment of suitable environmental qualifications (e.g., completion of the IEMA Foundation in Environmental Management, or a similar course).

The *Contractor* shall deliver the work that meets the *Employer's* objectives and the project requirements, including minimising the impact on the environment and surrounding stakeholders.

The *Contractor* shall implement a value engineering approach at all stages of the design and shall seek to optimise solutions that remove unnecessary waste and reduce life cycle costs whilst improving function, quality and sustainability.

To ensure the full implementation of all the environmental and sustainability requirements, the *Contractor* shall employ an experienced Environmental Manager who shall be supported, as necessary, by experts in technical areas – such as energy / carbon, contaminated land, ecology etc. Both the Environmental Manager and the technical experts shall be sufficiently competent and appropriately qualified to undertake their roles.

WI 1160.1 Corporate and Mayoral Requirements

TfL have developed a Corporate Environmental Framework that sets out TfL's vision and ambition for environmental performance. The Framework details TfL's priorities and explains how they will be delivered in a way that meets stakeholders' needs by achieving a range of objectives and targets.

The *Contractor* shall familiarise itself with the content of the Framework and, where relevant, assist TfL with the delivery of the commitments contained therein.

The *Contractor* shall also ensure that it takes account of any applicable policies and proposals in relevant Mayoral documents - including the Mayor's Transport Strategy, Environment Framework, Responsible Procurement Strategy, and the Sustainable Design and Construction supplementary planning guidance to the London Plan.

WI 1160.2 Other Environmental Specialists

As necessary, based on the scope and the level of environmental risk associated with the *works*, the *Contractor* shall engage environmental specialists to ensure the full implementation of the environmental requirements. The environmental specialists may include personnel with expertise in noise/vibration, air quality, ecology, contaminated land etc.

All such specialists shall have suitable qualifications and experience.

The *Contractor* shall obtain the *Project Manager's* written consent before the proposed personnel take up any environmental or sustainability related positions, and prior to implementing any changes to the personnel undertaking these roles.

WI 1160.3 Environmental Management Plan

The *Contractor* shall define their environmental management system (EMS) approach within a Site-specific Environmental Management Plan (EMP).

The *Contractor's* EMP shall be based upon the requirements of the latest BS EN ISO 14001 standard and shall include coverage of each of the environmental aspects referenced in this document – although coverage may be suitably scaled to the project's level of environmental risk.

The EMP shall cover all stages of the Works, including the design stage, where applicable.

As a minimum, the EMP shall include or define the approach to:

- Planning – determining the project specific risks and opportunities and actions to address significant environmental aspects and fulfil all compliance obligations.

The *Contractor* periodically review, and as necessary updates, the risk and opportunity assessment. The frequency of the review may be related to the level of risk, but it does not exceed more than six months.

WI 1160.4 Environmental Targets

As a minimum, the *Contractor* shall adopt the following environmental targets and put in place appropriate systems to achieve them.

Description	Target
Environmental enforcement/regulatory notices	0
Major environmental incidents	0
Percentage of non-hazardous construction and demolition waste diverted from landfill (i.e., reused, recycled and/or recovered)	Refer to yearly targets in table below
Percentage of non-hazardous construction and demolition waste recycled	70%
Percentage of non-hazardous excavated materials diverted from landfill	99%

TfL has a target to divert (i.e., reuse, recycle and/or recover) 99% of non-hazardous waste from landfill by 2031. To assist TfL to meet this target, the *Contractor* shall adopt the following targets for diverting non-hazardous construction and demolition waste from landfill by the years indicated.

Year	2018-20	2021-25	2026-30	2030
Percentage of non-hazardous construction and demolition waste diverted from landfill	96%	97%	98%	99%

The *Contractor* may propose additional environmental objectives to either take account of the identified significant environmental aspects or compliance obligations, or to support the attainment of the objectives in TfL's Corporate Environmental Framework, or their own corporate goals.

The *Contractor* shall report on progress against all environmental targets within the 4-weekly progress report – including justification and / or proposals for achieving the target if it is not being met.

The Employer desires to reuse any assets removed as a result of site strip / demolition process where possible, however this depends on the asset condition and the need. Prior to the strip out / demolition works, the Contractor shall schedule a joint dilapidation survey to be undertaken by the Contractor and the Project Manager. The Project Manager will then ascertain the assets that the Employer would like to retain for reuse. The Contractor shall endeavor to remove such assets in a way as to minimise potential damage. It is expected that some assets such as lighting column components, Pway and sleepers will want to be re-used by Employer in some capacity if they are in an acceptable condition upon removal.

WI 1160.5 Environmental Reporting

The *Contractor* shall report the following information as part of their 4-weekly report, or via the Info Exchange Online Portal.

- The Environmental Data set out in Appendix C6.660 Health and Safety
- Details of any environmental incidents or near misses that occurred and, how the issue was resolved (i.e., what corrective action was implemented)
- Details of any interaction with environmental regulators
- A summary of the environmental monitoring undertaken – including noise, dust and vibration
- Details of any complaints about noise, dust or vibration – including how these were resolved.
- Details of any issues identified during environmental inspections or audits and the status of closing out such issues.
- Details of any design changes with the potential to affect environmental outcomes.
- The six metrics below should be submitted into the TfL IE2 Reporting system used for safety and waste reporting. The Contractor should request access from the Project Manager if they do not have an account.
 - Total amount of concrete material purchased (m3)
 - Proportion of concrete material purchased with a non-CEM I cement mix (m3)
 - Amount of steel purchased (tonnes)
 - Amount of recycled steel purchased (tonnes)
 - Amount of timber purchased (tonnes)
 - Amount of timber used from certified sustainable sources (tonnes)

WI 1160.6 Environmental Inspections and Audits

The *Contractor* shall implement a programme of environmental inspections and audits to ensure compliance with all legal and contract requirements (Compliance Obligations).

The *Contractor* shall keep the *Project Manager* apprised of the timing of these environmental inspections and audits so that a member of the TfL HSE Team may, on occasions, attend and participate in joint exercises. The *Contractor's* Environmental Manager shall partake in all environmental inspections and audits.

WI 1160.7 Competency and Training

The *Contractor* shall determine the environmental competency and training requirements for all staff working on the project and maintain documentation to demonstrate delivery of the planned training.

As a minimum, the *Contractor* shall ensure that all staff receives environmental awareness training on the specific project risks and the content of the EMP.

WI 1160.8 Emergency Preparedness and Response

As a minimum, the *Contractor* shall define the following either within its EMP or an Emergency Preparedness Plan:

- Definitions of what constitutes an environmental incident, a major environmental incident, an environmental emergency, harm or damage to the environment, and an environmental near miss.
- Details of the potential types of environmental incident relevant to the works and the envisaged control measures.
- Responsibilities of the Contractor's staff for dealing with an environmental incident or

near miss.

- Details of the incident response equipment that will be used to bring environmental incidents or emergencies under control, including the location of spill kits and the minimum acceptable stock requirements.
- An up-to-date Site drainage plan which details manholes, direction of flow, interventions points and final discharge points to foul and surface water resources.
- The systems (and contact details) for notifying the appropriate statutory authorities, emergency services, *Project Manager* and the *Contractor's* personnel in the event of an environmental incident or near miss.
- Contact details of a supplier who can assist if the incident cannot be dealt with by the *Contractor's* team (e.g., if a significant spill occurs that cannot be controlled or cleaned up by the Site staff).
- The information to be recorded in the event of an environmental incident (to include date, time, location, description of incident, action taken, personnel involved and notifications, photographs); and,
- A simple flowchart to show the process and responsibilities.

WI 1160.9 Investigation of Environmental Incidents

The *Contractor* shall notify the *Project Manager* of all environmental incidents and 'near misses' as soon as practicable after they occur. In particular, the *Contractor* shall ensure that any incidents which could result in significant damage to the environment, a breach of legislation, or reputational damage are reported to the *Project Manager* immediately.

See WI 1110.5 for incident reporting procedures.

On top of general procedures, initial environmental incident reports should also contain:

- Whether the incident is considered an environmental incident, a major environmental incident, an environmental emergency or an environmental near miss.
- In the event of a spillage, details of the substance spilt and an estimate of the amount.
- An initial assessment of the root causes of the incident and any corrective actions proposed to prevent recurrence

In order to fully identify root causes and prevent recurrence, all environmental incidents and near misses shall be investigated by the *Contractor*. The *Contractor* shall produce a report of the investigation and shall submit this to the *Project Manager* within 14 Working Days of the incident.

In addition to containing the bullet point information above, the full report shall, as a minimum, include:

- Photographs / a sketch showing what happened and where.
- Details of any notification/third party involvement.
- Immediate causes.
- Root causes – e.g., inadequate procedures, conflicting targets, poor communication, lack of training, inadequate maintenance, extreme weather conditions or lack of security.
- Remedial actions implemented and/or proposed and timescales.
- Measures to prevent recurrence and timescales; and,
- Approvals by the *Contractor's* senior individual responsible for ensuring the actions are completed satisfactorily.

The *Contractor* shall monitor the implementation of any actions / recommendations resulting from the investigation of the environmental incident and shall ensure that they are completed by the scheduled completion dates.

WI 1160.10 Advanced Notifications

The *Contractor* shall take a pro-active approach to notifying residents, businesses and regulators (e.g., the Local Authority) about forthcoming *works* that may impact upon them – including the removal of vegetation or the undertaking of ‘noisy’ or ‘out-of-hours’ *works*. The notifications, which shall be made using a format agreed with TfL, shall, as far as possible, be issued two weeks prior to the *works* taking place.

As a minimum, the notifications shall include:

- Details of the *works* to be undertaken
- The dates / hours of working
- Brief details of the potential impacts and how these are to be mitigated
- Contact details that can be used to seek further information or make a complaint

TfL operates 24-hour hotline (0343 222 2424) which customers can use to make complaints. Alternatively, customers can email contactus@tfl.gov.uk

The *Contractor* shall provide the *Project Manager* with a copy of all environmentally related correspondence with third parties (e.g., the Local Authority or Environment Agency) on the date of issue.

WI 1160.11 Dust, Air Quality and Noise

The *Contractor* shall ensure that air quality impacts (including dust) from demolition, construction-related activities and construction traffic are controlled by using best practicable means during the planning and management of the Works.

The *Contractor* shall ensure compliance with the Mayor of London’s Supplementary Planning Guidance (SPG) on The Control of Dust and Emissions During Construction and Demolition.

All *Contractor’s* Non-Road Mobile Machinery (NRMM) between 19kW and 560kW and must meet or exceed the following requirements (which are more stringent than stated in the SPG):

- NRMM used on any Site within Greater London shall, as a minimum, meet Stage IIIB of EU Directive 97/68/EC (as amended) emission standards.
- From 1 September 2020, NRMM used on any Site within Greater London shall, as a minimum, meet Stage IV of EU Directive 97/68/EC (as amended) emission standards.
- All NRMM must meet the above standards unless it can be demonstrated that the machinery is not available or that a comprehensive retrofit to meet PM10 and NOx emission standards is not feasible. In this situation, every effort must be made to use the least polluting equipment available (next best available EU stage) including retrofitting technologies to reduce particulate emissions.

Where applicable, the *Contractor* shall comply with the Greater London Authority’s (GLA) NRMM Exemption policy for any NRMM, which cannot meet the emissions requirements. Details can be found at <https://nrmm.london/> The *Contractor* shall seek exemption from the

Project Manager for any NRMM of net power between 19 and 36 kW that cannot comply with the emissions standards.

The *Contractor* shall also: -

- Maintain an inventory of all on-Site NRMM using the GLA's NRMM. London database
- Regularly service all machinery and keep records on Site.

The *Contractor* shall use best practicable means to always reduce noise and vibration and shall comply with the provisions of the current edition of BS5228 - Code of Practice for Noise and Vibration Control on Construction and Demolition Sites.

WI1160.12 Working Hours and Fatigue

As far as reasonably practicable, the *Contractor* shall undertake all *works* within the following core working hours:

- 0800 to 1800 on weekdays (excluding public and/or bank holidays),
- 0800 to 1300 on Saturdays

It is acknowledged that elements of the Works may need to be undertaken outside of core working hours – e.g., during highway or railway possessions / blockades. In accordance with best practicable means, the *Contractor* shall programme the Works so that any activities with the potential to give rise to disturbance are undertaken during less sensitive times of the day (i.e., avoiding night-time if possible).

Work outside of normal working hours must be agreed with the *Project Manager* and the Local Authority before being undertaken.

If 'out of hours' *works* are to be undertaken, the *Contractor* shall notify residents or other sensitive receptors in advance of commencing the *works*.

Adherence to the Working Time Regulations does not manage the risk of fatigue and the *Contractor* shall implement controls to reduce, so far as is reasonably practicable, risks arising from employee fatigue. The control of risk from fatigue is needed even if there is no shift work, significant overtime or safety critical work being undertaken.

In considering the risk of fatigue, the *Contractor* shall include but not limit their controls to:

- the longest shift in any roster shall be 12 hours. When working nightshifts, consideration to reducing the shift length shall be given due to the increased risk of fatigue
- the door-to-door time (combined travel time and work time) shall not be planned to exceed 14 hours.
- Working from home will be allowed, but limited to a maximum 2 days a week and with prior agreement with the Project Manager either on an ad-hoc basis or long term arrangement. Working from home will also be restricted to office based staff where their role does not include direct delivery / labour involved in the Works, or supervision of the works for the purpose of health and safety or delivery schedule adherence.

Special consideration shall be given to first night shifts (where applicable) due to the change in work/sleep patterns.

The *Contractor* shall have suitable systems in place to demonstrate how they manage risks

associated with fatigue, which shall include the use of suitable fatigue assessment methods to assess proposed work patterns and actual hours worked

The *Contractor* shall refer to the Office of Road and Rail document “Managing Rail Staff Fatigue” or the Health & Safety Executive document “Managing Shift work” (HSG256) as appropriate for guidance on managing fatigue in railway and non-railway staff.

In addition, where safety critical work is identified, suppliers shall submit detailed rosters and associated fatigue risk management plans which will include, but are not limited to, fatigue risk assessments.

To minimise fatigue risks and in line with TfL’s working time policy, no operatives shall:

- Work more than 6 x consecutive shifts with 1 x full rest day (24hrs), or 12 x consecutive shifts with 2 x full rest days (48hrs).
- Working time, including overtime, should not exceed an average of 48 hours for each seven days averaged over any period of 17 weeks (exclusive of periods of annual leave and sick leave etc.) Where workers have less than 17 weeks’ service, the reference period is their service to date. The reference period is a rolling period, i.e., the 17 weeks prior to the current date, unless there is a relevant agreement that it be specific successive periods of 17 weeks.
- The *Contractor* is to ensure that their staffs have a rest period of not less than 11 consecutive hours in each 24-hour period.

WI 1160.13 Section 61 Consents

Unless the *Contractor* can demonstrate to the *Project Manager* that the *works* can be undertaken without the risk of disturbing residents or other noise and/or vibration sensitive receptors, the *Contractor* shall seek and obtain a consent under Section 61 of the Control of Pollution Act, 1974, for all *works* (a Section 61 consent).

No *works* shall be undertaken in advance of obtaining Section 61 consent, unless explicitly agreed in advance with the *Project Manager*.

The *Contractor* shall develop a draft Section 61 consent application (prepared by competent acoustic professionals) and agree this with the *Project Manager* before submitting it to the Local Authority.

If the *Contractor* is to seek consent for working outside of the core working hours, then the *Contractor* shall provide justification for doing so, and detailed assessment of the associated noise impacts.

The *Contractor* is advised that the Local Authority can take up to 28 days to determine a Section 61 application. In addition, the *Project Manager* requires that a draft of the Section 61 application is submitted for review at least 7 days prior to submission to the Local Authority, and that the *Contractor* addresses any comments raised by the *Project Manager* prior to submission to the Local Authority. The *Contractor* shall allow for the above timescales in their programme.

No *works* covered by a Section 61 application (or subsequent variation / dispensation) shall be commenced until the *Contractor* has obtained the relevant consent from the Local Authority

The *Contractor* shall always comply with the Section 61 consent.

The *Contractor* shall ensure that all Section 61 consent related correspondence with the Local Authority is copied to the *Project Manager*. This shall include provision of all applications for, or variations / dispensations to, a consent, all consents granted by the Local Authority, all over-run notifications and any associated matters.

WI 1160.14 Noise and Vibration Monitoring

The *Contractor* shall undertake any monitoring required by the Section 61 Consent.

Unless the *Contractor* can demonstrate to the *Project Manager's* satisfaction that monitoring is not required, the *Contractor* shall, as a minimum, undertake noise monitoring adjacent to the closest noise sensitive receptors (e.g., residential premises) at the start of each new phase of *works*, and if undertaking any *works* outside of core working hours.

The monitoring shall be undertaken for a minimum of 10 minutes at each location, and shall, as a minimum, record the LAEQ over this time period, together with notes on the dominant noise sources and the calibration levels at the beginning and end of the measurement period.

The *Contractor* shall also undertake noise or vibration monitoring in response to any complaints, or requests from the *Project Manager* or the Local Authority.

All noise monitoring will be undertaken using type 1 noise monitors which comply with BS EN 61672-1:2003.

The noise monitoring data shall be submitted to the *Project Manager* for information. This information shall be submitted at a minimum frequency of once a month.

The *Contractor* shall also undertake regular on-Site checks to confirm the application of BPM (Best Practical Means) and adherence to the Section 61 consent requirements.

WI 1160.15 Contaminated Land

The *Contractor* will comply with and implement all relevant statutory and industry best practice guidance in relation to the assessment and management of contaminated land.

Prior to commencing the Works, the *Contractor* shall develop a Remediation Plan that implements the actions from the Remediation Strategy (Appendix F9.35 Site Wide Remediation Strategy), relevant to the Works.

Where possible, the Contractor shall seek to re-use excavated material as part of the works and this shall be documented within the Remediation Strategy. The *Contractor* shall submit their Remediation Plan to the *Project Manager* for acceptance within 28 days of appointment.

Works shall not start on Site until the *Project Manager* has accepted the Remediation Plan. A reason for the *Project Manager* not accepting the Remediation Plan is that it does not comply with the Works Information and/or planning conditions.

The *Contractor* shall plan and undertake the Works in a manner which minimises the disturbance of any contaminated land and avoids the creation of pollution pathways. This shall include the use of piling techniques which minimise the potential for vertical contamination pathways to be created; it is also noted that if piling is required, a written scheme of investigations is required as per the planning conditions found in Appendix B5.3 Beckton Planning Conditions. Landfill shall only be used if other remediation options (e.g., on-Site treatment, off Site treatment) are not reasonably practicable.

The *Contractor* shall undertake all necessary and appropriate health, safety and environmental monitoring to ensure the adherence to, and the continuing suitability of the mitigation measures or remediation proposals developed for working on, or adjacent to, contaminated land. As necessary, the *Contractor* shall also undertake monitoring to verify the effectiveness of the measures implemented – e.g., to demonstrate that the remediation proposals have been effective.”

WI 1160.16 Import of soils or infill materials

The *Contractor* shall not bring soils or infill materials onto the Site unless they have been satisfactorily proven to be uncontaminated and to present no risks to human health, property or the environment. Documentary evidence to confirm the origin of all imported soils and infill materials, supported by appropriate chemical analysis test results, shall be maintained by the *Contractor*.

The *Contractor* shall pay particular attention to the requirement for off-Site testing of all soils or infill materials, which must take place in advance of delivery to Site.

The *Contractor* takes note of the constraints as given in document: “Works Licence Relating To Property At Beckton Gas Worksite, Armada Way, London” dated 8 January 2021. Refer to Site Information 3.8

WI 1160.17 Resource Efficiency

The *Contractor* shall implement material efficiency principles wherever practicable by, for example:

- using less materials,
- adopting low-waste processes,
- using recycled materials or by-products from other industries in preference to virgin materials,
- using durable materials to extend the asset’s serviceable life,
- The *Contractor* shall consider the properties and potential environmental impacts of materials and shall select and use materials which have a low or reduced environmental impact – e.g., materials that are:
 - non-hazardous (environmentally inert),
 - low VOC (Volatile Organic Compounds),
 - recyclable,
 - low(er) in embodied energy and/or water.

The *Contractor* shall document how they have met the above requirements within a Construction Phase Resource and Site Waste Management Plan (RWMP).

The *Contractor* shall also endeavour to procure products and materials responsibly. Principles for achieving this are set out within the GLA’s Responsible Procurement Policy, and products or materials certified under the BRE’s Responsible Sourcing Standard, BES6001 are deemed to meet the Standard’s responsible sourcing requirements.

WI 1160.18 Sustainable Timber

The incorporation of recycled, reclaimed and sustainably sourced timber into the temporary and permanent *works* within this project is encouraged. If the *Contractor* proposes to use non- Recycled, Reclaimed and Sustainably Sourced Timber within this project then they must seek TfL's prior written consent to do so.

Timber used by the *Contractor* must be accredited to the Forest Stewardship Council (FSC), or the Programme for the Endorsement of Forest Certification (PEFC), or an equivalent.

TfL will accept timber accredited through other schemes approved by the Central Point of Expertise on Timber (CPET), as listed below:

TfL Sustainable Timber – Procurement Guidance Notes Page 3 of 3

(a) Canadian Standards Association (CSA).

(b) Sustainable Forestry Initiative (SFI),

or such other source as the *Contractor* may demonstrate to the Authority's satisfaction is equivalent.

WI 1160.19 Waste Management

All wastes shall be managed in accordance with DEFRA Hierarchy of Waste Management. For each waste type, the *Contractor* shall therefore adopt and implement the highest option for managing waste from the list below:

- prevent
- reduce
- re-use within the project
- re-use at other project Sites
- recycle
- recover, e.g., energy from incineration
- dispose

The *Contractor* shall take a proactive approach to the sustainable use of resources and to minimising both the production of waste and the volume of waste disposed of in landfill.

WI 1160.20 Construction Phase Resource and Waste Management Plan

The *Contractor* shall build upon the Outline Construction Resource Management Plan (CRMP) (refer to Appendix D7.94) compiled during the design stage to develop and implement a Construction Phase Outline Construction Resource Management Plan (CRMP) that delivers the aspiration of the design stage CRMP, and, as far as practicable, ensures:

- compliance with the resources, materials and waste requirements
- compliance with the waste duty of care
- achievement of project waste and/or materials targets

The *Contractor* shall develop the Construction Phase CRMP prior to commencing the *works* on-Site.

The *Contractor* shall not commence Works until the *Project Manager* has accepted the Construction Phase CRMP.

The *Contractor* shall regularly review and as necessary, update the Construction Phase CRMP to take account of changing circumstances. Such reviews shall take place at least

every six months during construction (unless otherwise agreed with the *Project Manager*). The updated Construction Phase CRMP shall be submitted to the *Project Manager* for acceptance.

The *Contractor* is encouraged to use the Electronic Duty of Care (EDOC) system.

WI 1160.21 Water

The *Contractor* shall undertake the *Works* in a manner which protects the water environment - including any change to water quality, flow volume or levels. To achieve this, the *Contractor* shall, as a minimum:

- Identify any water sensitive receptors (such as ponds, watercourses, drains or groundwater) which may potentially be affected by the *Works*, and assess the risk to them.
- Identify any mitigation measures which shall be employed to minimise the risk to these water sensitive receptors – including any necessary pollution prevention measures.
- Obtain and comply with any necessary abstraction, discharge and other water environment consents.
- Undertake any water quality monitoring programmes agreed with the *Project Manager*.

The output of the *Contractor's* risk assessment and the identification of mitigation measures shall be clearly documented – e.g., within the *Contractor's* EMP.

As a minimum, the *Contractor* shall ensure that:

- All potentially polluting materials, plant and equipment is stored away from water sensitive receptors, including drains
- All containers of potentially contaminating substances are securely stored within impermeable bunds with a capacity of not less than 110% of the largest container or 25% of the aggregate total capacity of the containers, whichever is the greater
- All refuelling, oiling or greasing is undertaken on impermeable surfaces or using 'plant nappies'
- An authorised person oversees the bulk delivery of fuel to the Site, and the refuelling of vehicles, plant and equipment
- Plant, equipment and vehicles are regularly inspected and maintained to ensure they are free from oil and fuel leaks.
- Measures are implemented to prevent run-off and other pollutants being washed into watercourses
- Where wheel washes are installed adjacent to Site accesses or egresses, they are self-contained, recycle as much wash water as possible and will not directly discharge to the environment
- Enough spill kit materials are available and that personnel are trained in their use
- All spillage incidents are reported and investigated so that lessons can be learnt and, if required, further controls can be implemented to prevent further potentially more serious incidents
- The *Contractor* shall avoid the use of drip trays (due to their propensity to fill with water which can either overflow or be spilt). Instead, the *Contractor* shall use 'plant nappies' under plant etc. to contain any drips or spillages
- The *Contractor* shall use water in an efficient manner, both on-Site and within Site accommodation
- The *Contractor* shall not make temporary or permanent connections to any mains, drains, pipes, watercourses or utility services without the necessary consent.

WI 1160.22 Ecology

When developing and implementing the *Works*, the *Contractor* shall ensure that due consideration is given to ecology and biodiversity in line with current legislation and applicable strategies and plans. The mitigation hierarchy (of avoid, minimise, restore, compensate) shall be followed, and a net gain in biodiversity shall be delivered, in accordance with Mayor's Transport Strategy.

Prior to commencing any *works* on-Site, the *Contractor* shall review the ecological information that is available to determine if it is sufficient and current enough for the risks and opportunities to be understood. Currently available information is included in Appendices C6.608 & F9.18.

If the *Contractor* deems the available information to be insufficient or outdated, the *Contractor* shall arrange for a suitably competent ecologist to undertake any ecology surveys necessary to inform the *Contractor* about the potentially affected habitats and the presence of protected species, or to comply with the survey recommendations from previous reports.

The report must be prepared in sufficient time to enable the *Contractor* to implement the recommendations before the commencement of any *works* on Site with the potential to affect ecological resources.

Works shall not start on Site until the *Project Manager* has accepted the ecologist's report.

When undertaking the *Works*, the *Contractor* shall adhere to all the recommendations in the ecologist's report. In addition, they shall comply with any applicable legislation, Mayoral policies, TfL strategies, borough biodiversity plans, guidance or code of practice.

If the *works* disturb, or have potential to harm, wildlife on-Site, the *Contractor* shall immediately cease the offending *works* and inform the *Project Manager* of the issue and the proposals for rectifying / avoiding further impacts.

WI 1160.23 Invasive Species

If any invasive weeds may be affected by the *Works*, the *Contractor* shall develop and, once agreed with the *Project Manager*, implement proposals for controlling these plants and ensuring they are not spread by the *Works*.

