

This document is executed as a deed and is delivered and takes effect  
at the date written at the beginning of it



<b>Framework:</b>	<b>Client Support Framework</b>
<b>Supplier:</b>	[REDACTED]
<b>Company Number:</b>	[REDACTED]
<b>Geographical Area:</b>	<b>National</b>
<b>Project Name:</b>	<b>River Thames Scheme Technical Services</b>
<b>Project Number:</b>	<b>ENVIMSE500260</b>
<b>Contract Type:</b>	<b>Professional Service Contract</b>
<b>Option:</b>	<b>Option C</b>
<b>Contract Number:</b>	<b>project_36321</b>
<b>Stage:</b>	<b>Design</b>

Revision	Status	Originator	Reviewer	Date

**PROFESSIONAL SERVICE CONTRACT - Under the Client Support Framework  
CONTRACT DATA**

**Project Name** River Thames Scheme Technical Services

**Project Number** ENVIMSE500260

This contract is made on 13 January 2023  
between the *Client* and the *Consultant*

- This contract is made pursuant to the Framework Agreement (the "Agreement") dated 02nd day of July 2019 between the *Client* and the *Consultant* in relation to the Client Support Framework. The entire Agreement and the following schedules are incorporated into this contract by reference
- Schedules 1 through to 14 inclusive of the Framework schedules are relied upon within this contract.
- The following documents are incorporated into this contract by reference  
RTS\_Tech\_Services\_Scope v1.2 dated 24 November 2022

**Part One - Data provided by the Client  
Statements given in  
all Contracts**

**1 General** The *conditions of contract* are the core clauses and the clauses for the following main Option, the Option for resolving and avoiding disputes and secondary Options of the NEC4 Professional Service Contract June 2017.

Main Option  Option for resolving and avoiding disputes

Secondary Options

- X1: Price adjustment for inflation
- X2: Changes in the law
- X5: Sectional Completion
- X7: Delay damages
- X8: Undertakings to Others
- X9: Transfer of rights
- X10: Information modelling
- X11: Termination by the *Client*
- X12: Multi Party Collaboration
- X18: Limitation of liability
- Y(UK)1: Project Bank Account
- Y(UK)2: The Housing Grants, Construction and Regeneration Act 1996
- Y(UK)3: The Contracts (Rights of Third Parties) Act 1999
- Z: *Additional conditions of contract*

The *service* is Provision of technical services required to support the River Thames Scheme to Full Business Case approval.

The *Client* is Environment Agency

Address for communications

Address for electronic communications

The *Service Manager* is

Address for communications

Address for electronic communications

The Scope is in  
RTS\_Tech\_Services\_Scope v1.2 dated 24 November 2022

The *language of the contract* is English

The *law of the contract* is  
the law of England and Wales, subject to the jurisdiction of the courts of England and Wales

The *period for reply* is 2 weeks

The *period for retention* is 12 years following Completion or earlier termination

The following matters will be included in the Early Warning Register

Early warning meetings are to be held at intervals no longer than 2 weeks

## 2 The Consultant's main responsibilities

The *key dates* and *conditions* to be met are  
*condition* to be met  
'none set' 'none set' *key date*  
'none set' 'none set'  
'none set' 'none set'

The *Consultant* prepares forecasts of the total Defined Cost plus Fee and *expenses* at intervals no longer than 4 weeks

## 3 Time

The *starting date* is 09 January 2023

The *Client* provides access to the following persons, places and things  
access  
EA/SCC client team, existing data 09 January 2023 *access date*

The *Consultant* submits revised programmes at intervals no longer than 4 weeks

The *completion date* for the whole of the *service* is 10 December 2026

The period after the Contract Date within which the *Consultant* is to submit a first programme for acceptance is 4 weeks

## 4 Quality management

The period after the Contract Date within which the *Consultant* is to submit a quality policy statement and quality plan is 4 weeks

The period between Completion of the whole of the *service* and the *defects date* is 52 weeks

## 5 Payment

The *currency of the contract* is the £ sterling

The *assessment interval* is Monthly

The *expenses* stated by the *Client* are as stated in Schedule 6.

The *interest rate* is 2.00% per annum (not less than 2) above the  
Base rate of the Bank of England

The locations for which the *Consultant* provides a charge for the cost of support people and office overhead are All UK Offices

The *Consultant's share percentages* and the *share ranges* are  
*share range* *Consultant's share percentage*  
less than 85% 0 %  
from 85% to 115% 50 %  
greater than 115% 100 %

The *exchange rates* are those published in  
on

## 6 Compensation events

These are additional compensation events

1. 'not used'
2. 'not used'
3. 'not used'
4. 'not used'
5. 'not used'

## 8 Liabilities and insurance

These are additional *Client's* liabilities

1. 'not used'
2. 'not used'
3. 'not used'

The minimum amount of cover and the periods for which the *Consultant* maintains insurance are

EVENT	MINIMUM AMOUNT OF	PERIOD FOLLOWING COMPLETION OF THE WHOLE OF THE <i>SERVICE</i> OR TERMINATION
The <i>Consultant's</i> failure to use the skill and care normally used by professionals providing services similar to the <i>service</i>	£5 million in respect of each claim, without limit to the number of claims	12 years
Loss of or damage to property and liability for bodily injury to or death of a person (not an employee of the <i>Consultant</i> ) arising from or in connection with the <i>Consultant</i> Providing the Service	Which ever is the greater of £5m or the amount required by law in respect of each claim, without limit to the number of claims	12 months
Death of or bodily injury to employees of the <i>Consultant</i> arising out of and in the course of their employment in connection with the contract	Which ever is the greater of £5m or the amount required by law in respect of each claim, without limit to the number of claims	For the period required by law
The <i>Consultant's</i> total liability to the <i>Client</i> for all matters arising under or in connection with the contract, other than the excluded matters is limited to		£5 million

## Resolving and avoiding disputes

The <i>tribunal</i> is		litigation in the courts
The <i>Adjudicator</i> is		'to be confirmed'
Address for communications		'to be confirmed'
Address for electronic communications		<a href="#">'to be confirmed'</a>
The <i>Adjudicator nominating body</i> is		The Institution of Civil Engineers

## Z Clauses

### Z1 Disputes

Delete existing clause W2.1

### Z2 Prevention

The text of clause 18 Prevention is deleted.

Delete the text of clause 60.1(12) and replace with:

The *service* is affected by any of the following events

- War, civil war, rebellion, revolution, insurrection, military or usurped power;
- Strikes, riots and civil commotion not confined to the employees of the *Consultant* and sub consultants,
- Ionising radiation or radioactive contamination from nuclear fuel or nuclear waste resulting from the combustion of nuclear fuel,
- Radioactive, toxic, explosive or other hazardous properties of an explosive nuclear device,
- Natural disaster,
- Fire and explosion,
- Impact by aircraft or other aerial device or thing dropped from them.

### Z3 Disallowed Costs

In second bullet of 11.2 (18) add:

(including compensation events with the Subcontractor, i.e. payment for work that should not have been undertaken).

Add the following additional bullets after 'and the cost of ' :

- Mistakes or delays caused by the *Consultant's* failure to follow standards in Scopes/quality plans.
- Reorganisation of the *Consultant's* project team.
- Additional costs or delays incurred due to *Consultant's* failure to comply with published and known guidance or document formats.
- Exceeding the Scope without prior instruction that leads to abortive cost
- Re-working of documents due to inadequate QA prior to submission, i.e. grammatical, factual arithmetical or design errors.
- Production or preparation of self-promotional material.
- Excessive charges for project management time on a commission for secondments or full time appointments (greater than 5% of commission value)
- Any hours exceeding 8 per day unless with prior written agreement of the *Service Manager*
- Any hours for travel beyond the location of the nearest consultant office to the project unless previously agreed with the *Service Manager*
- Attendance of additional individuals to meetings/ workshops etc who have not been previously invited by the *Service Manager*
- Costs associated with the attendance at additional meetings after programmed Completion, if delay is due to *Consultant* performance.
- Costs associated with rectifications that are due to *Consultant* error or omission.
- Costs associated with the identification of opportunities to improve our processes and procedures for project delivery through the *Consultant's* involvement
- Was incurred due to a breach of safety requirements, or due additional work to comply with safety requirements
- Was incurred as a result of the *Client* issuing a Yellow or Red Card to prepare a Performance Improvement Plan
- Was incurred as a resulting of rectifying a non-compliance with the Framework Agreement and/or any call off contracts following an audit

### Z4 Share on termination

Delete existing clause 93.3 and 93.4 and replace with:

93.3 In the event of termination in respect of a contract relating to services there is no *Consultant's* share.

When appointing *Consultants* on a secondment basis only:

Add clause 19

19.1 The *Client* will from starting date to Completion Date indemnify the *Consultant* against any and all liabilities, proceedings, costs, losses, claims and demands whatsoever arising directly or indirectly out of the activities of the *Consultant* in providing the services save where such claims, in the reasonable opinion of the *Client*, arise from or are contributed to by:

19.1.1 Misrepresentation or negligence by or on behalf of the *Consultant* ;

or

19.1.2 The *Consultant* has acted contrary to the *Service Manager's* reasonable instructions or wholly outside the scope of the *Consultant's* duties as defined by the *Service Manager* .

## **Z6 The Schedule of Cost Components**

The Schedule of Cost Components are as detailed in the Framework Schedule 6.

## **Z7 Linked contracts**

Issues requiring redesign or rework on this contract due to a fault or error of the *Consultant* under this contract or a previous contract will neither be an allowable cost under this contract or any subsequent contract, nor will it be a Compensation event under this contract or any subsequent contract under this project or programme.

## **Z8 Requirement for Invoice**

Insert the following sentence at the end of clause 51.1:

The Party to which payment is due submits an invoice to the other Party for the amount to be paid within one week of the *Service Manager's* certificate.

Delete existing clause 51.2 and insert the following:

51.2 Each certified payment is made by the later of

- one week after the paying Party receives an invoice from the other Party and
- three weeks after the assessment date, or, if a different period is stated in the Contract Data, within the period stated.

If a certified payment is late, or if a payment is late because the *Service Manager* has not issued a certificate which should be issued, interest is paid on the late payment. Interest is assessed from the 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

## **Z9 Conflict of Interest**

The *Consultant* immediately notifies the *Client* of any circumstances giving rise to or potentially giving rise to conflicts of interest relating to the *Consultant* (including without limitation its reputation and standing) and/or the *Client* of which it is aware or which it anticipates may justify the *Client* taking action to protect its interests. Should the Parties be unable to remove the conflict of interest to the satisfaction of the *Client*, the *Client*, in its sole discretion, may terminate this Contract.

## **Z10 Change in Control**

The *Consultant* shall notify the *Client* as soon as reasonably practicable, in writing, of any agreement, proposal or negotiations which will or may result in a *Consultant* Change in Control and shall give further notice to the *Client* when any Change in Control has occurred. The *Client* may terminate this contract with immediate effect by notice in writing and without compensation to the *Consultant* within six (6) months of being notified that a Change of Control has occurred, or, where no notification has been made, the date that the *Client* becomes aware of the Change of Control, but shall not be permitted to terminate where the *Client's* prior written acceptance was granted prior to the Change in Control. A Change of Control is defined as per the Deed of Agreement, Z14.4.

## **Z12 Waiver**

No waiver shall be effective unless it is expressly stated to be a waiver and communicated to the other Party by the *Service Manager* in writing in accordance with the Contract, and with express reference to Clause Z12. The failure of either party to insist upon strict performance of the Contract, or any failure or delay in exercising any right or remedy shall not constitute a waiver or diminution of the obligations established by the Contract.

## **Z13 Performance Management**

Amend Schedule 5 of the Client Support Framework as follows:

1. Add the following "Preamble" to Section 3:

- Any reference to the "Client Support Framework (CSF)" is to be taken as a reference to the "River Thames Scheme".
- Any reference to "Key Performance Indicators" (KPIs) is to be taken as a reference to the KPIs referred to in clause X12.

2. Delete existing Section 3.2 and add new section as below:

"The KPIs are implemented by the Partners from the starting date or effective date as the case may be".

3. Delete sections 3.3, 3.4, 3.5, 3.6, 3.7, 3.9 and 3.10.

## **Z14 Eligibility to Tender for RTS Engineering & Construction Contract**

The *Consultant* undertakes that they will not be eligible to tender for the River Thames Scheme Engineering and Construction Contract either in their own right, as part of a joint venture or consortium, or as a sub-contractor to a party bidding for the works.

The *Consultant* will procure the same undertakings from any of their Subconsultants that are involved in developing the scope for the River Thames Scheme Engineering and Construction Contract where either:

- (a) Their work could introduce Scope items which are not able to be delivered by the market in the relevant discipline generally, or
- (b) They would gain advantageous knowledge which would not be shared with the market during the pre-tender and tender process

The *Consultant's* constituent or parent companies will not be eligible to tender for the River Thames Scheme Engineering and Construction Contract where those companies are involved in developing the scope for the River Thames Scheme Engineering and Construction Contract.

## **Z15 Application of Rate Adjustment**

Replace clause 10.8 of Appendix 6.2 of Schedule 6 of the Client Support Framework Deed of Agreement with:

In the event that a contract extends across a rate review, rates are updated when the revised rates are accepted; and the Prices remain unchanged, revised rates apply from the date of acceptance.

## **Z16 Add Defined Terms to X1.1**

(d) The Previous Annual Index (P) is the index twelve months prior to the Latest Index.

(e) The Latest Index (L) shall not be greater than (B) multiplied by 1.1 or (P) multiplied by 1.1, whichever is the most recent.

## Secondary Options

### OPTION X1: Price adjustment for inflation

The proportions used to calculate the Price Adjustment Factor are

0.9	linked to the index for people
0.1	non-adjustable
1.00	

The *base date* for indices is

The Contract Date

These indices are

Average Weekly Earnings K54X as provided by the Office for National Statistics

### OPTION X2: Changes in the law

The *law of the project* is the law of England and Wales, subject to the jurisdiction of the courts of England and Wales

### OPTION X5: Sectional Completion

The *completion date* for each *section* of the *service* is

<i>section</i>	<i>description</i>	<i>completion date</i>
1	Completion of the Design & Construction works ECC Scope as defined at section 8.4 of the Scope.	09 November 2023
2	Completion of all technical information required to support statutory consultation as defined at section 8.4 of the Scope.	25 August 2023
3	Completion of all technical information required to support Full Business Case submission as defined at section 8.4 of the Scope.	11 June 2026

### X7 plus X5

Delay damages for each *section* of the *service* are

<i>section</i>	<i>description</i>
1	Completion of the Design & Construction works ECC Scope as defined at section 8.4 of the Scope.
2	Completion of all technical information required to support statutory consultation as defined at section 8.4 of the Scope.
3	Completion of all technical information required to support Full Business Case submission as defined at section 8.4 of the Scope.

The delay damages for the remainder of the *service* are

The delay damages are capped in total with the delay damages for each section and the delay damages for the remainder of the service to be no greater than 2.5% of the Total of the Prices.

### OPTION X8: Undertakings to Others

The *undertakings to Others* are provided to

### OPTION X9: Transfer of rights

### OPTION X10: Information modelling

The period after the Contract Date within which the *Consultant* is to submit a first Information Execution Plan for acceptance is

2 weeks

### OPTION X11: Termination by the Client

### OPTION X12: Multi Party Collaboration

The *Promoter* is:

Environment Agency

The Schedule of Partners is in:

RTS\_Schedule\_of\_Partners v2.0 dated 31 March 2022

The *Promoter's* objective is:

as provided in RTS\_Promoter's\_Objectives

The Partnering Information is in:

RTS\_Partnering\_Information v3.0 dated 20 June 2022

The minimum amount of insurance cover for claims made against the *Consultant* arising out of its failure to use skill and care normally used by professional providing information similar to the Project Information is, in respect of each claim

### OPTION X18: Limitation of liability

The *Consultant's* liability to the *Client* for indirect or consequential loss is limited to

£5,000,000

The *Consultant's* liability to the *Client* for Defects that are not found until after the *defects date* is limited to

£5,000,000

The *end of liability date* is  
Completion of the whole of the *service*

12 years

after the

### Y(UK)1:Project Bank Account

The *Consultant* is to pay any bank charges made and to be paid any interest paid by the *project bank*

**Y(UK2): The Housing Grants, Construction and Regeneration Act 1996**

The period for payment is 14 Days after the date on which payment becomes due

**Y(UK3): The Contracts (Rights of Third Parties Act) 1999**

term	<i>beneficiary</i>
None	None

**Part Two - Data provided by the Consultant**

Completion of the data in full, according to the Options chosen, is essential to create a complete contract.