WI 1160.24 Biosecurity

Where landscaping is included within the scope of *works*, the *Contractor* shall ensure the use of UK grown trees, shrubs and other bedding plants in order to maintain biosecurity.

If there is a justifiable reason why UK grown plants cannot be used and plants need to be imported, the *Contractor* shall ensure that the plants have undergone a quarantine period appropriate to the species prior to being purchased.

The *Contractor* shall provide the *Project Manager* with suitable documentary evidence to confirm these requirements prior to installation.

WI 1160.25 Ecological and biodiversity data

All background ecology data searches, necessary to complete required ecology surveys,

must be sourced from the Greenspace information for Greater London CIC (GiGL) (the local environmental records centre for London) under the TfL Service Level Agreement, using the GiGL TfL data search request form.

To enable TfL to maintain datasets for the TfL estate, the *Contractor* must return all ecology data and biodiversity net gain data, including GIS layers, to GiGL following the How to Provide Data guidance.

Ecology data must be returned within 8 weeks of survey completion. Updated biodiversity Net gain data must be returned once work on Site is complete.

The *Contractor* shall ensure compliance with the Planning Conditions found in Appendix B5.3 Beckton Planning Conditions

WI 1160.26 Highways and Traffic

The *Contractor* shall ensure compliance with C5.2 49200-DLR-MAC-TR000_Z-HS-K-0005 Detailed Construction Logistics Plan to undertake any necessary consultation with the Highways Authority for *works* affecting public highways and shall ensure that all necessary consents or licences are obtained and complied with.

When undertaking *works* that affects the highway, the *Contractor* shall:

- comply with the Construction Logistics Plan.
- minimise the need for and duration of any closures or diversions of highways or public rights of way.
- where necessary, provide and maintain suitable diversion routes with all necessary signage and barriers, and
- provide advanced notification to all potentially affected residents and businesses about the diversion routes and dates / durations of use.

The *Contractor* shall minimise the impacts of construction traffic on the public highways and access routes by:

- Consolidating loads to reduce the number of deliveries
- Planning delivery routes and times to avoid sensitive Sites / activities – e.g., schools at the start or end of the school day
- Implementing measures to prevent the deposition of mud on roads - these may include: the provision of hard standing's and wheel cleaning facilities at access points, the sheeting of lorries, and/or the use of mechanical road sweepers
- Avoiding, wherever practicable, the parking of vehicles on public highways
- Ensuring vehicles are switched off when not in use

The *Contractor* takes note of the constraints as given in document: "Works Licence Relating To Haul Road At Beckton Gas Worksite, Armada Way, London" dated 8 January 2021. Refer to Site Information 3.7

WI 1160.27 Construction Worker Travel

The *Contractor* shall implement measures to encourage Site staff and construction workers to avoid using private cars to access the work Site, and to encourage them to use alternatives such as public transport, cycling, walking etc. The *Contractor* shall monitor the effectiveness of the proposed measures.

WI 1160.28 Lighting

The *Contractor* shall take all reasonable steps to minimise the potential for artificial light to adversely affect or intrude upon local sensitive receptors. This shall include, but not be limited to:

- Avoiding or minimising the use of lighting
- Using the appropriate lux levels to minimise disturbance
- Using directional lighting or shielding to avoid intrusion

WI 1160.29 Site Energy Conservation

The *Contractor* will maximise energy efficiency on Site. The measures to be implemented shall be detailed in the EMP, but, as a minimum, the following measures shall be considered and implemented wherever possible:

- Avoiding unnecessary day and night-time lighting of the Site, and offices / accommodation
- Installing energy efficient security and task lighting, e.g., LED
- Providing well insulated Site accommodation
- Selecting and using energy efficient plant and equipment
- Powering-down equipment/plant when not in use
- Minimising the use of diesel- or petrol-powered generators and instead using mains electricity or battery powered equipment
- Collecting energy and fuel consumption data to communicate to staff and report to the *Project Manager*

WI 1160.30 Low carbon cement

Low carbon cement (i.e. not a BS EN 197-1 CEM I mix) should be used wherever possible, providing that use does not impact the critical path. The Contractor should propose for acceptance the proposed cement designation as per BS EN 197-1 for all concrete pours and provide a narrative why this is the lowest carbon cement mix suitable for the application. The forecast embodied carbon from cement only in a concrete mix should be provided with the proposal and the free to access Inventory of Carbon and Energy (v3.0) should be used for calculating the carbon content (BS 15804 life cycle stages A1-3) from cement in a concrete mix.

WI 1165 BREEAM

The *works* will be assessed under the BREEAM UK New Construction 2014 guidance as an Industrial: vehicle servicing unit (fully fitted out) and must achieve an “Excellent” award standard.

A BREEAM Evidence Tracker has been produced which is provided in Appendix C6.610. The *Contractor* assists and provides all necessary documentation as evidence to support achieving the target rating.

WI 1170 Sustainable Design and Assessment

The *Contractor* will be responsible for managing whole life carbon, water usage and cost as per the below and populate the Carbon Model Tool in Appendix, or an agreed alternative model.

(1)	<p>Where the <i>Contractor</i> is responsible for the design, the <i>Contractor</i> maximises the sustainable performance of their activities (including through their supply chain) and minimises the whole life Carbon impact.</p> <p>Note: when 'carbon' is used in this document, it will be taken be a short-hand umbrella term for the emissions from all greenhouse gases.</p>
(2)	<p>The <i>Contractor</i> investigates innovative sustainable design and construction solutions that have the potential to lower the project's whole life carbon and whole life cost. The <i>Contractor</i> implements the investigated solutions, obtaining approval from the <i>Project Manager</i> when this increases contract, design or build costs.</p>
(3)	<p>To maximise the Project's sustainable performance, the <i>Contractor</i> shall:</p> <ul style="list-style-type: none"> • Use principles that consider the longer-term design life of assets and that will offer innovative solutions using the best available technology. • Design systems and install equipment that will reduce energy use and the operational cost of assets.
	<ul style="list-style-type: none"> • Ensure that the new systems are compatible with the energy system and load requirements at the existing site. • Design systems and install equipment that minimises water use during the asset's installation and operation. • Design assets (built and natural) that are resilient and maintainable throughout the design life of the asset, and support the resilience of other assets and the operation of the transport system to extreme weather and climate change.
(4)	<p>Where the <i>Contractor</i> is responsible for the design, the <i>Contractor</i> strives to lower the project's whole life carbon and whole life cost by investigating, and where practicable implementing, innovative sustainable design and construction solutions.</p>
(5)	<p>The <i>Contractor</i> will implement the carbon reduction hierarchy (build nothing, build less, build clever and build efficiently) in design development:</p> <ul style="list-style-type: none"> • Build nothing - challenge the root cause of the need; explore alternative approaches to achieve the desired outcome. • Build less - maximise the use of existing assets; optimise asset operation and management to reduce the extent of new construction required. • Build clever - design in the use of low carbon materials; streamline delivery processes; minimise resource consumption. • Build efficiently - embrace new construction technologies; eliminate waste.

GW1 1170.1	<u>Quantitatively measuring whole life carbon</u>
(1)	The <i>Contractor</i> will create a Whole Life Carbon Model for the scope of their <i>works</i> , as detailed in Appendix A. This provides generic requirements for the scope of the carbon assessment and model. The model should cover BS EN 15804 carbon lifecycle modules A1-5, B4 and B6 as a minimum.
(2)	The <i>Contractor</i> must demonstrate that at least 95% of carbon for each required module is covered in the Whole Life Carbon Model accordance with PAS 2080 c7.1.3.3 (Cut off rules).
(3)	<p>The output of the Whole Life Carbon model will be provided to the <i>Project Manager</i> in one the following file formats:</p> <ul style="list-style-type: none"> • .xls • .xlsx • .csv <p>All carbon modules for an item will be recorded on the same row. This includes operational energy (B6) unless agreed with the Project Manager. I.e., operational energy should not be aggregated and entered separately.</p>
(4)	The Whole Life Carbon Model will be calculated as per the requirements and assumptions in Appendix A. The study period shall be 120 years.
(5)	Operational energy must be calculated using the Green Book supplementary guidance: valuation of energy use and greenhouse gas emissions for appraisal . The data used must be Grid Average, Consumption-based, Commercial/Public sector.
(6)	The Whole Life Carbon Model will be created by a competent person(s). The details of the person(s) creating the model should be included in the tender return.
(7)	The Whole Life Carbon Model will be used by the <i>Contractor</i> to capture the whole life carbon over the project lifecycle. It will be updated for each Pathway Stage that the contract covers.
(8)	<p>The minimum requirements of data presentation for the Whole Life Carbon Model are shown in the table below. The <i>Contractor</i> may add further metadata entries to aid presentation of calculations and recording of source data.</p> <p>Note: The TfL ProjectWise data environment includes these metadata items in the default AECOSim libraries, should the <i>Contractor</i> wish to use the digital design process for carbon calculations.</p>

(9)	<p>The <i>Contractor</i> provides the Whole Life Carbon Model and a Carbon Report for review and acceptance by the <i>Project Manager</i> as a formal deliverable at the end of each Pathway Stage under this contract. A Carbon Report will have as a minimum:</p> <ol style="list-style-type: none"> 1. Details of who undertook the assessment. 2. Pathway Stage at which the assessment was undertaken. 3. Assumptions in the build-up of the model beyond those stated in Appendix A. 4. Whole life carbon results. 5. Data sources for the carbon values. 6. The approximate percentage of the project's material quantities covered. 7. Aggregated carbon results by chosen categorisation system. 8. % change against [4] from last assessment (where applicable). <p>Commentary about the key design changes, including optioneering considered and resultant quantitative impact on whole life carbon, as well as other changes implemented to meet Works Information requirements. <u>Note:</u> the Carbon Report shall list all design changes that resulted in a change of more than 1% of the total whole life carbon emissions. The rationale for the change and exact carbon impact will be recorded.</p>
-----	---

Table 1: Carbon Model Data Submission Table

Ref	Name in MS Excel	Description
1	Element location and short description	Location and brief description of the element (e.g., Ticket hall foundation beam / Substation CMS / Depot main office luminaire).
2	Element category	Element category - the <i>Contractor</i> should select or devise an appropriate system.
3	B6 Appliance wattage (W)	Electrical load drawn by unit when active. If the appliance is distribution equipment and wattage is required (see Appendix A), this value should reflect electrical losses only.
4	B6 Appliance power factor	Power factor for unit drawing power.
5	B6 Annualised appliance utilisation	Percentage of the time that the appliance will be drawing the stated wattage.
6	B6 Carbon emissions	Calculation is: ' Appliance wattage (W) ' multiplied by ' Annualised appliance utilisation ' multiplied by 365 multiplied by 24 multiplied by multiplied 0.001 multiplied by [average carbon emissions in grid electricity for study period in CO2e/kWh].
7	A1-3 Material description	Brief description of the material (as per the Environmental Product Declaration (EPD) where available).
8	A1-3 Carbon factor	BS EN 15978 carbon factor for life cycle stages A1-3 (Product). This should be as per the EPD where available. If not obtained directly from manufacturer, as per the RICS Whole Life Carbon Assessment for the Built Environment hierarchy of allowable carbon data.
9	A1-3 Carbon factor unit	Unit for carbon factor (kgCO2e/m3, kgCO2e/tonne etc.).

10	A1-3 Carbon factor source	Source of the Stage A 1-3 carbon factor. If not from the manufacturer (ideally via an Environment Product Declaration), preferably Inventory of Carbon and Energy (ICE) v3.0/RSSB database. Please also add any specific commentary regarding A1-3.
11	A1-3 Quantity	The quantity of A1-3 carbon measured as a multiple of the carbon factor. Outside of the model, this field should select the relevant modelled data as per the carbon factor chosen (e.g., volume/tonnage).
12	A1-3 Carbon emissions	Calculation is: ' A1-3 carbon factor ' multiplied by ' A1-3 carbon quantity '.
13	A4 Carbon factor	BS EN 15978 carbon factor for life cycle stages A4 (Construction transport).
14	A4 Carbon factor unit	Unit for carbon factor (kgCO ₂ e/tonne.km etc.)
15	A4 Carbon factor source	Source of the Stage A4 carbon factor. Please also add any specific commentary regarding A4 (e.g., transport method and distance)
16	A4 Quantity	The quantity of A4 carbon measured as a multiple of the carbon factor.
17	A4 Carbon emissions	Calculation is: ' A4 carbon factor ' multiplied by ' A4 carbon quantity '.
18	A5 Carbon factor	BS EN 15978 carbon factor for life cycle stages A5 (Construction).
19	A5 Carbon factor unit	Unit for carbon factor (kgCO ₂ e/m ³ , kgCO ₂ e/tonne, kgCO ₂ e/£ etc.).
20	A5 Carbon factor source	Source of the Stage A5 carbon factor (EPDs, ICE database, etc.). Please also add any specific commentary regarding A5.
21	A5 Quantity	The quantity of A5 carbon measured as a multiple of the carbon factor.
22	A5 Carbon emissions	Calculation is: ' A5 carbon factor ' multiplied by ' A5 carbon quantity '.
23	B4 Factored service life	The working life of a product, after which it is assumed that the element will be replaced. Note that this is generally longer than the design service life.
24	B4 Carbon emissions	Calculation is: (120 divided by ' Factored service life ') multiplied by ' A1-3 carbon emissions '.
25	Optional carbon commentary	Optional entry for any other commentary else.
26	Sum of carbon emissions	Calculations is: ' A1-3 carbon emissions ' plus ' A4 carbon emissions ' plus ' A5 carbon emissions ' plus ' B4 carbon emissions ' plus ' B6 carbon emissions '



WORKS INFORMATION

WI 1200

SUBCONTRACTING

CONTENTS

WI1205	Restrictions for Subcontracting
WI1210	Requirements for all Subcontracts
WI1215	Submission of Subcontract Documentation
WI1220	Acceptance Procedures
WI1225	The Subcontract Procurement Plan
WI1230	Responsible Procurement
WI1235	Notification Requirements

WI 1205 Restrictions for Subcontracting

WI 1205.1 Specific Requirements

The *Contractor* only sub-contracts any part of the works as per clause 26 of the conditions of contract and with the prior written approval of the *Project Manager* provided always that the *Contractor* remains fully responsible for such parts of the works. The *Contractor* does not sub-contract any part of the works where the *Employer* makes a reasonable objection to the sub- contracting of that part.

The *Contractor* engages all subcontractors and suppliers on terms consistent with the terms of this contract and on terms that oblige the Subcontractors and suppliers to comply with the terms of its sub-contract in a manner which enables the *Contractor* to comply with its contract obligations under the contract.

WI 1210 Requirements for all Subcontracts (Clause 26)

The *Contractor* ensures that each subcontract he lets in relation to this contract contain provisions:

- requiring the proposed Subcontractor (and sub-subcontractors of any tier) to meet the Conditions stated for any Sectional Completion date and to achieve Completion on or before the Completion Date and to minimise the level of Defined Cost,
- requiring the proposed Subcontractors (and sub-subcontractors of any tier) to assign to the *Employer* the IPR in all documents, drawings, materials, computer software, licences and any other material or works prepared or developed by or on behalf of the proposed Subcontractor in the performance of the subcontract,
- requiring the proposed Subcontractor (and sub-subcontractors of any tier) to grant a non-exclusive, perpetual, irrevocable, royalty-free licence to the *Employer* to use Background IPR (including the right to grant sub- licences) of an equivalent extent and nature to those required by this contract,
- imposing equivalent obligations of confidentiality on the proposed Subcontractor (and sub-subcontractors of any tier) to those required by this contract,
- imposing equivalent obligations regarding Prohibited Acts and health and safety (including Safety Breaches) as required by this contract on Subcontractor (and sub-subcontractors of any tier),
- in equivalent terms to the payment clause of this contract together with an obligation to procure that equivalent provisions are included in sub-subcontracts of any tier,
- imposing equivalent obligations regarding London Living Wage on the proposed Subcontractor (and sub-subcontractor of any tier) to those required by this contract,
- imposing equivalent obligations regarding Freedom of Information Act on the proposed Subcontractor (and sub-subcontractor of any tier) to those required by this contract,
- imposing equivalent obligations regarding criminal record declarations on the proposed Subcontractor (and sub-subcontractor of any tier) to those required by this contract,
- in equivalent terms to clause 50 in conditions of contract together with an obligation to procure that equivalent provisions are included in sub-

- subcontracts of any tier,
- requiring the Subcontractor to comply with the provisions of assignment and novation of this contract,
- imposing equivalent rights to terminate the Subcontract and any sub-subcontract (together with equivalent provisions in relation to the amounts due in the event of such termination) to those contained in this contract,
- requiring the Subcontractor to maintain *Employers* liability, and where relevant, motor liability and professional indemnity insurance in accordance with this contract,

WI 1215 Submission of Subcontract Documentation

The *Contractor* submits to the *Project Manager* for acceptance, the name of the proposed Subcontractor for any subcontract over £10,000 (ten thousand pounds), or series of subcontracts with the same Subcontractor exceeding £10,000 (ten thousand pounds) in the aggregate, together with a copy of the proposed subcontract documentation and such other information as the *Project Manager* may require.

The *Contractor* includes in the proposed schedule of subcontracts all proposals to let works to any associated, affiliated or subsidiary companies of the *Contractor* and the *Contractor's* group of companies.

[REDACTED]

The *Contractor* submits the name of the proposed Subcontractor for any such subcontract to the *Project Manager* if requested by the *Project Manager* to do so together with a copy of the proposed subcontract documentation and such other information as the *Project Manager* may require and the *Project Manager* provides the *Contractor* with his written objection (if any) to any such proposed Subcontractor within 4 weeks of submission.

[REDACTED]

WI 1220 Acceptance Procedures

There are no additional procedures that the *Contractor* is to comply with other than those stated in clause 26 with regard to subcontract procurement.

WI 1225 The Subcontract Procurement Plan

The *Contractor* submits a detailed Subcontractor Procurement Plan to the *Project Manager* for acceptance within 4 weeks of the *starting date*.

The Subcontractor Procurement Plan contains, as a minimum, the *Contractor's* proposal for the following:

- A subcontract procurement policy statement
- A subcontract procurement quality statement including a commitment to meeting the *Employer's* requirement for best value and responsible procurement.
- Overall procurement schedule detailing when the *Contractor* intends to commence procurement for the parts of the *works* that are to be subcontracted, along with how this fits with the Accepted schedule.
- A statement detailing which parts of the *works* the *Contractor* intends to subcontract along with the reason why.
- A statement explaining how the *Contractor* intends to pass risk to their Subcontractors and how this transfer meets with requirement of the *Contractor's* Risk Management Plan.
- A statement explaining how the *Contractor* intends to manage health and safety in their supply chain
- The proposed form of contact for each Subcontractor identified in the Subcontractor Procurement Plan
- Details of which, in accordance with this Works Information, subcontractors the *Contractor* intends to submit to the *Project Manager* the full subcontract details.

WI 1225.1 Updating the Subcontract Procurement Plan

The *Contractor* submits a revised subcontract Procurement Plan to the *Project Manager* for acceptance whenever there is a change to the planned Subcontract Procurement Plan, by virtue of a change to the schedule, additional works identified to be subcontracted or when the Subcontractor Procurement Plan is affected by a compensation event.

The *Contractor* shows on each revised Subcontractor Procurement Plan how the plan has differed from the previous plan.

WI 1230 Responsible Procurement

The *Contractor* complies with the requirements and principles of the Responsible Procurement Policy in accordance with the following;

The Greater London Authority (GLA) has developed a Responsible Procurement Policy (RPP), through which it aims to improve London's sustainability across the following themes:

- Improving supply chain diversity
- Embedding fair and inclusive employment practices
- Enabling skills, training and employment opportunities
- Promoting ethical sourcing practices
- Improving environmental sustainability

The five themes are set out in more detail in the GLA and TfL public websites.

The *Contractor* submits, prior to the starting date, a responsible procurement policy setting out his proposed arrangements in respect of the GLA RPP to the *Project Manager* for acceptance. In the event that any policy submission is found to be inadequate, the *Contractor* implements an improvement plan to bring the policy arrangements to an acceptable standard within an agreed timescale and thereafter to maintain the policy in operation for the duration of the contract.

The *Contractor* is to undertake best endeavors to comply with the Section 106 local Labour requirements (Refer to Appendix B5.1). This will involve, but is not be limited to, organizing a meeting Council's provider Workplace to discuss vacancies and apprentice opportunities within the first two weeks of the *starting date*.

The *Contractor* will also be required to comply with the following requirements for responsible procurement:

- Equality, diversity and inclusion as set out at Schedule 19 of the Framework
- Fair Employment (London Living Wage) as set out in clause Z2.15 of the Conditions of Contract
- Strategic labour needs and training as set out at Schedule 18 of the Framework – amend as to requirements of the S106
- Ethical Sourcing – minimum requirements are Ethical Trading Initiative (ETI) Base Code
- Modern Slavery - complies with the Modern Slavery Act 2015 and any guidance issued by the Secretary of State under it. A Modern Slavery Ethical Sourcing Action Plan is required
- TfL Work Related Road Risk as detailed in WI1100
- HGV Direct Vision Standards (DVS)
- Provide a Sustainable Procurement Plan.

WI 1235 Notification Requirements

Within 4 weeks of the *starting date* for the *works*, the *Contractor* provides to the *Employer* in writing the name, contact details and details of the legal representatives of any Subcontractor (of any tier), to the extent that such information has not already been provided by the *Contractor* to the *Employer*.

The *Contractor* also immediately notifies the *Employer* in writing of any change to the information notified under this WI1235 and provides to the *Employer* in writing the name, contact details and details of the legal representatives of each new Subcontractor (of any tier) which the *Contractor* subsequently involves in the *works* after the *starting date*.

The *Employer* reserves the right to verify whether there are any grounds for excluding any Subcontractor under regulation 57 of the Public Contracts Regulations 2015 and Public Procurement (Amendment etc.) (EU Exit) Regulations 2020 (PPR 2020). Where necessary for the purpose of the *Employer's* exercise of its right under this WI1235, the *Employer* may request that the information provided by the *Contractor* under WI1230 be accompanied by one or more documents (within the meaning of regulation 59 of the Public Contracts Regulations 2015 and Public Procurement (Amendment etc.) (EU Exit) Regulations 2020 (PPR 2020)) in respect of the relevant Subcontractor(s). Further, the *Employer*:

- Shall require that the *Contractor* replaces any Subcontractor in respect of which the verification has shown that there are compulsory grounds for exclusion under regulation 57 of the Public Contracts Regulations 2015 and Public Procurement (Amendment etc.) (EU Exit) Regulations 2020 (PPR 2020), and;
- may require that the *Contractor* replaces any Subcontractor in respect of which the verification has shown that there are non-compulsory grounds for exclusion under regulation 57 of the Public Contracts Regulations 2015 and Public Procurement (Amendment etc.) (EU Exit) Regulations 2020 (PPR 2020).



WORKS INFORMATION

WI 1300

TITLE

CONTENTS

WI 1305	Title
WI 1310	Marking / Storage
WI1315	Disposal of Material from Site

WI 1305 Title

Unless otherwise stated in the Works Information, the title of all assets will be in the name of the *Employer*; all benefits of credit for sale of any and all redundant materials, including all cabling, removed from the Site shall be to the benefit of the *Employer*.

The *Contractor* shall obtain prior acceptance of the buyer from the *Project Manager*.

WI 1310 Marking/Storage

The *Contractor* will ensure all equipment, plant and materials are

- Stored securely
- Stored in compliance with the manufacturers' requirements
- Be easily available for inspection by the *Project Manager*
- to be marked as 'Property of DLR' unless the *Project Manager* has agreed that marking is not required.

WI 1315 Disposal of Material from Site

If the *Project Manager* decides that the redundant materials and equipment are unsuitable for re-use, then the *Contractor* arranges for the disposal of the assets through the appropriate recycling processes and facilities in keeping with the *Employer's* policies.



WORKS INFORMATION

WI 1500

ACCOUNTS AND RECORDS

CONTENTS

WI1505	Accounts and Records
WI1510	Definitions and General Provisions
WI1515	Records Management
WI1520	Management Systems Records
WI1525	Design Records
WI1530	Construction and Manufacturing Records
WI1535	Commissioning Records
WI1540	Operation and Maintenance Records
WI1545	Additional Accounts and Records
WI1550	Construction Industry Scheme

WI 1505 Accounts and Records

The *Conditions of Contract* set out the minimum records to be retained by the *Contractor* along with the *Employer's* compliance requirements in this respect.

This section of the Works Information sets out the additional records to be retained by the *Contractor* and their Subcontractors.

The *Contractor* is required to retain records in respect of the following:

- Documents submitted to provide Assurance and to verify compliance with the Employer's Requirements.
- Documents and records to be retained as required by Health, Safety, Environment and Quality, as required by Works Information WI1100.
- Records submitted to record progress and contract performance; as required by other parts of the Works Information.
- Records required by other parts of the Works Information.

All records to be retained are approved by a member of the *Contractor's* staff with the appropriate level of authority.

The *Contractor* refines the lists of records to be provided and to be retained in discussion with any relevant Others including asset owners, Maintainers and consenting bodies.

WI 1510 Definitions and General Provisions

The *Contractor* utilises DLR templates where available or proposes standard forms for deliverable documents for acceptance by the *Project Manager*. The *Project Manager* reserves the right to determine the most appropriate submission template.

Deliverable Records means records that the *Contractor* is required to supply to the *Employer* or Others, in respect of the Works.

Deliverable Records are issued in hard copy and electronic format.

Deliverable Records drawing files shall be prepared and issued in accordance with the CAD Specification as per DLR Standards.

Contractor Records means records that the *Contractor* is required to retain and maintain.

Contractor Records are issued in electronic and hard copy format and shall comply with ISO 9001. Superseded documents are also considered to be records.

WI 1515 Records Management

Within two weeks of the *starting date*, the *Contractor* submits a list of all Deliverable Records to be provided for acceptance by the *Project Manager*.

The dates on which the *Contractor* will prepare and submit the Deliverable Records for review by the *Project Manager* are to be included in the *Contractor's* programme submitted for acceptance.

Those documents requiring acceptance or approval by the *Employer* and Others are identified, and submission dates are agreed with the *Project Manager* to prevent delays in the execution of the *works*.

Deliverable Records are collated, packaged, indexed and submitted by the *Contractor* in a phased manner to the *Project Manager* for each element, structure, activity or Section as agreed with the *Project Manager*.

Access to Deliverable Records are provided by the *Contractor* to the *Project Manager*, or to third parties nominated by the *Project Manager*, as soon as the records become available.

Access to *Contractor* Records are to be provided to the *Project Manager*, or to the *Employer* and Others authorised by the *Project Manager*, who is allowed to copy records as required.