**1 General**

**The Consultant is**

Name and company number

Address for communications



Address for electronic communications



The fee percentage is

Option C



The key persons are

Name (1)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (2)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (3)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (4)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (5)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (6)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (7)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (8)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

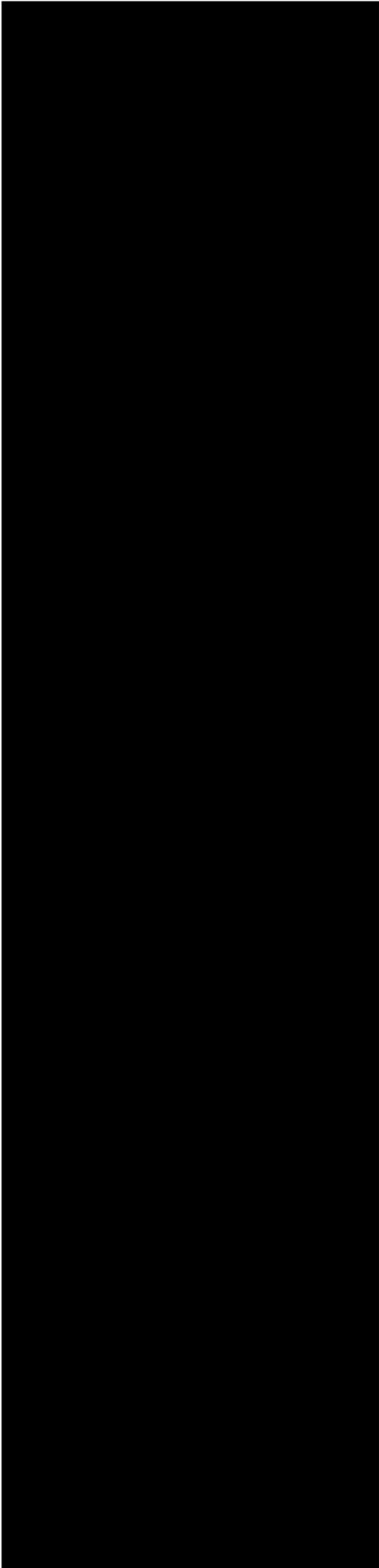
Name (9)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (10)  
Job  
Responsibilities  
Qualifications  
Experience

The key persons are

Name (11)  
Job  
Responsibilities  
Qualifications  
Experience



The *key persons* are

Name (12)	Paul Booth
Job	MEICA Lead
Responsibilities	Technical lead for all MEICA services
Qualifications	BSc CEng CEnv MCIWEM FSOE FIPE
Experience	25 years

The *key persons* are

Name (13)	Gordon Moffatt
Job	BIM Lead
Responsibilities	Technical lead for all BIM services
Qualifications	HND BRE-BIM Member
Experience	22 years

The *key persons* are

Name (14)	Jo Dancy
Job	Stakeholder Engagement Lead
Responsibilities	Technical lead for all stakeholder engagement services
Qualifications	BA(hons) MCI
Experience	22 years

The following matters will be included in the Early Warning Register

### 3 Time

The programme identified in the Contract Data is

### 5 Payment

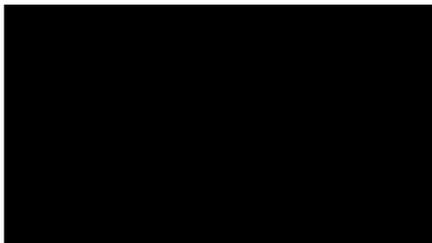
The *activity schedule* is  
in Capita\_Binnies\_RTS\_Tech\_Services\_Activity\_Schedule\_v2.0\_Fees removed\_X1 10% Cap.xls

The tendered total of the Prices is

██████████

### Resolving and avoiding disputes

The *Senior Representatives* of the *Consultant* are



Name (2)  
Address for communications

Address for electronic communications

### X10: Information Modelling

The *information execution plan* identified in the Contract Data is

### Y(UK)1: Project Bank Account

The *project bank* is

*named suppliers* are

# Contract Execution

## Client execution

Signed as a Deed by [PRINT NAME]

for and on behalf of the Environment Agency

[Redacted Signature] \_\_\_\_\_  
[Redacted Date] \_\_\_\_\_  
[Redacted Role] \_\_\_\_\_

Signature

Date

Role

In the presence of:

[Redacted Signature] \_\_\_\_\_  
[Redacted Date] \_\_\_\_\_

Signature

11/01/2023

Date

[Redacted Role] \_\_\_\_\_

Role

[Redacted Name] \_\_\_\_\_

Name [Print]

Address  
[Redacted Address] \_\_\_\_\_

[Redacted Address] \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## Consultant execution

Signed as a Deed by [PRINT NAME]

for and on behalf of

[Redacted Name]

[Redacted Signature] \_\_\_\_\_  
[Redacted Date] \_\_\_\_\_  
[Redacted Role] \_\_\_\_\_

Signature

Date

Role

In the presence of:

[Redacted Signature] \_\_\_\_\_  
[Redacted Date] \_\_\_\_\_  
[Redacted Role] \_\_\_\_\_

Signature

Date

Role

[Redacted Name] \_\_\_\_\_

Name [Print]

Address  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_





# NEC4 professional service contract (PSC)

## Scope

### Project/contract information

<b>Project name</b>	The River Thames Scheme
<b>Project SOP reference</b>	ENVIMSE500260
<b>Contract Name</b>	CSF - Technical Services – FBC Development Phase
<b>Contract reference</b>	project_36321
<b>Date</b>	24 <sup>th</sup> November 2022
<b>Version number</b>	1.2
<b>Author</b>	[REDACTED]

### Revision history

Revision date	Summary of changes	Version No.
30 <sup>th</sup> June 2022	Issue for Tender	1.0
14 <sup>th</sup> July 2022	Updated with amendment to 1.4.3, 2.10, 4.1 and 8.2	1.1
24 <sup>th</sup> November 2022	Scope amended in line with tender clarifications.	1.2

This Scope should be read in conjunction with the version of the Minimum Technical Requirements (MTR) current at the Contract Date. In the event of conflict, this Scope shall prevail. The provision of the *service* is to be compliant with the version of the MTR.

Document Number	Document Title (MTR)	Version No.	Issue date
412_13_SD01	Minimum Technical Requirements	Current	V12 December 2021



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## Acronyms and Glossary of Terms

Acronyms / Phrase	Description
BIM	Building Information Model
CERT	Combined Efficiency Reporting Tool
DCO	Development Consent Order
Defra	Department for Environment Food & Rural Affairs
DfR	Design for Reliability
ECC	Engineering and Construction Contract
ECI	Early Contractor Involvement
EIA	Environmental Impact Assessment
ESE	Early Supplier Engagement
EWC	European Waste Catalogue
FBC	Full Business Case
GHG	Greenhouse Gas
GIS	Geographic Information System
HCA	Habitat Creation Areas
HRA	Habitats Regulations Assessment
IDP	Information Delivery Plan
INNS	Invasive non-native species
LCWIPs	Local Cycling Walking Infrastructure Plans
LVIA	Landscape and Visual Impact Assessment
MEICA	Mechanical, Electrical, Instrumentation, Control and Automation
MIDP	Master Information Delivery Plan
MMS	Materials Management Strategy
NPS	Nonpoint Source
OBC	Outline Business Case
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
QUESTOR	Quality Evaluation and Simulation Tool for River Systems
RACI	Responsible, Accountable, Consulted, and Informed
RAG	Red, Amber Green
RTS	River Thames Scheme
SCC	Surrey County Council
SHE	Safety, Health and Environment
SHEWCoP	Safety, Health, Environment and Wellbeing Code of Practice
SoCG	Statement of Common Ground
WFD	Water Framework Directive

Note: Nothing in this Scope shall cause the *Consultant's* obligation to exceed that stated in Clause 20.2 of the contract.

## **1. Purpose of the service**

### **1.1. Scheme background**

The lower River Thames floodplain between Datchet in Berkshire and Teddington in west London is the most populated undefended floodplain in the United Kingdom. Over 15,000 properties are at risk in a 1% annual exceedance probability flood. Between Datchet and Shepperton the floodplain widens to over 2km in some places and here the settlements of Datchet, Wraysbury, Staines, Egham Hythe, Chertsey, Laleham and Shepperton are all at risk of flooding. Downstream, through Kingston and Richmond, the floodplain narrows and here riverside and island properties are at risk.

As seen in 2014 and 2003, hundreds of riverside properties and those in the lowest lying areas are vulnerable to frequent flooding.

In response to this risk the Environment Agency published the Lower Thames Strategy in 2010 and proposed the River Thames Scheme (RTS) in partnership with several organisations including Surrey County Council, the relevant borough and district councils, Thames Water and the Thames Regional Flood and Coastal Committee.

Work began on the RTS Capacity Improvements and Flood Channel in 2014 with the project going through a phase of appraisal and outline design development, including EIA scoping and formal pre-application advice received from Local Planning Authorities, and the OBC submission. Following support from Defra the OBC was approved by Her Majesty's Treasury in summer 2021.

The approval authorised an investment of £61m to undertake the next phase of the Scheme up to the point of a FBC application for a total investment of £500m.

The preferred option in the OBC would provide multiple benefits for local communities including better protection from flooding to communities, infrastructure and the environment along the River Thames in Surrey and deliver a range of environmental and socio-economic benefits, enhancing existing and creating new habitats for ecology and improving access to open space.

The preferred option is based upon the original recommendations of the Lower Thames Strategy published in 2010, through the construction of an 8km flood alleviation channel in two sections from Egham Hythe in Staines to the Desborough Cut, together with capacity improvements to several existing Thames weirs and new public areas providing a range of associated wider benefits.

### **1.2. The approach**

The RTS is being delivered through an equal partnership between the Environment Agency and Surrey County Council with funding also provided by Others. The Environment Agency and Surrey County Council partnership will be formalised through a collaboration agreement. It has been agreed that:

- Both the Environment Agency and Surrey County Council will finance the Scheme and share in the risk of scheme delivery, with Surrey County Council contributing up to £237 million.

- Both the Environment Agency and Surrey County Council will be joint promoters of the DCO for the scheme,
- Both the Environment Agency and Surrey County Council will share the ownership of assets being derived from the Scheme as follows:
  - The Environment Agency owning and maintaining the flood risk assets,
  - Surrey County Council will own and maintain the public spaces created by the Scheme and
  - Where feasible some land may remain within the ownership of the existing landowners.
- In the delineation of responsibilities, the Environment Agency will be the main contracting authority for goods and services required for Scheme delivery and is consequently the *Client* within this Scope from section 2,
- Both the Environment Agency and Surrey County Council will jointly form a senior user panel, that will provide advice and support to the *Service Manager* when making decisions about the end use of the Scheme and
- Both the Environment Agency and Surrey County Council will jointly form a technical steering group that will provide advice and support to the *Service Manager* on potential environmental and regulatory constraints and challenges.

As RTS is being jointly delivered by the two organisations, the governance and delivery accountabilities are different from those of other capital projects, through the formation of a Strategic Delivery Board, representing both parties.

The structure and governance of the organisation is described in the 'The Organisational Design' and 'Assurance and Approvals Strategy'.

With an investment of £40m to date, a further £61m of funding approved via the OBC was to:

- Prepare and apply for a DCO, support the examination, and obtain a granting of the DCO from the Secretary of State,
- Prepare and undertake an open market procurement process to select and appoint a construction partner to undertake detailed design and construction,
- Provide all design development and technical analysis necessary to provide the information required for the DCO and other consents not included within the DCO, address the needs of associated consultees, and address the current design risks and uncertainties,
- Provide all the design information required to support the open market procurement process,
- Prepare and submit an FBC and obtain FBC approval from the Environment Agency Large Projects Review Group, the Department for Environment Food & Rural Affairs and Her Majesty's Treasury for the funding and authorisation to proceed to the next phase of construction delivery (this will include understanding the cost, programme, risks, and benefits of the Scheme and ensure adequate funding is in place),
- Seek out and obtain any additional third-party funding and,
- Identify and undertake any appropriate enabling works required ahead of FBC approval.

For this phase (OBC – FBC) there will be four main packages of work:

- Package 1 – Manage the production of the DCO and statutory consultation,
- Package 2 – Technical and design development including the EIA,

- Package 3 – Land strategy and land acquisition and
- Package 4 – Preparation for construction, including support for the open market procurement process, together with ESE, enabling works and the detailed design by the construction partner.

The Environment Agency either has or is in the process of, has procuring a variety of suppliers to deliver a range of services, and enable a collaborative working approach, which will be needed for such a complex and challenging project. The *Consultant* forms part of the package 2 delivery team. The main services delivered by Others are as follows:

- RTS Consenting Services provider (consultancy services to co-ordinate the consenting process; manage the development of the DCO; author the DCO and manage the DCO process from pre-application through to approval by the Secretary of State; co-ordinate the associated consultation and manage the stakeholder relationship process) – within package 1,
- Legal services,
- Land agent services – within package 3,
- Terrestrial non-native species surveying and treatment,
- ESE services – within package 4,
- EIA scoping (including submission to PINS and receipt of scoping opinion) and methodologies for technical assessment, Hydraulic modelling, environmental (ground water, water quality and sediment transport) modelling and other legacy services and
- Certain ecological surveys being undertaken by framework suppliers.

The RTS spans five planning authorities: London Borough of Richmond upon Thames, Elmbridge Borough Council, Spelthorne Borough Council, Runnymede Borough Council and Surrey County Council (as Waste Planning Authority and Minerals Planning Authority) and the Royal Borough of Kingston upon Thames (due to its being a close neighbour).

Following consultation with local authorities and project sponsors, the project sought a direction under Section 35 of the Planning Act 2008 from Defra. In winter 2020, the Secretary of State subsequently confirmed that the RTS should be considered a development of national significance for which development consent is required. The RTS will therefore pursue an application for the first DCO required for a flood alleviation scheme.

### 1.3. Scheme Status

The Capacity Improvements & Flood Channel component, including areas for habitat enhancement and new public open spaces, comprises the most significant of the measures outlined in section 1.1 and form most of this Scope. For clarity, in this Scope the acronym 'RTS' or reference to 'the Scheme' or 'the project' hereafter refers to this Scope definition.

Up to July 2020 the RTS included a flood channel in three sections but, following confirmation of the funding position, channel section 1 was removed. The RTS comprises the following as a minimum:

- The construction of a new flood channel in two sections: Egham Hythe to Chertsey (Runnymede) and Laleham to Shepperton (Spelthorne),
- The creation of at least two new public open spaces – the outline design included the Royal Hythe Country Park (Runnymede) and Manor Farm Country Park (Spelthorne) - and associated active travel routes
- The development of further habitat creation areas, locations to be confirmed and

- Flow capacity enhancements to the River Thames at Desborough Cut (Elmbridge), Sunbury weir (Elmbridge), Molesey weir (Elmbridge/Richmond) and Teddington weir (Richmond).

This solution is detailed in the existing outline design proposal, referenced in section 3, which has been derived from a lengthy options appraisal phase that included stakeholder consultation and forms the basis for the next phase of development of the Scheme.

The *Client*, through Others, has carried out further elements of design development since OBC approval, focussing on the landscape design, as well as EIA scoping, certain environmental surveys, computer modelling activities and early supplier engagement which are referenced in this Scope. The status of all work is contained within section 3 and the *Consultant* will be responsible for developing these outputs further as described in section 2 of this scope.

Since 2021, the project team has been working in a ‘transition phase’ to develop the processes and organisational structure necessary for this next phase which will take the project to approval of the FBC. This Scope is for *service* required in the OBC – FBC phase.

## 1.4. The objectives

### 1.4.1. Scheme Vision

The vision of the scheme is that *“The River Thames Scheme will reduce flood risk to people living and working near the Thames, enhance the resilience of nationally important infrastructure, contribute to a vibrant local economy and maximise the social and environmental value of the river.”*

For each element of the vision the project has set out its ambition through goals. The goals were created in 2014 and revised in 2021/22, with outcomes developed and agreed between the Environment Agency and Surrey County Council to capture what the *Client* organisations would like to achieve. The goals draw on the aspirations of the Environment Agency’s 25-year plan, Surrey County Council’s Community Vision and the United Nations Sustainable Development Goals and are reflected in the scheme description in the Section 35 direction.