WI 1520 Management System Records

In addition to records required in accordance with The Conditions of Contract, the *Contractor* maintains records of the following, but not limited to:

Deliverable Records:

- Schedule of Deliverable Records and Contractor Records
- Construction Phase Plan
- *Contractor's* Quality and Assurance Plan
- Environmental Management Plan and procedures
- Waste Management Plan
- *Contractor's* management procedures
- Other assurance evidence as called up in the accepted *Contractor's* Quality and Assurance Plan.
- Risk Management Plan
- Weekly Progress Photographs
- Track Gauging Records
- Audit reports
- Assurance Compliance Submission(s)
- Certificate of Conformity to EMC Regulations
- Community and Media Relations Plan
- Required Planning, Heritage, Design and Construction consents
- Acceptance letters, certificates, records
- Safety documents as required in Works Information WI1100
- Incident/Accident reports
- Identification and resolution of system non-conformities/Defects
- Schedule of work
- Daily logs/shift reports and work plans

- Corrective actions initiated and implemented
- Certificates of competency
- Certificates of conformity to quality management
- BBA certificates (including date of latest successful surveillance/assessment visit)
- Technical and commercial correspondence
- Minutes of meetings
- Records of training
- Modern Slavery Ethical Sourcing Action Plan
- Equality, Diversity & Inclusion Policy
- Equality, Diversity & Inclusion (EDI) Action Plan
- All information described in WI 600 and WI 800

WI 1525 Design Records

In addition to records required in accordance with The Conditions of Contract, the *Contractor* maintains records of the following:

1. Deliverable Records for any change in design supplied by the *Employer* or designs produced by the *Contractor* but not limited to:
 - Conceptual Design Statements (AIP submissions)
 - Design Check Certificates (including Certificates for *Contractor's* Change)
 - Compliance Submissions
 - Compliance Certificates
 - Technical reports
 - Surveys and associated drawings
 - Detailed designs and Designer's risk assessments
 - Specifications
 - Design drawings (including temporary works)
 - Design calculations (including temporary works)
 - Further documents required for Supplier Assessment Tool.
 - Issued for Construction Drawings
2. *Contractor* Records:
 - Marked up drawings
 - Fabrication drawings
 - Check prints of drawings, reports and calculations
 - Design Risk Management Log

WI 1530 Construction and Manufacturing records

In addition to records required in accordance with The Conditions of Contract, the *Contractor* maintains records of the following where applicable: Deliverable Records:

- Records required to confirm/evidence compliance with the Planning Conditions
- Competitively tendered Subcontractor and supplier evaluations
- Site Queries
- Construction safe system of *works*

- Crane Plans
- Risk assessments
- Hazard Identification Logs
- Inspection & Test Plans and supporting check sheets and inspection/test certificates
- Consent to test / trial certification report
- Working drawings
- Inspection and Test Reports including specified Certification
- Acceptance Certificates
- Factory Acceptance Tests (FATs)
- Site acceptance Tests (SATs)
- Load Applications / Approvals
- Settlement building and other infrastructure Condition and Damage Reports
- Track Clearance and gauging records
- Weekly progress photographs (to be detailed within the Daily Log Shift Report)
- As built drawings
- As-built records
- Specifications of installed Plant
- Reports of the final disposition of nonconforming, defective or repaired work
- Geological records, ground investigation records, groundwater level and quality records, ground movement monitoring records, earthworks control records, piling and embedded walling records.
- Noise monitoring records
- Live risk register
- Materials testing records
- Records of outstanding work and Defects lists and implementation programmes for Completion
- Staged Completion Report
- Snagging and Defects Records
- Infrastructure release notice
- Further documents required for TfL Supplier Assessment Tool

Contractor Records:

- *Contractor*, Subcontractor and supplier correspondence
- Construction diaries
- Inspection and test logs
- Calibration records
- PAT records
- Damage logs
- Surveys diaries and records

WI 1535 Commissioning Records

In addition to records required in accordance with the Conditions of Contract, the *Contractor* maintains records of the following:

Deliverable Records:

- Inspection and test reports (including ITP and support evidence, where appropriate).
- Completion and / or Consent to Operate Certification Report

- Handover certification (for Maintainer acceptance of Asset)
- Details of testing and commissioning activity
- Quality check Sheets
- Records of testing and commissioning results
- Records of O&M training
- Acceptance and Completion Certificates
- Third party approvals, where required
- Plant reliability predictions
- Licences and consents
- Snagging/ defects Lists.
- Commissioning Plan
- Further documents required by legislation
- Further documents required for TfL Supplier Assessment Tool
- Redline drawings
- O&M Manuals
- Updated Asset Registers

Contractor Records:

- Inspection and test logs
-

WI 1540 Operation and Maintenance Records

In addition to records required in accordance with the Conditions of Contract, the *Contractor* maintains records of the following:

Deliverable Records:

- Completion and Consent to Operate Certification Report
- Maintenance Manuals including spares requirements
- Maintenance procedures
- Emergency maintenance procedures
- Inspection procedures
- Maintenance programmes
- Operations manuals
- Records of modifications made to the completed infrastructure or installed Plant
- Reports of failures, faults and incidents
- Further documents required for TfL supplier assessment tool

WI 1545 Additional Accounts and Records

In addition to records required in accordance with the Conditions of Contract and elsewhere in the Works Information the *Contractor* maintains records of the following:

- Subcontract documentation and changes thereto;
- Service order documentation and changes thereto;
- Invoices and credit notes;
- Bank Statements;

- Cash book & analysis;
- Cash book - bank statement reconciliations;
- Detailed payroll build-ups and information to support pay entitlements for operatives and staff;
- Timesheets, allocation sheets and swipe card records;
- National Insurance contributions build-ups;
- Subcontract final accounts;
- Delivery tickets for Plant, Material and Equipment and off hire notices for Equipment; and
- Any other relevant records that the *Project Manager* may reasonably require to verify any aspect of the *works* or requirement of the contract.

WI 1550 Construction Industry Scheme

1. Where the Construction Industry Scheme applies to any payment made by the *Employer* to the *Contractor* under the contract, the obligations of the *Employer* to make such payment are subject to the provisions and requirements of the Construction Industry Scheme.
2. The *Contractor* hereby undertakes that where, in relation to any payment to be made to the *Contractor* under this contract, a certificate of registration for gross payment is required in accordance with the Construction Industry Scheme, he will for the period between the Contract Date and the final date for payment of any amount due under the final assessment:
 - ensure that such a certificate is in place
 - provide a copy of such certificate to the *Employer* upon receipt of a written request to do so, and;
 - will use all reasonable endeavours to ensure that no circumstances will arise whereby HM Revenue and Customs may be entitled to cancel such certificate.

The *Contractor* further acknowledges and undertakes that if the certificate referred to in sub-clause (2) above, is not in place, or ceases to be in force for any reason during the currency of this contract, he will notify the *Employer* forthwith.

If at any time between the Contract Date and the final date for payment of any amount due under the final assessment, the *Contractor* does not have a valid certificate of registration for gross payment under the Construction Industry Scheme in place, or if he fails to provide a copy of such certificate when requested by the *Employer*, the *Employer* deducts any tax from payments due to the *Contractor* under the contract at the rate specified by HM Revenue and Customs pursuant to the Construction Industry Scheme before paying the balance to the *Contractor*. The *Employer* accounts to HM Revenue and Customs for any tax so deducted.



WORKS INFORMATION

WI 2000

EMPLOYER'S WORK SPECIFICATIONS AND DRAWINGS

CONTENTS

WI 2005	The <i>Employer's</i> work specifications
WI 2010	Drawings

WI 2005 The *Employer's* work Specification

WI 2005.1 The *Employer's* Technical Documents

The requirements are set out at Appendix C.

WI 2005.2 DLR Standards and Business Critical Processes

DLR standards and Business Critical Processes can be found in Appendix D. Any ambiguities found within the DLR standards must be brought to the attention of the *Project Manager* by the *Contractor* and agreements of alternative standards must be agreed in advance.

WI 2005.3 Templates

Refer to Appendix E for templates that are to be used by the *Contractor* during the *works*.

WI 2010 Drawings

Refer to Appendix C for Design drawings.

WI 2020 Support Information

Refer to Appendix F for documents provided 'For Information' only and not forming part of the Works Information or the Site Information.



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Volume 3

Site Information

3.000



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Volume 4

Works Information Appendices

4.000



**DLR Rolling Stock Replacement Programme; Beckton
Depot MFB, SS & TFOS Build Call-Off Contract; NEC3
ECC Option C**

Section 4.01

List of Appendices

4.010

Volume 3 Site Information

(Site Information) (3.0)	Doc number	Doc name	Revision
3.1	49200-DLR-MAC-TD350_Z-HS-K-0002	Beckton Depot Detailed CoCP	
3.2	1499901-DLR-RSTK-TR600_Z-IE-K-0114	Beckton Sustainability Strategy	
3.3	49200-DLR-MAC-TR000_Z-HS-K-0002	Beckton Depot Environmental Reports	
3.4	65204MF-DLR-BOU-TD350_00-SKE-GL-0001	MFB Route Sketch	
3.5	65204MF-DLR-BOU-TD350_00-SKE-GL-0002	CDM Boundary Sketch	
3.6	65204MF-DLR-BOU-TD350_00-SKE-GL-0003	Site plan showing location of MFB, SS & TFOS	
3.7	UK - 645453427.7	Works Licence Relating to Haul Road at Beckton Gas Works Site	
3.8	UK - 644288957.7	Works Licence Relating To Property At Beckton Gas Worksite, Armada Way, London	
3.9	AGREED HEADS OF TERMS	572_Beckton_AgreementForLease_HoTs_TFL_Land_240919	
3.10	NOT USED	NOT USED	
3.11	DLR CAI Report	Beckton Legacy Drawing Master Register	
3.12	87012-S-9465-PDF		

Volume 4 Appendices

Maintenance Facility Building + SS + TFOS List of Appendices

Appendix A (4.0) List of Appendices

List of Appendices	Doc number	Doc name	Revision
4.1	(This list)	List of Appendices	

Appendix B (5.0) Requirements

Requirements	Doc Number	Doc name	Rev
5.1	65204-DLR-MAC-TD350-CER-LG-0003 P01	S106 - Deed of Agreement for DLR Depot	P01
5.2	65204-AEC-EST-TD350-REP-EN-9001 P02	GQRA Interpretive Report	P02
5.3	65204-DLR-MAC-TD350-CER-LG-0001 P02	Planning Decision Notice Discharge Pre-commencement Conditions	P02
5.4	P133 HSE Policy	TfL HSE Policy	
5.5	65000-DLR-MAC-TR000-ZZ-0001 - RSRP IP Strategy v1.0-signed.pdf	Working within 5mts of track	1
5.6	65001-DLR-MAC-TR000-PLN-CL-0001	Principle Contractor Co-ordination Plan	21st January
5.7	65001-DLR-RSK-TR000-REQ-EN-0001	Carbon Modelling Requirements (as per RMM)	
5.8	NOT USED	NOT USED	
5.9	NOT USED	NOT USED	

Appendix C (6.0) Design

Technical Note	Doc number	Doc name	Revision
6.1	65204MF-ARC-MAC-TD350_00-RPT-DM-0002	Potential Future Design Changes	rev 01
6.1.1	65204MF-DLR-MAC-TD350_00-RPT-DM-0001	MFB Outstanding Detailed Design Technical Note	rev 01
6.1.2	65204-AEC-MAC-TD350-REP-CM-9001	AECOM Potential Future Design Changes	rev 01
6.1.3	65204MF-ARC-PRM-TD350_Z-DR-AR-1990	Site Layout for Future Change	rev 01
Telecoms / PKG 031	Doc number	Doc name	Revision
6.2	65204MF-ARC-COM-TD350_Z-CAL-TL-0001	CMS Calculation - Communications Systems	C01
6.3	65204MF-ARC-COM-TD350_Z-CAL-TL-0002	Power, Heat & UPS Calculations - Communications Systems	C01
6.4	65204MF-ARC-COM-TD350_Z-DAT-TL-0001	Datasheets - Communications Systems	C01

6.5	65204MF-ARC-COM-TD350_Z-DR-TL-0001	Telecoms - Network & Telephone Connectivity	C01
6.6	65204MF-ARC-COM-TD350_Z-DR-TL-0003	Telecoms - Second Floor Comms Cabinet Face Layout	C01
6.7	5204MF-ARC-COM-TD350_Z-DR-TL-0004	Telecoms - Second Floor Comms Cabinet Power Distribution	C01
6.8	65204MF-ARC-COM-TD350_Z-DR-TL-0005	Telecoms - Telephony and LAN Schematic	C01
6.9	65204MF-ARC-COM-TD350_Z-DR-TL-0006	Telecoms - Telephony Krone Connectivity	C01
6.10	65204MF-ARC-COM-TD350_Z-DR-TL-0007	Telecoms - Telephony Krone - Insulator Displacement Connection	C01
6.11	65204MF-ARC-COM-TD350_Z-DR-TL-0008	Telecoms - Wi-Fi Network Schematic	C01
6.12	65204MF-ARC-COM-TD350_Z-DR-TL-0009	Telecoms - Mounting Details- Wi-Fi / JB / LED CIS Displays	C01
6.13	65204MF-ARC-COM-TD350_Z-DR-TL-0010	Telecoms - NVER Room Layout	C01
6.14	65204MF-ARC-COM-TD350_Z-DR-TL-0011	Telecoms - EVC Schematic	C01
6.15	65204MF-ARC-COM-TD350_Z-DR-TL-0012	Telecoms - Existing NVER Cabinet Face Layout	C01
6.16	65204MF-ARC-COM-TD350_Z-RPT-TL-0001	Telecoms Detailed Design Report	C01
6.16.1	65204MF-ARC-COM-TD350_Z-BQU-TL-0001	Bill of Material - Communications Systems	C01
6.16.2	65204MF-ARC-COM-TD350_Z-SCH-TL-0001	Cable Schedule - Communications Systems	C01
Telecoms / PKG043	Doc number	Doc name	Revision
6.17	65204MF-ARC-COM-TD350_1-DR-TL-0001	Telecoms - GA Ground Floor - Cover Sheet	C01
6.18	65204MF-ARC-COM-TD350_1-DR-TL-0002	Telecoms - GA Ground Floor - Sheet 1 of 2	C01
6.19	65204MF-ARC-COM-TD350_1-DR-TL-0003	Telecoms - GA Ground Floor - Sheet 2 of 2	C01
6.20	65204MF-ARC-COM-TD350_1-DR-TL-0004	Telecoms - Ground Floor - CMS Layout - Sheet 1 of 2	C01
6.21	65204MF-ARC-COM-TD350_1-DR-TL-0005	Telecoms - Ground Floor - CMS Layout - Sheet 2 of 2	C01
6.22	65204MF-ARC-COM-TD350_A-DR-TL-0001	Telecoms - GA Second Floor Cover Sheet	C01
6.23	65204MF-ARC-COM-TD350_A-DR-TL-0002	Telecoms - GA Second Floor Sheet 1 of 2	C01
6.24	65204MF-ARC-COM-TD350_A-DR-TL-0003	Telecoms - GA Second Floor Sheet 2 of 2	C01
6.25	65204MF-ARC-COM-TD350_A-DR-TL-0004	Telecoms - Second Floor - CMS Layout - Sheet 1 of 2	C01
6.26	65204MF-ARC-COM-TD350_A-DR-TL-0005	Telecoms - Second Floor - CMS Layout - Sheet 2 of 2	C01
6.27	65204MF-ARC-COM-TD350_Z-DR-TL-0002	Telecoms - Comms Room and Krone Box - Equipment Layout	C01
Premises / PKG032	Doc number	Doc name	Revision
6.28	65204MF-ARC-PRM-TD350_00-RPT-AR-1808	PSA Walking Route Report	C01
6.29	65204MF-ARC-PRM-TD350_00-RPT-AR-1809	Deliveries, Storage and Logistics Report	C01
6.30	65204MF-ARC-PRM-TD350_Z-DR-AR-1000	Site Plan	C01
6.31	65204MF-ARC-PRM-TD350_Z-DR-AR-1001	Overall Ground Floor Plan	C01
6.32	65204MF-ARC-PRM-TD350_Z-DR-AR-1002	Overall Second Floor Plan	C01
6.33	65204MF-ARC-PRM-TD350_Z-DR-AR-1003	Overall Roof Plan	C01
6.34	65204MF-ARC-PRM-TD350_Z-DR-AR-1004	Part First Floor Level, Mezzanine Level and Top of Lift Shaft Level Plans	C01
6.35	65204MF-ARC-PRM-TD350_Z-DR-AR-1005	Overall Ground Floor - Fire Plan	C01
6.36	65204MF-ARC-PRM-TD350_Z-DR-AR-1006	Overall Second Floor - Fire Plan	C01
6.37	65204MF-ARC-PRM-TD350_Z-DR-AR-1007	Part First Floor Fire Plan and Fire Safety Section	C01
6.38	65204MF-ARC-PRM-TD350_Z-DR-AR-1010	Site Masterplan	C01
6.39	65204MF-ARC-PRM-TD350_Z-DR-AR-1015	Suspended Ceilings Layouts	C01
6.40	65204MF-ARC-PRM-TD350_Z-DR-AR-1025	Ground Floor & Part First Floor Plan Wall Setting Out	C01
6.41	65204MF-ARC-PRM-TD350_Z-DR-AR-1026	Second Floor Plan - Wall Setting Out - Sheet 1 of 2	C01

6.42	65204MF-ARC-PRM-TD350_Z-DR-AR-1027	Second Floor Plan - Wall Setting Out - Sheet 2 of 2	C01
6.43	65204MF-ARC-PRM-TD350_Z-DR-AR-1041	Part Ground & Second Floor Building Plan BWIC Sheet 1 of 2	C01
6.44	65204MF-ARC-PRM-TD350_Z-DR-AR-1042	Part Ground & Second floor Building Plan BWIC Sheet 2 of 2	C01
6.45	65204MF-ARC-PRM-TD350_Z-DR-AR-1051	Ground and First Floor Building Plans Suspended Ceiling Setting Out	C01
6.46	65204MF-ARC-PRM-TD350_Z-DR-AR-1052	Second Floor Building Plan Suspended Ceiling Setting Out Sheet 1 of 2	C01
6.47	65204MF-ARC-PRM-TD350_Z-DR-AR-1053	Second Floor Building Plan Suspended Ceiling Setting Out Sheet 2 of 2	C01
6.48	65204MF-ARC-PRM-TD350_Z-DR-AR-1061	Ground Floor Compressor Plant Room	C01
6.49	65204MF-ARC-PRM-TD350_Z-DR-AR-1062	Ground Floor DC Switch room	C01
6.50	65204MF-ARC-PRM-TD350_Z-DR-AR-1064	Second Floor - Mechanical Plant Room B/761 - 1 of 2	C01
6.51	65204MF-ARC-PRM-TD350_Z-DR-AR-1065	Second Floor - Mechanical Plant Room B/761 - 2 of 2	C01
6.52	65204MF-ARC-PRM-TD350_Z-DR-AR-1066	Second Floor - LV Switch room B/665	C01
6.53	65204MF-ARC-PRM-TD350_Z-DR-AR-1090	East and West Elevations	C01
6.54	65204MF-ARC-PRM-TD350_Z-DR-AR-1091	North Elevation	C01
6.55	65204MF-ARC-PRM-TD350_Z-DR-AR-1092	Wheel Lathe Building Area Elevations	C01
6.56	65204MF-ARC-PRM-TD350_Z-DR-AR-1100	Cross Section A-A	C01
6.57	65204MF-ARC-PRM-TD350_Z-DR-AR-1101	Cross Section B-B	C01
6.58	65204MF-ARC-PRM-TD350_Z-DR-AR-1102	Long Section Through Road E-E (1 of 3)	C01
6.59	65204MF-ARC-PRM-TD350_Z-DR-AR-1103	Long Section Through Road E-E (2 of 3)	C01
6.60	65204MF-ARC-PRM-TD350_Z-DR-AR-1104	Long Section Through Road E-E (3 of 3)	C01
6.61	65204MF-ARC-PRM-TD350_Z-DR-AR-1105	Long Section Through Wheel Lathe (Looking North) 1 of 2	C01
6.62	65204MF-ARC-PRM-TD350_Z-DR-AR-1106	Long Section Through Wheel Lathe (Looking North) 2 of 2	C01
6.63	65204MF-ARC-PRM-TD350_Z-DR-AR-1110	Maintenance Access	C01
6.64	65204MF-ARC-PRM-TD350_Z-DR-AR-1120	Detailed Sections 1 and 2	C01
6.65	65204MF-ARC-PRM-TD350_Z-DR-AR-1121	Detailed Sections 3, 4 and 5	C01
6.66	65204MF-ARC-PRM-TD350_Z-DR-AR-1122	Detailed Sections 6, 7, 8, and 9	C01
6.67	65204MF-ARC-PRM-TD350_Z-DR-AR-1123	Detailed Sections 10,11 and 12	C01
6.68	65204MF-ARC-PRM-TD350_Z-DR-AR-1133	Lift Shaft General Arrangement	C01
6.69	65204MF-ARC-PRM-TD350_Z-DR-AR-1134	Lift Shaft Details	C01
6.70	65204MF-ARC-PRM-TD350_Z-DR-AR-1135	Stair 2 B/631 Plans and Sections	C01
6.71	65204MF-ARC-PRM-TD350_Z-DR-AR-1136	Stair 2 B/631 Details	C01
6.72	65204MF-ARC-PRM-TD350_Z-DR-AR-1151	Existing Building (Wheel Lathe) - Demolition Works Sheet 1 of 2	C01
6.73	65204MF-ARC-PRM-TD350_Z-DR-AR-1152	Existing Building (Wheel Lathe) - Demolition Works Sheet 2 of 2	C01
6.74	65204MF-ARC-PRM-TD350_Z-DR-AR-1161	Internal East Elevation	C01
6.75	65204MF-ARC-PRM-TD350_Z-DR-AR-1162	Internal West Elevation	C01
6.76	65204MF-ARC-PRM-TD350_Z-DR-AR-1165	New MFB Internal North Elevation Sheet 1 of 2	C01
6.77	65204MF-ARC-PRM-TD350_Z-DR-AR-1166	New MFB Internal North Elevation Sheet 2 of 2	C01
6.78	65204MF-ARC-PRM-TD350_Z-DR-AR-1171	New MFB Internal South Elevation Sheet 1 of 2	C01
6.79	65204MF-ARC-PRM-TD350_Z-DR-AR-1172	New MFB Internal South Elevation Sheet 2 of 2	C01
6.80	65204MF-ARC-PRM-TD350_Z-DR-AR-1200	Ground Floor Plan - Wall and Ceiling Finishes	C01
6.81	65204MF-ARC-PRM-TD350_Z-DR-AR-1201	Part First Floor and Full Second Floor Plan - Finishes	C01
6.82	65204MF-ARC-PRM-TD350_Z-DR-AR-1203	Internal Finishes Board	C01

6.83	65204MF-ARC-PRM-TD350_Z-DR-AR-1204	Ground Floor Plan - Floor Finishes	C01
6.84	65204MF-ARC-PRM-TD350_Z-DR-AR-1206	Ground Floor Plan - Floor Markings	C01
6.85	65204MF-ARC-PRM-TD350_Z-DR-AR-1210	Ground Floor Plan - Protection	C01
6.86	65204MF-ARC-PRM-TD350_Z-DR-AR-1211	Ground Floor Plan - Wall Types	C01
6.87	65204MF-ARC-PRM-TD350_Z-DR-AR-1212	Second Floor Plan - Wall Types	C01
6.88	65204MF-ARC-PRM-TD350_Z-DR-AR-1214	Part First Floor Level, Mezzanine Level and Top of Lift Shaft Level Plans - Wall Types	C01
6.89	65204MF-ARC-PRM-TD350_Z-DR-AR-1226	All Levels - Wall Types Typical Plans and Sections	C01
6.90	65204MF-ARC-PRM-TD350_Z-DR-AR-1231	Ground & Second Floor Finishes Details	C01
6.91	65204MF-ARC-PRM-TD350_Z-DR-AR-1241	Ground Floor Plan - Floor Marking Setting Out Sheet 1 of 4	C01
6.92	65204MF-ARC-PRM-TD350_Z-DR-AR-1242	Ground Floor Plan - Floor Marking Setting Out Sheet 2 of 4	C01
6.93	65204MF-ARC-PRM-TD350_Z-DR-AR-1243	Ground Floor Plan - Floor Marking Setting Out Sheet 3 of 4	C01
6.94	65204MF-ARC-PRM-TD350_Z-DR-AR-1244	Ground Floor Plan - Floor Marking Setting Out Sheet 4 of 4	C01
6.95	65204MF-ARC-PRM-TD350_Z-DR-AR-1245	Ground Floor Plan - Internal Guarding Protection Sheet 1 of 3	C01
6.96	65204MF-ARC-PRM-TD350_Z-DR-AR-1246	Ground Floor Plan - Internal Guarding Protection Sheet 2 of 3	C01
6.97	65204MF-ARC-PRM-TD350_Z-DR-AR-1247	Ground Floor Plan - Internal Guarding Protection Sheet 3 of 3	C01
6.98	65204MF-ARC-PRM-TD350_Z-DR-AR-1301	Internal Doors - Door Types Elevations	C01
6.99	65204MF-ARC-PRM-TD350_Z-DR-AR-1303	Internal Fire Shutter Details	C01
6.100	65204MF-ARC-PRM-TD350_Z-DR-AR-1305	Internal Door Details - Door Structural Openings And Door Frame Conditions	C01
6.101	65204MF-ARC-PRM-TD350_Z-DR-AR-1306	Internal Door Details - Door Structural Openings And Door Frame Conditions Sheet 2 of 2	C01
6.102	65204MF-ARC-PRM-TD350_Z-DR-AR-1310	Internal Wall Details Ground Floor	C01
6.103	65204MF-ARC-PRM-TD350_Z-DR-AR-1311	Internal Wall Details Second Floor	C01
6.104	65204MF-ARC-PRM-TD350_Z-DR-AR-1312	Internal Glazed Partition	C01
6.105	65204MF-ARC-PRM-TD350_Z-DR-AR-1313	Composite Panel Wall Details	C01
6.106	65204MF-ARC-PRM-TD350_Z-DR-AR-1314	Interface (between Wheel Lathe and MFB) Wall Details	C01
6.107	65204MF-ARC-PRM-TD350_Z-DR-AR-1315	Fire Stopping Details	C01
6.108	65204MF-ARC-PRM-TD350_Z-DR-AR-1317	Smoke Curtain Details	C01
6.109	65204MF-ARC-PRM-TD350_Z-DR-AR-1318	Ceiling Details	C01
6.110	65204MF-ARC-PRM-TD350_Z-DR-AR-1320	Internal Fixed Guardrails to Pit Steps, Swimming Pool Ramps.	C01
6.111	65204MF-ARC-PRM-TD350_Z-DR-AR-1325	Cat Ladders 1 and 2 (Grid Line 3 / K-L)	C01
6.112	65204MF-ARC-PRM-TD350_Z-DR-AR-1326	MFB Roof Access Stair	C01
6.113	65204MF-ARC-PRM-TD350_Z-DR-AR-1331	Sky Gantry Walkway and Stairs Sheet 1 of 2	C01
6.114	65204MF-ARC-PRM-TD350_Z-DR-AR-1332	Sky Gantry Walkway and Stairs Sheet 2 of 2	C01
6.115	65204MF-ARC-PRM-TD350_Z-DR-AR-1340	Standing Desk and Road End Panel Arrangement East End	C01
6.116	65204MF-ARC-PRM-TD350_Z-DR-AR-1341	Standing Desk and Road End Panel Arrangement West End	C01
6.117	65204MF-ARC-PRM-TD350_Z-DR-AR-1395	Train Assembly Sequence	C01
6.118	65204MF-ARC-PRM-TD350_Z-DR-AR-1401	Cladding Details Sheet 1	C01
6.119	65204MF-ARC-PRM-TD350_Z-DR-AR-1402	Cladding Details Sheet 2	C01
6.120	65204MF-ARC-PRM-TD350_Z-DR-AR-1403	Cladding Details Sheet 3	C01
6.121	65204MF-ARC-PRM-TD350_Z-DR-AR-1404	Cladding Details Sheet 4	C01
6.122	65204MF-ARC-PRM-TD350_Z-DR-AR-1406	Roof Mounted Smoke Vent and Rooflight Kerb Details	C01
6.123	65204MF-ARC-PRM-TD350_Z-DR-AR-1407	External Window Head, Jamb, Cill Details	C01

6.124	65204MF-ARC-PRM-TD350_Z-DR-AR-1408	Curtain Wall Details	C01
6.125	65204MF-ARC-PRM-TD350_Z-DR-AR-1410	External Personnel Door Details	C01
6.126	65204MF-ARC-PRM-TD350_Z-DR-AR-1411	Typical Sectional Overhead Door Details. Sheet 1 of 2	C01
6.127	65204MF-ARC-PRM-TD350_Z-DR-AR-1412	Typical Sectional Overhead Door Details. Sheet 2 of 2	C01
6.128	65204MF-ARC-PRM-TD350_Z-DR-AR-1415	Typical Roof Details MFB Gutter Details	C01
6.129	65204MF-ARC-PRM-TD350_Z-DR-AR-1416	Typical Roof Details - Wheel Lathe Gutter	C01
6.130	65204MF-ARC-PRM-TD350_Z-DR-AR-1450	Second Floor Kitchenette B/049	C01
6.131	65204MF-ARC-PRM-TD350_Z-DR-AR-1451	Second Floor Male Changing Room B/425	C01
6.132	65204MF-ARC-PRM-TD350_Z-DR-AR-1452	Second Floor Female Changing Room B/427	C01
6.133	65204MF-ARC-PRM-TD350_Z-DR-AR-1453	Second Floor Male B/425 and Female Toilets B/427	C01
6.134	65204MF-ARC-PRM-TD350_Z-DR-AR-1454	Second Floor Accessible Toilet B/424	C01
6.135	65204MF-ARC-PRM-TD350_Z-DR-AR-1455	Second Floor Cleaners Room B/408	C01
6.136	65204MF-ARC-PRM-TD350_Z-DR-AR-1456	Second Floor Unisex WC 01 - B/422 and Unisex WC 02 - B/423	C01
6.137	65204MF-ARC-PRM-TD350_Z-DR-AR-1457	Ground Floor Male WC 1/417	C01
6.138	65204MF-ARC-PRM-TD350_Z-DR-AR-1458	Ground Floor Female WC 1/416	C01
6.139	65204MF-ARC-PRM-TD350_Z-DR-AR-1459	Second Floor Accessible Shower and Changing Room	C01
6.140	65204MF-ARC-PRM-TD350_Z-DR-AR-1481	Internal Door Schedule Ground and Part First Floor Level	C01
6.141	65204MF-ARC-PRM-TD350_Z-DR-AR-1482	Internal Door Schedule Second Floor Level	C01
6.142	65204MF-ARC-PRM-TD350_Z-DR-AR-1491	External Door Schedule	C01
6.143	65204MF-ARC-PRM-TD350_Z-DR-AR-1494	Window Schedule & Internal Window Details	C01
6.144	65204MF-ARC-PRM-TD350_Z-DR-AR-1495	Louvre Schedule	C01
6.145	65204MF-ARC-PRM-TD350_Z-DR-AR-1496	Louvre Details	C01
6.146	65204MF-ARC-PRM-TD350_Z-DR-AR-1497	Sanitaryware Schedule	C01
6.147	65204MF-ARC-PRM-TD350_Z-DR-AR-1498	Compressor Room 1/779 Louvre Details	C01
6.148	65204MF-ARC-PRM-TD350_Z-DR-AR-1750	Plant & Equipment - Swept Path Analysis - Bogie Removal	C01
6.149	65204MF-ARC-PRM-TD350_Z-DR-AR-1751	Plant & Equipment - Swept Path Analysis - Gangway Couplers	C01
6.150	65204MF-ARC-PRM-TD350_Z-DR-AR-1752	Swept Path Analysis - HVAC Removal	C01
6.151	65204MF-ARC-PRM-TD350_Z-DR-AR-1753	Swept Path Analysis - Forklift	C01
6.152	65204MF-ARC-PRM-TD350_Z-DR-AR-1754	Swept Path Analysis - Door Replacement	C01
6.153	65204MF-ARC-PRM-TD350_Z-DR-AR-1760	Plant & Equipment - Storage Layout	C01
6.154	65204MF-ARC-PRM-TD350_Z-DR-AR-1761	Plant & Equipment - Internal Elevation Storage Layout Sheet (Sheet 1)	C01
6.155	65204MF-ARC-PRM-TD350_Z-DR-AR-1762	Plant & Equipment - Internal Elevation Storage Layout Sheet (Sheet 2)	C01
6.156	65204MF-ARC-PRM-TD350_Z-DR-AR-1765	Typical Pit Sections	C01
6.157	65204MF-ARC-PRM-TD350_Z-DR-AR-1766	Road 6 Assembly Pit Details	C01
6.158	65204MF-ARC-PRM-TD350_Z-DR-AR-1906	Proposed Elevations	C01
6.159	65204MF-ARC-PRM-TD350_Z-DR-AR-1985	BREEAM - Cycle Shelters	C01
6.160	65204MF-ARC-PRM-TD350_Z-DR-AR-1991	External Apron Area Arrangement	C01
6.161	65204MF-ARC-PRM-TD350_00-CER-AR-1811	Design Check Certificate – Premises	C01
6.162	65204MF-ARC-PRM-TD350_00-CER-AR-1812	Design Check Certificate – P & E (Plant & Equipment) -	C01
6.163	65204MF-ARC-PRM-TD350_Z-DR-AR-1997	Proposed Section - Functional & Non-Functional Requirements	C01
6.164	65204MF-ARC-PRM-TD350_Z-DR-AR-1998	Preliminary Forklift Swept Path Analysis	C01

6.165	65204MF-ARC-PRM-TD350_Z-RDS-AR-1800	Room Data Sheets - Premises	C01
6.166	65204MF-ARC-PRM-TD350_Z-REQ-AR-1801	Detailed Design Specification for External Envelope	C01
6.167	65204MF-ARC-PRM-TD350_Z-REQ-AR-1802	Detailed Design Specification for Internal Building	C01
6.168	65204MF-ARC-PRM-TD350_Z-RPT-AR-1809	Deliveries, Storage and Logistics Report	C01
6.169	65204MF-ARC-PRM-TD350_Z-SCH-AR-1805	Plant and Equipment Schedule	C01
6.169.1	65204MF-ARC-PRM-TD350_Z-DR-AR-1970	Site Wide Fire Strategy Emergency Vehicle Access Route	C01
Public Health / PKG033	Doc number	Doc name	Revision
6.170	65204MF-ARC-MEC-TD350_00-DR-PH-0003	Public Health Services - Domestic And Industrial Water Services Schematic	C01
6.171	65204MF-ARC-MEC-TD350_00-DR-PH-0014	Public Health Services - Above Ground Foul Water Drainage Schematic	C01
6.172	65204MF-ARC-MEC-TD350_00-DR-PH-0015	Public Health Services - Above Ground Gas Radiant Heater Flue Condensate Drainage Schematic	C01
6.173	65204MF-ARC-MEC-TD350_00-DR-PH-0021	Public Health Services - Above Ground Surface Water Drainage Schematic	C01
6.174	65204MF-ARC-MEC-TD350_00-DR-PH-0035	Public Health Services - Ground Floor Compressed Air Schematic	C01
6.175	65204MF-ARC-MEC-TD350_1-DR-PH-0001	Public Health Services - Ground Floor Index Sheet	C01
6.176	65204MF-ARC-MEC-TD350_1-DR-PH-0007	Public Health Services - Ground Floor Domestic & Industrial Water Services Layout (Sheet 1 of 2)	C01
6.177	65204MF-ARC-MEC-TD350_1-DR-PH-0008	Public Health Services - Ground Floor Domestic & Industrial Water Services Layout (Sheet 2 of 2)	C01
6.178	65204MF-ARC-MEC-TD350_1-DR-PH-0018	Public Health Services - Ground Floor Above Ground Foul & Surface Water Drainage Layout (Sheet 1 of 2)	C01
6.179	65204MF-ARC-MEC-TD350_1-DR-PH-0019	Public Health Services - Ground Floor Above Ground Foul & Surface Water Drainage Layout (Sheet 2 of 2)	C01
6.180	65204MF-ARC-MEC-TD350_1-DR-PH-0037	Public Health Services - Ground Floor Compressed Air Layout (Sheet 1 of 2)	C01
6.181	65204MF-ARC-MEC-TD350_1-DR-PH-0038	Public Health Services - Ground Floor Compressed Air Layout (Sheet 2 of 2)	C01
6.182	65204MF-ARC-MEC-TD350_1-DR-PH-0040	Public Health Services - Air Compressor Room Layout	C01
6.183	65204MF-ARC-MEC-TD350_A-DR-PH-0002	Public Health Services - Second Floor Index Sheet	C01
6.184	65204MF-ARC-MEC-TD350_A-DR-PH-0005	Public Health Services - Second Floor Domestic & Industrial Water Services Layout (Sheet 1 of 2)	C01
6.185	65204MF-ARC-MEC-TD350_A-DR-PH-0006	Public Health Services - Second Floor Domestic & Industrial Water Services Layout (Sheet 2 of 2)	C01
6.186	65204MF-ARC-MEC-TD350_A-DR-PH-0016	Public Health Services - Second Floor Above Ground Foul & Surface Water Drainage Layout (Sheet 1 of 2)	C01
6.187	65204MF-ARC-MEC-TD350_A-DR-PH-0017	Public Health Services - Second Floor Above Ground Foul & Surface Water Drainage Layout (Sheet 2 of 2)	C01
6.188	65204MF-ARC-MEC-TD350_Z-DR-PH-0027	Public Health Services - Section (Sheet 1 of 3)	C01
6.189	65204MF-ARC-MEC-TD350_Z-DR-PH-0028	Public Health Services - Section (Sheet 2 of 3)	C01
6.190	65204MF-ARC-MEC-TD350_Z-DR-PH-0029	Public Health Services - Section (Sheet 3 of 3)	C01
6.191	65204MF-ARC-MEC-TD350_Z-DR-PH-0041	Public Health Services - Air Compressor Room Section	C01
Fire Systems PKG034	Doc number	Doc name	Revision
6.192	65204MF-ARC-FRS-TD350_00-DR-FE-0001	Fire Systems - Loop Schematic (Sheet 1 of 2)	C01
6.193	65204MF-ARC-FRS-TD350_00-DR-FE-0002	Fire Systems - Loop Schematic (Sheet 2 of 2)	C01
6.194	65204MF-ARC-FRS-TD350_00-DR-FE-1000	Fire Systems - Legends and Symbols	C01
6.195	65204MF-ARC-FRS-TD350_00-REQ-FE-0001	Fire Services Specification - Particular Specification and Schedule Volume 1	C01
6.196	65204MF-ARC-FRS-TD350_00-REQ-FE-0002	Fire Services Specification - General Workmanship and Materials Volume 2	C01
6.197	65204MF-ARC-FRS-TD350_1-DR-FE-0001	Fire System - Ground Floor Index Sheet	C01
6.198	65204MF-ARC-FRS-TD350_1-DR-FE-0002	Fire Systems Layout - Work Shed (Sheet 1 of 2)	C01
6.199	65204MF-ARC-FRS-TD350_1-DR-FE-0003	Fire Systems Layout - Work Shed (Sheet 2 of 2)	C01
6.200	65204MF-ARC-FRS-TD350_A-DR-FE-0001	Fire System - Second Floor Index Sheet	C01
6.201	65204MF-ARC-FRS-TD350_A-DR-FE-0002	Fire Systems Layout - Staff Accommodation (Sheet 1 of 2)	C01

6.202	65204MF-ARC-FRS-TD350_A-DR-FE-0003	Fire Systems Layout - Staff Accommodation (Sheet 2 of 2)	C01
Fire / PKG036	Doc number	Doc name	Revision
6.203	65204MF-ARC-FRS-TD350_00-STR-FE-0001	Fire Safety Strategy	P05
6.204	NOT USED	NOT USED	
Fire Strategy / PKG117	Doc number	Doc name	Revision
6.205	65204MF-ARC-FRS-TD350_00-STR-FE-000	Fire strategy Construction Phase	P01
Traction Power / PKG035	Doc number	Doc name	Revision
6.206	65204MF-ARC-POW-TD350_Z-DR-TC-0001	MFB DC Sectioning Traction Power Supply Diagram	C01
6.207	65204MF-ARC-POW-TD350_Z-DR-TC-0002	MFB DC Shore Supplies Single Line Diagram	C01
6.208	65204MF-ARC-POW-TD350_Z-DR-TC-0003	MFB DC Switch room Layout	C01
6.209	65204MF-ARC-POW-TD350_Z-DR-TC-0004	DC Switch room Earthing Layout	C01
6.210	65204MF-ARC-POW-TD350_Z-DR-TC-0005	MFB Shore Supplies Overhead Busbar Layout	C01
6.211	65204MF-ARC-POW-TD350_Z-DR-TC-0006	MFB Shore Supplies Overhead Busbar Sections	C01
6.212	65204MF-ARC-POW-TD350_Z-DR-TC-0007	Conductor Rail Layout for MFB Shed Road 6 to 9 East End	C01
6.213	65204MF-ARC-POW-TD350_Z-DR-TC-0008	Conductor Rail Layout for MFB Shed Road 6 to 9 West End	C01
6.214	65204MF-ARC-POW-TD350_Z-DR-TC-0009	Negative Bonding Layout for MFB Shed Road 6 to 9 East End	C01
6.215	65204MF-ARC-POW-TD350_Z-DR-TC-0010	Negative Bonding Layout for MFB Shed Road 6 to 9 West End	C01
6.216	65204MF-ARC-POW-TD350_Z-DR-TC-0011	MFB Emergency Stop Button Layout	C01
6.217	65204MF-ARC-POW-TD350_Z-DR-TC-0012	MFB Shore Supply System Block Diagram	C01
6.218	65204MF-ARC-POW-TD350_Z-DR-TC-0013	MFB 230V & 110V AC Distribution Scheme	C01
6.219	65204MF-ARC-POW-TD350_Z-DR-TC-0014	MFB Overhead Status Indicator and Klaxon layout	C01
6.220	65204MF-ARC-POW-TD350_Z-DR-TC-0015	MFB Depot Personnel Protection System Layout East End	C01
6.221	65204MF-ARC-POW-TD350_Z-DR-TC-0016	MFB Depot Personnel Protection System Layout West End	C01
6.222	65204MF-ARC-POW-TD350_Z-DR-TC-0018	MFB Cable Containment Layout	C01
6.223	65204MF-ARC-POW-TD350_Z-DR-TC-0019	DC Switch room Cable Containment Layout	C01
6.224	65204MF-ARC-POW-TD350_Z-DR-TC-0020	DC Cable Route Layout West End	C01
6.225	65204MF-ARC-POW-TD350_Z-DR-TC-0021	DC Cable Route Layout East End	C01
6.226	65204MF-ARC-POW-TD350_Z-DR-TC-0028	MFB Depot Personnel Protection System Block Diagram	C01
6.227	65204MF-ARC-POW-TD350_Z-DR-TC-0029	DPPS Single Line Diagram	C01
6.228	65204MF-ARC-POW-TD350_Z-DR-TC-0040	DC Cable Schedule	C01
6.229	65204MF-ARC-POW-TD350_Z-DR-TC-0041	Control & Auxiliary Power Cable Schedule (Sheet 1 of 6)	C01
6.230	65204MF-ARC-POW-TD350_Z-DR-TC-0042	Control & Auxiliary Power Cable Schedule (Sheet 2 of 6)	C01
6.231	65204MF-ARC-POW-TD350_Z-DR-TC-0043	Control & Auxiliary Power Cable Schedule (Sheet 3 of 6)	C01
6.232	65204MF-ARC-POW-TD350_Z-DR-TC-0044	Control & Auxiliary Power Cable Schedule (Sheet 4 of 6)	C01
6.233	65204MF-ARC-POW-TD350_Z-DR-TC-0045	Control & Auxiliary Power Cable Schedule (Sheet 5 of 6)	C01
6.234	65204MF-ARC-POW-TD350_Z-DR-TC-0046	Control & Auxiliary Power Cable Schedule (Sheet 6 of 6)	C01
6.235	65204MF-ARC-POW-TD350_Z-DR-TC-0049	Termination Diagram for Emergency Stop Button	C01
Civils PKG037	Doc number	Doc name	Revision
6.236	65204MF-ARC-BAS-TD350_00-DR-SE-3001	General Notes	P03
6.237	65204MF-ARC-BAS-TD350_1-DR-CE-3004	Pile cap Layout Plan	P03
6.238	65204MF-ARC-BAS-TD350_1-DR-CE-3005	Plan at Ground Level	P04

6.239	65204MF-ARC-BAS-TD350_1-DR-CE-3006	Hardstanding Plan - Aprons and Train Delivery	P03
6.240	65204MF-ARC-BAS-TD350_1-DR-CE-3010	Pile Setting Out Schedule	P03
6.241	65204MF-ARC-BAS-TD350_1-DR-SE-3002	Proposed Site General Arrangement Plan	P04
6.242	65204MF-ARC-BAS-TD350_2-DR-CE-3003	Pile Layout Plan	P04
6.243	65204MF-ARC-BAS-TD350_2-DR-SE-3226	Way beam Plan	P03
6.244	65204MF-ARC-BAS-TD350_2-DR-SE-3227	Way beam Section Details	P03
6.245	65204MF-ARC-BAS-TD350_A-DR-SE-3231	Plant Platform Sheet 1 of 2	P03
6.246	65204MF-ARC-BAS-TD350_A-DR-SE-3232	Plant Platform Sheet 2 of 2	P03
6.247	65204MF-ARC-BAS-TD350_Z-DR-SE-3015	Ancillary Civil Plan	P03
6.248	65204MF-ARC-BAS-TD350_Z-DR-SE-3022	Structural Steel Layout at Second Floor	P05
6.249	65204MF-ARC-BAS-TD350_Z-DR-SE-3024	Structural Steel Layout at Roof Level	P05
6.250	65204MF-ARC-BAS-TD350_Z-DR-SE-3051	Northern Elevation	P04
6.251	65204MF-ARC-BAS-TD350_Z-DR-SE-3052	Longitudinal section - Along Road 6	P03
6.252	65204MF-ARC-BAS-TD350_Z-DR-SE-3053	Longitudinal section - Along Road 7	P03
6.253	65204MF-ARC-BAS-TD350_Z-DR-SE-3054	Longitudinal section - Along Road 8	P03
6.254	65204MF-ARC-BAS-TD350_Z-DR-SE-3301	Ancillary Civils Sheet 1 Supports at Way Beams	P03
6.255	65204MF-ARC-BAS-TD350_Z-DR-SE-3302	Ancillary Civils Sheet 2 Cable Supporting Details	P03
6.255.1	65204MF-ARC-BAS-TD350_1-DR-CE-3007	Demolition Drawing at Ground Floor Level	P01
Civils PKG079	Doc number	Doc name	Revision
6.256	65204MF-ARC-BAS-TD350_00-RPT-SE-0001	Civil Detailed Design Report	P03
6.257	65204MF-ARC-BAS-TD350_Z-DR-SE-3061	Cross section Between Grid E & F and Grid M	P04
6.258	65204MF-ARC-BAS-TD350_Z-DR-SE-3062	West and East Elevations	P04
6.259	65204MF-ARC-BAS-TD350_Z-DR-SE-3063	Cross section Between Grid B & C and Grid G & H	P03
6.260	65204MF-ARC-BAS-TD350_Z-DR-SE-3064	Cross section Between Grid H & J and Grid N & P	P03
6.261	65204MF-ARC-BAS-TD350_Z-DR-SE-3101	Concrete Floor Details Sheet 1	P03
6.262	65204MF-ARC-BAS-TD350_Z-DR-SE-3102	Concrete Floor Details Sheet 2	P03
6.263	65204MF-ARC-BAS-TD350_Z-DR-SE-3201	Truss Connection Details Sheet 1 of 3	P03
6.264	65204MF-ARC-BAS-TD350_Z-DR-SE-3202	Truss Connection Details Sheet 2 of 3	P03
6.265	65204MF-ARC-BAS-TD350_Z-DR-SE-3203	Truss Connection Details Sheet 3 of 3	P03
6.266	65204MF-ARC-BAS-TD350_Z-DR-SE-3211	Column Base Plate Details Sheet 1 of 3	P03
6.267	65204MF-ARC-BAS-TD350_Z-DR-SE-3212	Column Base Plate Details Sheet 2 of 3	P03
6.268	65204MF-ARC-BAS-TD350_Z-DR-SE-3213	Beam Connection Details Sheet 1 of 2	P03
6.269	65204MF-ARC-BAS-TD350_Z-DR-SE-3214	Beam Connection Details Sheet 2 of 2	P03
6.270	65204MF-ARC-BAS-TD350_Z-DR-SE-3216	Second Floor Beams Framing/Opening Details	P03
6.271	65204MF-ARC-BAS-TD350_Z-DR-SE-3222	Second Floor Beam Connection Details	P03
6.272	65204MF-ARC-BAS-TD350_Z-DR-SE-3236	Sky walkway Details	P03
6.273	65204MF-ARC-BAS-TD350_Z-DR-SE-3237	Sky walkway Connection Details	P03
6.274	65204MF-ARC-BAS-TD350_Z-DR-SE-3241	Fire Escape Stairs Details Sheet 1	P03
6.275	65204MF-ARC-BAS-TD350_Z-DR-SE-3242	Fire Escape Stairs Details Sheet 2	P03
6.276	65204MF-ARC-BAS-TD350_Z-REQ-SE-0001	Civil, Drainage & Geotechnical Specification	P03
Civils Drainage PKG106	Doc number	Doc name	Revision

6.277	65204MF-ARC-BAS-TD350_00-CER-SE-0001	Design Check Certificate – Civil	P02
6.278	65204MF-ARC-BAS-TD350_1-DR-CE-3105	Ramp and Staircase Sheet 1 of 2	P02
6.279	65204MF-ARC-BAS-TD350_1-DR-CE-3106	Ramp and Staircase Sheet 2 of 2	P02
6.280	65204MF-ARC-BAS-TD350_1-DR-CE-3107	Ground Floor Beam Details Sheet 1 of 4	P02
6.281	65204MF-ARC-BAS-TD350_1-DR-CE-3108	Ground Floor Beam Details Sheet 2 of 4	P02
6.282	65204MF-ARC-BAS-TD350_1-DR-CE-3109	Ground Floor Beam Details Sheet 3 of 4	P02
6.283	65204MF-ARC-BAS-TD350_1-DR-CE-3110	Ground Floor Beam Details Sheet 4 of 4	P02
6.284	65204MF-ARC-BAS-TD350_1-DR-CE-3151	Key Plan Ground Floor Slab Layout	P02
6.285	65204MF-ARC-BAS-TD350_1-DR-CE-3152	Ground Floor Slab Layout Part 1	P02
6.286	65204MF-ARC-BAS-TD350_1-DR-CE-3153	Ground Floor Slab Layout Part 2	P02
6.287	65204MF-ARC-BAS-TD350_1-DR-CE-3154	Ground Floor Slab Layout Part 3	P02
6.288	65204MF-ARC-BAS-TD350_1-DR-CE-3155	Ground Floor Slab Layout Part 4	P02
6.289	65204MF-ARC-BAS-TD350_1-DR-CE-3156	Ground Floor Slab Layout Part 5	P02
6.290	65204MF-ARC-BAS-TD350_1-DR-CE-3157	Ground Floor Slab Layout Part 6	P02
6.291	65204MF-ARC-BAS-TD350_1-DR-CE-3158	Ground Floor Slab Layout Part 7	P02
6.292	65204MF-ARC-BAS-TD350_1-DR-CE-3159	Ground Floor Slab Layout Part 8	P02
6.293	65204MF-ARC-BAS-TD350_1-DR-CE-3160	Road 6 Pit - Bottom Slab Layout	P02
6.294	65204MF-ARC-BAS-TD350_2-DR-CE-3166	Cross Sections Sheet 6 of 6	P01
6.295	65204MF-ARC-BAS-TD350_2-DR-CE-3103	Road 7, 8 & 9 Duck Under Details	P02
6.296	65204MF-ARC-BAS-TD350_2-DR-CE-3161	Cross Sections Sheet 1 of 6	P02
6.297	65204MF-ARC-BAS-TD350_2-DR-CE-3162	Cross Sections Sheet 2 of 6	P02
6.298	65204MF-ARC-BAS-TD350_2-DR-CE-3163	Cross Sections Sheet 3 of 6	P02
6.299	65204MF-ARC-BAS-TD350_2-DR-CE-3164	Cross Sections Sheet 4 of 6	P02
6.300	65204MF-ARC-BAS-TD350_2-DR-CE-3165	Cross Sections Sheet 5 of 6	P02
6.301	65204MF-ARC-BAS-TD350_2-DR-CE-3411	Road 6 construction sequence Sheet 1	P02
6.302	65204MF-ARC-BAS-TD350_2-DR-CE-3412	Road 6 construction sequence Sheet 2	P02
6.303	65204MF-ARC-BAS-TD350_2-DR-CE-3413	Road 6 construction sequence Sheet 3	P02
6.304	65204MF-ARC-BAS-TD350_A-DR-CE-3025	Plan at Second Floor Level RC Slab	P02
6.305	65204MF-ARC-BAS-TD350_Z-CAL-SE-0001	Structural and Drainage Calculations	P02
6.306	65204MF-ARC-BAS-TD350_Z-DR-CE-3008	Foundation Details Sheet 1 of 2	P02
6.307	65204MF-ARC-BAS-TD350_Z-DR-CE-3009	Foundation Details Sheet 2 of 2	P02
6.308	65204MF-ARC-BAS-TD350_Z-DR-CE-3011	Pile cap setting out schedule	P02
6.309	65204MF-ARC-BAS-TD350_Z-DR-CE-3113	Road 6 Jacking pit details	P02
6.310	65204MF-ARC-BAS-TD350_Z-DR-CE-3114	Road 6 Train assembly pit Sheet 1 of 2	P02
6.311	65204MF-ARC-BAS-TD350_Z-DR-CE-3115	Road 6 Train assembly pit Sheet 2 of 2	P02
6.312	65204MF-ARC-BAS-TD350_Z-DR-CE-3501	Pile RC and Secant Pile	P02
6.313	65204MF-ARC-BAS-TD350_Z-DR-CE-3502	Pile cap RC- Sheet 01	P02
6.314	65204MF-ARC-BAS-TD350_Z-DR-CE-3503	Pile cap RC- Sheet 02	P02
6.315	65204MF-ARC-BAS-TD350_Z-DR-CE-3504	Beam and Pile cap @ Grid A Sheet 01 Plan	P02
6.316	65204MF-ARC-BAS-TD350_Z-DR-CE-3505	Beam and Pile cap @Grid A Sheet 02 Elevation	P02
6.317	65204MF-ARC-BAS-TD350_Z-DR-CE-3506	Pile cap RC- Sheet 03	P02