The goals are divided into two categories covering ‘What our project will achieve’ and ‘How we’ll achieve it’:

The ‘What our project will achieve’ goals are:

- **Protecting our Communities:** We will create more climate resilient places and infrastructure for our communities by reducing the risk of flooding
- **Enhancing our Thames:** We will increase the natural capital of the River Thames and surrounding areas by creating new places for people and wildlife and improve access to nature for recreation
- **Securing our economy:** We will maximise the social value of the scheme to promote green and sustainable growth

The ‘How we’ll achieve it’ goals are:

- **People:** We value people and will champion an inclusive culture where everyone is recognised for the valuable role they play in support of this project; where we aim to always prioritise safety, wellbeing, and active partnering.

- **Sustainability:** We will create a Greener Future by tackling the causes of climate change and becoming carbon neutral
- **Value for Money and Innovation:** We will manage our money efficiently and transparently and will maximise opportunities to innovate to deliver valuable outcomes.

Under each of the project goals, several outcomes have been identified. These are either ‘core’ outcomes or ‘added value’ outcomes. Core outcomes are included within baseline costs or have otherwise been agreed by Senior Leadership Team. Added value outcomes are opportunities to explore through the design phase, which provide additional wider benefits to people, environment, and the local economy, but are not currently in scope to be funded. The outcomes are set out in the benefits register contained in section 3

#### 1.4.2. Development Consent Order

The Environment Agency and Surrey County Council, as joint applicants, propose to obtain a DCO to secure consent for the Scheme under the Planning Act 2008.

The services required to draft the DCO, engage with the PINS and support the Environment Agency and Surrey County Council in its interaction with the application process do not form part of this Scope. However, the content of the DCO application will draw on the technical services in this Scope and there will need to be collaboration and information sharing between the Environment Agency, the *Consultant* and Others involved in progressing the Environment Agency’s OBC – FBC phase objectives listed in this section. Where deliverables produced as part of the *service* are needed for the draft DCO, the references to the draft DCO structure and contents are as shown in the table below:

Vol.	Indicative contents
1	Application overview: includes cover letter to PINS, application form, navigation document
2	Plans and drawings includes location plan, illustrative masterplan layout, land plans, works plans, general arrangement and engineering drawings, sections, phasing plans
3	DCO and consents includes the DCO, explanatory memorandum, consents, and agreements position statement
4	Compulsory acquisition information includes statement of reasons, book of reference, funding statement
5	Reports/Statements (e.g., consultation report)
6	Environmental information: includes environmental statement, code of construction conduct, sustainability statement, flood risk assessment, habitats regulations assessment
7	Other documents: includes needs case, planning statement

**TABLE 1: DCO VOLUMES**

A more detailed indicative list of contents for each volume of the DCO is shown in Appendix A and the Scope required from the *Consultant* is described in section 2

#### 1.4.3. Objectives for the OBC – FBC (consenting) phase

The objectives of this scope are to support the joint client (Surrey CC and Environment Agency) in securing

- A DCO

- A fully funded Full Business Case approval
- Gateway 3 sign off – in line with the agreed governance and delivery structure.
- A plan for delivering future phases of the scheme, including procurement of a construction partner.
- A proposal to maximise the benefits created by the scheme in line with the benefits realisation plan.

The *Consultant* shall provide a team of suitably qualified and skilled individuals that will perform the following tasks.

- Familiarise with the current design proposals and approach.
- Develop a strategy for securing all of the consents required to deliver the scheme.
- Support in the preparation of a Development Consent Order (DCO) for submission by September 2024.
- Develop the 'technical' products required for the DCO as defined in appendix B, to the level of maturity required for examination.
- Support all other aspects of the preparation of the DCO.
- Obtain all technical evidence required to support the development of the DCO products, including site surveys, ecological surveys, hydraulic and environmental modelling.
- Lead on engagement with statutory consultees including, Natural England, National Highways, Thames Water etc.
- Support negotiations with landowners, through provision of material and by responding to outputs of landowner discussions by considering how these need to be reflected in the design.
- Identify elements of the design likely to cause concern to statutory consultees.
- Identify opportunities to maximise the scheme benefits and identify how the scheme benefits could be achieved as part of the design to be included in the DCO and any associated development.
- Obtain Statements of Common Ground from all statutory consultees.
- Adapt the design proposals to respond to the outputs of the non-statutory consultation event.
- Support the design and execution of Statutory Consultation by July 2023. Leading on the preparation of materials and engagement with Statutory Consultees and using the outputs of this to develop the final DCO submission and prepare for examination.
- Support the DCO examination process through to decision. Lead on summarising and capturing the outputs of the DCO and handing these over to the construction partner.
- Support wider consultation and engagement activities.
- Prepare the technical elements of an ITT and ECC Scope for the selection of a construction partner
- Produce a forecast of the scheme benefits.
- Produce the technical sections and appendices to form the Full Business Case.

All of the deliverables and outputs to be produced within the scope should have these objectives in mind, and the resource to be provided should have suitable knowledge and experience of delivering DCO's, exert the right behaviours needed to deliver a DCO project and adopt an approach commensurate with other DCO programmes.

## 1.5.Changes from the Outline Design

The *Client*, through Others, has carried out further elements of design development since OBC approval and development of the outline design report.

These comprise:

1. Further development of the landscape design to respond to the updated project goals and outcomes described in Section 1.4 and to explore the potential for wider funding opportunities. The development of the landscape design proceeded via several studies including:
  - a. A set of Environmental Design Principles (*Client*),
  - b. A pre-feasibility study relating to active travel, biodiversity and natural capital enhancements relating to six sites within the RTS study area,
  - c. Local Cycling and Walking Infrastructure Plans to identify key improvement opportunities for active travel adjacent to the RTS footprint (SCC),
  - d. Ten studies investigating opportunities for: New active travel routes, Profiling of raised landscape features, Public green space and enjoyment of space, Heritage Art and Education, Scheme footprint and neighbouring land, In-channel habitat and riparian zones, Additional tree planting, Additional Land by the Spelthorne Channel, Wetland facility on Desborough Island, Green open space, and future land use,
  - e. A natural capital baseline assessment and,
  - f. An updated Landscape and Green Infrastructure Study for the scheme,
2. Building on the outline design, the studies, and a set of *Client* recommendations, a Landscape Concept Report has been produced. This showcases four 'Landscape Themes' that would aim to deliver the scheme vision, goals and outcomes and the Environmental Design Principles. The themes are not rigid alternatives, but explore different outcomes when emphasis is placed on a particular set of opportunities over the others,
3. Further work has been undertaken to identify the sites required to achieve the scheme biodiversity net gain outcomes in line with the project's approach to net gain. The Landscape Concept Report also includes the preferred sites for habitat creation,
4. Desborough Cut will not be widened and the riverbed below the two bridges onto Desborough Island will not be lowered. Instead, riverbed lowering further downstream past Walton Bridge is proposed, subject to sediment contamination and archaeological assessment,
5. The removal of channel section 1 from the Scheme, including the two publicly accessible spaces at Sunnymeads and Hythe End,
6. The *Client* has undertaken a feasibility study into the provision of fish passes at Teddington, Sunbury, and Chertsey weir. The *Client* will confirm whether these are included or not as part of the design,
7. Several additional design uncertainties which need to be resolved, including:
  - a. Works to improve fish passage at Abbey river,
  - b. The scheme boundary for EIA scoping was set wider than the current known footprint of the landscape design, to allow for consideration of neighbouring land to achieve additional benefits, such as habitat, recreation, and tree planting. The appraisal of the landscape concept design and further design development should confirm the need, or otherwise, for these areas of land to define the boundary for the EIA and DCO submission,

- c. The *Client* has commissioned a feasibility study to identify suitable destinations for the receipt of surplus material from the RTS. The details of the preferred sites will need to be included as part of the materials management strategy and considered within the PEIR and EIA,
- d. The Southampton to London pipeline has received consent and will be constructed prior to the RTS. The route of the pipeline interfaces with the RTS at the Spelthorne channel intake. The *Consultant* shall lead on the technical design discussion regarding the pipeline interface with Others,
- e. The *Client* commissioned a review of downstream capacity improvements following removal of Channel Section 1, which may recommend alterations to these designs. The *Client* will confirm whether these are included or not as part of the design.

## 2. Description of the service

### 2.1. Overview

The *Consultant* shall deliver the *service* with cognisance of the *Client's* objectives in section 1.4. The Scope is multi-disciplinary and is detailed throughout this section.

The *Consultant* shall:

1. ensure that the design takes into consideration all relevant guidance and legislation and seek to minimise long-term asset, land management and, maintenance costs and reduce whole life carbon,
2. ensure the *service* and deliverables required by this Scope are completed in line with the intent and objectives of the scheme described throughout section 1 and specifically in section 1.4,
3. demonstrate that the *Consultant* has learnt from UK and international best practice and demonstrate how optimum flood risk reduction, natural processes, recreation and active travel, biodiversity gain, water quality and visual amenity can be combined,
4. work collaboratively with the *Client*, ESE contractor, RTS Consenting team and Others, in a timely manner, to ensure the reference design meets the goals and outcomes of the current phase of the scheme, all associated approvals, and is acceptable to statutory and key stakeholders recognising the limits of design required for the consenting phase,
5. demonstrate sustainability leadership through fully considering and contributing to achieving the *Client's* environment and sustainability ambitions and targets. These are set out in the scheme goals and outcomes, and its draft Sustainability Policy and Strategy, and are in line with the EA2025 Action Plan, e: Mission 2030 Strategy, Surrey County Council's Net Zero by 2030 programme, the Defra 25 Year Environment Plan, and the principles of sustainability as described by the United Nation's Sustainable Development Goals,
6. engage with the *Client*, the ESE Contractor and Others to ensure that the Scope delivered is consistent with the sustainability objectives and initiatives (previous bullet) insofar as the Scope and other limitations permit. The *Consultant* shall use the tools in the SHEWCoP - referenced in section 4, the CEEQUAL assessment and value engineering work to identify options for meeting or exceeding sustainability and carbon management targets,
7. ensure the reference design is coordinated with the LCWIPs and active travel plans for the areas interacting with the RTS,
8. ensure the design is integrated with local utilities and structures planned, owned, or operated by Others (including National Highways). The *Consultant* shall demonstrate that interfacing parties have been engaged, consulted and comments or concerns have been addressed by both parties,
9. unless otherwise stated, be responsible for all design information and data collection within the bounds of this Scope, required to inform the reference design. This shall remain the case until the ECC contractor has mobilised. Mobilisation of the ECC contractor is defined the award of the ECC Option C Contract at Gateway 3. The future ECC contractor will be responsible for developing the design of the *Consultant* to a level that, when accepted, can be used for construction,
10. ensure all deliverables are either accepted by the *Service Manager* or received by the *Client* for information. The *Consultant* shall, unless stated otherwise, agree, prior

to submission which documents are for information and which require acceptance. For all documents and deliverables developed throughout this Scope, the *Consultant* shall engage the *Client* throughout the development process and provide reasonable opportunity for both informal and formal review,

11. through their *service*, advise the *Service Manager* of any instances where additional deliverables, reviews, gap analysis's, surveys, assessments, or evidence plans would be beneficial to support the programme and its wider objectives. All proposals shall be accompanied by a cost benefit analysis. No work shall be undertaken on these activities until the *Service Manager* has accepted the proposal,
12. review the need for evidence plans and advise the *Client* on whether they are beneficial to the programme. The recommendations shall consider the need on a deliverable's basis and not at a service level. The assessment shall be completed within 4 weeks of *starting date* and submitted to the *Service Manager* for acceptance. Should the assessment be accepted by the *Service Manager*; the *Consultant* shall be responsible for the delivery of the relevant evidence plans,
13. review the previous pre-application comments received from the Local Planning Authorities and address them as required to support the objectives or *service* described in this Scope,
14. ensure the reference design developed by this Scope has been through sufficient consultation and engagement processes with 3<sup>rd</sup> parties and the public to enable to the successful completion of Statutory Consultation under the DCO process, this shall include confirming alignment on the changes listed in section 1.5,
15. ensure the removal of channel section 1/Berkshire channel is accounted for in the reference design, the *service* shall also ensure that reference design doesn't limit the re-addition of it at a later point,
16. ensure their design outputs have been suitably reviewed by the relevant specialists to form an integrated and coordinated design,
17. maintain arrangements for specialists in archaeology and cultural heritage, water environment and ecology (inc INNS and aquatic pathogens), waste and other key specialists (as agreed with the *Client*) to be available to and knowledgeable of the project to support delivery of the *service*,
18. ensure that for every deliverable a product description, unless stated otherwise, has been submitted to and accepted by the *Client* in the format referenced in section 4. The *Consultant* must not commence work on any product until an accepted product description is in place. The subsequent product shall be developed in line with the accepted product description. There are instances where a product description has been developed by Others (listed in the relevant part of this section and referenced in section 3). In these instances, the *Consultant* shall exercise reasonable skill and care to ensure the content is suitable given any design development which has progressed since it was accepted,
19. use reasonable skill and care to ensure that all deliverables produced under this Scope are aligned and consistent and,
20. review responses from NPS and sustainable places, plus the feedback from stakeholders on the draft EIA scoping reports of 2017 and 2018, plus feedback from SCC on the draft EIA assessment methodologies and incorporate them into the outputs of this *service*.

Throughout the Scope reference is made to registers or trackers which the *Consultant* is expected to be involved in. These are consolidated into Appendix D alongside a summary of the *Consultants* responsibility. This appendix shall be used in conjunction with the relevant

section of the Scope and shall not limit the *Consultant* from developing additional tools or the use progress management tools by the *Client* or the *Consultant*.

The *service* is split into the following main sections:

### 2.2 – Environmental Services

This covers information predominately required for volume 6 of the DCO but also includes *service* in relation to water quality modelling, sustainability, and carbon management, CEEQUAL, consultation with environmental bodies, any other environmental consents which sit outside of the DCO and any environmental information required for the construction partner tender (refer Section 2.6), where not included in the DCO.

### 2.3 – Environmental Surveys

This section focuses on the *service* relating to environmental surveys including but not limited to the *service* related to planning, delivery, and reporting on their completion.

### 2.4 – Design Development

This section covers *service* that are predominantly required for volume 2 of the DCO and the reference design deliverables needed to procure the construction partner. The *Consultant* shall, as part of their *service*, review the outline design and subsequent design development, develop it, and ensure it integrates with other technical services in this Scope or those provided by Others. The starting point for this design development is described by the documents listed in section 3 of this Scope.

### 2.5 – Consents and permits

This section focuses on the *service* relating to identification of, planning for, consultation on and procedures to obtain the necessary consents and permits.

### 2.6 – Materials management

The section focuses on the *service* required in relation to materials management.

### 2.7 – Engineering and Construction Contract

This section focuses on the *service* required by the *Client* to develop the ECC scope, site information and supporting technical information. This section will draw upon details contained within sections 2.1 through 2.6 plus additional Scope not linked to those sections.

### 2.8 – Full Business Case

This section focuses on the *service* required by the *Client* to develop the FBC. This section will draw upon details contained within sections 2.1 through 2.6 plus additional Scope not linked directly to those sections.

### 2.9 - Development Consent Order

This section focuses on the *service* required by the *Client* to develop the DCO. This section will draw upon details contained within sections 2.1 through 2.6 plus additional Scope not linked directly to those sections.

### 2.10 – Consultation and engagement

This section focuses on the requirements for the extensive consultation and engagement required as part of delivering the Scope contained in sections 2.1 through 2.9.

### 2.1.1. Nomenclature

The project title to be used is: 'The River Thames Scheme'. The *Consultant* shall use the existing design naming conventions and structures nomenclature when providing the Scope except that the design elements currently referenced as channel section 2 shall be updated and referenced as the Runnymede channel and those currently referenced as channel section 3 shall be updated and referenced as the Spelthorne channel.

For information, the Berkshire Channel was previously referred to as Channel section 1, the Runnymede channel was previously referred to as Channel section 2 and, the Spelthorne Channel was previously referred to as Channel section 3. Additionally, the Runnymede and Spelthorne channels are now collectively referred to as the Surrey Channels.

### 2.1.2. Collaboration and Interface Management

The *Consultant* shall collaborate with the *Client* and Others in developing the technical information required. The *Consultant shall* use the principles of 'ISO 44001 - Collaborative Business Relationship Management Systems' to develop these relationships; noting the relationship with the Consenting Services provider is pivotal to meeting the *Client* objectives.