6.318	65204MF-ARC-BAS-TD350_Z-DR-CE-3507	Pile cap RC- Sheet 04	P02
6.319	65204MF-ARC-BAS-TD350_Z-DR-CE-3508	Beam and Pile cap @Grid Q Sheet 01 Elevation	P02
6.320	65204MF-ARC-BAS-TD350_Z-DR-CE-3509	Beam and Pile cap @Grid Q Sheet 02 Plan	P02
6.321	65204MF-ARC-BAS-TD350_Z-DR-CE-3511	Ground Floor Bottom Slab RC Part - 1	P02
6.322	65204MF-ARC-BAS-TD350_Z-DR-CE-3512	Ground Floor Bottom Slab RC Part - 2	P02
6.323	65204MF-ARC-BAS-TD350_Z-DR-CE-3513	Ground Floor Bottom Slab RC Part - 3	P02
6.324	65204MF-ARC-BAS-TD350_Z-DR-CE-3514	Ground Floor Bottom Slab RC Part - 4	P02
6.325	65204MF-ARC-BAS-TD350_Z-DR-CE-3515	Ground Floor Bottom Slab RC Part - 5	P02
6.326	65204MF-ARC-BAS-TD350_Z-DR-CE-3516	Ground Floor Bottom Slab RC Part - 6	P02
6.327	65204MF-ARC-BAS-TD350_Z-DR-CE-3517	Ground Floor Bottom Apron East Slab RC Part - 7	P02
6.328	65204MF-ARC-BAS-TD350_Z-DR-CE-3518	Ground Floor Bottom Apron West Slab RC Part - 7	P02
6.329	65204MF-ARC-BAS-TD350_Z-DR-CE-3519	Ground Floor Bottom Slab Part RC - 8	P02
6.330	65204MF-ARC-BAS-TD350_Z-DR-CE-3520	Road 6 pit Slab - Bottom RC	P02
6.331	65204MF-ARC-BAS-TD350_Z-DR-CE-3521	Ground Floor Top Slab RC Part - 1	P02
6.332	65204MF-ARC-BAS-TD350_Z-DR-CE-3522	Ground Floor Top Slab RC Part - 2	P02
6.333	65204MF-ARC-BAS-TD350_Z-DR-CE-3523	Ground Floor Top Slab RC Part - 3	P02
6.334	65204MF-ARC-BAS-TD350_Z-DR-CE-3524	Ground Floor Top Slab RC Part - 4	P02
6.335	65204MF-ARC-BAS-TD350_Z-DR-CE-3525	Ground Floor Top Slab RC Part - 5	P02
6.336	65204MF-ARC-BAS-TD350_Z-DR-CE-3526	Ground Floor Top Slab RC Part - 6	P02
6.337	65204MF-ARC-BAS-TD350_Z-DR-CE-3527	Ground Floor Top Apron East Slab RC Part - 7	P02
6.338	65204MF-ARC-BAS-TD350_Z-DR-CE-3528	Ground Floor Top Apron West Slab RC Part - 7	P02
6.339	65204MF-ARC-BAS-TD350_Z-DR-CE-3529	Ground Floor Top Slab Part RC - 8	P02
6.340	65204MF-ARC-BAS-TD350_Z-DR-CE-3530	Road 6 pit Slab - Top RC	P02
6.341	65204MF-ARC-BAS-TD350_Z-DR-CE-3531	RC Sections for Part 1	P02
6.342	65204MF-ARC-BAS-TD350_Z-DR-CE-3532	RC Sections for Part 2	P02
6.343	65204MF-ARC-BAS-TD350_Z-DR-CE-3533	RC Sections for Part 3	P02
6.344	65204MF-ARC-BAS-TD350_Z-DR-CE-3534	RC Sections for Part 4	P02
6.345	65204MF-ARC-BAS-TD350_Z-DR-CE-3535	RC Sections for Part 5	P02
6.346	65204MF-ARC-BAS-TD350_Z-DR-CE-3536	RC Sections for Part 7	P02
6.347	65204MF-ARC-BAS-TD350_Z-DR-CE-3537	Road 6 pit Slab - Section and Details	P02
6.348	65204MF-ARC-BAS-TD350_Z-DR-CE-3538	Miscellaneous Details Sheet 1 of 2	P02
6.349	65204MF-ARC-BAS-TD350_Z-DR-CE-3539	Miscellaneous Details Sheet 2 of 2	P02
6.350	65204MF-ARC-BAS-TD350_Z-DR-CE-3540	Capping Beam Reinforcement Details Sheet 01 of 03	P02
6.351	65204MF-ARC-BAS-TD350_Z-DR-CE-3541	Capping Beam Reinforcement Details Sheet 02 of 03	P02
6.352	65204MF-ARC-BAS-TD350_Z-DR-CE-3542	Capping Beam Reinforcement Details Sheet 03 of 03	P02
6.353	65204MF-ARC-BAS-TD350_Z-DR-CE-3543	Road 6 Liner Wall Starter RC Details Sheet 01	P02
6.354	65204MF-ARC-BAS-TD350_Z-DR-CE-3544	Road 6 Liner Wall Starter RC Details Sheet 02	P02
6.355	65204MF-ARC-BAS-TD350_Z-DR-CE-3545	Road 6 Liner Wall RC Details - Sheet 01	P02
6.356	65204MF-ARC-BAS-TD350_Z-DR-CE-3546	Road 6 Liner Wall RC Details - Sheet 02	P02
6.357	65204MF-ARC-BAS-TD350_Z-DR-CE-3547	Road 6 Liner Wall RC Details - Sheet 03	P02
6.358	65204MF-ARC-BAS-TD350_Z-DR-CE-3548	Track Beam Details (Between Grid 1 and 1A) Road 9	P02

6.359	65204MF-ARC-BAS-TD350_Z-DR-CE-3549	Track Beam Details (Between Grid 1 and 1A) Road 8	P02
6.360	65204MF-ARC-BAS-TD350_Z-DR-CE-3550	Ramps RC Part - 1	P02
6.361	65204MF-ARC-BAS-TD350_Z-DR-CE-3551	Ramps RC Part - 2	P02
6.362	65204MF-ARC-BAS-TD350_Z-DR-CE-3552	Staircase Reinforcement Details Sheet 1	P02
6.363	65204MF-ARC-BAS-TD350_Z-DR-CE-3553	Staircase Reinforcement Details Sheet 2	P02
6.364	65204MF-ARC-BAS-TD350_Z-DR-CE-3554	Underpass in Part 5 and 6 RC Details	P02
6.365	65204MF-ARC-BAS-TD350_Z-DR-CE-3555	Pit Chambers RC Sheet 01	P02
6.366	65204MF-ARC-BAS-TD350_Z-DR-CE-3556	Pit Chambers RC Sheet 02	P02
6.367	65204MF-ARC-BAS-TD350_Z-DR-CE-3557	Under Pass in Part 5 and 6 Sections	P02
6.368	65204MF-ARC-BAS-TD350_Z-DR-CE-3558	Track Beam Details (Between Grid 1A and 2) Road 7	P02
6.369	65204MF-ARC-BAS-TD350_Z-DR-CE-3559	Capping Beam Reinforcement Details Sheet 04	P02
6.370	65204MF-ARC-BAS-TD350_Z-DR-CE-3560	Ground Beam RC Sheet 1	P02
6.371	65204MF-ARC-BAS-TD350_Z-DR-CE-3561	Ground Beam RC Sheet 2	P02
6.372	65204MF-ARC-BAS-TD350_Z-DR-CE-3562	Ground Beam RC Sheet 3	P02
6.373	65204MF-ARC-BAS-TD350_Z-DR-CE-3563	Ground Beam RC Sheet 4	P02
6.374	65204MF-ARC-BAS-TD350_Z-DR-CE-3564	Ground Beam RC Sheet 5	P02
6.375	65204MF-ARC-BAS-TD350_Z-DR-CE-3565	Ground Beam RC Sheet 6	P02
6.376	65204MF-ARC-BAS-TD350_Z-DR-CE-3566	Ground Beam RC Sheet 7	P02
6.377	65204MF-ARC-BAS-TD350_Z-DR-CE-3567	Ground Beam RC Sheet 8	P02
6.378	65204MF-ARC-BAS-TD350_Z-DR-CE-3568	Beam and Pile cap @ Grid-A Sheet 03 - Sections	P02
6.379	65204MF-ARC-BAS-TD350_Z-DR-CE-3569	Beam and Pile cap @ Grid-Q Sheet 03 - Sections	P02
6.380	65204MF-ARC-BAS-TD350_Z-DR-CE-3570	Ground Beam RC Sheet 9	P02
6.381	65204MF-ARC-BAS-TD350_Z-DR-CE-3571	Part 7 Apron Ground Beam RC Sheet 12	P02
6.382	65204MF-ARC-BAS-TD350_Z-DR-CE-3572	Part 7 Apron Ground Beam RC Sheet 13	P02
6.383	65204MF-ARC-BAS-TD350_Z-DR-CE-3573	Part 7 Apron Ground Beam RC Sheet 14	P02
6.384	65204MF-ARC-BAS-TD350_Z-DR-CE-3574	Ground Beam RC Sheet 10	P02
6.385	65204MF-ARC-BAS-TD350_Z-DR-CE-3575	Pit Chambers RC Sheet 03	P02
6.386	65204MF-ARC-BAS-TD350_Z-DR-CE-3576	Second Floor Deck Slab RC Details	P02
6.387	65204MF-ARC-BAS-TD350_Z-DR-CE-3577	Ground Floor Wall and Beam RC details	P02
6.388	65204MF-ARC-BAS-TD350_Z-DR-CE-3578	Track Beam Details (Between Grid 1 and 1a) Road 7 - Details	P02
6.389	65204MF-ARC-BAS-TD350_Z-DR-CE-3579	Track Beam Details (Between Grid 1 and 1a) Road 8 - Details	P02
6.390	65204MF-ARC-BAS-TD350_Z-DR-CE-3580	Track Beam Details (Between Grid 1a and 2) Road 9 - Detail	P02
6.391	65204MF-ARC-BAS-TD350_Z-DR-SE-3021	Shed Steelwork Plan Loads and SOP of Columns	P02
6.392	65204MF-ARC-BAS-TD350_Z-DR-SE-3204	Crane & Shore Supply Connection Details	P02
6.393	65204MF-ARC-BAS-TD350_Z-DR-SE-3031	Existing Wheel Lathe shed Existing Steelwork Plan Sheet 1 of 2	P02
6.394	65204MF-ARC-BAS-TD350_Z-DR-SE-3032	Existing Wheel Lathe shed Existing Steelwork Plan Sheet 2 of 2	P02
6.395	65204MF-ARC-BAS-TD350_Z-DR-SE-3033	Existing Wheel Lathe shed Demolition Plan Sheet 1 of 2	P02
6.396	65204MF-ARC-BAS-TD350_Z-DR-SE-3034	Existing Wheel Lathe shed Demolition Plan Sheet 2 of 2	P02
6.397	65204MF-ARC-BAS-TD350_Z-DR-SE-3035	Existing Wheel Lathe shed Proposed Plan Sheet 1 of 2	P02
6.398	65204MF-ARC-BAS-TD350_Z-DR-SE-3036	Existing Wheel Lathe shed Proposed Plan Sheet 2 of 2	P02
6.399	65204MF-ARC-BAS-TD350_Z-DR-SE-3038	Existing Wheel Lathe Shed Existing Sections Sheet 1 of 2	P02

6.400	65204MF-ARC-BAS-TD350_Z-DR-SE-3039	Existing Wheel Lathe Shed Existing Sections Sheet 2 of 2	P02
6.401	65204MF-ARC-BAS-TD350_Z-DR-SE-3040	Existing Wheel Lathe Shed Demolition Sections sheet 1 of 2	P02
6.402	65204MF-ARC-BAS-TD350_Z-DR-SE-3041	Existing Wheel Lathe Shed Demolition Sections sheet 2 of 2	P02
6.403	65204MF-ARC-BAS-TD350_Z-DR-SE-3042	Existing Wheel Lathe Shed modification Sections sheet 1 of 2	P02
6.404	65204MF-ARC-BAS-TD350_Z-DR-SE-3043	Existing Wheel Lathe Shed Modification Sections sheet 2 of 2	P02
6.405	65204MF-ARC-BAS-TD350_Z-DR-SE-3045	Existing Wheel Lathe Shed modification Connection Details	P02
6.406	65204MF-ARC-BAS-TD350_Z-DR-SE-3047	Existing Wheel Lathe Shed Construction Sequence Details 1 of 2	P02
6.407	65204MF-ARC-BAS-TD350_Z-DR-SE-3048	Existing Wheel Lathe Shed Construction Sequence Details 2 of 2	P02
6.408	65204MF-ARC-BAS-TD350_Z-DR-SE-3055	Longitudinal section 5 - South Elevation	P02
6.409	65204MF-ARC-BAS-TD350_Z-DR-SE-3205	Gable Truss Connection Forces	P02
6.410	65204MF-ARC-BAS-TD350_Z-DR-SE-3206	Secondary Truss connection Forces	P02
6.411	65204MF-ARC-BAS-TD350_Z-DR-SE-3315	DC Switch room, UPS Room and Compressor Plans	P02
6.412	65204MF-ARC-BAS-TD350_Z-DR-SE-3303	Corner Column and East elevation Cladding Panel Connection Details	P02
6.413	65204MF-ARC-BAS-TD350_Z-DR-SE-3304	Ancillary Civils MFB Roof Handrail and Gutter Structural Support	P02
6.414	65204MF-ARC-BAS-TD350_Z-DR-SE-3305	Ancillary Civils MFB Second Floor Door and Window Structural Support Sheet 1	P02
6.415	65204MF-ARC-BAS-TD350_Z-DR-SE-3306	Ancillary Civils MFB Second Floor Door and Window Structural Support Sheet 2	P02
6.416	65204MF-ARC-BAS-TD350_Z-DR-SE-3307	Ancillary Civils MFB Second Floor Door and Window Structural Support Sheet 3	P02
6.417	65204MF-ARC-BAS-TD350_Z-DR-SE-3308	Ancillary Civils Steel Structures Details for Ground Floor Door Openings Sheet 1 of 2	P02
6.418	65204MF-ARC-BAS-TD350_Z-DR-SE-3309	Ancillary Civils : Steel Structures Details for Ground Floor Doors Openings Sheet 2 of 2	P02
6.419	65204MF-ARC-BAS-TD350_Z-DR-SE-3310	Ancillary Civils South Elevation Secondary beam and column Details and E and P Support Details Sheet 1	P02
6.420	65204MF-ARC-BAS-TD350_Z-DR-SE-3311	Ancillary Civils South Elevation Secondary beam and column Details and E and P Support Details Sheet 2	P02
6.421	65204MF-ARC-BAS-TD350_Z-DR-SE-3312	Ancillary Civils South Elevation Secondary beam and column Details and E and P Support Details Sheet 3	P02
6.422	65204MF-ARC-BAS-TD350_Z-DR-SE-3313	Wheel Lathe Gutters and Mechanical Equipment Structural Details	P02
6.423	65204MF-ARC-BAS-TD350_Z-DR-SE-3314	Existing Wheel Lathe Shed Existing and Proposed Ground Floor Work Details	P02
6.424	65204MF-ARC-BAS-TD350_Z-DR-SE-3316	DC Switch room, UPS Room and Compressor Sections	P02
6.425	65204MF-ARC-BAS-TD350_Z-DR-SE-3351	MFB Louvre Support Sheet 1	P02
6.426	65204MF-ARC-BAS-TD350_Z-DR-SE-3352	MFB Louvre Support Sheet 2	P02
6.427	65204MF-ARC-BAS-TD350_Z-DR-SE-3353	MFB Second Floor Secondary Steelwork Details Sheet 1 of 3	P02
6.428	65204MF-ARC-BAS-TD350_Z-DR-SE-3354	MFB Second Floor Secondary Steelwork Details Sheet 2 of 3	P02
6.429	65204MF-ARC-BAS-TD350_Z-DR-SE-3355	Cat ladders Support Details	P02
6.430	65204MF-ARC-BAS-TD350_Z-DR-SE-3356	MFB Second Floor Beam and Column Details Sheet 3 of 3	P02
6.431	65204MF-ARC-BAS-TD350_Z-SCH-CE-3501	Pile RC & Secant Pile	P02
6.432	65204MF-ARC-BAS-TD350_Z-SCH-CE-3502	Pile cap RC- Sheet 01	P02
6.433	65204MF-ARC-BAS-TD350_Z-SCH-CE-3503	Pile cap RC- Sheet 02	P02
6.434	65204MF-ARC-BAS-TD350_Z-SCH-CE-3504	Beam and Pile cap @Grid A RC Sheet 01 Elevation	P02
6.435	65204MF-ARC-BAS-TD350_Z-SCH-CE-3505	Beam and Pile cap @Grid A RC Sheet 02 Plan	P02
6.436	65204MF-ARC-BAS-TD350_Z-SCH-CE-3506	Pile cap RC- Sheet 03	P02
6.437	65204MF-ARC-BAS-TD350_Z-SCH-CE-3507	Pile cap RC- Sheet 04	P02
6.438	65204MF-ARC-BAS-TD350_Z-SCH-CE-3508	Beam and Pile cap @Grid Q RC Sheet 1 Elevation	P02
6.439	65204MF-ARC-BAS-TD350_Z-SCH-CE-3509	Beam and Pile cap @Grid Q RC Sheet 2 Plan	P02
6.440	65204MF-ARC-BAS-TD350_Z-SCH-CE-3511	Ground Floor Slab (Part 1) Bottom Reinforcement Details	P02

6.441	65204MF-ARC-BAS-TD350_Z-SCH-CE-3512	Ground Floor Bottom Slab RC Part - 2	P02
6.442	65204MF-ARC-BAS-TD350_Z-SCH-CE-3513	Ground Floor Bottom Slab RC Part - 3	P02
6.443	65204MF-ARC-BAS-TD350_Z-SCH-CE-3514	Ground Floor Bottom Slab RC Part - 4	P02
6.444	65204MF-ARC-BAS-TD350_Z-SCH-CE-3515	Ground Floor Bottom Slab RC Part - 5	P02
6.445	65204MF-ARC-BAS-TD350_Z-SCH-CE-3516	Ground Floor Bottom Slab RC Part - 6	P02
6.446	65204MF-ARC-BAS-TD350_Z-SCH-CE-3517	Ground Floor Bottom Apron East Slab RC Part - 7	P02
6.447	65204MF-ARC-BAS-TD350_Z-SCH-CE-3518	Ground Floor Bottom Apron West Slab RC Part - 7	P02
6.448	65204MF-ARC-BAS-TD350_Z-SCH-CE-3519	Ground Floor Bottom Slab Part RC - 8	P02
6.449	65204MF-ARC-BAS-TD350_Z-SCH-CE-3520	Road 6 pit Slab - Bottom RC	P02
6.450	65204MF-ARC-BAS-TD350_Z-SCH-CE-3521	Ground Floor Slab (Part 1) Top Reinforcement Details	P02
6.451	65204MF-ARC-BAS-TD350_Z-SCH-CE-3522	Ground Floor Top Slab RC Part - 2	P02
6.452	65204MF-ARC-BAS-TD350_Z-SCH-CE-3523	Ground Floor Top Slab RC Part - 3	P02
6.453	65204MF-ARC-BAS-TD350_Z-SCH-CE-3524	Ground Floor Top Slab RC Part - 4	P02
6.454	65204MF-ARC-BAS-TD350_Z-SCH-CE-3525	Ground Floor Top Slab RC Part - 5	P02
6.455	65204MF-ARC-BAS-TD350_Z-SCH-CE-3526	Ground Floor Top Slab RC Part - 6	P02
6.456	65204MF-ARC-BAS-TD350_Z-SCH-CE-3527	Ground Floor Top Apron East Slab RC Part - 7	P02
6.457	65204MF-ARC-BAS-TD350_Z-SCH-CE-3528	Ground Floor Top Apron West Slab RC Part - 7	P02
6.458	65204MF-ARC-BAS-TD350_Z-SCH-CE-3529	Ground Floor Top Slab Part RC Part 8	P02
6.459	65204MF-ARC-BAS-TD350_Z-SCH-CE-3530	Road 6 pit Slab - Top RC	P02
6.460	65204MF-ARC-BAS-TD350_Z-SCH-CE-3532	Ground Floor Slab Details Part 2	P02
6.461	65204MF-ARC-BAS-TD350_Z-SCH-CE-3537	Road 6 pit Slab - Section and Details RC	P02
6.462	65204MF-ARC-BAS-TD350_Z-SCH-CE-3538	Miscellaneous Details Sheet 1 of 2	P02
6.463	65204MF-ARC-BAS-TD350_Z-SCH-CE-3539	Miscellaneous Details Sheet 2 of 2	P02
6.464	65204MF-ARC-BAS-TD350_Z-SCH-CE-3540	Capping Beam Reinforcement Details Sheet 1 of 3	P02
6.465	65204MF-ARC-BAS-TD350_Z-SCH-CE-3541	Capping Beam Reinforcement Details Sheet 2 of 3	P02
6.466	65204MF-ARC-BAS-TD350_Z-SCH-CE-3542	Capping Beam Reinforcement Details Sheet 3 of 3 RC - Sheet 03 (Beam 4)	P02
6.467	65204MF-ARC-BAS-TD350_Z-SCH-CE-3543	Road 6 Liner Wall Starters RC Details Sheet 01	P02
6.468	65204MF-ARC-BAS-TD350_Z-SCH-CE-3544	Road 6 Liner Wall Starters RC Details Sheet 02	P02
6.469	65204MF-ARC-BAS-TD350_Z-SCH-CE-3545	Road 6 pit Liner Wall - RC Details Sheet 01	P02
6.470	65204MF-ARC-BAS-TD350_Z-SCH-CE-3546	Road 6 pit Liner Wall - RC Details Sheet 02	P02
6.471	65204MF-ARC-BAS-TD350_Z-SCH-CE-3547	Road 6 pit Liner Wall - RC Details Sheet 03	P02
6.472	65204MF-ARC-BAS-TD350_Z-SCH-CE-3548	Track Beam @ R9 Reinforcement Details	P02
6.473	65204MF-ARC-BAS-TD350_Z-SCH-CE-3549	Track Beam @ R8 Reinforcement Details	P02
6.474	65204MF-ARC-BAS-TD350_Z-SCH-CE-3550	Ramp 1 Reinforcement Details	P02
6.475	65204MF-ARC-BAS-TD350_Z-SCH-CE-3551	Ramp 2 Reinforcement Details	P02
6.476	65204MF-ARC-BAS-TD350_Z-SCH-CE-3552	Staircase Reinforcement Details Sheet 1 of 2	P02
6.477	65204MF-ARC-BAS-TD350_Z-SCH-CE-3553	Staircase Reinforcement Details Sheet 2 of 2	P02
6.478	65204MF-ARC-BAS-TD350_Z-SCH-CE-3554	Underpass in Part 5 and 6 RC Details Sheet 1	P02
6.479	65204MF-ARC-BAS-TD350_Z-SCH-CE-3555	Pit Chambers RC and Miscellaneous Details - Sheet 01 of 03	P02
6.480	65204MF-ARC-BAS-TD350_Z-SCH-CE-3556	Pit Chambers RC and Miscellaneous Details - Sheet 02 of 03	P02
6.481	65204MF-ARC-BAS-TD350_Z-SCH-CE-3558	Track Beam @ R7 Reinforcement Details	P02