For all interfaces, they are party to, the *Consultant* shall develop specific interface control trackers, which cover the requirements of both parties in terms of deliverables, information, quality, and timelines for delivery. These trackers shall be reviewed at regular intervals with the relevant parties and updated accordingly. Upon each revision they shall be submitted to the *Client* for information alongside a brief description of how the requirements are achieved in the design and the timeline is accounted for in the *Consultants* contractual programme. These trackers shall deal with requirements to and from Others, including the Consenting Services and ESE providers.

Throughout the *service* the *Consultant* shall exhibit behaviours in line with 'Charter for Behaviours expected on the project' developed through the X12 contract requirements.

The *Consultant shall*:

- Act as stakeholder manager for all 3<sup>rd</sup> parties (other than those employed by the *Client* or being led by the Consenting Services provider – such as Local Authorities) that are relevant to the *service* described in this Scope. They shall produce stakeholder engagement plans for each 3<sup>rd</sup> party – these can form part of the wider plan described in section 2.10,
- Support the DCO application by providing technical support into the deliverables the Consenting Services provider is responsible such as: statement of community consultation, statements of common ground (where the *Consultant* is not responsible for them as described in section 2.10), the consultation report, cumulative impact assessment, Non-Statutory and Statutory consultation and the DCO submission. The *consultant* shall as a minimum provide technical information to support the Consenting Services provider in developing the DCO, support the DCO examination process in accordance with section 2.9. The full scope of this support shall be agreed with the Consenting Services provider and the *Client* and the timelines shall be in line with the *Partnering Timetable*,
- Ensure the design and environmental assessments account for the construction methodologies proposed by the *Client*, the ESE provider or Other as identified through their delivery of the *service*. Where required review documents produced by

Others, these shall be conducted in the interest of the programme and in line with constraints of this Scope and the RACI (described in section 7).

## 2.2. Environmental services

### 2.2.1. Overview

The *Consultant* is required to provide *service* to develop the deliverables listed in section 2.2.2. considering any specific information listed in section 2.2.3 or elsewhere in this Scope. These deliverables are focussed on the following key topics:

1. Environmental Impact Assessment,
2. Environmental Modelling,
3. CEEQUAL and,
4. Sustainability Objectives Development.

### 2.2.2. Deliverables Required

Table 2 is a summarised list of the deliverables required to support the Environmental services portion of this Scope. Table 2 denotes through a 'Yes' where the Consultant is responsible for developing the document. Where N/A is stated, the Client is not expecting the relevant document to be produced. Finally, Table 2 denotes several documents as 'No', these have been produced by Others or the Client and are referenced in section 3.

For items denoted 'No' the *Consultant* shall review the relevant document through delivery of the *service* and revise as required to meet the and requirements of this Scope. Additionally, the *Consultant* shall advise the *Client* of omissions, errors, or improvements within these documents which should be addressed to ensure the scheme meets the stated objectives.

Title	Product Description Required?	Deliverable Required?	Reference
Environmental Impact Assessment			
EIA technical assessments	N/A	Yes	2.2.3.1
PEIR	Yes	Yes	2.2.3.2
Environmental Statement	Yes	Yes	2.2.3.3
Water Framework Directive compliance assessment	No	Yes	2.2.3.4
Habitats Regulations Assessment	No	Yes	2.2.3.5
Digital EIA	No	Yes	2.2.3.6
Environmental action plan	Yes	Yes	2.2.3.7
Aquatic & terrestrial INNS gap analysis	No	No	2.2.3.8
Aquatic & terrestrial INNS management plan	No	Yes	2.2.3.9
Aquatic pathogens gap analysis	No	No	2.2.3.10
Aquatic pathogens management plan	No	Yes	2.2.3.11
Flood Risk Assessment	Yes	Yes	2.2.3.12
Environmental site appraisal plan	N/A	Yes	2.2.3.13
Statement of Statutory Nuisances	N/A	Yes	2.2.3.14
Environmental Modelling			
Augmented flow procedure	No	Yes	2.2.3.15
CEEQUAL			
CEEQUAL interim assessment	N/A	Yes	2.2.3.16
Sustainability Objectives Development			
Carbon Management Plan / Mitigation Plan	No	Yes	2.2.3.17
Natural Capital Assessment	Yes	Yes	2.2.3.18

## TABLE 2: ENVIRONMENTAL SERVICE DELIVERABLES

### 2.2.3. Deliverable Specific Information or Requirements

#### 2.2.3.1. EIA technical assessment

The *Consultant* shall utilise the supplied EIA scoping report and the EIA scoping opinion to undertake the relevant technical assessments which support the reference design. For the avoidance of doubt the EIA scoping report was conducted by Others and is provided to the *Consultant*. The *Consultant* shall review the methodologies previously developed and confirm suitability, in their capacity as competent expert. Any changes recommended must be subject to acceptance from the relevant statutory consultees, which the *Consultant* shall evidence to the *Client*. The *Consultant* shall, in consultation with the RTS comms and engagement team, be responsible for consulting with and engaging the relevant organisations to ensure their agreement with the deliverables and outputs.

The *Consultant* shall produce a technical assessment mitigation register which includes the proposed design changes based on the consultation and/or technical assessments, details of the mitigation benefits and implications for EIA scoping. The register shall be reviewed with the *Client*, through a collaborative working arrangement (such as regular workshops). Upon acceptance from the *Client* of a design change or mitigation the *Consultant* shall incorporate it into the reference design and re-run the appropriate technical assessments. Throughout this process the *Consultant* shall issue the register for information at intervals no greater than one month. Once all recommendations from the technical assessments have been addressed then the register shall be submitted for acceptance.

The *Consultant* shall produce a schedule of scoping report comments, provide responses to comments, and address relevant comments into the design as required throughout the scoping option. The *Consultant* shall consult with the *Client* to agree which comments shall be addressed and incorporated into the design.

Should the need arise through the process of design development or from delivering the other elements of this Scope the *Consultant* shall review and revise the relevant technical assessment accordingly in accordance with the parameters stated in this sub-section.

#### 2.2.3.2. A Preliminary Environmental Information Report (PEIR)

The *Consultant* shall utilise the existing product description for information and develop a revised product description based on the status of the project at the point of delivery. The revised product description shall be accepted by the *Client* prior to commencing work on the PEIR.

The *Consultant* shall produce a PEIR including a non-technical summary of the PEIR. The *Consultant* shall review baseline data and provide any recommendations as to where this requires update. The *Consultant* shall in collaboration with the Consenting Services provider, prepare a product description for the PEIR, which aligns this product with the relevant programme interdependencies, and is submitted to the *Client* for acceptance. The PEIR shall reflect the initial outputs from the technical assessments, previous consultation responses, and support the statutory consultation objectives. The *Consultant* shall submit the PEIR and all associated data to inform it to the *Client* for acceptance.

#### 2.2.3.3. The Environmental Statement

The *Consultant* shall produce an Environmental Statement (and a non-technical summary of the Environmental Statement). The Environmental Statement shall reflect the final outputs

from the technical assessments and the consultation and engagement undertaken. The *Consultant* shall submit the Environmental Statement and all associated data to inform the EIA to the *Client* for acceptance.

#### **2.2.3.4. Water Framework Directive compliance assessment**

The *Consultant* shall review the requirements of this Scope and the existing information referenced in section 3 to carry out a WFD 3<sup>rd</sup> re-screening. Based on this re-screening, the *Consultant* shall produce a WFD compliance assessment. The WFD compliance assessment follows the methodology set out in the document 'Roadmap for completing updates to the WFD Compliance Assessment' in section 3. The *Consultant* submits the compliance assessment to the *Client* for acceptance

As part of the compliance assessment the *Consultant* shall review the RTS exemptions proposed under Regulation 19 updating as necessary validating existing evidence and providing new evidence as required to support the reference design.

#### **2.2.3.5. Habitats Regulations Assessment**

The *Consultant* shall review the requirements of this Scope and the existing information referenced in section 3 to carry out an HRA re-screening of waterbodies to be included in the assessment. The re-screening takes account of any changes in the RTS design and additional surveys referred to in appendix C. The *Consultant* submits the output from the re-screening to the *Client* for acceptance.

Based on the accepted re-screening output, the *Consultant* shall produce an HRA. The HRA follows the methodology set out in the document 'Roadmap for completing the Information to inform a Habitats Regulations Assessment' in section 3. The output recommendations and any effects shall be agreed with the *Client* prior to submission.

To develop the assessment, the *Consultant* shall, consult Natural England on the following:

1. The HRA study area,
2. Requirements for updating the technical sections of the HRA referenced in section 3,
3. 'Proxy sites' analysis referenced in the existing HRA referenced in section 3 and,
4. The plans and projects to be included in the cumulative assessment.

The *Consultant* shall submit the updated assessment including evidence of consultation with Natural England to the *Client* for acceptance.

#### **2.2.3.6. Digital EIA**

The *Consultant* shall present the PEIR and Environment Statement as a digital EIA. The digital EIA shall be hosted on a GIS platform with interactive features to allow the EIA to be explored by the users, including members of the public, during the consultation process. The *Consultant* shall ensure the digital EIA has the capability to view areas of the Scheme in more detail, understand environmental effects on specific environmental receptors and within geographic areas together with the anticipated environmental mitigation requirements. The GIS platform shall be agreed with the *Client* and the Consenting Services provider and be developed as a single source of truth. The *Consultant* shall endeavour to avoid duplication of effort and multiple handing of content through development of the Digital EIA.

#### **2.2.3.7. Environmental action plan**

The *Consultant* shall develop an environmental action plan. The *Consultant* shall ensure the action plan includes details of the environmental monitoring and management actions that

are required pre-construction, during construction and post-construction of the RTS, together with the responsibilities and timescales for implementing them. The *Consultant* shall ensure the ECC, and the environmental action plan are aligned. Additionally, the *Consultant* shall ensure the plan demonstrates where detailed management plans are required. If detailed management plans are required to support DCO the *Consultant* shall produce these. The environmental action plan and any relevant management plans shall be submitted to the *Client* for acceptance.

#### **2.2.3.8. Aquatic & terrestrial INNS gap analysis**

The *Consultant* shall if required by the *Service Manager* review and revise the gap analysis based on comments or consultations. Upon revisions the *Consultant* shall submit the updated document to the *Client* for acceptance.

#### **2.2.3.9. Aquatic & terrestrial INNS management plan**

The *Consultant* shall utilise the provided Aquatic & terrestrial INNS gap analysis and the existing surveys, analysis, and assessments to develop a risk management plan to assess the worst-case impacts/hazards providing mitigations, management assumptions and supporting justifications accordingly. This risk management plan shall be submitted to the *Client* for acceptance

Based on the accepted risk management plan the *Consultant* shall develop conceptual management plans which enable stakeholder engagement and inform the EIA, HRA and WFD assessments. The *Consultant* shall refine the mitigation and management assumptions to develop scheme wide management measures, through undertaking the following activities:

- Review key risks of spread – using a conceptual source pathway receptor model (including consideration of horizon species and favourable habitat conditions that may influence spread),
- Review and alignment with other stakeholder management plans for INNS where applicable,
- Review of Legal Position,
- Key constraints to management options i.e., human health risks, time, conflicts and engagement, risks to native species populations and,
- Identification of high-level costs, timelines, and success measurables for management measures.

As part of the plans the *Consultant* shall develop an GIS interactive tool with information on current constraints and opportunities associated with INNS. The *Consultant* shall submit the conceptual management plan to the *Client* for acceptance.

#### **2.2.3.10. Aquatic pathogens gap analysis**

The *Consultant* shall if required by the *Service Manager* review and revise the gap analysis based on comments or consultations. Upon revisions the *Consultant* shall submit the updated document to the *Client* for acceptance.

#### **2.2.3.11. Aquatic pathogens management plan**

The *Consultant* shall utilise the provided Aquatic pathogens gap analysis and the existing surveys, analysis, and assessments to develop a risk management plan to assess the worst-case impacts/hazards providing mitigations, management assumptions and supporting

justifications accordingly. This risk management plan shall be submitted to the *Client* for acceptance

Based on the accepted risk management plan the *Consultant* shall develop conceptual management plans which enable stakeholder engagement and inform the EIA, HRA and WFD assessments. The *Consultant* shall refine the mitigation and management assumptions to develop scheme wide management measures, through undertaking the following activities:

- Review key risks of spread – using a conceptual source pathway receptor model (including consideration of horizon species and favourable habitat conditions that may influence spread),
- Review and alignment with other stakeholder management plans for pathogens where applicable,
- Review of Legal Position,
- Key constraints to management options i.e., human health risks, time, conflicts and engagement, risks to native species populations and,
- Identification of high-level costs, timelines, and success measurables for management measures.

As part of the plans the *Consultant* shall develop an GIS interactive tool with information on current constraints and opportunities associated with pathogens. The *Consultant* shall submit the conceptual management plan to the *Client* for acceptance

#### **2.2.3.12. Flood Risk Assessment**

The *Consultant* shall develop a flood risk assessment for the scheme. The flood risk assessment shall be informed by the:

- Flood Zones of the land,
- Proposed land uses and their flood risk vulnerability,
- The local authority strategic flood risk assessments,
- Outputs from sequential and exception tests – (if required) and,
- Outputs from the engagement with relevant stakeholders which impact the flood risk assessment.

The *Consultant* shall be responsible for the conduct of any tests or stakeholder engagement required to develop the assessment and demonstrate compliance with relevant policy. The *Consultant* shall submit the flood risk assessment to the *Client* for acceptance.

#### **2.2.3.13. Environmental site appraisal plans**

The *Consultant* shall review and revise the environmental site appraisal plans in line with the design development *service*. The plans shall be submitted to the *Client* for acceptance.

#### **2.2.3.14. Statement of Statutory Nuisances**

The *Consultant* produces Statements of Statutory Nuisances to identify where the RTS engages one or more of the matters set out in section 79(1) of the Environmental Protection Act 1990 and if so, how it is proposed to mitigate or limit them. The deliverables shall be submitted to the *Client* for acceptance.

#### **2.2.3.15. Augmented flow procedure**

The outline design developed a coupled MIKE11-MIKE SHE model. The model was calibrated for the baseline situation for the section of the Thames and offline lakes where the RTS is being planned. The RTS was then incorporated into the model for scenario testing. The modelling focuses on predicting the effect of the RTS on water quality in lakes that would be connected by the new channel sections by looking at water balance, lake residence times, groundwater issues and water quality and cohesive sediments. The model was subsequently used to simulate sediment transport, with a particular focus on sediment-bound phosphorus.

The model was primarily developed to look at a representative hydrological year including a major flood rather than low flow conditions. However, there have been uncertainties with the outputs of the modelling associated with limited sediment and water quality data. Additionally, modelling was commissioned using QUESTOR and Protech to better understand the impacts of water quality in lake

The outline design of the RTS proposes that, when not in operation for flood management, an augmented flow of nominally 1cumec will be continuously fed through the channel sections. This is primarily for fish pass wetting and nutrient management in connected lakes. Thames Water, Affinity Water and other stakeholders have raised concerns that during drought conditions when river levels are low, the continued use of augmented flow will derogate water abstraction rights in the River Thames and impact river water quality.

The *Client*, with Others, will complete a conceptual modelling workshop and report. The *Consultant* shall attend the workshop and utilise the conceptual water quality modelling report to produce a detailed procedure for augmented flow. The *Consultant* shall consult with Natural England, the *Client*, Thames Water, and Others on the procedure and provide evidence of this as part of the submission. The procedure shall provide sufficient information to support relevant environmental permits. The *Consultant* shall submit the procedure to the *Client* for acceptance.

### **2.2.3.16. CEEQUAL interim assessment**

The *Client* has registered the RTS for a CEEQUAL Whole Project assessment with an interim Strategy and Design assessment to be undertaken once the DCO application has been submitted. The *Client's* CEEQUAL target achievement is 'excellent'. The *Client* has agreed the scope of the assessment and an initial review of the project's strengths and weaknesses against the scoped-in questions, together with a calculation of potential scores, has been completed.