6.482	65204MF-ARC-BAS-TD350_Z-SCH-CE-3559	Capping Beam RC - (Pile caps to Beam 3) Sheet 04	P02
6.483	65204MF-ARC-BAS-TD350_Z-SCH-CE-3560	Ground Beam RC Sheet 1	P02
6.484	65204MF-ARC-BAS-TD350_Z-SCH-CE-3561	Ground Beam RC Sheet 2	P02
6.485	65204MF-ARC-BAS-TD350_Z-SCH-CE-3562	Ground Beam RC Sheet 3	P02
6.486	65204MF-ARC-BAS-TD350_Z-SCH-CE-3563	Ground Beam RC Sheet 4	P02
6.487	65204MF-ARC-BAS-TD350_Z-SCH-CE-3564	Ground Beam RC Sheet 5	P02
6.488	65204MF-ARC-BAS-TD350_Z-SCH-CE-3565	Ground Beam RC Sheet 6	P02
6.489	65204MF-ARC-BAS-TD350_Z-SCH-CE-3566	Ground Beam RC Sheet 7	P02
6.490	65204MF-ARC-BAS-TD350_Z-SCH-CE-3567	Ground Beam RC Sheet 8	P02
6.491	65204MF-ARC-BAS-TD350_Z-SCH-CE-3570	Ground Beam RC Sheet 9	P02
6.492	65204MF-ARC-BAS-TD350_Z-SCH-CE-3571	Part 7 Apron Ground Beam RC Sheet 12	P02
6.493	65204MF-ARC-BAS-TD350_Z-SCH-CE-3572	Part 7 Apron Ground Beam RC Sheet 13	P02
6.494	65204MF-ARC-BAS-TD350_Z-SCH-CE-3573	Part 7 Apron Ground Beam RC Sheet 14	P02
6.495	65204MF-ARC-BAS-TD350_Z-SCH-CE-3574	Ground Beam RC Sheet 10	P02
6.496	65204MF-ARC-BAS-TD350_Z-SCH-CE-3575	Pit Chambers RC and Miscellaneous Details - Sheet 03 of 03	P02
6.497	65204MF-ARC-BAS-TD350_Z-SCH-CE-3576	SECOND FLOOR DECK SLAB RC DETAILS	P02
6.498	65204MF-ARC-BAS-TD350_Z-SCH-CE-3577	Ground Floor Wall and Beam reinforcement Details	P02
6.499	65204MF-ARC-BAS-TD350_Z-SCH-CE-3578	Track Beam @ R7 Details	P02
6.500	65204MF-ARC-BAS-TD350_Z-SCH-CE-3579	Track Beam @ R8 Details	P02
6.501	65204MF-ARC-BAS-TD350_Z-SCH-CE-3580	Track Beam @ R9 Details	P02
6.501.1	65204MF-ARC-BAS-TD350_Z-DR-SE-3215	Column Base Plate Details 3 of 3	P02
6.501.2	65204MF-ARC-BAS-TD350_Z-DR-SE-3315	DC Switchroom, UPS Room and Compressor Plans	P02
6.501.3	65204MF-ARC-BAS-TD350_Z-DR-SE-3317	Cable & Distribution Cubicle Supporting Details	P01
Drainage / PKG114 Site Wide Drainage		Doc number	Doc name
6.502	65204MF-ARC-DRG-TD350_00-STR-DR-0001	Site Wide Drainage Maintenance Strategy	P01
Electrical Service PKG039		Doc number	Doc name
6.503	65204MF-ARC-ELC-TD350_Z-DR-EE-0009	Electrical Services - CMS North Wall Elevation	C01
6.504	65204MF-ARC-ELC-TD350_Z-DR-EE-0010	Electrical Services - CMS South Wall Elevation	C01
6.505	65204MF-ARC-ELC-TD350_Z-DR-EE-0011	Electrical Services - Roof Level CMS Layout Layout (Sheet 1 of 2)	C01
6.506	65204MF-ARC-ELC-TD350_Z-DR-EE-0012	Electrical Services - CMS East Wall Elevation	C01
6.507	65204MF-ARC-ELC-TD350_Z-DR-EE-0016	Electrical Services - CMS Cross Section Staff Accommodation	C01
6.508	65204MF-ARC-ELC-TD350_Z-DR-EE-0019	Electrical Services - CMS Cross Section (Sheet 1 of 2)	C01
6.509	65204MF-ARC-ELC-TD350_Z-DR-EE-0020	Electrical Services - CMS Cross Section (Sheet 2 of 2)	C01
6.509.1	65204MF-ARC-ELC-TD350_00-CAL-EE-0001	Electrical Services - Maximum Demand Calculations and Amtech Calculations	C01
6.509.2	65204MF-ARC-ELC-TD350_00-CAL-EE-0002	Electrical Services - Lighting Design Calculations	C01
6.509.3	65204MF-ARC-ELC-TD350_00-CAL-EE-0003	Electrical Services - Cable Management System Calculations	C01
6.509.4	65204MF-ARC-ELC-TD350_00-CAL-EE-0004	Electrical Services - Lightning Protection Risk Assessment & Earthing Calculations	C01
6.509.5	65204MF-ARC-ELC-TD350_00-DR-EE-0001	Electrical Services - Earthing and Lightning Protection Details	C01
6.509.6	65204MF-ARC-ELC-TD350_00-DR-EE-0002	Electrical Services - Typical Details (Sheet 1 of 4)	C01
6.509.7	65204MF-ARC-ELC-TD350_00-DR-EE-0003	Electrical Services - Typical Details (Sheet 2 of 4)	C01
6.509.8	65204MF-ARC-ELC-TD350_00-DR-EE-0004	Electrical Services - Typical Details (Sheet 3 of 4)	C01

6.509.9	65204MF-ARC-ELC-TD350_00-DR-EE-0005	Electrical Services - Typical Details (Sheet 4 of 4)	C01
6.509.10	65204MF-ARC-ELC-TD350_00-REQ-EE-0001	Electrical Services - Material and Workmanship Specification	C01
6.509.11	65204MF-ARC-ELC-TD350_00-RPT-EE-0001	Electrical Services - Design Report - Basis of Design & Systems Overview	C01
6.509.12	65204MF-ARC-ELC-TD350_00-SCH-EE-0001	Electrical Services - Luminaire Schedule and Lighting Summary	C01
6.509.13	65204MF-ARC-ELC-TD350_00-SCH-EE-0002	Electrical Services - Equipment Schedules	C01
6.509.14	65204MF-ARC-ELC-TD350_1-DR-EE-0001	Electrical Services - Ground Floor - Index Sheet	C01
6.509.15	65204MF-ARC-ELC-TD350_1-DR-EE-0002	Electrical Services - Shed Level Lighting Layout (Sheet 1 of 2)	C01
6.509.16	65204MF-ARC-ELC-TD350_1-DR-EE-0003	Electrical Services - Shed Level Lighting Layout (Sheet 2 of 2)	C01
6.509.17	65204MF-ARC-ELC-TD350_1-DR-EE-0004	Electrical Services - Ground Floor Level Lighting Layout (Sheet 1 of 2)	C01
6.509.18	65204MF-ARC-ELC-TD350_1-DR-EE-0005	Electrical Services - Ground Floor Level Lighting Layout (Sheet 2 of 2)	C01
6.509.19	65204MF-ARC-ELC-TD350_1-DR-EE-0007	Electrical Services - Shed Pit Lighting Layout (Sheet 1 of 2)	C01
6.509.20	65204MF-ARC-ELC-TD350_1-DR-EE-0009	Electrical Services - Shed Pit Lighting Layout (Sheet 2 of 2)	C01
6.509.21	65204MF-ARC-ELC-TD350_1-DR-EE-0011	Electrical Services - Ground Floor Low Level CMS Layout (Sheet 1 of 2)	C01
6.509.22	65204MF-ARC-ELC-TD350_1-DR-EE-0012	Electrical Services - Ground Floor Low Level CMS Layout (Sheet 2 of 2)	C01
6.509.23	65204MF-ARC-ELC-TD350_1-DR-EE-0013	Electrical Services - Ground Floor High Level CMS Layout (Sheet 1 of 2)	C01
6.509.24	65204MF-ARC-ELC-TD350_1-DR-EE-0014	Electrical Services - Ground Floor High Level CMS Layout (Sheet 2 of 2)	C01
6.509.25	65204MF-ARC-ELC-TD350_1-DR-EE-0017	Electrical Services - Ground Floor Small Power Layout (Sheet 1 of 2)	C01
6.509.26	65204MF-ARC-ELC-TD350_1-DR-EE-0018	Electrical Services - Ground Floor Small Power Layout (Sheet 2 of 2)	C01
6.509.27	65204MF-ARC-ELC-TD350_1-DR-EE-0025	Electrical Services - Ground Floor UPS Room Layout	C01
6.509.28	65204MF-ARC-ELC-TD350_1-DR-EE-0027	Electrical Services - Ground Floor Earthing and Lightning Protection Layout (Sheet 1 of 2)	C01
6.509.29	65204MF-ARC-ELC-TD350_1-DR-EE-0028	Electrical Services - Ground Floor Earthing and Lightning Protection Layout (Sheet 2 of 2)	C01
6.509.30	65204MF-ARC-ELC-TD350_2-DR-EE-0001	Electrical Services - External Below Ground CMS Services	C01
6.509.31	65204MF-ARC-ELC-TD350_A-DR-EE-0001	Electrical Services - Second Floor - Index Sheet	C01
6.509.32	65204MF-ARC-ELC-TD350_A-DR-EE-0002	Electrical Services - Roof - Index Sheet	C01
6.509.33	65204MF-ARC-ELC-TD350_A-DR-EE-0003	Electrical Services - Second Floor Lighting Layout (Sheet 1 of 2)	C01
6.509.34	65204MF-ARC-ELC-TD350_A-DR-EE-0004	Electrical Services - Second Floor Lighting Layout (Sheet 1 of 2)	C01
6.509.35	65204MF-ARC-ELC-TD350_A-DR-EE-0007	Electrical Services - Roof Level CMS Layout Layout (Sheet 1 of 2)	C01
6.509.36	65204MF-ARC-ELC-TD350_A-DR-EE-0008	Electrical Services - Roof Level CMS Layout Layout (Sheet 2 of 2)	C01
6.509.37	65204MF-ARC-ELC-TD350_A-DR-EE-0009	Electrical Services - Staff Accommodation CMS Layout (Sheet 1 of 2)	C01
6.509.38	65204MF-ARC-ELC-TD350_A-DR-EE-0010	Electrical Services - Staff Accommodation CMS Layout (Sheet 2 of 2)	C01
6.509.39	65204MF-ARC-ELC-TD350_A-DR-EE-0013	Electrical Services - Second Floor Small Power Layout (Sheet 1 of 2)	C01
6.509.40	65204MF-ARC-ELC-TD350_A-DR-EE-0014	Electrical Services - Second Floor Small Power Layout (Sheet 2 of 2)	C01
6.509.41	65204MF-ARC-ELC-TD350_A-DR-EE-0017	Electrical Services - Staff Accommodation LV Switch Room Layout	C01
6.509.42	65204MF-ARC-ELC-TD350_A-DR-EE-0021	Electrical Services - Second Floor Earthing & Lightning Protection Layout (Sheet 1 of 2)	C01
6.509.43	65204MF-ARC-ELC-TD350_A-DR-EE-0022	Electrical Services - Second Floor Earthing & Lightning Protection Layout (Sheet 2 of 2)	C01
6.509.44	65204MF-ARC-ELC-TD350_A-DR-EE-0023	Electrical Services - Roof Earthing Layout & Lightning Protection (Sheet 1 of 2)	C01
6.509.45	65204MF-ARC-ELC-TD350_A-DR-EE-0024	Electrical Services - Roof Earthing Layout & Lightning Protection (Sheet 2 of 2)	C01
6.509.46	65204MF-ARC-ELC-TD350_Z-DR-EE-0001	Electrical Services - Legends and Symbols	C01
6.509.47	65204MF-ARC-ELC-TD350_Z-DR-EE-0002	Electrical Services - LV Schematic	C01
6.509.48	65204MF-ARC-ELC-TD350_Z-DR-EE-0005	Electrical Services - Earthing And Bonding Schematic	C01
6.509.49	65204MF-ARC-ELC-TD350_Z-DR-EE-0006	Electrical Services - Lighting Control Schematic	C01

6.509.50	65204MF-ARC-ELC-TD350_Z-DR-EE-0007	Electrical Services - Shed Lighting Cross Section Details Sheet 1 of 2	C01
6.509.51	65204MF-ARC-ELC-TD350_Z-DR-EE-0008	Electrical Services - Shed Lighting Cross Section Details Sheet 2 of 2	C01
Mechanical PKG040	Doc number	Doc name	Revision
6.510	65204MF-ARC-MAC-TD350_00-REQ-ZZ-0001	Project RIBA 4(ii) Specification	C01
6.511	65204MF-ARC-MEC-TD350_00-DR-ME-0001	Mechanical & Public Health Services - Legends And Symbols	C01
6.512	65204MF-ARC-MEC-TD350_00-DR-ME-0004	Mechanical Services - Ground Floor Combined Heating, Cooling And Gas Schematic	C01
6.513	65204MF-ARC-MEC-TD350_00-DR-ME-0006	Mechanical Services - Second Floor Heating And Cooling Schematic	C01
6.514	65204MF-ARC-MEC-TD350_00-DR-ME-0016	Mechanical Services - Ground Floor Ventilation Schematic	C01
6.515	65204MF-ARC-MEC-TD350_00-DR-ME-0018	Mechanical Services - Second Floor Ventilation Schematic	C01
6.516	65204MF-ARC-MEC-TD350_1-DR-ME-0002	Mechanical Services - Ground Floor Index Sheet	C01
6.517	65204MF-ARC-MEC-TD350_1-DR-ME-0009	Mechanical Services - Ground Floor Combined Heating, Cooling and Gas Layout (Sheet 1 of 2)	C01
6.518	65204MF-ARC-MEC-TD350_1-DR-ME-0010	Mechanical Services - Ground Floor Combined Heating, Cooling and Gas Layout (Sheet 2 of 2)	C01
6.519	65204MF-ARC-MEC-TD350_1-DR-ME-0020	Mechanical Services - Ground Floor Ventilation Layout (Sheet 1 of 2)	C01
6.520	65204MF-ARC-MEC-TD350_1-DR-ME-0021	Mechanical Services - Ground Floor Ventilation Layout (Sheet 2 of 2)	C01
6.521	65204MF-ARC-MEC-TD350_1-DR-ME-0037	Mechanical Services - Ground Floor Sections	C01
6.522	65204MF-ARC-MEC-TD350_A-DR-ME-0003	Mechanical Services - Second Floor Index Sheet	C01
6.523	65204MF-ARC-MEC-TD350_A-DR-ME-0013	Mechanical Services - Second Floor Heating and Cooling Layout (Sheet 1 of 2)	C01
6.524	65204MF-ARC-MEC-TD350_A-DR-ME-0014	Mechanical Services - Second Floor Heating and Cooling Layout (Sheet 2 of 2)	C01
6.525	65204MF-ARC-MEC-TD350_A-DR-ME-0023	Mechanical Services - Second Floor Ventilation Layout (Sheet 1 of 2)	C01
6.526	65204MF-ARC-MEC-TD350_A-DR-ME-0024	Mechanical Services - Second Floor Ventilation Layout (Sheet 2 of 2)	C01
6.527	65204MF-ARC-MEC-TD350_A-DR-ME-0033	Mechanical Services - Second Floor Plantroom Layout	C01
6.528	65204MF-ARC-MEC-TD350_A-DR-ME-0034	Mechanical Services - Mezzanine Floor Ventilation Layout	C01
6.529	65204MF-ARC-MEC-TD350_A-DR-ME-0035	Mechanical Services - Second Floor Sections	C01
6.530	65204MF-ARC-MEC-TD350_Z-CAL-ME-0001	Mechanical and Public Health RIBA 4 (ii) Calculation Report	C01
6.531	65204MF-ARC-MEC-TD350_Z-DR-ME-0005	Mechanical Services - Roof Level Combined Mechanical & Public Health Layout Index Sheet	C01
6.532	65204MF-ARC-MEC-TD350_Z-DR-ME-0025	Mechanical Services - Roof Level Combined Mechanical & Public Health Layout (Sheet 1 of 2)	C01
6.533	65204MF-ARC-MEC-TD350_Z-DR-ME-0026	Mechanical Services - Roof Level Combined Mechanical & Public Health Layout (Sheet 2 of 2)	C01
6.534	65204MF-ARC-MEC-TD350_Z-SCH-ME-0001	Mechanical and Public Health RIBA 4 (ii) Schedules	C01
6.534.1	65204MF-ARC-MEC-TD350_00-REQ-ME-0001	Mechanical & Public Health - RIBA 4(ii) Particular Specification	C01
Human Factors / PKG041	Doc number	Doc name	Revision
6.535	65204MF-ARC-MAC-TD350_00-REG-HF-0001	Human Factors Issues Log	P03
Human Factors / PKG091	Doc number	Doc name	Revision
6.536	65204MF-ARC-MAC-TD350_00-RPT-HF-0002	Human Factors Assurance Report	P03
Human Factors / PKG065	Doc number	Doc name	Revision
6.537	65204MF-ARC-MAC-TD350_00-PLN-HF-0001	Human Factors Integration Plan	P05
Electrification & Plant / PKG042	Doc number	Doc name	Revision
6.538	65204MF-ARC-MAC-TD350_00-PLN-EC-0002	Earthing, Bonding & Stray Current Plan	C01
Environmental / PKG044	Doc number	Doc name	Revision
6.539	65204MF-ARC-MAC-TD350_00-PLN-EN-0002	Environmental Management Plan	P03
CDM / PKG045	Doc number	Doc name	Revision
6.540	65204MF-ARC-MAC-TD350_00-REG-HS-0002	CDM Design Risk Register (Overarching Designers Risk Assessment)	C01

Systems Engineering / PKG046	Doc number	Doc name	Revision
6.541	65204MF-ARC-MAC-TD350_00-REQ-RQ-0001	Detailed Requirements Specification	C01
6.542	65204MF-ARC-MAC-TD350_00-REQ-RQ-0003	HVAC High Level Access Platform SRS (System Requirement Specification)	C01
6.543	65204MF-ARC-MAC-TD350_00-REQ-RQ-0004	Underfloor Train Lifting System SRS	C01
6.544	65204MF-ARC-MAC-TD350_00-REQ-RQ-0005	Coupler Stillage SRS	C01
6.545	65204MF-ARC-MAC-TD350_00-REQ-RQ-0006	Bogie Stacking Frame SRS	C01
6.546	65204MF-ARC-MAC-TD350_00-REQ-RQ-0007	Door Storage Trolley SRS	C01
6.547	65204MF-ARC-MAC-TD350_00-REQ-RQ-0008	Headlight Testing Board SRS	C01
6.548	65204MF-ARC-MAC-TD350_00-REQ-RQ-0009	Ride Height Adjustment Trolley SRS (Systems Requirements Specification)	C01
6.549	65204MF-ARC-MAC-TD350_00-RPT-IN-0001	Interface Control Agreement	C01
6.550	65204MF-ARC-MAC-TD350_00-RPT-IN-0002	Interface Control Agreement - AECOM & MFB	C01
6.551	65204MF-ARC-MAC-TD350_00-RPT-IN-0003	Interface Control Agreement - CAF & MFB	C01
6.552	65204MF-ARC-MAC-TD350_00-RPT-IN-0004	Interface Control Agreement - DLR & MFB	C01
6.553	65204MF-ARC-MAC-TD350_00-RPT-IN-0005	Interface Control Agreement - KAD & MFB	C01
6.554	65204MF-ARC-MAC-TD350_00-RPT-IN-0006	Interface Control Agreement - UKPN & MFB	C01
6.555	65204MF-ARC-MAC-TD350_00-RPT-IN-0007	Interface Control Agreement - SCADA and MFB	C01
6.556	65204MF-ARC-MAC-TD350_00-RPT-RQ-0001	Requirements Verification & Validation Matrix & Report	C01
6.557	65204MF-ARC-MAC-TD350_00-RPT-RS-0003	Standards Compliance Report	C01
6.557.1	65204MF-ARC-MAC-TD350_00-REQ-RQ-0010	HVAC Stillage SRS	C01
P-Way / PKG047	Doc number	Doc name	Revision
6.558	65204MF-ARC-TRK-TD350_00-DR-RE-0003	Beckton Depot MFB Permanent Way General Arrangement Drawing	C01
6.559	65204MF-ARC-TRK-TD350_00-DR-RE-0006	Beckton Depot MFB Permanent Way Vertical Profiles Road 6,7,8&9	C01
6.560	65204MF-ARC-TRK-TD350_00-DR-RE-0007	Beckton Depot MFB Permanent Way Swept Path Drawing	C01
6.561	65204MF-ARC-TRK-TD350_00-DR-RE-0015	Beckton Depot MFB Permanent Way Timber Infill Detailed Drawing	C01
6.562	65204MF-ARC-TRK-TD350_00-RPT-RE-0001	Permanent Way - Detailed Design Report / Track Specification - Permanent Way Design	C01
6.562.1	65204MF-ARC-TRK-TD350_00-RPT-RE-0002	Permanent Way Design - Derogation to DLR Standards Application	C01
Risk Assumptions Issues Dependencies / PKG048	Doc number	Doc name	Revision
6.563	65204MF-ARC-MAC-TD350_00-REG-RS-0002	Risk, Assumptions Issues & Dependencies Register (RAID)	C01
6.564	NOT USED	NOT USED	
Interface / PKG049	Doc number	Doc name	Revision
6.565	65204MF-ARC-MAC-TD350_00-RPT-RS-0005	Interface Identification Document	C01
ESM Hazards / PKG050	Doc number	Doc name	Revision
6.566	65204MF-ARC-MAC-TD350_00-REG-RS-0001	ESM Hazard Record	C01
Bogie report / PKG051	Doc number	Doc name	Revision
6.567	65204MF-ARC-TRK-TD350_1-RPT-RS-0001	Bogie Road Design Report	C01
Sustainability / PKG052	Doc number	Doc name	Revision
6.568	65204MF-ARC-MAC-TD350_00-STR-EN-0001	Sustainability Strategy	P02
Design RA / PKG053	Doc number	Doc name	Revision
6.569	65204MF-ARC-MAC-TD350_00-PLN-HS-0002	Design Risk Assessment Plan	P02
Buried services / PKG054	Doc number	Doc name	Revision
6.570	65204MF-ARC-MUA-TD350_00-RPT-UT-0001	Buried Services Investigation Report	P01

Buried services	Doc number	Doc name	Revision
6.571	65204-AEC-MAC-TD350-PLN-UT-9002 P02	MFB Buried Services and Utilities Investigation Report	C01
Task analysis / PKG055	Doc number	Doc name	Revision
6.572	65204MF-ARC-MAC-TD350_00-RPT-HF-0003	Task Analysis Report	P03
Training / PKG057	Doc number	Doc name	Revision
6.573	65204MF-ARC-MAC-TD350_00-RPT-HF-0001	Training Plan	P02
Lightning / PKG60	Doc number	Doc name	Revision
6.574	65204MF-ARC-ELC-TD350_00-RPT-EE-0002	Survey Report and Lightning Protection Risk Assessment	P01
EMC / PKG062	Doc number	Doc name	Revision
6.575	65204MF-ARC-MAC-TD350_00-PLN-EC-0001	EMC Control Plan	C01
6.576	65204MF-ARC-MAC-TD350_00-RPT-EC-0001	EMC Project File	C01
TAP / PKG063	Doc number	Doc name	Revision
6.577	65204MF-DLR-MAC-TD350-PLN-ZZ-00001	Technical Assurance Plan	P06
Noise / PKG064	Doc number	Doc name	Revision
6.578	65204MF-ARC-MAC-TD350_00-RPT-NA-0001	Noise Monitoring Survey Report	P01
Systems Eng. / PKG066	Doc number	Doc name	Revision
6.579	65204MF-ARC-MAC-TD350_00-PLN-RS-0002	Reliability, Availability and Maintainability (RAM) Plan	P03
6.580	65204MF-ARC-MAC-TD350_00-RPT-RM-0001	Hazard Analysis Report	P03
6.581	65204MF-ARC-MAC-TD350_00-RPT-RS-0001	Reliability, Availability and Maintainability (RAM) Report	P02
6.582	65204MF-ARC-MAC-TD350_00-RPT-RS-0002	Multidisciplinary Safety Justification Report	C01
Maintenance / PKG067	Doc number	Doc name	Revision
6.583	65204MF-ARC-MAC-TD350_00-STR-HF-0001	Maintenance Strategy	P02
DITLO / PKG069	Doc number	Doc name	Revision
6.584	65204MF-ARC-MAC-TD350_00-RPT-ZZ-0001	DITLO Report (Day In The Life Of)	P03
TOPO / PKG070	Doc number	Doc name	Revision
6.585	65204MF-ARC-MAC-TD350_Z-SUR-ZZ-0001	Topographical Survey Report	P01
Geotechnical / PKG071	Doc number	Doc name	Revision
6.586	65204MF-ARC-BAS-TD350_Z-RPT-GE-0001	Geotechnical Design Report - Vol.1	P03
6.587	65204MF-ARC-BAS-TD350_Z-RPT-GE-0002	Geotechnical Design Report - Vol.2	P03
Solar / PKG073	Doc number	Doc name	Revision
6.588	65204MF-ARC-MAC-TD350_00-RPT-EN-0006	Solar PV Feasibility Report	P02
Energy / PKG074	Doc number	Doc name	Revision
6.589	65204MF-ARC-MAC-TD350_00-RPT-EN-0002	Energy Report	P02
Energy Efficiency / PKG113	Doc number	Doc name	Revision
6.590	65204MF-ARC-MAC-TD350_00-PLN-EN-0003	Carbon and Energy Efficiency Plan	P01
6.591	65204MF-ARC-MAC-TD350_00-RPT-EN-0012	Designing Out Carbon Workshop Report	P01
Construction / PKG075	Doc number	Doc name	Revision
6.592	65204MF-ARC-MAC-TD350_00-REG-CL-0001	Temporary Works Register	C01
6.592.1	65204MF-ARC-MAC-TD350_00-STR-ZZ-0001	Testing & Commissioning Strategy	C01
6.592.2	65204MF-ARC-MAC-TD350_00-STR-CL-0002	Hoarding Fencing Strategy & Plan	P02
6.592.3	65204MF-ARC-MAC-TD350_00-STR-CL-0001	Construction Strategy	P03