The *Consultant* shall undertake the role of the RTS CEEQUAL assessor to the point of DCO submission and:

1. Assess and tracks CEEQUAL scores against the targets throughout the interim stage. Quarterly progress reports are submitted to the *Client* for acceptance,
2. Lead liaison with the CEEQUAL verifier and the *Client*,
3. Identify actions needed to achieve the desired target scores, both for the interim stage and for the Whole Project assessment and produces and maintains a schedule that identifies action owners and tracks progress. Actions are shown on the *Consultant's* programme and progress against actions is reported in the quarterly report in point 1,
4. Hold a familiarisation session specifically on environmental and social issues and a team wide briefing on CEEQUAL and how it is being applied to this scheme. Contributes items on CEEQUAL at relevant progress meetings.

5. Hold bi-monthly meetings with key members of the *Client's* team to discuss actions and contributions to the assessment process,
6. Identify actions needing to be progressed by the construction partner and the *Client* after the interim stage assessment. The *Consultant* ensures that the ECC scope developed as part of the Scope is consistent with these requirements,
7. Maintain a schedule of the evidence required to demonstrate CEEQUAL scores,
8. Notify the *Client* when the interim assessment scores are ready for submission and, once acceptance has been notified by the *Client*, submits the scores for interim assessment following DCO submission and
9. Lead on the verification meeting with the CEEQUAL verifier.

### **2.2.3.17. Carbon Management Plan**

The *Client*, through Others, has prepared a first iteration of the Carbon Management Plan. The Carbon Management Plan outlines baseline GHG emissions from the RTS, identifies the key elements of the project contributing to GHG emissions, sets out a target for carbon reduction, identifies and evaluates initial opportunities for carbon reduction or removal, and provides recommendations for carbon management.

The *Consultant* shall review and update the document at quarterly intervals and submit to the *Client* for acceptance. Updates shall be completed in line with the product description. The *Consultant* shall organise cross-disciplinary carbon reduction workshops following each quarterly update, to identify and assess opportunities for carbon reduction. Updates to the RTS baseline GHG emissions are to be quantified using the Environment Agency's carbon calculator. The *Consultant* shall include within the Carbon Management Plan an assessment of the emission of landfill gas arising from channel excavation.

The *Consultant* shall ensure the plan describes the methodology for appraisal through carbon emissions reduction hierarchy informed by the approach in 'PAS 2080 - Carbon Management in Infrastructure Verification', cost/benefit analysis and other environmental impacts or benefits and offers recommendations. The approach adopted in PAS 2080 is extended to integrate carbon sequestration into the process.

The *Consultant* shall ensure that the next and all subsequent revisions of the Carbon Management Plan consider the relevant workshop outputs listed Section 3 and include and assessment of the need and opportunities for sequestering carbon to achieve the carbon reduction target of the scheme.

The *Consultant* shall ensure their *service* is delivered in line with the Carbon Management Plan and its recommendations.

The *Consultant* shall prepare a Carbon Optimisation Report as part of the FBC.

### **2.2.3.18. Natural Capital Assessment**

The *Consultant* shall develop a natural capital assessment. The *Consultant* shall account for the following in developing the assessment:

1. The previous assessment completed in 2017
2. Other natural capital work undertaken by the *Client*, via Others, including the baseline appraisal (Phase 1) which has been undertaken
3. The assessment informs the PEIR and design decisions to optimise natural capital benefits

4. The assessment is used to optimise economic benefits of the scheme and maximise additional funding opportunities
5. The assessment forms part of the evidence bases for other documents to support the DCO
6. Landscape enhancement areas / public green spaces were not included in the 2017 assessment and are now to be included
7. Calculations are set up so that they can be readily disaggregated to different investment frameworks to align the valuation evidence with different funding streams
8. A parallel assessment is being undertaken under section 2.5 to support the Waste Recovery Plan
9. The assessment is developed in close collaboration with the *Client*, Surrey County Council, and the Consenting Services provider
10. The assessment will form part of the evidence base to confirm compliance with the *Client's* objectives in section 1.4 for the DCO application and for the relevant questions of the CEEQUAL assessment.

The *Consultant* shall develop the assessment through Phase 2 and 3 to meet the following requirements:

#### Phase 2

- Review baseline and extend to cover any changes in scheme boundary since Phase 1
- Review Landscape Concept Report, agree with *Client* number of design scenarios to be assessed and breakdown of valuation, set out valuation framework and demonstrate alignment with best practice guidance, create design scenarios based on clear assumptions agreed with *Client*
- Assess impacts and quantify net change in terms of habitat, active travel, and access.
- Complete NATURE Tool for design scenarios (assumed three) based on information set out in Landscape Concept Report and agreed assumptions, complete up to 10 site summary sheets
- Report qualitative benefits of RTS in summary e.g., enhanced access to water and nature, inclusive green infrastructure/green spaces etc. These will also be covered by the landscape design team in their reporting and summarised here in terms of ecosystem services benefits
- Consider and agree with *Client* what metrics and monetary values can be attached to changes, and complete natural capital impact valuation on scenarios. Report quantified benefits of RTS by ecosystems services / natural capital flows for the 10 sites with before/after performance and analysis of significance e.g., health care costs avoided, water treatment costs avoided, improved air quality, water quality and summarise for PEIR
- Benefits to be dis-aggregated to relevant potential funders (as produced for 2017 study) i.e., those that could be funded via RTS because they respond to project objectives, and any extra benefits or opportunities that are outside the RTS scope but could be delivered if there was additional funding.
- The above to be combined into a single assessment report which also highlights opportunities outside the scope of RTS that can be delivered with additional funding, additional data recommendations, risks to data, identification of any trade-offs and synergies. The report to include a non-technical summary to inform design process
- Presentation of findings to project team / *Client*

## Phase 3

The *Consultant* should revise the assessment immediately prior to finalisation of the FBC to provide a detailed natural capital impact valuation a final report suitable to inform FBC economic case. The *Consultant* prepares a more detailed note on the approach to Phase 3 to the *Client* for acceptance, prior to commencement of the assessment.

Both stages of the report shall be submitted to the *Client* for acceptance.

## 2.3. Environmental surveys

### 2.3.1. Overview

The *Client* has conducted several surveys and a summary of what has been completed, those in progress and whose data will be available to the *Consultant* in due course and has developed a list of surveys which are outstanding. This information is summarised in Appendix C. The *Consultant* shall be responsible for collecting the outstanding surveys (column two) as required to meet the deliverables listed in section 2.3.2. Unless stated otherwise, the *Consultant* is responsible for the confirmation, scoping, procurement, supervision, data collection and reporting of all surveys shown in column two plus any others identified by the *Consultant's* gap analysis that are not shown in the Table 14 in appendix C.

The content of Appendix C excludes surveys required for data collection pre-construction, during construction and post-construction, for example additional ecology and water surveys required to obtain pre-construction data to validate baseline conditions and inform licence applications and mitigation strategies.

The *Consultant* shall provide a survey manager who is the single point of contact between the *Client*, and the *Client's* land agent.

Where the *Consultant* requires access to any land to undertake a survey, the *Consultant* submits an access request to the *Client's* land agent no less than four weeks prior to the planned survey commencement date. The *Consultant's* access request shall include a digital shapefile of the proposed survey area and the risk assessment and method statement for the survey. The risk assessment and method statement shall include considerations relating to biological control of non-native species spread and decontamination procedures to be used. Should a survey fall outside of the project boundary, then the *Consultant* shall consult with the *Client* to agree a revised lead time for the submission of the access request.

Once access has been agreed the *Client's* land agent confirms the arrangements to the *Consultant*. The arrangements include details of required land access and egress and other constraints the *Consultant* must adhere to. The survey does not commence without confirmation of the agreed access from the *Client's* land agent. The *Consultant* is responsible for obtaining any other consent, permit or licence required for each survey.

The *Consultant* shall ensure all relevant surveys are conducted and the associated reports must be suitable and valid at the time of the submission of the EIA Assessment – this shall include ensuring compliance around the EIA scoping boundary.

### 2.3.2. Deliverables Required

Table 3 is a summarised list of the deliverables required to support the Environmental surveys portion of this Scope. This list is an indicative list of the deliverables required to be produced by the *Consultant*. Unless stated, further detail can be found in Appendix C.

Survey Title	Scope Report (see 2.3.3.2)	Survey Report (see 2.3.3.3)	Other Deliverable	Comments
<b>General</b>				
Gap Analysis	N/A	N/A	Yes	See 2.3.3.1
<b>Protected Species Surveys in new boundaries for EIA scoping</b>				
Dormice / Hazel Dormice	Yes	Yes	N/A	To be conducted for EIA scoping boundary subject to the results of the UKHab Condition Survey
Great Crested Newts	Yes	Yes	N/A	
Reptiles	Yes	Yes	N/A	
White Clawed Crayfish	Yes	Yes	N/A	
Water vole	Yes	Yes	N/A	
National Vegetation Classification / Botany	Yes	Yes	N/A	
Hedgerows	Yes	Yes	N/A	
<b>Air quality and climatic factors</b>				
Diffusion Tube Monitoring	Yes	Yes	N/A	
<b>Biodiversity (terrestrial ecology receptors)</b>				
Badger	Yes	Yes	N/A	
Bats	Yes	Yes	N/A	
Otter	Yes	Yes	N/A	
Breeding Birds	Yes	Yes	N/A	
Wintering Birds	Yes	Yes	N/A	
Terrestrial Inverts	Yes	Yes	N/A	
Terrestrial INNS	Yes	Yes	N/A	
Phytoplankton, Zooplankton and Phytobenthos	No	No	Testing and Report	
<b>Biodiversity (aquatic ecology receptors)</b>				
Fish Hydroacoustic	Yes	Yes	N/A	Scope, fee, and programme only
Fish and Fish INNS and Pathogens	Yes	Yes	N/A	
Macrophytes (Inc INNS)	Yes	Yes	N/A	
Benthic Inverts	Yes	Yes	N/A	
<b>Cultural heritage, archaeology and built heritage</b>				
Archaeological Site Evaluations on HCAs	Yes	Yes	N/A	
Cultural heritage setting study stages 3 - 5	Yes	Yes	N/A	
<b>Landscape and visual amenity</b>				
Topographic surveys	Yes	Yes	N/A	
Tree surveys	Yes	Yes	N/A	
Summer views	Yes	Yes	N/A	
Noise Survey	Yes	Yes	N/A	

**TABLE 3: SURVEY DELIVERABLES**

### 2.3.3. Deliverable Specific Information or Requirements

#### 2.3.3.1. Gap analysis

The *Consultant* shall undertake a gap analysis of the survey data obtained to date and to be obtained by the *Consultant*. The gap analysis shall highlight additional surveys required, the reason they are needed, timescales and cost estimates. The gap analysis shall also consider any surveys required to support the additional site areas. The *Consultant* shall submit the gap analysis to the *Client* for acceptance who will advise how to proceed. No work shall be carried on the additional surveys until the gap analysis is accepted

#### **2.3.3.2. Survey Scopes**

The *Consultant* shall develop survey scoping reports for each survey they are responsible for. Each scoping report shall include a detailed methodology for the surveys, references to industry standards, the format of the data to be collected and risk assessments and method statements for the fieldwork.

The *Consultant* submits the scoping reports to the *Client* for acceptance and does not commence a survey until acceptance has been notified.

#### **2.3.3.3. Data collection and reporting**

The *Consultant* shall undertake the surveys in accordance with the accepted survey scoping reports and method statements. Where confident identification of specimens in the field is not possible, the *Consultant* shall collect voucher specimens and provides accredited experts, verified by their curriculum vitae, to confirm species identification.

Once a survey is complete, the *Consultant* shall prepare a report that includes the factual survey results, an interpretive analysis, and recommendations for further work. The *Consultant* shall compile all survey data in an appropriate digital format that can be shared with the *Client* and Others and submits the report and digital data files to the *Client* for acceptance.

## **2.4. Design development**

### **2.4.1. Overview**

The *Consultant* is required to provide *service* to develop the deliverables listed in section 2.4.2. considering any specific information listed in section 2.4.3 or elsewhere in this Scope. These deliverables are focussed on the following key topics:

1. Channel engineering,
2. Thames Weirs,
3. Operations and Maintenance,
4. Mechanical, Electrical, Instrumentation Control and Automation,
5. Buildings and roads,
6. Utilities,
7. Bridges and structures,
8. Desborough bed lowering,
9. Value engineering,
10. Landscape and environmental design,
11. Reference design report,
12. Design changes tracker and,
13. Constraints Register.

For each of the design development sections, the *Consultant* shall review the requirements of this Scope, the existing design information, section 1.5, and other technical reports

referenced in section 3 to ensure the design information produced by the *Consultant* is fully integrated with and complimentary to other parts of the *service*. For the avoidance of doubt the *Consultant* shall consult with Others through the design development to ensure the reference design (produced by the *service*) is suitable to secure DCO, the FBC and/or inform the ECC scope.

#### 2.4.2. Workstream and deliverables required

Table 4 is a summarised list of the deliverables required to support the Design services portion of this Scope. Table 4 denotes through a 'Yes' where the Consultant is responsible for developing the document. Where N/A is stated, the Client is not expecting the relevant document to be produced. Finally, Table 4 denotes several documents as 'No', these have been produced by Others or the Client and are referenced in section 3.

For items denoted 'No' the *Consultant* shall review the relevant document throughout the delivery of this Scope and revise as required to meet the current design principals. Additionally, the *Consultant* shall advise the *Client* of any omissions, errors, or improvements within these documents which it believes should be addressed to ensure the scheme meets the stated objectives.

Title	Product Description	Products Schedule	Drawings, Calculations & Schedules	Other Deliverables	Reference
Channel engineering	No	Yes	Yes	N/A	2.4.3.1
Thames Weirs	Yes	Yes	Yes	Design report, Fish passes report	2.4.3.2
Operations and Maintenance	Yes	N/A	N/A	Strategy	2.4.3.3
Mechanical, Electrical, Instrumentation Control and Automation	Yes	Yes	Yes	User requirements specification	2.4.3.4
Buildings and roads	No	No	Yes	N/A	2.4.3.5
Utilities	No	Yes	Yes	Surveys, Design report, Engagement tracker, ESSO pipeline design	2.4.3.6
Bridges and structures	No	No	Yes	Design Report, Engagement tracker, National Highways review	2.4.3.7
Desborough bed lowering	No	No	Yes	Surveys and site investigations	2.4.3.8
Value engineering	N/A	N/A	N/A	Report	2.4.3.9
Landscape and environmental design	Yes	Yes	Yes	Environmental masterplan,	2.4.3.10

Title	Product Description	Products Schedule	Drawings, Calculations & Schedules	Other Deliverables	Reference
				Landscape and ecological management plan, Green infrastructure study Parameter plans, Planting procurement strategy, Open space assessment, Replacement land report	
Reference design report	Yes	N/A	N/A	Report	2.4.3.11
Design changes tracker	Yes	N/A	N/A	Report	2.4.3.12
Constraints Register	Yes	N/A	N/A	Register	2.4.3.13

**TABLE 4: DESIGN DEVELOPMENT DELIVERABLES**

### 2.4.3. Workstream and deliverable specific requirements

#### 2.4.3.1. Channel engineering

The two channel sections are made up of the intake structures, channel sides and bases, flood training embankments, weirs, flow control structures, fish passes and the outfalls. Additionally, the outline design includes flow control structures at Ferry Lane lake.

The *Consultant* shall develop and subsequently maintain a Channel Engineering products schedule. The schedule shall include a review of channel bed protection utilising lessons learnt from the Jubilee River project to optimise the proposals for the RTS. The products schedule shall detail all the proposed products, which objectives in sections 1.4 they support and the reasons for their inclusions. The schedule shall be consistent with the MIDP referenced in section 11 and be submitted to the *Client* for acceptance upon each revision.

The *Consultant* shall update and develop the drawings, calculations, and schedules in accordance with the accepted products schedule. Drawings, calculations, and schedules shall be assembled into logical packages before submission to the *Client* for acceptance.

#### 2.4.3.2. Thames Weirs

Fish passage at the weir complexes is currently limited: Sunbury has no fish pass while Molesey and Teddington each have an existing fish pass limited to certain species. This existing position does not meet the WFD objectives of the River Thames waterbodies. The *Client* has undertaken pre-feasibility studies on fish passes at Teddington, Sunbury, and Chertsey weirs. The *Consultant* shall coordinate with the *Client* and Others (who are preparing the pre-feasibility studies) to review the outputs from the pre-feasibility studies and assess the compatibility with the RTS design and the EIA with recommendations on potential integration with the RTS. The *Consultant* shall collaborate and consult with the *Client* to produce a report advising how fish pass design at the weir complexes is to be incorporated

into the EIA and the reference design. Prior to the report being submitted the *Consultant* shall have conducted workshops with the *Client* to agree the Fish Pass report contents.

The existing weir complexes operated by the *Client* at Sunbury, Molesey and Teddington need to be modified by increasing the number of radial gates, thereby increasing downstream capacity. The outline design proposed three new gates at Sunbury, two new gates at Molesey and five new gates at Teddington.

The *Consultant* shall develop and subsequently maintain a Thames Weirs products schedule. The products schedule shall detail all the proposed products, which objectives in sections 1.4 they support and the reasons for their inclusions. The schedule shall be consistent with the MIDP referenced in section 11 and shall be submitted to the *Client* for acceptance upon each revision.

The *Consultant* shall update and develop the drawings, calculations, and schedules in accordance with the accepted products schedule. Drawings, calculations, and schedules shall be assembled into logical packages before submission to the *Client* for acceptance.

The *Consultant* shall develop a Thames Weirs design report that summarises the design of the Thames Weirs taking on board the design development, the fish passes and the capacity modifications. This report shall be submitted to the *Client* for acceptance.

#### **2.4.3.3. Operations and Maintenance**

The operation and maintenance of the new RTS assets has been considered as part of the outline design. The *Consultant* shall use the following assumptions as the basis for delivering the Scope:

1. The channel sections shall commence operation when the River Thames flow is approximately 230cumecs,
2. The intake structure shall be operated in the following increments 10cumecs up to 120cumecs total channel flow and 5cumecs increments from 120 to 150cumecs. This results in a total of 18 gate movements to achieve the design flow of 150cumecs,
3. The intake structure for each channel section will comprise of nine, 3.5m wide 'typical' Thames's weir radial gates. Gates are likely to be operated in sets of three,
4. The target augmented flow will be 1.5cumec, sufficient to feed the fish passes. This flow will be variable (between zero and 1.5cumec) to accommodate low flow, abstraction, and environmental requirements – this assumption shall evolve based on the work undertaken to deliver the Scope described in section 2.2.3.15,
5. Intake structures will have options for manual or semi-automatic/automatic operation with operation carried out and monitored by trained *Client* staff,
6. There will be a minimum of one flow gauge per channel section, but more may be required to allow, for example, monitoring of environmental mitigation,
7. The existing Thames flow gauges at Windsor Park, Staines and Walton will be used for operational data and monitoring. A further flow gauge or additional level monitoring may be necessary in the Chertsey weir area where the Runnymede channel outfalls and the Spelthorne channel intake are located,
8. During exceedance events the RTS intake gates will be gradually closed to limit the in-channel flow to its design maximum of 150cumecs and
9. The operation of the increased capacity through the additional gates at the Thames weir complexes is not expected to form part of the RTS operating procedures but will be incorporated into revised gate pulling orders.

In the final strategy the Operation and maintenance approach shall have the commencement and subsequent management of increments based on river levels rather than flows. At the point of developing this Scope the best estimates for trigger levels at 230cumec flow are 12.64mODN for Runnymede channel (Penton Hook weir - tail) and 11.40mODN for Spelthorne channel (Chertsey weir - tail)

The *Consultant* shall develop an Operations and Maintenance strategy. The *Consultant* shall consult with the *Client's* operations and maintenance strategy steering group throughout its development.

The *Consultant* shall ensure the strategy includes the following key points and is submitted to the *Client* for acceptance:

- Intake gates
  - No throttling of flows into Runnymede channel
  - Throttling of flows into Spelthorne channel to restrict flow to 150cumecs
  - The *Consultant* shall confirm the level of throttling and whether additional bunds are required to avoid increased flooding from lakes and ensures the strategy confirms levels of intake gate redundancy.
- Freeboard
  - The strategy shall confirm the levels of freeboard at specific locations and the impacts on channel operation and public safety during flood events of 0.5%, 1% and 5% annual exceedance probability.
- Augmented flow
  - The strategy for the operation of augmented flow (to be aligned with other work in this Scope)
- Operational compounds
  - The strategy shall confirm the operational facilities and maintenance requirements at each intake structure and the A320 flow control structure
- Monitoring and control equipment
  - The strategy shall include proposals for the equipment required for operational monitoring and control and other RTS data monitoring and the *Consultant* ensures this is consistent with and integrated into the outputs of the environmental services undertaken as part of the *service*.

#### **2.4.3.4. Mechanical, Electrical, Instrumentation Control and Automation**

The outline design includes basic information on the requirements for Mechanical, Electrical, Instrumentation, Control and Automation (MEICA). The MEICA design includes building services, gate control systems and automation, mechanical and electrical operation of gates, lighting, security systems, instrumentation, and telemetry.

The *Consultant* shall develop and subsequently maintain a MEICA products schedule. The products schedule shall detail all the proposed products, which objectives in section 1.4 they support and the reasons for their inclusions. The schedule shall be consistent with the MIDP referenced in section 11 and shall be submitted to the *Client* for acceptance upon each revision.

The *Consultant* shall update and develop the drawings, calculations, and schedules in accordance with the accepted products schedule. Drawings, calculations, and schedules shall be assembled into logical packages before submission to the *Client* for acceptance.

The *Consultant* shall produce User Requirements specifications for the following elements of Scope. The accepted versions of the specifications shall be incorporated into the ECC scope:

- User requirements specifications for building services, security systems including closed-circuit television,
- User requirements specifications for lighting for RTS operational and public areas,
- User requirements specifications for gates MEICA and,
- User requirements specifications for monitoring instrumentation and telemetry.

#### 2.4.3.5. Buildings and roads

The outline design includes basic information on the requirements for buildings and roads required for operations and maintenance purposes. The buildings and roads include those required for the operational compounds, access to the channel and other structures and visitor facilities at the two publicly accessible spaces.

The ESE Contractor shall develop information for temporary offices, compounds, laydown areas and roads required for constructing the RTS together with working area drawings sufficient to inform the reference design and commensurate with the detail required for the DCO submission. The *Consultant* shall work closely with the ESE Contractor to ensure this information is integrated with other information provided as part of the Scope.

The *Consultant* shall develop and subsequently maintain a Building and roads products schedule sufficient to inform the reference design and commensurate with the detail required for the DCO submission. The products schedule shall detail all the proposed products, which objectives in section 1.4 they support and the reasons for their inclusions. The schedule shall be consistent with the MIDP referenced in section 11 and shall be submitted to the *Client* for acceptance upon each revision.

The *Consultant* shall update and develop the drawings, calculations, and schedules in accordance with the accepted products schedule. Drawings, calculations, and schedules shall be assembled into logical packages before submission to the *Client* for acceptance.

#### 2.4.3.6. Utilities

The RTS interacts with 12 separate utility companies and unless stated otherwise, the *Consultant* is responsible for all engagement with the utility companies, which is required to complete the RTS reference design. Over and above the requirements to engage with the *Client*, the *Consultant* shall ensure the *Client's* Utility Project Manager is full engaged on all aspects of the service relating to utilities. The *Client's* land agent co-ordinates land issues relating to the utility designs.

The approximate number of instances where a proposed RTS asset interfaces with a utility company asset and details of key interfaces are described in Table 5:

Utility company	Channel		Notable Interface	Channel
	Runnymede	Spelthorne		
Affinity Water	5	2	700mm water - Design of footbridge/service bridge FBR5 to be developed	Runnymede

Utility company	Channel		Notable Interface	Channel
	Runnymede	Spelthorne		
			700mm water, 4" water; Thames Waterfowl rising main and abandoned sewer - Interfaces with structures FC22 and LA6. Opportunities for early diversions	Runnymede
Thames Water	2	1		
National Grid Gas	3	1		
Southern Gas Network	0	1		
Esso	0	1	Esso 10" and 12" oil pipelines and a Cadent Gas 8" pipeline - A services bridge integrated within structure IS3 is not acceptable to Esso. Interaction with Esso's Southampton to London pipeline works	Spelthorne
Zayo Telecoms	2	0		
Instalcom	2	0		
Openreach	5	5		
Virgin Media	0	2		
Sky UK	0	1		
SSE	3	1	11kV network - SSE C3 design indicates the overhead line is to be diverted underground within the Thorpe Hay meadow Site of Special Scientific Interest	Runnymede
UK Power Networks	2	4		

**TABLE 5: APPROXIMATE UTILITY COMPANY INTERFACES**

The *Consultant* shall develop the utility interface designs further ensuring they are fully integrated. They shall establish relationships with the utility companies, assist the *Client* to better understand the future diversion costs and investigate options for undertaking some of the higher risk diversions early before the FBC is approved. The procurement and contract strategy for the construction partner is based on the construction partner having responsibility for C4 enquiries and utility co-ordination works.

The *Consultant* shall develop and subsequently maintain a utility products schedule. The products schedule shall detail all the proposed products, which objectives in section 1.4 they support and the reasons for their inclusions. The schedule shall be consistent with the MIDP referenced in section 11 and shall be submitted to the *Client* for acceptance upon each revision.

The *Consultant* shall update and develop the drawings, calculations, and schedules in accordance with the accepted products schedule. Drawings, calculations, and schedules shall be assembled into logical packages before submission to the *Client* for acceptance

The *Consultant* shall identify any utilities in the scheme area currently unknown to the *Client*. The *Consultant* shall update the desktop utilities searches at the commencement of the Scope and again prior to the DCO submissions. The *Consultant* shall engage with the utility

companies to identify further surveys to establish existing utility details and prepare a utilities survey report. The report shall include the proposed survey by asset, reasons for the survey and recommended survey type in accordance with 'PAS 128 – Specification for Underground Utility Detection, Verification and Location'. The report shall be submitted to the *Client* for acceptance and the *Client* will notify the *Consultant* as to how the proposed surveys are to be acted upon.

The *Consultant* shall use survey information and further develop the integrated diversion designs through updated C3 enquiries – where relevant this shall include local authority assets such as street lighting. The report shall include the proposed diversion designs, the proposed split in work between utility companies and the construction partner, cost estimates and timings. The report proposes the options for undertaking some of the higher risk diversions early before the FBC is approved and recommendations on how the *Client* could progress with these.

The *Consultant* shall produce and maintain a utilities engagement tracker. It shall show the status of each utility's engagement, the risks and issues for each proposed interface and demonstration of how requirements are agreed and incorporated into the design. The tracker shall be submitted regularly to the *Client* for information.

The *Consultant* shall support the Consenting Services provider through engagement with the utility companies to aid the drafting of Protective Provisions which are to be included in the DCO.

The *Consultant* shall review design information issued to the *Client* by Esso for the Southampton to London pipeline interfacing with the RTS at the Spelthorne channel intake. The *Consultant* shall provide comments relating to the Esso's design integration with deliverables the *Consultant* produces as part of the services. Once satisfactory closeout of the comments is completed, the *Consultant* issues a statement of assurance to the *Client*. The *Consultant* shall exercise reasonable skill and care to issue the statement of assurance.

#### **2.4.3.7. Bridges and structures**

The bridges and structures for the RTS include footbridges on private and public land, highways road bridges, new and existing M3 motorway structures. The outline design contained 'approval in principle' documents for the bridges and structures and these were shared with the landowners for their acceptance. From the outline design the *Client* has decided that further design of the M3 motorway structures HA3M, HA4M, HA5M and HA7M is to be excluded from this Scope and delivered by National Highways.

The road bridge loadings were assessed using the SV 100 load model defined in the 'Highways Structures & Bridges Inspection & Assessment, CS 458 (formerly BD 86/11)'. Through consultation Surrey County Council, as the highways authority, challenged whether an SV 196 load model would be more appropriate. As per agreements made by the *Client* with Surrey County Council, structures HA1 and HA2 shall be designed, by the *Consultant*, to SV196 standards. For all other structures it should be assumed only an SV 196 loading for a single vehicle on the structure and being in the centre of the road.

Unless stated otherwise, the *Consultant* is responsible for all engagement and consultation with the highway's authorities and private landowners within the bounds of this Scope to ensure the reference design is integrated with these parties.

The *Consultant* shall develop and subsequently maintain a bridges and structures products schedule. The products schedule shall detail all the proposed products, which objectives in

sections 1.4 they support and the reasons for their inclusions. The schedule shall be consistent with the MIDP referenced in section 11 and shall be submitted to the *Client* for acceptance upon each revision.

The *Consultant* shall update and develop the drawings, calculations, and schedules in accordance with the accepted products schedule. Drawings, calculations, and schedules shall be assembled into logical packages before submission to the *Client* for acceptance.

The *Consultant* shall produce and maintain a bridges and structures engagement tracker. It shall show the status of each organisation or individual's engagement, the risks and issues for each proposed interface and demonstration of how requirements are agreed and incorporated into the design. The tracker shall be submitted regularly to the *Client* for information.

The *Consultant* shall prepare a bridges and structures design report. The report shall include the designs, evidence of landowner engagement and consultation and their acceptance of the proposed designs. The report shall be submitted to the *Client* for acceptance

#### **2.4.3.8. Desborough bed lowering**

The Desborough Cut is an engineered channel created downstream of the outfall of Spelthorne channel. The proposed design involves riverbed lowering of the River Thames downstream of the Cut for approximately 1km. The area of the proposed bed lowering is approximately 20m wide and 0.7m deep including 0.2m of additional depth for resilience against future siltation. The *Client* shall provide outputs of an archaeological investigations which utilise two geophysics datasets: side-scan sonar and sub-bottom profiler. The *Client* shall provide a contaminated sediment desk-based assessment and analysis of further surveys, site investigations and design and assessment work required. These surveys, site investigations and design activities shall, unless otherwise stated, be the responsibility of the *Consultant* once direction has been provided by the *Service Manager*.

The *Consultant* shall develop and subsequently maintain a Desborough bed lowering products schedule. The products schedule shall detail all the proposed products, which objectives in sections 1.4 they support and the reasons for their inclusions. The schedule shall be consistent with the MIDP referenced in section 11 and shall be submitted to the *Client* for acceptance upon each revision.

The *Consultant* shall update and develop the drawings, calculations, and schedules in accordance with the accepted products schedule. Drawings, calculations, and schedules shall be assembled into logical packages before submission to the *Client* for acceptance.

The *Consultant* shall review the existing geotechnical information referenced in section 3 and the geophysics and archaeology reports for Desborough bed lowering and identify further surveys and site investigations necessary. The *Consultant* shall prepare a report detailing the further surveys and site investigations proposed and ensure that the proposed site investigations and further archaeological investigations needed can be co-ordinated for optimal efficiency. As a minimum the report shall describe the reason for, objectives of and the scope of each survey and site investigation. The report shall be submitted to the *Client* for acceptance and the *Client* will notify the *Consultant* as to how the proposed surveys are to be acted upon.

#### **2.4.3.9. Value engineering**

The *Consultant* shall, throughout the delivery of their *service* identify opportunities to value engineer the scheme in order to improve the benefits or reduce costs. The *Consultant* shall arrange quarterly workshops with the *Client* and Others to explore value engineering and low carbon opportunities throughout the design development. The workshop shall be structured and facilitated by an experienced professional provided by the *Consultant*. Furthermore, the workshop shall agree the next steps for opportunities including confirmation of the opportunities to be adopted. The workshop and any outputs shall be conducted and/or developed in accordance with the CERT process with separate workstreams for Cost/Time and Carbon. The value engineering workshops shall produce and maintain a tracker which includes details of potential opportunities, cost and time/carbon implications and impacts on the *Client*'s objectives in section 1.4. This tracker shall be regularly submitted to the *Client* for acceptance.

#### **2.4.3.10. Landscape and environmental design**

An integrated landscape design is fundamental to the achievement of the scheme vision. As described in section 1.5, the outline landscape design presented in the OBC has been further developed to respond to the updated project goals and objectives.

The *Consultant* is required to further develop and deliver the landscape and environmental design to meet the requirements of the DCO and other consents and achieve the project goals and objectives.

The landscape and environmental design must integrate all aspects of the project, including but not limited to those listed below:

##### **Policy frameworks**

The *Consultant* shall ensure that the landscape design takes into consideration and responds to the requirements of any relevant local authority plans and green infrastructure strategies.

##### **New areas of public open space to provide recreational and amenity benefit.**

Provision of new areas of public open spaces is a core outcome of the project. The Landscape Concept Design and predecessor information has identified key opportunity areas to provide public open spaces with a range of potential recreation and biodiversity benefits across the 'themes. The *Consultant* is responsible for confirming the land that will provide new areas of public open space and developing the designs of these areas as part of a coherent landscape and green infrastructure design.