6.592.4	65204MF-ARC-MAC-TD350_00-PLN-ZZ-0001	Commissioning Plan	P02
Ground investigation / PKG078	Doc number	Doc name	Revision
6.593	65204MF-ARC-MAC-TD350_Z-RPT-GE-0001	Ground Investigation Report-Factual	P03
Traction Power / PKG080	Doc number	Doc name	Revision
6.594	65204MF-ARC-POW-TD350_00-REQ-TC-0002	Depot Personnel Protection System - Performance Specification	C01
6.595	65204MF-ARC-POW-TD350_00-RPT-TC-0001	Traction Power Detailed Design Report - RIBA Stage 4	C01
6.596	65204MF-ARC-POW-TD350_Z-CAL-TC-0001	110V AC Cable Sizing Calculation Report	C01
6.597	65204MF-ARC-POW-TD350_Z-CAL-TC-0002	750V DC Cable Sizing Calculation Report	C01
6.598	65204MF-ARC-POW-TD350_Z-CAL-TC-0003	400V/230V AC Cable Sizing Calculation Report	C01
6.599	65204MF-ARC-POW-TD350_Z-CAL-TC-0004	Cable Tray Sizing Calculation	C01
6.599.1	65204MF-ARC-POW-TD350_00-REQ-TC-0001	Overhead Shore Supply System Performance Specification	C01
ESMP / PKG082	Doc number	Doc name	Revision
6.600	65204MF-ARC-MAC-TD350_00-PLN-RS-0001	Engineering Safety Management Plan (ESMP)	P02
Cable Sub-Station / PKG083	Doc number	Doc name	Revision
6.601	65204MF-ARC-POW-TD350_00-RPT-TC-0005	Substation Cable Route Survey Report	P02
Planning Consent / PKG084	Doc number	Doc name	Revision
6.602	65204MF-ARC-MAC-TD350_00-STR-PS-0001	Planning Consent Strategy	P02
Remedial Report / PKG085	Doc number	Doc name	Revision
6.603	65204MF-ARC-MAC-TD350_00-RPT-EN-0008	Remedial Strategy Report	P03
Cyber RA / PKG086	Doc number	Doc name	Revision
6.604	65204MF-ARC-MAC-TD350_00-REG-RS-0004	Cyber Security Risk Assessment	C01
Cyber Plan / PKG088	Doc number	Doc name	Revision
6.605	65204MF-ARC-MAC-TD350_00-PLN-RS-0006	Cyber Security Management Plan	C01
Geotechnical / PKG095	Doc number	Doc name	Revision
6.606	65204MF-ARC-BAS-TD350_Z-RPT-GE-0003	Geotechnical Bridging Report	P02
Breeam PKG099 / 100	Doc number	Doc name	Revision
6.607	65204MF-ARC-MAC-TD350_00-RPT-EN-0004	Biodiversity Net Gain report	P01
6.608	65204MF-ARC-MAC-TD350_00-RPT-EN-0009	BREEAM Ecology Report	P01
6.609	65204MF-ARC-MAC-TD350_00-RPT-EN-0010	Ene 04 Low Zero Carbon Technologies Study	P02
Breeam / PKG068	Doc number	Doc name	Revision
6.610	65204MF-ARC-MAC-TD350_00-REG-EN-0004	BREEAM Tracker: Stage 4 Update	C01
Earthing PKG 101	Doc number	Doc name	Revision
6.611	65204MF-ARC-MAC-TD350_00-RPT-EC-0004	Earthing Bonding derogation application to DLR Standards	P02
6.612	NOT USED	NOT USED	
Information Security / PKG105	Doc number	Doc name	Revision
6.613	65204MF-ARC-MAC-TD350_00-PLN-RS-0007	Information Security Management Plan	C01
Substation Cable Route / PKG109 / PKG110	Doc number	Doc name	Revision
6.614	65204MF-ARC-POW-TD350_00-RPT-TC-0050	Substation Cable Route Design & DC Supply Modifications Detailed Design Report - RIBA Stage 4	C01
6.615	65204MF-ARC-BAS-TD350_Z-DR-CE-3951	DC Cable Route GA Sheet 1	C01
6.616	65204MF-ARC-BAS-TD350_Z-DR-CE-3953	DC Cable Route GA Sheet 3	C01
6.617	65204MF-ARC-BAS-TD350_Z-DR-CE-3954	DC Cable Route GA Sheet 4	C01

6.618	65204MF-ARC-BAS-TD350_Z-DR-CE-3955	DC Cable Route GA Sheet 2	C01
6.619	65204MF-ARC-BAS-TD350_Z-DR-CE-3957	DC Cable Route Sections and Details Sheet 1	C01
6.620	65204MF-ARC-BAS-TD350_Z-DR-CE-3958	DC Cable Route Sections and Details Sheet 2	C01
6.621	65204MF-ARC-BAS-TD350_Z-DR-CE-3959	DC Cable Route Sections and Details Sheet 3	C01
6.622	65204MF-ARC-BAS-TD350_Z-DR-CE-3960	DC Cable Route Sections and Details Sheet 4	C01
6.623	65204MF-ARC-POW-TD350_Z-DR-TC-0050	Substation DC Cable Route	C01
6.624	65204MF-ARC-POW-TD350_Z-DR-TC-0053	Substation DC Cable Schedule	C01
6.625	65204MF-ARC-POW-TD350_Z-DR-TC-0054	Substation Control & Auxiliary Cable Schedule	C01
6.626	65204MF-ARC-POW-TD350_Z-DR-TC-0055	DC Supply Modification Single Line Diagram	C01
Site Waste / PKG111	Doc number	Doc name	Revision
6.627	65204MF-ARC-MAC-TD350_00-PLN-EN-0001	Resource and Site Waste Management Plan	P02
BIM / PKG081	Doc number	Doc name	Revision
6.628	65204MF-ARC-MAC-TD350_00-PLN-DM-0001	BIM Execution Plan (BEP)	P03
BIM Maximo / PKG115	Doc number	Doc name	Revision
6.629	65204MF-ARC-MAC-TD350_00-SCH-ZZ-0002	Beckton MFB - BIM Maximo Asset Schedule	P01
4D model / PKG118	Doc number	Doc name	Revision
6.630	65204MF-ARC-MAC-TD350_00-AFI-ZZ-0001	Beckton MFB 4D Synchro Model	P01
6.631	65204MF-ARC-MAC-TD350_00-VSU-ZZ-0001	Beckton MFB 4D Animation Video	n/a
Asbestos / PKG120	Doc number	Doc name	Revision
6.632	65204MF-ARC-MAC-TD350_00-SUR-HS-0001	Asbestos Refurbishment & Demolition Survey	P01
Pre-construction / PKG121	Doc number	Doc name	Revision
6.633	65204MF-ARC-MAC-TD350_00-RPT-HS-0001	Pre-Construction Information (PCI)	P01
Civils (pt 4) PKG 124	Doc number	Doc name	Revision
6.633.1	65204MF-ARC-BAS-TD350_Z-DR-SE-3046	DC Cable Details at WLS and Chamber Schedule	P01
PKG102 - Design Compliance	Doc number	Doc name	Revision
6.633.2	65204MF-ARC-MAC-TD350_Z-RPT-ZZ-0001	Design Compliance Report – Project Technical Case	P01
Drainage - PKG112	Doc number	Doc name	Revision
6.633.3	65204MF-ARC-DRG-TD350_00-CER-DR-0001	Drainage Design Check Certificate	P01
Drainage / PKG038	Doc number	Doc name	Revision
6.633.4	65204MF-ARC-DRG-TD350_2-DR-DR-3901	Proposed Drainage Below Ground Foul Water	P04
6.633.5	65204MF-ARC-DRG-TD350_2-DR-DR-3902	Proposed Drainage Below Ground Surface Water	P03
6.633.6	65204MF-ARC-DRG-TD350_2-DR-DR-3903	Proposed Foul Drainage Sections	P03
6.633.7	65204MF-ARC-DRG-TD350_2-DR-DR-3904	Proposed Rain Drainage Sections	P03
Wheel Lathe Feasibility / PKG125	Doc number	Doc name	Revision
6.633.8	65204MF-ARC-MAC-TD350_00-RPT-ZZ-0004	Wheel Lathe Facility Feasibility and Impact Assessment Report	C01
6.633.9	65204MF-ARC-MAC-TD350_00-RPT-CL-0001	Constructability Report	P03
Southern Sidings (SS)			
Southern Sidings (SS) (Signalling)	Doc number	Doc name	Revision
6.634	65204-AEC-SIG-TD350-REP-RS-2002	Signal Plan - Southern Sidings	C01
6.635	65204-AEC-SIG-TD350-REP-RS-2003	Signalling Drawings (SS)	C01
6.636	65204-AEC-SIG-TD350-REP-RS-2005	Southern Sidings - Signalling Stage B2p	C02

6.637	65204-AEC-SIG-TD350-REP-RS-2006	Southern Sidings - Signalling Stage B4p	C01
6.638	65204-AEC-SIG-TD350-REP-RS-2007	Southern Sidings - Signalling Stage B6c	C02
6.639	65204-AEC-SIG-TD350-REP-RS-2008	Southern Sidings Signalling Hardware & Software Report	C01
6.640	65204-AEC-SIG-TD350-REP-RS-2001	Signalling Detailed Design Report - Southern Sidings (OSL)	C01
6.641	65204-AEC-SIG-TD350-REP-RS-9003	Signalling Migration and Commissioning Plan - Southern Sidings (OSL)	C01
6.642	65204-AEC-SIG-TD350-REP-RS-9005	Signalling Testing Report (Testing Strategy OSL) - Southern Sidings	C01
6.643	65204-AEC-SIG-TD350-DR-RS-2016	Southern Sidings Control Tables	C01
6.644	65204-AEC-ELC-TD350_Z-REP-E-9002	Southern Sidings Temporary Works Signalling Power	C01
6.645	65204-AEC-MAC-TD350-REP-ZZ-9004	Southern Sidings Deferral - Design Modifications	P01
SS Technical Case	Doc number	Doc name	Revision
6.646	65204-AEC-MAC-TD350-CER-ZZ-2004	Southern Sidings - Overarching Technical case	P01
6.647	65204-AEC-MAC-TD350-CER-ZZ-9001	Depot Wide Sidings - Overarching Technical case	P01
SS IDR FDR	Doc number	Doc name	Revision
6.648	65204-AEC-MAC-TD350-REG-ZZ-2001	Southern Sidings - Interdisciplinary Design Check - AoD	P02
6.649	65204-AEC-MAC-TD350-REG-IM-2100	Southern Sidings - AFC Submission - Master FDR	P02
SS V&V	Doc number	Doc name	Revision
6.651	65204-AEC-MAC-TD350-REQ-IM-2001	Requirements Verification & Validation (V&V) Matrix - Southern Sidings	C03
6.652	65204-AEC-MAC-TD350-REP-ZZ-2002	Requirements Verification & Validation (V&V) Report - Southern Sidings	C03
6.653	65204-AEC-MAC-TD350-REQ-IM-9001	Requirements Verification & Validation (V&V) Matrix	P01
6.654	65204-AEC-MAC-TD350-REP-ZZ-9001	Requirements Verification & Validation (V&V) Report	P01
SS Safety Justification	Doc number	Doc name	Revision
6.655	65204-AEC-MAC-TD350-REP-HS-9002	Multidisciplinary Safety Justification Report (inc. Cyber Security Case)	C01
SS HAZID	Doc number	Doc name	Revision
6.656	65204-AEC-MAC-TD350-REP-HS-2004	Southern Sidings Deferral HAZID Hazard Analysis Report	P01
SS Interface	Doc number	Doc name	Revision
6.657	65204-AEC-MAC-TD350-REP-ZZ-9002	Depot Wide - Interface Identification Document	P01
SS Hoarding Strategy	Doc number	Doc name	Revision
6.658	65204-AEC-FAE-TD350-REP-CE-9001	Hoarding/Fencing Strategy	C01
SS Migration Plan	Doc number	Doc name	Revision
6.659	65204-AEC-MAC-TD350-PLN-ZZ-9003	Migration Plan	C01
SS Health and Safety File	Doc number	Doc name	Revision
6.660	65204-AEC-MAC-TD350-REP-HS-2001	Health and Safety File	C03
SS Construction Strategy	Doc number	Doc name	Revision
6.661	65204-AEC-MAC-TD350-REP-CL-0001	Construction Strategy	P05
SS ETE/Traction Power Depot Wide	Doc number	Doc name	Revision
6.663	65204-AEC-ELC-TD350-REP-E-9004	Traction Power Impact Assessment (SS)	P04
6.664	65204-AEC-ELC-TD350-REP-E-2005	EMC Technical File for Southern Sidings	C02
6.665	65204-AEC-ELC-TD350-REP-E-2010	ETE Stage Works Report (SS)	C02
6.666	65204-AEC-MAC-TD350-REP-RS-9006	Interface Control Agreement Southern Sidings and SCADA (SS)	C01
6.667	65204-AEC-MAC-TD350-REP-RS-9005	Southern Sidings/Substation Interface Control Agreement (SS)	C01
SS Civils	Doc number	Doc name	Revision

6.668	65204-AEC-BAS-TD350-REP-CE-2001	Southern Sidings Package - Detailed design (Civil)	C03
SS Drainage	Doc number	Doc name	Revision
6.669	65204-AEC-DRG-TD350-REP-D-2001	Southern Sidings - Detailed Drainage Design	C03
6.670	65204-AEC-DRG-TD350-REP-D-2002	Southern Sidings – Drainage Specification	C02
SS M&E	Doc number	Doc name	Revision
6.671	65204-AEC-ELC-TD350-REP-E-2003	M&E LV Detailed Design Report (Southern Sidings)	C04
SS Telecoms	Doc number	Doc name	Revision
6.673	65204-AEC-COM-TD350-REP-RS-2002	Southern Sidings - Telecommunications Construction Specification	C02
SS Track	Doc number	Doc name	Revision
6.674	65204-AEC-TRK-TD350-REP-RE-2001	Southern Sidings Permanent Way Detailed Design Report	C05
SS BIM Maximo	Doc number	Doc name	Revision
6.675	65204-AEC-MAC-TD350-SCH-IM-2001	BIM Maximo Asset Schedule - Southern Sidings	P01
TFOS			
6.676	TFOS Technical Requirements 0.3 21-02-	TFOS Technical Requirements	21.02.22
6.677	65210-ARC-PRM-TD350 00-DR-AR-5015	HIF land drawing + TFOS overlay	P01
6.678	65210-ARC-MAC-TD350-RPT-EN-0002	Beckton Ground Investigation Factual Report	P02
6.679	65210-ARC-MAC-TD350-RPT-EN-0001	Beckton Geo-Environmental Assessment Report	P02
6.680	C.M0.94.600.00	Vehicle Description	A
6.681	65210-ARC-MAC-TD350-RPT-EN-0003	Beckton Conceptual Remediation Appraisal Report	P02
6.682	NOT USED	NOT USED	
6.683	ST_Overview_Neivalu_A4	Spaciotempo Neivalu Specification	N/A
6.684	ST-21-HP-37672	Transport of London	N/A
6.685	37672.1	Spaciotempo Proposal for Transport of London	N/A
Northern Siding (NS) – Road BK, BL, BM and MFB Fan area design			
Northern Sidings Signalling	Doc number	Doc name	Revision
6.686	65204-AEC-SIG-TD350-REP-RS-3008	Signalling Hardware and Software Report	C02
6.687	65204-AEC-SIG-TD350-REP-RS-9009	Signalling Testing Report	C02
6.688	65204-AEC-SIG-TD350-REP-RS-3001	Signalling Detailed Design Report	C02
6.689	65204-AEC-SIG-TD350-REP-RS-3002	Signal Plan	C01
6.690	65204-AEC-SIG-TD350-REP-RS-3003	Signalling Drawings	C02
6.691	65204-AEC-SIG-TD350-REP-RS-9007	Signalling Migration and Commissioning Plan	C02
6.692	65204-AEC-SIG-TD350-REP-RS-3004	Control Tables	C01
6.693	65204-AEC-SIG-TD350-REP-RS-9006	Signalling FMECA Report	C01
6.694	65204-AEC-SIG-TD350-REP-RS-3009	Stageworks C1w	C02
6.695	65204-AEC-SIG-TD350-REP-RS-3005	Stageworks C2p	C02
6.696		Stageworks C4P AFC	
6.697	65204-AEC-SIG-TD350-REP-RS-3006	Stageworks C4p	P05
6.698		Stageworks C4p AFC	
6.699	65204-AEC-SIG-TD350-REP-RS-3007	Stageworks C6p	C02
6.700	65204-AEC-SIG-TD350-REP-RS-3010	Northern Sidings - Vital Locking of Test Track Report	C01
Northern Sidings Civils	Doc number	Doc name	Revision
6.701	65204-AEC-EST-TD350-REP-GE-1001	Geotechnical Design Report	C01
6.702	65204-AEC-MAC-TD350-REP-D-3002	Highways Detailed Design Report	C02

6.703	65204-AEC-MAC-TD350-REP-D-3001	Highway Specification	C02
6.704	65204-AEC-BAS-TD350-REP-CE-3001	Civils Detailed Design Report - Northern Sidings Submission A	C04
6.705	65204-AEC-BAS-TD350-REP-CE-3002	Construction specifications - Civils	C01
6.706	65204-AEC-BAS-TD350-REP-D-3002	Construction specifications - Drainage	
6.707	65204-AEC-DRG-TD350-REP-D-3001	Detailed design – Drainage (including stage works drainage)	C02
6.708	65204-AEC-EST-TD350-REP-GE-3001	Northern Sidings - GI Factual Report	C01
6.709	65204-AEC-EST-TD350-REP-GE-3002	Northern Sidings – Design Impact Summary CPTu Interpretation	P02
6.710	65204-AEC-EST-TD350-REP-GE-3003	Northern Sidings - 600 Earthworks Specification	C02
6.711	65204-AEC-BAS-TD350-REP-CE-3003	Civils Detailed Design Report - Northern Sidings Submission B	C04
6.712	65204-AEC-BAS-TD350-REP-CE-3004	Civils Detailed Design Report - Northern Sidings Submission C	C03
6.713	65204-AEC-BAS-TD350-REP-CE-3005	Civils Detailed Design Report - Northern Sidings Submission D	C03
Northern Sidings M&E	Doc number	Doc name	Revision
6.714	65204-AEC-ELC-TD350-REP-E-3007	M&E LV Detailed Design Report	C02
6.715	65204-AEC-ELC-TD350-REP-E-3001	Traction Power Detailed Design Report	C02
6.716	65204-AEC-ELC-TD350-REP-E-3006	Signalling Power Detailed Design Report	C03
6.717	65204-AEC-ELC-TD350-REP-E-3005	Points Heating Detailed Design Report+E181	C01
6.718	65204-AEC-ELC-TD350-REP-E-3008	ETE Stageworks	C02
6.719	65204-AEC-ELC-TD350-REP-E-3003	EMC Technical File	C02
Northern Sidings COMMS	Doc number	Doc name	Revision
6.720	65204-AEC-COM-TD350-REP-RS-3001	Telecoms Detailed Design Report	C02
Northern Sidings PWAY	Doc number	Doc name	Revision
6.721	65204-AEC-TRK-TD350-REP-RE-3001	Permanent Way Detailed Design Report	C01
6.722	65204-AEC-TRK-TD350-REP-RE-3002	Track Construction Specification	C01
Northern Sidings	Doc number	Doc name	Revision
6.723	65204-AEC-DRG-TD350-REP-D-3002	Northern Sidings - Construction specifications - Drainage	C02
6.724	65204-AEC-ELC-TD350-PLN-E-9001	Depot Wide – Earthing and Bonding and Stray Current Plan	C01
6.725	65204-AEC-ELC-TD350-PLN-E-9002	Depot Wide – EMC Control Plan	C01
6.726	65204-AEC-MAC-TD350-REP-RS-9002	Interface Control Agreement – Northern Sidings and Northern Test Track ATO System	
6.727	65204-AEC-MAC-TD350-REP-RS-9003	Interface Control Agreement – Northern Sidings and MFB	
6.728	65204-AEC-MAC-TD350-REP-RS-9004	Interface Control Agreement - Northern Sidings and Substation	
6.729	65204-AEC-MAC-TD350-REP-RS-9007	Interface Control Agreement – Northern Sidings and SCADA	
6.730	65204-AEC-MACTD350-REP-HS-3002	Northern Sidings Hazard Analysis Report	
6.731	65204-AEC-MAC-TD350-CER-ZZ-3004 P02	Northern Sidings - AoD -Technical Case =	

Appendix D (7.0) DLR Processes, Project Plans & Standards

Standards	Doc number	Doc name	Rev
7.1	Category 1 Standard S1062	Temporary Works	
7.2	Automated Period End Calendar to 2035	TFL Period Calendar to 2035	
7.3	DLR-ENG-STD-ES101 Issue B	Noise and Vibration Engineering Standard	B
7.4	DLR-ENG-STD-ES102 Issue B	EMC Standard	B
7.5	DLR-ENG-STD-ES104 Issue 2.0	BIM Standard	2
7.6	DLR-ENG-STD-ES401 Issue D	Infrastructure Permanent Way Engineering Standard	D
7.7	DLR-ENG-STD-ES501 Issue B	Civil Structural Architectural Landscape Works	B

7.8	DLR-ENG-STD-ES504 Issue A	Design of Underground Structures Engineering Standard	A
7.9	DLR-ENG-STD-ES604 Issue A	Earthing Bonding and Corrosion Protection Engineering Standard	A
7.10	DLR-ENG-STD-ES701 Issue C	Code of Practice Engineering Standard for Materials, Equipment & Workmanship for use on DLR Passenger Rolling Stock	C
7.11	CORE-DLR-RSK-ENG_0-DR-K-0258	Vehicle & Structure Gauges - Platform location and Minimum Dimensions Standard	P01.1
7.12	CORE-DLR-RSK-ENG_0-DR-K-0254	Vehicle & Structure Gauges - Centre & End Throw Details Standard	P01.1
7.13	DLR-ENG-DWG-RS092 Issue C	B92 and B2007 Stock Collector Shoe Spacing Standard	C
7.14	DLR-ENG-DWG-RS200 Issue A	Flange lubrication for DLR5 tyre profile critical limits Standard	A
7.15	DLR-ENG-DWG-RS201 Issue A	Flange Lubrication for DLR5 Tyre Profile Lubrication Gauge	A
7.16	DLR-ENG-DWG-RS253 4.0 Issue C	Vehicle & Structure Gauges - Static Vehicle Dimensions Standard	C
7.17	DLR-ENG-DWG-RS255 Issue B	Vehicle & Structure Gauges - Centre & End Throws on Vertical Curves Standard	B
7.18	DLR-ENG-DWG-RS256 Issue C	Vehicle & Structure Gauges - Lateral cant Allowances Standard	C
7.19	DLR-ENG-DWG-RS257 Issue C	Vehicle & Structure Gauges - Detail of Conductor Rail area Standard	C
7.20	DLR-ENG-DWG-RS259 Issue B	Vehicle & Structure Gauges - Swept Envelope Standard	B
7.21	DLR-ENG-DWG-RS260 Issue B	Vehicle & Structure Gauges - Structure Gauge for Open Track Standard	B
7.22	DLR-ENG-DWG-RS261 Issue B	Vehicle & Structure Gauges - Structure Gauge for Tunnels Standard	B
7.23	DLR-ENG-DWG-RS262 Issue A	Vehicle & Structure Gauges - Variation of Swept Envelope and Structure Gauge dimensions on curves Standard	A
7.24	DLR-ENG-DWG-RS283 Issue C	Standard Bridge Load Case Standard	C
7.25	DLR-ENG-DWG-RS0483 Issue B	Maintenance Vehicles Infrastructure Interface Standard	B
7.26	DLR-ENG-DWG-ST001 Issue P3	DLR Platform Markings Sheet 1 Standard	P3
7.27	DLR-ENG-DWG-ST002 Issue P1	DLR Platform Markings Sheet 2 Standard	P1
7.28	DLR-ENG-STD-ES001 Issue 1.0	Standard for Standards	1
7.29	DLR-ENG-STD-ES301 Issue B	Signalling Principles Engineering Standard	B
7.30	DLR-ENG-STD-ES302 Issue B	Automatic Train Control System Engineering Standard	B
7.31	DLR-ENG-STD-ES303 Issue 1.0	Depot Signalling Engineering Standard	1
7.32	DLR-ENG-STD-ES304 Issue 1.0	Sighting of Signals, Signs and Point Indicators Engineering Standard	1
7.33	DLR-ENG-STD-ES601 Issue A	Electrical Power Supplies Engineering Standard	A
7.34	DLR-ENG-STD-ES605 Issue A	Electrical Installation Standards Engineering Standard	A
7.35	DLR-ENG-STD-ES606 Issue A	750V Traction Distribution Protection System Engineering Standard	A
7.36	DLR-ENG-STD-ES609 Issue A	High Voltage Traction and Auxiliary Power Supply Engineering Standard	A
7.37	DLR-ENG-STD-ES610 Issue 1.0	E&M Systems - Lighting	1
7.38	DLR-ENG-STD-ES702 Issue A	Minimum Standards For Engineers Vehicles Engineering Standard	A
7.39	DLR-ENG-STD-ES705 Issue B	B92B2007 Vehicle Interface Parameters Standard	B
7.40	DLR-ENG-STD-ES708 Issue A	Rolling Stock Power Supply Interface Engineering Standard	A
7.41	DLR-ENG-STD-ES709 Issue A	Rolling Stock Permanent Way Interface Engineering Standard	A
7.42	DLR-ENG-STD-ES710 Issue C	Rolling Stock Infrastructure Interface Engineering Standard	C
7.43	DLR-ENG-STD-ES711 Issue B	Minimum Performance Requirement for PRS Braking Engineering Standard	B
7.44	DLR-ENG-STD-ES712 Issue 1.0	Rolling Stock Document Numbering Standard	1

7.45	DLR-ENG-STD-ES800 Issue A	Requirements For The Control Of Software Development Prior to Introduction into DLR Systems Engineering Standard	A
7.46	DLR-ENG-DWG-RS252 Issue A	Vehicle Recovery Skate Standard	A
7.47	T0438 Issue A2	Specification Composite Sleepers and Bearers	A2
7.48	DLR-IMS-GENR-BCP-00002	Assurance of Maintenance Changes	Issue 01
7.49	DLR-IMS-GENR-BCP-00003 Issue 03	Change Assurance Framework	3
7.50	DLR-IMS-GENR-BCP-00005 Issue 01	Assurance of Organisational Change	Issue 01
7.51	DLR-IMS-GENR-BCP-00009 Issue 01	Management of DLR Engineering & Maintenance Standards	Issue 01
7.52	DLR-IMS-GENR-BCP-00012 Issue 02	Assurance of Signalling Asset Changes	2
7.53	DLR-IMS-GENR-BCP-00014 Issue 03	Assurance of Non-signalling Asset Changes	3
7.54	DLR-IMS-GENR-BCP-00018 Issue 02	Assuring the Operability of New or Altered DLR Assets	2
7.55	DLR-JMS-PROC-001 Issue 11	Accident and Incident Reporting and Investigation	11
7.56	DLR-JMS-PROC-006 Issue 04	Third Party Developments	4
7.57	DLR-JMS-PROC-007 Issue 05	Joint Risk Management	5
7.58	DLR-JMS-PROC-008 Issue 06	ATCS Management Arrangements	6
7.59	DLR-JMS-PROC-016 Issue 08	Management of the Safety Performance Index	8
7.60	DLR-JMS-PROC-019 Issue 05	Fire Safety Arrangements on the DLR	5
7.61	DLR-JMS-PROC-022 Issue 04	Management of asbestos on the DLR	4
7.62	DLR-JMS-PROC-023 Issue 03	Seasonal Preparedness	3
7.63	DLR-JMS-PROC-024 Issue 04	Possession Planning Arrangements on the DLR	4
7.64	WRM.PPP.2019 Issue 01	WoRM Manual Update 2019	Issue 01
7.65	WRM SOP PC 1 01 v15	Intro Content and Definitions	V15
7.66	WRM SOP PC 2.01 v6	Application to Carry Out Works on DLR	V6
7.67	WRM SOP PC 3.01 v3	Implementation, Management and Supervision of Possessions and Isolations	V3
7.68	WRM SOP PC 3.02 v4	Types of Possessions And Isolations	V4
7.69	WRM SOP PC 3.03 v4	Implementation, Management and Supervision of Live Possessions	V4
7.70	WRM SOP PC 3.07 v3	Approval and Use of Manual Track Trolleys on DLR	V3
7.71	WRM SOP PC 3.08 v3	Approval and Use of Rail Mounted Plant on the DLR	V3
7.72	WRM SOP PC 3.10 v4	Storage of Materials, Plant & Equipment Trackside or on Stations	V4
7.73	WRM SOP PC 3.12 v2	Asset Handover and Hand back	
7.74	WRM SOP PC 3.14 v3	Temporary Trackside Protection Barriers	V3
7.75	WRM SOP PC 3.15 v4	Special Possession and Isolation Arrangements	V4
7.76	WRM SOP PC 3.16 v2	Restricted Works	V2
7.77	WRM SOP PC 3.19 v3	Application and Removal of Temporary Speed Restrictions	V3
7.78	WRM SOP PC 3.21 v2	Use of LUL Maintenance Access Crossing	V2
7.79	WRM SOP PC 3.24 v3	Asset Check Certification	V3
7.80	WRM SOP PC 4.01 v4	Working in Depots	V4
7.81	WRM SOP PC 4.02 v4	Implementation, Management and Supervision of Worksites outside Possessions	V4
7.82	WRM SOP PC 4.04 v4	Working in Restricted Areas	V4
7.83	1499901-DLR-RSTK-TR600_Z-IE-K-0004	Systems Engineering Management Plan	Rev1
7.84	1499901-DLR-RSTK-TR600_Z-IE-K-0016	Design Management Plan	Rev1.1
7.85	65204-AEC-MAC-TD350-PLN-HS-9001	Engineering Safety Management Plan (ESMP)	