##### **New and enhancement active travel routes**

Provision of new and enhanced active travel routes is a core outcome of the project. The Landscape Concept Design and predecessor information has identified key opportunity areas to provide routes both within the channel footprint and linking to the wider network. The *Consultant* is responsible for confirming the proposed new and enhanced active travel provision and developing the designs of the confirmed sites as part of a coherent landscape and green infrastructure design.

The *Consultant* shall ensure all active travel design are coordinated with the LCWIPs for the relevant areas associated with the scheme. The LCWIPs for areas interacting with the RTS should be cognisant of the RTS whilst providing connection for active travel routes and proposed infrastructure improvement.

## **New areas of habitat enhancement and creation**

Construction of the RTS will result in both short-term/temporary and disturbance and loss during construction, and permanent disturbance and loss of habitat during operation. The Scheme's approach to biodiversity is to focus mitigation on the impacts that are likely significant and/or require mitigation by legislation (HRA and WFD-related, invasive non-native species, protected species, and high value habitats) and to provide an overall 20% net gain in biodiversity in the long-term.

The RTS has previously utilised the Biodiversity Metric 3.0 to calculate Biodiversity Net Gain however, the *Consultant* shall adopt the revised Biodiversity Metric 3.1, incorporate this into the design for the RTS. The RTS adopts an approach that balances the principles and rules of the metric considering metric Principle 6 to ensure high quality habitats are provided; this will be guided by expert ecological judgement. The scheme has currently considered net gain as 9%, this is based on the outline design and 6 preferred HCAs. A further 5 HCAs have been identified with the potential to create additional net gain. There is an option to provide the balance of net gain via the identification of further sites or using an offsetting provider

The HCAs are included in the Landscape Concept Design, and their design will be influenced by the wider RTS landscaping objectives, with sites closer to the scheme providing a balance of net gain and wider objectives. Sites further from the scheme will likely have more of a net gain focus in their design. The *Consultant* is responsible for confirming the sites to provide 20% biodiversity net gain and developing the designs of the confirmed sites as part of a coherent landscape and green infrastructure design. The *Consultant* shall support the *Client* in engaging with site owners and managers and consults with stakeholders to develop the HCA designs.

The *Consultant* uses the Defra biodiversity metric to calculate the final biodiversity net gain the RTS will provide and ensures that 20% net gain is achieved, insofar as this is reasonably practical within the constraints of the project. The *Consultant* produces a report that includes the calculations and an explanation of any variations to the biodiversity net gain proposed at Stage 1 and Stage 2 of the landscape design appraisal. The *Consultant* shall submit the report to the *Client* for acceptance.

### **In-channel habitat**

The *Consultant* shall draw on the feasibility report for 'In-channel habitat and riparian zones' and optimises the landscape design of marginal habitat within the 10m riparian zone to achieve enhancements that contribute to the project's biodiversity net gain objective of 20%.

For lakes, the *Consultant* assesses the feasibility of the following and incorporates them into the design:

1. Wider shallow margins to increase complexity,
2. Lake shallowing and islands,
3. Opportunities to increase width of margin up to 10m and
4. Opportunities to link to other areas of habitat.

For engineered sections of channel, the *Consultant* shall consider the provision of wetted marginal shelf habitat and opportunities to link to other areas of habitat. For trapezoidal

sections of channel, the *Consultant* avoids uniform profiles and develops a naturalised approach.

### **Trees**

The *Consultant* shall ensure the design delivers tree planting to contribute to the project's carbon outcomes, as set out in the Carbon Management Plan (section 2.2.3.17). The *Consultant* shall weigh the extent of planting of trees for carbon sequestration against other core outcomes when appraising design options.

The *Consultant* shall ensure arboricultural impact assessments and proposed removal and retention information developed as part of the EIA is used to inform the landscape design.

### **Water Framework Directive and Habitats Regulations Assessment mitigation design**

The WFD compliance assessment and HRA undertaken as part of the *service* will require mitigations to be included in the design. Examples of these are:

1. Infilling and control structures at the Thorpe Park lakes,
2. Lake edge shallowing,
3. Shading,
4. Tree sinking,
5. Targeted macrophyte planting in the channel sections,
6. Tree planting for fish cover and
7. The control structure between St Ann's lake and Abbey lake.

For lakes, examples include:

1. Wider shallow margins to increase complexity,
2. Lake shallowing and islands,
3. Opportunities to increase width of margin up to 10m and
4. Opportunities to link to other areas of habitat.

The *Consultant* shall ensure mitigations are developed and confirmed as part of the HRA and WFD assessments. The *Consultant* shall include the mitigations in the technical assessment's mitigations register in section 2.2.1 and ensures consistency with design changes tracker in section 2.3.19. Once accepted the mitigations are integrated into the RTS reference design.

The *Consultant* shall ensure that the biodiversity net gain provided through the HCAs, public spaces or in-channel is additional to the proposed WFD and HRA mitigation design.

### **Materials Management**

The *Consultant* shall ensure the development of the landscape design is integrated with the materials management strategy to ensure that opportunities for re-use are identified and assessed for feasibility, ensuring that any material proposed for re-use is suitable for the proposed end-use design.

#### **2.4.3.10.1. Landscape design products schedule**

The *Consultant* shall confirm the information to be updated or developed in a landscape design products schedule. The schedule details all the proposed products, which of the design freeze points they apply to, which of the objectives in section 1.4 they support and the reasons for their inclusion. The schedule is consistent with the MIDP referenced in section 11 and is submitted to the *Client* for acceptance.

Once accepted the schedule is maintained by the *Consultant* and further revisions are notified to the *Client*.

#### **2.4.3.10.2. Landscape Concept Design appraisal**

The *Consultant* shall build on existing studies and apply the Landscape Appraisal framework to the Landscape Concept Design report to inform the development of the 'themes' into design option(s) for public consultation (Stage 1) and then into a final design for DCO (Stage 2).

At each stage, the *Consultant* shall submit the recommendations from the appraisal as a report to the *Client* for acceptance.

The *Consultant* shall produce desk studies to inform the appraisal which shall be submitted to *Client* for acceptance.

#### **2.4.3.10.3. Design drawings for Consultation with the public and other stakeholders**

Following Stage 1, the *Consultant* produces a set of drawings and illustrations to demonstrate design options for consultation with the public and other stakeholders. The *Consultant* works with the *Client* and Consenting Services provider to agree the objectives of the consultation and develops material accordingly. This shall include a narrative around the development of the design and the design principles of the options presented, and an indication of the feedback sought from consultation.

#### **2.4.3.10.4. Environmental masterplan**

The *Consultant* shall develop an environmental masterplan, at an appropriate scale which includes the existing landscape, the channel sections and associated infrastructure design. The masterplan shall include the landscape and ecology design information, with all biodiversity net gain outcomes, new public open spaces, and active travel enhancements. The *Consultant* shall ensure the masterplan references the environmental functions of the design including visual screening, landscape integration, biodiversity and nature conservation, visual amenity, heritage, water quality, leisure, and the built environment.

The *Consultant* shall submit the environmental masterplan to the *Client* for acceptance.

#### **2.4.3.10.5. Landscape design drawings, calculations, and schedules**

The *Consultant* shall update and develop the landscape design information in accordance with the landscape products schedule and the 'Landscape Institute's Landscape *Consultant's* Scope of Services Work Stage S1-3 Developed Design and elements of S1-4 Technical Design (as per the Landscape Institute's Digital Plan of Works Stage 3 and 4)'. The *Consultant* shall ensure the design is integrated with other parts of the *service* as a result of collaboration between disciplines such engineers, ecologists, geomorphologists, and landscape architects.

Drawings, calculations, and schedules are assembled into logical packages before submission to the *Client* for acceptance.

Landscape Design Products to include:

- a. Landscape general arrangement plans,
- b. Existing and proposed levels and contours,
- c. Illustrative cross sections,

- d. Reference specification for hard and soft landscape design,
- e. Drawings showing detailing and treatment of hard landscape surfaces (e.g., paths),
- f. Planting plans.

#### **2.4.3.10.6. Parameter plans**

The *Consultant* shall develop parameter plans to be used for elements of the project where the detail of the RTS design cannot be determined before DCO submission design freeze, such as building development areas, land use, access/circulation, landscape, and maximum building height as applicable. The plans include the parameters of the proposed element of the development, constraints, and restrictions within which the elements must be contained.

The *Consultant* shall assemble the parameter plans into logical packages and submit them to the *Client* for acceptance.

#### **2.4.3.10.7. Landscape and ecological management plan**

The *Consultant* shall develop a landscape and ecological management plan that sets out which landscape and ecological features such as vegetation and habitats will require protection and management during construction and during RTS operation post construction. The plan shall be in the form of a report which includes relevant tables, illustrations, and technical plans.

The landscape and ecological management plan include protection measures for landscape and ecology, reinstatement of vegetation and habitats post construction and the implementation of other ecological mitigation measures, together with the subsequent aftercare and, where applicable, monitoring arrangements. The outputs of the plan shall be translated into the requirements placed on the construction partner through the ECC scope developed as part of the *service*.

The *Consultant* shall consult with the *Client* and Others, including landowners during the development of the plan and submit the plan to the *Client* for acceptance.

#### **2.4.3.10.8. Updated landscape and green infrastructure study**

An update to the landscape and green infrastructure study produced in 2016 is being finalised. The *Consultant* shall further develop the landscape and green infrastructure study. The study follows the strategic approach for developing Green Infrastructure and best practice guidance as set out in the Landscape Institute Position Statement: 'Green Infrastructure: An Integrated Approach to Land Use, March 2013'.

The updated landscape and green infrastructure study are produced initially to inform the design development and then updated to account for the final Scheme reference design.

The study clearly outlines what design elements should be included in the design for the DCO and which elements are legacy items that can be delivered at a future time by SCC.

The *Consultant shall* submit the updated landscape and green infrastructure study to the *Client* for acceptance.

#### **2.4.3.10.9. Alignment with other services**

The *Consultant* shall work with the Consenting Services provider to ensure that the updated landscape design information is consistent with and integrated into the environmental

information required for the DCO and the EIA described in section 2.2.1. The *Consultant* shall:

1. Coordinate with the production of the LVIA and prepare a mix of type 1, 2 and 3 photomontages and visual representations for both the construction and RTS operational phases, after agreeing the relevant type of visualisation with the planning authorities,
2. Ensure the landscape and ecological management plan is consistent with the mitigation measures and net gain provision proposed as part of the EIA,
3. Ensure the landscape design is informed by flood risk, sequential test, and exception tests (if exception tests are required),
4. Ensure the landscape design supports the case (if required) to demonstrate very special circumstances for development in the Green Belt,
5. Ensure the landscape design incorporates cultural heritage characteristics and constraints,
6. Ensure the landscape design is integrated with water, geomorphology, and ecology disciplines in updates of the WFD compliance assessment and the HRA,
7. Ensure the landscape design is integrated into the understanding of geology, topsoil, subsoil, and landform contour requirements associated with geology, soils, and contaminated land and,
8. Ensure all consultation and engagement activity is recorded in the digital stakeholder relationship management platform managed by the Consenting Services provider.

#### **2.4.3.10.10. Planting procurement strategy**

To efficiently prepare for the volume of landscape planting during construction, the *Client* requires a strategy covering the procurement of planting to include seed collection and advanced nursery growing. The *Consultant* engages with the *Client* and other stakeholders and draws on best practice from other complex infrastructure projects and the 'Landscape Institute's 'Contract Growing Guidance' (JCLI Practice Note 11, October 2014)' to produce a planting procurement strategy. The *Consultant* ensures the strategy includes risks and opportunities of advanced growing and programme analysis, review and recommendations of potential suppliers and nurseries, estimates of costs and timescales and scopes for the procurement of recommended services.

The *Consultant* submits the strategy to the *Client* for acceptance. The *Client* notifies the *Consultant* as to how recommendations in the strategy are to be progressed.

#### **2.4.3.10.11. Visualisations**

The *Consultant* develops illustrative visualisations that are to be employed to aid explanation of the project for statutory and non-statutory stakeholders. The *Consultant* ensures the visualisations include points where key aspects of the RTS design integrate with existing communities/features. The visualisations are used by the *Client* and Others to ensure that technical and non-technical stakeholders have access to the information they need to reach an informed opinion.

The visualisations comprise a mix of mediums including digital visualisation and hand-drawn illustrations. The *Consultant* assembles visualisations into logical packages and submits them to the *Client* for acceptance.

#### **2.4.3.10.12. Open space assessment and Replacement land report**

The *Consultant* shall develop an open space assessment and a replacement land report (if required by the design) to support the landscape design. Both the assessment and report

shall be submitted to the *Client* for acceptance. Through the assessment and report the *Consultant* shall ascertain whether Special Category Land is to be included in the Order Limits (commons, open space or fuel or field garden allotment) and whether replacement land is required, in line with Sections 131 and 132 of the Planning Act 2008.

#### **2.4.3.11. Reference design report**

The *Consultant* shall develop a reference design report. The reference design report shall cover all aspects of the design undertaken by the *Consultant* as part of the Scope and includes the detail of the design development, consultation and engagement undertaken, integration with other parts of the Scope and key design activities for the construction partner. The reference design report shall be submitted to the *Client* for acceptance.

#### **2.4.3.12. Design changes tracker**

The *Consultant* shall develop a design changes tracker. The tracker developed by the *Consultant* shall build on the established tracker referenced in section 3. The tracker shall capture all design changes, including those arising from value engineering exercises and the environmental services, that the *Consultant* proposes. The *Consultant* shall ensure the tracker includes:

1. Reasons for the design change,
2. Benefits to the *Client*,
3. Consultation undertaken,
4. The implications of the proposed change on the *Client's* objectives,
5. Sustainability and carbon implications of implementing the proposed change,
6. Details of who needs to be informed from the *Client* and Others of the change and confirmation they have acknowledge or accepted it as required and,
7. Cost and time implications of implementing the proposed change.

The *Consultant* shall assess the changes relative to the baseline outline design at the starting date and submits the design changes tracker to the *Client* for information at intervals no greater than each month or after a major change.

#### **2.4.3.13. Constraints register**

The *Consultant* shall develop an ECC constraints register which details all constraints that the ECC contractor will need to work with. The register shall include details of the constraints, where it comes from and any further information on working with it. The constraints shall include but not be limited to those due to access or working arrangements, those imposed by Others, those due to outputs from environmental services and those due to outputs from the design developments. The constraints register shall be issued by the *Consultant* quarterly for information until is it ready for incorporation into the ECC scope at which point it shall be submitted to the *Client* for acceptance.

## **2.5. Consents and Permits**

### **2.5.1. Overview**

Appendix B contains an indicative list of consents and permits required to support the RTS and these have been identified by the *Client* in the previous phases of the scheme. The Consenting Services provider is responsible for the identification, verification of need for consent and preparation of all the consents and permits that will be submitted as part of the DCO application.

The *Consultant* shall collaborate with the *Client* and the Consenting Services provider to undertake a review and advise of any gaps or considerations to Appendix B including the consents and permits that will be included in the DCO and those that will be provided separately.

The *Consultant* shall proactively engage with the Consenting Services provider to agree the technical inputs required to support the development and application of consents required for the DCO. The agreements shall include the content and programme for supply thereof. The agreements shall be made to support the wider RTS programme and evidenced through an interface tracker that is available to the *Client* for information, meeting minutes and incorporated into the *Consultants* contractual programme.

The *Consultant* is responsible for the identification, verification for need of and preparation of all other consents and permits that are not being submitted as part of the DCO application, this shall include those listed in Appendix B and others the *Consultant* believe necessary to support the scheme's objectives, up to commencement of construction. Additionally, this shall apply to identifying and progressing consents which are required for later in the scheme if meaningful progress could or should be made during this phase of the scheme. All consents developed by *Consultant* shall be submitted to the *Client* for information. The *Client* shall pay the fees and submit the applications for consents and permits.

The *Client* has prepared a technical note on the approach to water and waste permits required from the *Client's* National Permitting Service in the 'Water and Waste Permits – Consents Strategy Appraisal' referenced in section 3, this shall be adopted and developed through the consultation with the *Client*, the Consenting Services provider, and other relevant stakeholders to confirm the approach for obtaining Water and Waste Permits. The *Consultant* shall have the approach accepted by the *Client*. The *Consultant* shall utilise the accepted approach to deliver the relevant aspects of their responsibilities.

### **2.5.2. Consents and Permits required**

The *Consultant* shall develop a Consents and Permits plan, the consent permits listed in Appendix B as 'Development' and supporting technical information required by the consenting services provider (those listed as 'technical support').