7.86	65204MF-ARC-MAC-TD350_00-PLN-EC-0001	80% EMC Control Plan	
7.87	49200-DLR-MAC-TD350_Z-HS-K-0003	Beckton Depot Detailed Code of Construction Practice	1
7.88	65204-AEC-MAC-TD350-PLN-CL-9001	Detailed Construction Logistics Plan	
7.89	49200-DLR-MAC-TD350_Z-HS-K-0004 RevJune17	GLA Responsible Procurement 13062017	
7.90	49200-DLR-MAC-TD350_Z-HS-K-0005	Mayors Transport Strategy	
7.91	49200-DLR-MAC-TD350_Z-HS-K-0006	TfL Corporate Environment Framework	Jun-16
7.92	1499901-DLR-RSTK-TR600_Z-IE-K-0114	DLR Sustainability Strategy	1
7.93	65204-AEC-MAC-TD350-PLN-EN-9001	Environmental Management Plan	P02
7.94	65204-AEC-MAC-TD350-PLN-EN-9003	Depot Wide - Outline Construction Resource Management Plan	
7.95	65204-AEC-MAC-TD350-PLN-EN-9002	Depot Wide - Design Resource Efficiency Plan	
7.96	65204-AEC-MAC-TD350-LOG-SU-3001	Sustainable Design Log	
7.97	65204-AEC-MAC-TD350-REP-EN-9001	Depot Wide – Reptile Survey Report	
7.98	TfL Information Control Procedure	TfL Information Control Procedure	C01
7.99	S1760 IssueA2	Standard Method and Procedure & Common Data Environment Procedure	A2
7.100	49222-DLR-MAC-TD350_Z-EI-K-0001	Employer Information Requirements (EIR)	V1.1
7.101	12100-KAD-PRM-TR000_Z-LS-K-0001	Maximo Asset Capture Sheet	
7.102	SS MIGRATION MATRIX Rev 3	Beckton Depot Upgrade Works - SS Migration Matrix Rev 3 for South Siding Works	3
7.103	SOUTHERN SIDINGS- OPERATIONAL / MIGRATION READINESS REVIEW	STAGE WISE MRR-ORR DELIVERABLES MATRIX SOUTHERN SIDINGS R2	2
7.104	65204-DLR-MAC-TD350_Z-PLN-IN-0001 Rev P0	Beckton Depot Upgrade Northern Sidings Migration Plan (Ops / Maintenance Interface)	4
7.105	65204-DLR-MAC-TD350_Z-PLN-IN-0001A	Format of Migration Plan - SAMPLE- (Ops-Maintenance Interface)	
7.106	65204MF-DLR-BOU-TD350_00-PLN-GL-0001	Maintenance Facility Building (MFB) & Southern Sidings (SS) Build Migration Stage Plan	
7.107	65204MF-DLR-ZZZ-TD350_00-PRG-PM-0004	MFB Sub Programme MRR-ORR - Migration Stage-wise Deliverables	
7.108	65204MF-DLR-ZZZ-TD350_00-PRG-PM-0003	MFB Sub Programme Migration Road Map	
7.109	65204MF-DLR-ZZZ-TD350_00-PRG-PM-0002	MFB Beckton Depot Staging of Works	
7.110	65204MF-DLR-ZZZ-TD350_00-PRG-PM-0001	MFB BED Delivery Strategy	
7.111	DLR-JMS-PROC-012	JMS-012 Assurance of Signalling Asset Changes	
7.112	DLR-JMS-PROC-014	JMS-014 Assurance of Non-Signalling Asset Changes	
7.113	DLR-JMS-PROC-018	JMS-018 Assurance of Operations Changes	
7.114	DLR-JMS-PROC-019	JMS-019 Fire Safety Arrangements on the DLR	
7.115	DLR-JMS-PROC-009	JMS-009 Management of DLR Engineering & Maintenance Standards	
7.116	PR0653 A2	Engineering Design Change Control	A2
7.117	65001-DLR-MAC-TR600-PLN-PM-0002	RSRP RAM Management Plan	
7.118	1499901-DLR-RSTK-TR600_Z-IE-K-0032	EMC strategy	
7.119	1499901-DLR-RSTK-TR600_Z-IE-K-0026	RSRP Human Factors Integration Plan	
7.120	65001-DLR-RSK-TR000-PLN-RS-0001	Systems Definition – Rolling Stock Replacement Programme (RSRP)	
7.121	CNRS 2014-92	Change Notification and Requirements Statement	
7.122	1499901-DLR-RSTK-TR600_Z-IE-K-0054	Programme Technical Assurance Plan PTAP	
7.123	1499901-DLR-RSTK-TR600_Z-IE-K-0011	Engineering Safety Management Plan	
7.124	65204MF-DLR-ZZZ-TD350_00-PRO-PS-0001	DLR RSRP Possession planning and integration document	
7.125	65204MF-DLR-CAI-TD350_00-PLN-CL-0001	WoRM SOP PC 3.12 Handover and Handback Plan	1
7.126	DLR RSRP Stakeholder Engagement and Communications Plan	1499901-DLR-RSTK-TR600_Z-IE-K-0010	2019

7.127	65204EW-DLR-MAC-TD350_1-REQ-CP-0001	Work Related Road Risk	
7.128	V03 07.01.22	Field Design Change Process	
7.129	PR0091 A1 ISP	Construction NOWRI	
7.130	D.4.1 & D.4.2 MFB, SS & TFOS Possessions_R04	D.4.1 & D.4.2 MFB, SS & TFOS Possessions_R04	RO4
7.131	NOT USED	NOT USED	
7.132	DVS MFB WI	DVS MFB WI	
7.133	DLR-ENG-STD-MR-300	Maintenance Standard for Signalling & Train Control	4
7.134	NR/GN/SIG/11724	Signalling Works Test Specifications	
7.135	NR/L2/SIG/30014	Signalling Works Testing Handbook	
7.136	RGSC01	Applicable issue of Railway Group Standards	
7.137	NR/CAT/STP/001	Applicable issue of Network Rail Standards	
7.138	RIS-0009-CCS 11	Identification of Signalling and related equipment	
7.139	NR/L2/SIG/11201 11	Signalling Design Handbook	
7.140	NR/L2/SIG/30009 12	Signalling Principles Handbook	
7.146	NR/L2/INF/02018 6	Specification for the Management of Safety Related Infrastructure Records	
7.147	NR/L2/INI/EDT/CP0091 2	Specification for Computer Aided Design	
7.149	NR/L2/SIG/30004 2	CAD Cell Library	
7.150	NR/L3/SIG/11761 5	Handbook for EBI Track 200 Audio Frequency Track	
7.152	NR/SP/SIG/11752 2	Train Detection Handbook	
7.153	NR/SP/SIG/19812 1	Cross Track Cable Management	
7.155	NR/L2/SIGELP/30007 3	Product Specification for Power Transformers for Signalling Systems	
7.156	NR/L2/SIGELP/50000	3 Safe Working and Maintenance on or near Signalling Power Distribution Equipment above 175V	
7.158	NR/L2/SCO/306 3	Disposal of Redundant Railway Assets	
7.159	RT/E/PS/00005 1	Railway Signalling Cables	
7.161	NR/L2/SIG/11213 2	Signalling Cable Equivalent Sizes	
7.162	BR1615 D	Specification for Relocatable Equipment Buildings for S&T Use	
7.164	NR/L2/SIGELP/27725 1	Insulation Monitoring and Fault Location Systems for use on Signalling Power Systems	
7.165	NR/PS/SIG/11756 2	HVI Track Circuits (formally RT/E/PS/11756)	
7.166	DLR-ENG-STD-ES602	Building Other Systems Engineering Standard	
7.167	220217 SIX monthly EVENTS lookahead from 19.02.22	220217 SIX monthly EVENTS lookahead from 19.02.22 issue date 19.02.2022	
7.168	220218 L&E and Station programme	220218 L&E and Station programme issue date 19.02.2022	
7.169	220218 Map Pack	220218 Map Pack issue date 19.02.2022	
7.170	220218 Track programme	220218 Track programme issue date 19.02.2022	

Appendix E (8.0) Templates

Templates	Doc number	Doc name	Rev
8.1	49200-DLR-MAC-TD350_Z-SD-K-0004	Race-Card Template	
8.2	49200-DLR-MAC-TD350_Z-SD-K-0003	Master Box Plan Template	
8.3	DLR-IMS-WoRM-ASM-00001	KAD Method Statement Template	
8.4	DLR-IMS-WoRM-LTR-00001	Late Letter Template	
8.5	DLR-IMS-WoRM-PLN-00001	Handover Hand Back Plan Template 5.1	5.1
8.6	DLR-IMS-WoRM-LCN-00001	Storage Licence Form	

8.7	DLR-IMS-WoRM-CER-00001	Asset Check Certificate	
8.8	DLR-IMS-WoRM-CER-00002	Handover Certificate	
8.9	DLR-IMS-WoRM-CER-00003	Hand back Certificate	
8.10	DLR-IMS-WoRM-CER-00004	Certificate of Final Completion	
8.11	DLR-IMS-WoRM-CHK-00001	Hand back Checklist	
8.12	DLR-IMS-WoRM-CHK-00002	P-Way Checklist	
8.13	DLR-IMS-WoRM-CHK-00003	Radio Systems Checklist	
8.14	DLR-IMS-WoRM-CHK-00004	Rolling Stock Checklist	
8.15	DLR-IMS-WoRM-FRM-00001	Justification for Special Possession	
8.16	DLR-IMS-WoRM-FRM-00002	Frustrated Access Form	
8.17	DLR-IMS-WoRM-FRM-00004	TSR request	
8.18	DLR-IMS-WoRM-FRM-00005	TSR form	
8.19	DLR-IMS-WoRM-NTC-00001	Trolley Approval Notice	
8.20	DLR-IMS-WoRM-NTC-00002	Plant Approval Notice	
8.21	DLR-IMS-WoRM-REQ-00001	Closure Request Form	
8.22	DLR-IMS-WoRM-REQ-00002 Rev6	Work Request	6
8.23	DLR-IMS-WoRM-REV-00001 Rev3	Method Statement Review Sheet	3
8.24	65204-AEC-MEC-TD350-FRM-E-9002_Ver2	KADLR Work Request Form (example)	2
8.25	49200-DLR-MAC-TD350_Z-LS-K-0001	Risk Register Template (PDF & Excel)	
8.26	1 WK & 2 WK Look Ahead	1 WK & 2 WK Look ahead Template	1
8.27	49200-DLR-MAC-TD350_Z-SD-K-0002	Daily Look Ahead Template	
8.28	HSE_CA Rev0.1	HSE Competency Assessment Template	0.1
8.29	F-10721	Task Briefing Sheet Template	
8.30	500-01	Example Template Project Meeting Reporting Cycle	
8.31	PST Rev1.0	Example Procurement Schedule Template	
8.32	A10 London City Airport	London City Airport Crane Application Template	
8.33	NOT USED	NOT USED	
8.34	F5905	Non Conformance Report Template	
8.35	Design Change Notice	Design Change Notice Template	
8.36	Design Change Request	Design Change Request	
8.37	F0485 A3	Snag Log Template	A3

Appendix F (9.0) Not part of Site Information or Works Information, Support Information Only

Support information	Doc number	Doc name	Rev
9.1	65204-AEC-MAC-TD350-PLN-UT-9001 P02	Utilities Diversion Plan	P02
9.2	65204EW-DLR-MAC-TD350-LST-CL-0001 P01	Pre Construction Readiness Checklist	P01
9.3	65204-AEC-SIG-TD350-DR-RS-2025 C01	Signalling Mainline Control Table Interface to Beckton Depot	CO1
9.4	65204-AEC-FAE-TD350-REP-CE-9001 P02	Hoarding/Fencing Strategy	P02
9.5	65204-AEC-MAC-TD350-PLN-ZZ-9005 P02	Beckton Depot Upgrade Quality Plan	P02
9.6	65204-AEC-EST-TD350-REP-EN-9001 P02	GQRA Interpretive Report	P02
9.7	65204-AEC-SIG-TD350-REP-RS-9006 P01	FMECA Report	P01
9.8	65204NS-DLR-PRM-TD350-REQ-CL-00001 Rev01	Welfare Facilities Scope of Works	0.1

9.9	65204EW-DLR-MAC-TD350-REG-HS-0001 Issue 1.0	Asbestos Register Beckton Depot Feb 2019	1
9.10	4RS-VT-193012- R652701 Issue 7.5.19	Soil Sample Analysis Beckton Depot 07 05 2019	
9.11	4RS-VT-193034-R654551 Issue 3.6.19	4Rail - Analysis of Soil Samples (added 13/06/2019)	
9.12	4RS-RS-193034-R654552 Issue 3.6.19	Waste Acceptance Criteria Analysis of Soil Samples (added 13/06/2019)	
9.13	65204-AEC-EST-TD350-REP-GE-3001 P01-C01	Ground Investigation Factual Report	C01
9.14	49205-CH2-STR16-TD350_Z-RP-CS-0002 Rev C01	Ground Investigation Factual Report a	C01
9.15	49205-CH2-STR16-TD350_Z-RP-CS-0001 Rev C02	Ground Investigation Factual Report b	C02
9.16	49222-CH2-PRM21-TD350_Z-RP-G-0005	Beckton DLR Depot, Armada Way, London Investigation of Underground Services	
9.17	49200-DLR-MAC-TR000_Z-HS-K-0002	Environmental Report	
9.18	TQ 442 812 Ref190147	Whitcher Wildlife Ltd. Beckton, Docklands Light Rail Depot Ecology Survey.	
9.19	65204-AEC-SIG-TD350-REP-RS-9001 C01	Signalling Survey Report (Condition and Dilapidation)	C01
9.20	65204-AEC-ELC-TD350-REP-E-9002 P01	EMC Assessment Report	P01
9.21	65204-AEC-ELC-TD350-REP-E-3003 P01	EMC Technical File	P01
9.22	49222-CH2-PRM21-TD350_Z-RP-G-0002 1.0	Beckton Depot Topographic Survey	1
9.23	DRS2009_DOCLIB_26526 08.10.15	BED Contamination Report (March 1992)	
9.24	DRS 2009 ST-0809 30520	Site Investigation Report for Beckton DLR Control Centre July 2009	
9.25	C2015_C11808-SK0002	Galleons Reach Depot TRL Probe Locations 14.10.15 Rev0	
9.26	6182TA 8.09.15	Galleons Reach Explosive Ordinance Threat Assmt	
9.27	240291	Galleons Reach Generic Human Health Assessment GRA Final	
9.28	EFS/186182 Ver.1	Socotec - Sample Analysis Armada Way Test Report	1
9.29	NGPH Site Code: 0572 Rev1.1	Health & Safety File for Armada Way, Beckton	1.1
9.30	11095480 20.11.17	Hazard and Risk Inspection BECKTON - Armada Way	
9.31	12111332_Rem_Validation Rev2	Environmental Verification Report Armada Way	2
9.32	660572 (M1121197) 27/03/2018	Portfolio-Specific Hazard Register 2017 National Grid sites - Beckton, Armada Way	
9.33	BED Contaminated Land_DRS2009_DOCLIB_26526 - Plan 1	BED Gasworks Plan 1	
9.34	BED Contaminated Land_DRS2009_DOCLIB_26526 - Plan 2	BED Gasworks Plan 2	
9.35	ps33d_health and safety file, June 2008	DLR North (Area B) Remediation Project H&S File	
9.36	CS028262/FIG8.1 v1	London Borough of Newham Strategic Flood Risk Assessment	1
9.37	Newham LFRMS Draft v5 final	Local Flood Risk Management Strategy for the LB of Newham	5
9.38	65204MF-ARC-MAC-TD350_00-RPT-ZZ-0004	Wheel Lathe Facility Feasibility and Impact Assessment Report	
9.39	65204MF-ARC-MAC-TD350_00-PLN-RS-0009	Migration Plan	C01
9.40	65204MF-ARC-MAC-TD350_00-REG-RS-0003	Migration risk assessment	C01
9.41	65204MF-ARC-MAC-TD350_00-RPT-RS-0006	Migration operations concept	C01

Appendix G (10.0) Tender Addendum 8.0 OTC, Test Track, Road BA

10.1	65204DD-DLR-TRK-TD350_00-REQ-RE-0001	OTC, Test Track, Road BA - Overview of scope of work	1
Eastern Stretch of Northern	Doc number	Doc name	Revision
10.2.1	65204-AEC-TRK-TD350_0-DR-RE-3101	Northern Sidings Proposed Lonitudinal Sections Sheet 1 of 7	C01
10.2.2	65204-AEC-BAS-TD350_1-DR-CE-3602	Northern Sidings Ground Level Walkways Layout Sheet 3 of 5	C02
10.2.3	65204-AEC-BAS-TD350_1-DR-CE-3606	Northern Sidings Temporary Walkway	C01
10.2.4	65204-AEC-BAS-TD350-REP-CE-3001	Northern Sidings - Submission A - Civils Design Report	C04
10.2.5	65204-AEC-BAS-TD350-REP-CE-3003	Northern Sidings - Submission B - Civils Design Report	C04
10.2.6	65204-AEC-BAS-TD350-REP-CE-3004	Northern Sidings - Submission C - Civils Design Report	C05
10.2.7	65204-AEC-BAS-TD350-REP-CE-3005	Northern Sidings - Submission D - Civils Design Report	C03
10.2.8	65204-AEC-BAS-TD350_1-DR-CE-3280	BECKTON DEPOT UPGRADE NORTHERN SIDINGS CABLE CONTAINMENT	C04
10.2.9	65204-AEC-BAS-TD350_1-DR-CE-3286	BECKTON DEPOT UPGRADE NORTHERN SIDINGS CABLE CONTAINMENT LAYOUT SHEET 6 OF 8	C03

10.2.10	65204-AEC-BAS-TD350_1-DR-CE-3287	BECKTON DEPOT UPGRADE NORTHERN SIDINGS CABLE CONTAINMENT LAYOUT SHEET 7 OF 8	C02
10.2.11	65204-AEC-BAS-TD350_1-DR-CE-3288	BECKTON DEPOT UPGRADE NORTHERN SIDINGS CABLE CONTAINMENT LAYOUT SHEET 8 OF 8	C03
10.2.12	65204-AEC-BAS-TD350_1-DR-CE-3603	Northern Sidings Ground Level Walkways Layout Sheet 4 of 5	C02
10.2.13	65204-AEC-BAS-TD350_1-DR-CE-3610	Northern Sidings Raised Walkways Layout	C03
10.2.14	65204-AEC-DRG-TF350_Z-DR-D-3016	Northern Sidings Proposed Surface Water Layout Sheet 3 of 5	C01
10.2.15	65204-AEC-TRK-TD350-REP-RE-3001	Northern Sidings Permanent Way Detailed Design Report	C01
10.2.16	65204-AEC-TRK-TD350_0-DR-RE-3003	Northern Sidings Proposed Track Layout Sheet 3 of 6	C01
10.2.17	65204-AEC-BAS-TD350-REP-CE-3006	MFB: Test Track Slab Track Detailed Design	P02
10.2.18	65204-AEC-TRK-TD350_0-DR-RE-3109	Northern Sidings Cross Sections	C01
10.2.19	65204-AEC-TRK-TD350_0-DR-RE-3014	Northern Sidings Proposed Geo-tech Arrangement and Limits	C01
10.2.20	65204-AEC-BAS-TD350_Z-DR-CE-3660	Northern Sidings Test Track Slab Layout	P05
10.2.21	65204-AEC-ELE-TD350_Z-DR-E-3105	Northern Sidings Lighting & Small Power Sheet 6 of 8	C01
10.2.22	65204-AEC-MEC-TD350_Z-DR-M-3006	Northern Sidings Mechanical Layout Sheet 6 of 8	C02
10.2.23	65204-AEC-ELE-TD350_1-DR-E-3002	Northern Sidings Proposed Conductor Rail Plan	C01
10.2.24	65204-AEC-ELE-TD350_1-DR-E-3003	Northern Sidings Proposed Conductor Rail Plan	C01
10.2.25	65204-AEC-ELE-TD350_1-DR-E-3026	Northern Sidings ETE DC Section Traction Power Supply Diagram	C01
10.2.26	65204-AEC-ELE-TD350_1-DR-E-3020	Northern Sidings ETE Cable Management System Sheet 2 of 2	C01
10.2.27	65204-AEC-SIG-TD350-REP-RS-3001	Northern Sidings - Signalling Detailed Design Report	C02
10.2.28	65204-AEC-SIG-TD350-REP-RS-3010	Northern Sidings - Vital Lock of Test Track Interface Report	C01
10.2.29	65204-AEC-ELE-TD350_Z-DR-E-3040	Northern Sidings Train Wash Pump Room Electrical Services	C01
10.2.30	65204-AEC-COM-TD350_Z-DR-RS-3100	Northern Sidings Telecommunications CCTV Coverage Sheet 2 of 2	C02
10.2.31	65204-AEC-COM-TD350_Z-DR-RS-3001	Northern Sidings Telecommunications General Arrangement Sheet 2 of 2	C02
Over Track Crossing	Doc number	Doc name	Revision
10.3.1	65204MF-ARC-TRK-TD350_00-RPT-RE-0003	Operational Track Crossing - Option Selection Report	P02
10.3.2	65204MF-ARC-MAC-TD350_00-RPT-ZZ-0006	Concept Design Statement - Operational Track Crossing	P01
10.3.3	65204MF-ARC-MAC-TD350_00-RPT-IN-0008	Beckton Depot OTC Detail Design - Interface Control Agreement	P01
Road BA Plain Line and Road W De-commissioning	Doc number	Doc name	Revision
10.4.1	65204-AEC-TRK-TD350_0-DR-RE-3101 Sheet 1 of 7	Northern Sidings Proposed Longitudinal Sections Sheet 1 of 7	C01
10.4.2	65204-AEC-BAS-TD350_1-DR-CE-3602	Northern Sidings Ground Level Walkways Layout Sheet 3 of 5	C02
10.4.3	65204-AEC-TRK-TD350_0-DR-RE-3003	Northern Sidings - Submission B - Civils Design Report	C04
10.4.4	65204-AEC-BAS-TD350_1-DR-CE-3606	Northern Sidings Temporary Walkway	C01
10.4.5	65204-AEC-BAS-TD350-REP-CE-3001	Northern Sidings - Submission A - Civils Design Report	C04
10.4.6	65204-AEC-BAS-TD350-REP-CE-3003	Northern Sidings - Submission B - Civils Design Report	C04
10.4.7	65204-AEC-BAS-TD350-REP-CE-3004	Northern Sidings - Submission C - Civils Design Report	C05
10.4.8	65204-AEC-BAS-TD350-REP-CE-3005	Northern Sidings - Submission D - Civils Design Report	C03
10.4.9	65204-AEC-BAS-TD350-REP-CE-3006	MFB: Test Track Slab Track Detailed Design	P02
10.4.10	65204-AEC-BAS-TD350_1-DR-CE-3280	BECKTON DEPOT UPGRADE NORTHERN SIDINGS CABLE CONTAINMENT	C04
10.4.11	65204-AEC-BAS-TD350_1-DR-CE-3286	BECKTON DEPOT UPGRADE NORTHERN SIDINGS CABLE CONTAINMENT LAYOUT SHEET 6 OF 8	C03
10.4.12	65204-AEC-BAS-TD350_1-DR-CE-3287	BECKTON DEPOT UPGRADE NORTHERN SIDINGS CABLE CONTAINMENT LAYOUT SHEET 7 OF 8	C02
10.4.13	65204-AEC-BAS-TD350_1-DR-CE-3288	BECKTON DEPOT UPGRADE NORTHERN SIDINGS CABLE CONTAINMENT LAYOUT SHEET 8 OF 8	C03
10.4.14	65204-AEC-TRK-TD350-REP-RE-3001	Northern Sidings Permanent Way Detailed Design Report	C01
10.4.15	65204-AEC-TRK-TD350_0-DR-RE-3013	Northern Sidings Proposed Staging Arrangement C6P	C01
10.4.16	65204-AEC-ELE-TD350_1-DR-E-3002	Northern Sidings Proposed Conductor Rail Plan	C01
10.4.17	65204-AEC-ELE-TD350_1-DR-E-3003	Northern Sidings Proposed Conductor Rail Plan	C01
10.4.18	65204-AEC-ELE-TD350_1-DR-E-3026	Northern Sidings ETE DC Section Traction Power Supply Diagram	C01
10.4.19	65204-AEC-ELE-TD350_1-DR-E-3020	Northern Sidings ETE Cable Management System Sheet 2 of 2	C01
10.4.20	65204-AEC-ELC-TD350-REP-E-3008	Northern Sidings - ETE Stageworks Report	C02
10.4.21	n/a	Migration Sketches (DRAFT)	v23
10.4.22	n/a	Stage C6P - Breakdown of Signalling activities	v02
10.4.23	65204-AEC-ELC-TD350-REP-E-3001	Northern Sidings Traction Power Detailed Design Report	C02