### **2.5.3. Consents and Permits specific requirements**

The *Consultant* shall review the requirements of this Scope, the existing information referenced in section 3 and the indicative list of consents and permits in appendix B and produce a consent and permits plan. The plan shall cover both the consents and permits the *Consultant* is responsible for and those where they are providing technical information to Others. The plan shall include details of the consents and permits required, responsibilities of themselves and Others, timescales, validity, supporting information requirements, references to other services, cost estimates for the consultation and engagement required for each permit. For consents or permits under the purview of the Consenting Services provider, the plan shall summarise the responsibilities of the *Consultant* only.

The plan shall include those consents and permits required pre-construction, during construction and post-construction and for these proposes who should have responsibility for obtaining them. The *Consultant* shall ensure the ECC scope is consistent with any responsibilities identified for the construction partner in the plan.

The plan shall be reviewed and revised quarterly to confirm currency and the *Consultant* shall submit each revision to the *Client* for acceptance.

The *Consultant* shall re-submit for pre-application advice on water-related permits (to include weirs and Desborough bed lowering) and submit for pre-application advice on waste-related permits to the *Client's* National Permitting Service in line with the *Clients* consents strategy appraisal in section 2.4.1.

## 2.6. Materials Management

### 2.6.1. Overview

The *Client* has undertaken ground investigations and commissioned an observational ground model. This informed the development of a materials management strategy. Further details of these items can be found in Section 3. The materials management strategy included consideration of the design of several new accessible green open spaces. These spaces are anticipated to be landscaped with material excavated to form the new channel sections as a sustainable and beneficial solution for the local communities

Since the completion of that initial materials management strategy several changes to the design are now required, the main ones being those described in section 1.5.

The pre-application, statutory planning consultation undertaken in 2019 confirmed that elements of the materials management strategy did not receive full support from stakeholders including the Environment Agency in their role as Statutory Consultee for Planning and Surrey County Council in their role as Waste Planning Authority.

In May 2021, the Strategic Delivery Board approved a recommendation to optimise the scheme's approach against the pre-application responses understanding the recent changes to the scheme consenting route and SCC Waste Policy.

In summer 2021 the *Client* led a Materials Management Options Appraisal endeavour through a series of focussed stakeholder sessions and multi-disciplinary workshops. The feedback and comments received during these sessions informed the options appraisal process, presented in the Materials Management Options Appraisal Report (see Section 3) which forms the basis of both the strategy and the additional design elements required to conclude the derived outcomes required.

The appraisal process identified an approach to materials management, including evidence requirements to support the approach and to respond to future challenges. The *Consultant* shall follow the approach as illustrated in the schematic in Figure 1.

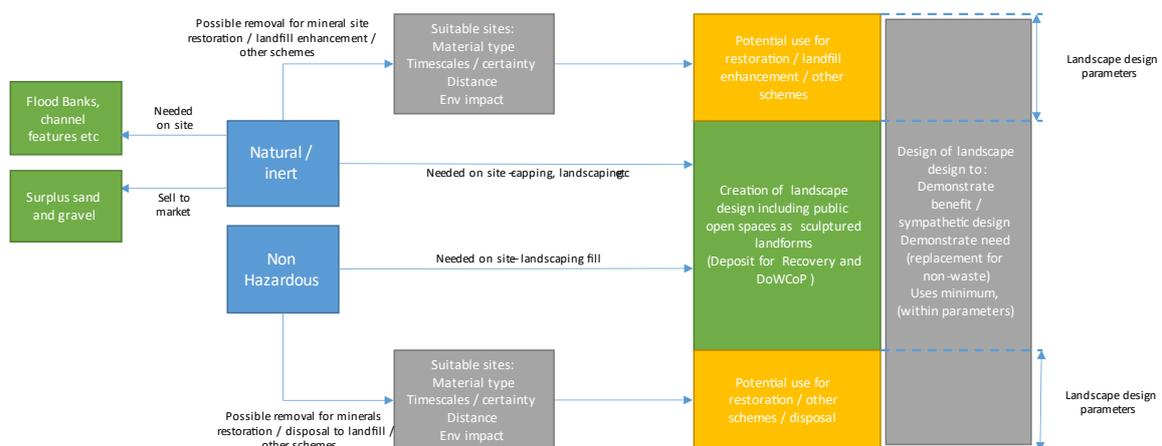


FIGURE 1: RECOMMENDED APPROACH FOR MATERIALS MANAGEMENT ON THE RTS.

The recommendation is for a legally robust case to be prepared for the use of excavated material, where suitable, to construct the scheme, including the green open spaces. This includes:

1. The reuse on-site of suitable excavated materials (e.g., inert naturally occurring) through the Definition of Waste: Code of Practice (DoWCoP) (not discussed in detail in the options appraisal but a core aspect of the 2018 strategy and remains part of the overall preferred approach)
2. The recovery of waste materials undertaken under a Deposit for Recovery permit
3. Investigation into the scope for the use of material to assist in restoration / landfill / enhancement / other schemes should there be surplus material beyond that used to deliver the scheme design (if those options are deemed suitable upon further investigation).

A feasibility study is currently underway to identify suitable destinations for the receipt of surplus material from the RTS. Alongside the feasibility study an assessment of alternate modes of transport is being undertaken to inform opportunities to minimise road movements of surplus material. This information will be made available to the *Consultant*.

### **2.6.2. Outcomes required**

The *Client* requires further studies / evidence gathering to be undertaken as identified in the recommended approach. The *Client* also requires a revised MMS to be prepared to ensure that the adopted approach has stakeholder support and will support the OBC – FBC phase objectives. The *Consultant* shall use the technical information currently available and undertakes further technical studies / evidence gathering to support the achievement of the following objectives:

1. There is a strategy for materials management that supports sustainable management of excavated material, enables the recovery of waste, and maximizes reuse, minimizes construction traffic, Landfill Tax and Aggregates Levy liability. The strategy is supported by all relevant stakeholders and all necessary permits to implement the strategy can be obtained. The MMS should demonstrate that it can be delivered through robust analysis of the nature of the expected materials to be excavated and the intended end destination for the reuse or recovery of the materials within the red line boundary of the site.
2. The MMS should inform and test the scheme permitting strategy developed by other scheme partners to ensure viability.
3. The MMS should provide confidence that there is sufficient capacity in the market to support the scheme objectives and the objectives and criteria detailed in the feasibility study and should receive both SCC and the EA stakeholder support.
4. There is support for the strategy and scheme design from the RTS partners and planning authorities, including agreement that the strategy and design are aligned with the RTS Vision and relevant national and local policy, and acceptable in terms of planning policy and local community support.
5. There is a sustainable management plan for the eradication / management of terrestrial invasive non-native species such as Japanese knotweed.

Ensure that the materials management strategy is fully aligned with the overall scheme design and ensuring that there is full stakeholder support, both statutory and non-statutory

### **2.6.3. Deliverables required**

The *Consultant* shall prepare the following deliverables to support the recommended approach. The *Consultant* shall work with the *Client*, Others, and the relevant stakeholders to ensure timeframes for deliverables align with any consultation timeframes and audiences required, such as pre-application advice, or other related part of the Service being delivered by the *Consultant*.

It may be necessary to develop some deliverables in stages iteratively throughout the DCO pre-application stage. The *Consultant* shall work with the *Client* to identify relevant interdependencies to establish a programme of delivery that shall form a section in the contractual programme.

#### **2.6.3.1. Product descriptions**

The *Consultant* shall develop product descriptions for the following products using the *Client's* template referenced in section 4.

- Materials Management Strategy
- Waste Recovery Plan
- Carbon Assessment

The *Consultant* shall submit the product descriptions to the *Client* for acceptance and does not commence work on a product until acceptance is notified formally.

#### **2.6.3.2. Materials Management Strategy**

The *Consultant* shall review the “materials management strategy” referenced in section 3 in relation to the design changes in section 1.4 and the outcomes in section 2.6.2.

In line with the recommended approach contained within the Materials Management Options Appraisal Report - P05 (ENVIMSE500260-EA-00-00-MA-EN-0001) and any feedback received / further information obtained from the further evidence gathering work undertaken in the above section, the *Consultant* shall develop a materials management strategy that interfaces with the overall scheme design and supports the DCO submission and the ECC scope, taking into consideration and further developing from the accepted product description.

The strategy shall describe the approach to undertaking the material excavation, processing, stockpiling, and end-use placement needed that will meet all relevant policy requirements, including relating to waste management and flood risk. The approach shall be supported by all relevant consultees and demonstrated by all relevant risk assessments, including a flood risk assessment.

The strategy shall follow the contents structure of the product description and shall revise and/or build upon and supplement the MMS report referenced elsewhere. As a minimum it should include:

1. An assessment and description of the material quantities and types, both non-waste and waste, required to be excavated to construct the RTS. Wastes should be classified in accordance with WM3, including the EWC code,
2. An assessment and description of the material quantities and types, both non-waste and waste, required to construct the RTS including landform volumes, relevant reuse criteria (both chemical and geotechnical) and the overall materials balance. To include mapping of potential end use destinations for materials based on volumes and suitability for use,

3. An assessment and description of the materials handling, processing, and treatment requirements, including proposed locations, details of relevant consent/permits and layouts for these facilities. This should account for the program/rate of excavation and consider seasonality,
4. An assessment and description of topsoil, subsoil and other naturally occurring materials pre-construction and post construction including the locations and space required for stockpiling and re-use opportunities. The chemical and geotechnical suitability of these materials for reuse within RTS should be included in the assessment,
5. Clarity on the handling properties, such as water saturation levels, of the excavated materials that will quantify the loading on existing underlying landfills at the green open space locations and the effects on both leachate and groundwater of reusing materials within RTS,
6. Development and description of a proposed approach to stockpiling material, to include locations, space required, stockpile management and anticipated stockpile durations,
7. A materials transportation plan that optimises the number and distance of vehicle movements required,
8. Analysis of the extent to which the proposed strategy is compliant with planning policy, including that relating to Waste, Flood Risk and Green Belt. The analysis includes reference to, and summary of assessments or deliverables undertaken as part of this Scope, or by Others, such as the Flood Risk Assessment and landscape design optimisation. The Consenting Services provider reviews the policy compliance element and should be consulted as the Materials Management Strategy progresses, alongside the Environmental and Technical Steering Group and targeted Waste Steering Group,
9. A description of how the Strategy complies with the requirements of the recommended waste permitting route. The description includes reference to assessments or deliverables undertaken as part of this Service, or by Others, such as the Waste Recovery Plan or relevant risk assessments,
10. A review of the risks and feasibility of a range of different regulatory routes for the placement of materials and wastes within the Order Limits. This should consider material types, volumes and geographically where materials and/or waste could be placed. This should also consider the opportunities for mineral restoration within the County of Surrey balanced against the material types and quantities required to construct the scheme and,
11. A review of the risks, opportunities and issues associated with the revised materials management strategy and mitigations proposed. The description includes reference to assessments or deliverables as part of this Service, or by Others, such as the EIA.

The *Consultant* shall ensure the Materials Management Strategy seeks and takes on board feedback received from internal stakeholders (the RTS Materials Management Steering Group, the Consenting Services provider's waste management expert and the *Client's* legal advisor) and external consultees (the Environment Agency's NPS and Sustainable Places). The *Consultant* supports the Consenting Services provider in pre-application engagement and consultation with the local planning authorities, in particular SCC as the Waste and Minerals Authority. The final Materials Management Strategy will reflect the final scheme design and be submitted as part of the DCO. The revised strategy shall be submitted to the *Client* for acceptance.

### **2.6.3.3. Surveys and site investigations**

The *Consultant shall* review the existing geotechnical information and relevant reports referenced in section 3 in relation to the objectives in section 2.6.2. Special attention is drawn on the existing environmental gap analysis and the products delivered to satisfy the gaps previously identified.

The *Consultant shall* validate the information and data and take forward any suggestions derived as the outcome of such reports. If further work is then believed to be necessary to achieve the objectives, then the *Consultant shall* prepare a report detailing the further surveys and site investigations proposed.

The *Consultant shall* ensure that any pre-construction monitoring requirements, identified in the risk assessments (see section 2.6.3.7) are satisfied and included in the report. Where monitoring is required, the *Consultant shall* identify this early to mitigate programme risk. As a minimum the report describes the reason for, objectives of and the detailed scope of each survey and site investigation. The report is submitted to the *Client* for acceptance. The *Client* notifies the *Consultant* as to how proposed surveys and site investigations are to proceed.

#### **2.6.3.4. Waste Recovery Plan**

The *Consultant shall* develop a Waste Recovery Plan, in line with current Environment Agency guidance and advice from relevant technical specialists (waste technical steering group, NPS and Legal) to be submitted to assist and inform the Deposit for Recovery permit as per the requirements of the recommended approach.

The aim of the Waste Recovery Plan is to demonstrate whether the scheme meets the legal waste recovery test as expressed through case law and relevant guidance.

One element of the test states that “*Depositing waste is only a recovery activity if you have shown that you could and would have carried out the works using non-waste material*”.

The Waste Recovery Plan should include evidence to support the recovery of waste, including but not limited to:

- An assessment of the financial implications of using a non-waste material in the green open space design, demonstrating whether the funding secured would be able to cover the costs should non-waste material be brought in for the requirements of the landscape design and/or that the works would have been undertaken using non-waste material if non-waste material could not be used. This would support the ‘funding to use non-waste’ factor identified in the guidance. It would also quantify the expected costs of using non-waste material if the Deposit for Recovery permit were refused. The *Client* notifies the *Consultant* of the quantum of funding secured.
- An assessment to demonstrate the ‘financial gain or other worthwhile benefit by using non-waste materials. This is likely to include:
  - a review of social, environmental, and economic benefits of the proposed landscape design to demonstrate the need for material to maximise benefits for biodiversity, health, recreation, and landscape. The *Consultant shall* ensure that benefits are evaluated in accordance with relevant national and local policy and build on the existing landscape and green infrastructure studies and the current natural capital and feasibility work by Others. This should also include any feedback from relevant consultation for the design which demonstrates support or otherwise.
  - Monetisation of the benefits by means of the natural capital assessment (refer to 2.2.3.18) to assist with justifying the economic case associated with

financial gain. The *Consultant* shall work with the *Client* and relevant stakeholders to agree a methodology for this work prior to commencement. The *Consultant* shall engage with NPS for pre-application advice covering the structure of the Waste Recovery Plan.

The *Consultant* shall work with the *Client*, legal advisors and NPS to agree a submission timetable for the preparation, review, amendment, and finalisation of the Waste Recovery Plan prior to this being submitted to NPS for pre-application advice and the typical subject matter appropriate for each section within the plan.

Submission of draft contents of the Waste Recovery Plan to NPS for pre-application advice should only be undertaken once a legally robust case has been prepared.

#### **2.6.3.5. Carbon Assessment**

The *Consultant* shall undertake an assessment of the carbon emissions for each option as defined in the Materials Management Options Appraisal Report

The assessment should include all activities that are likely to account for more than 5% of carbon emissions associated with each of the options. The assessment is likely to include the transport of material from and to sites, the mode of transport, any processing requirements and maintenance requirements taking into consideration also the output of the alternative modes of transport report. The carbon assessment should also include the embodied carbon of large machinery as a proportion of the machinery's predicted life cycle embodied carbon.

A methodology statement for the assessment will also be required and should include details of any carbon tool or emission factors used for calculations and the assumptions and limitations that will be applied.

The *Consultant* shall submit the scope of assessment (Product Description) and methodology statement to the *Client* for acceptance before undertaking the carbon assessment.

The final carbon assessment results must show a clear comparison between the options.

The *Consultant* shall use the results to inform any of the other evidence supporting the materials management recommended approach.

The Carbon Assessment and Technical Method Statement shall be submitted to the *Client* for acceptance.

#### **2.6.3.6. Landfill Location Policy and Test**

The *Consultant* shall simulate the outcome of applying the Landfill and Deposit for Recovery Location Tests set out in the Environment Agency's guidance on the protection of groundwater. The *Consultant* requests pre-application advice from NPS and seeks to demonstrate that the intended waste deposit approach meets the location test criteria and will not generate objections from the Environment Agency at the planning consultation stage. This pre-application advice is used by the *Client* to inform consideration of alternative approaches should the recommended approach prove to be unviable.

#### **2.6.3.7. Stability risk assessment**

The *Consultant* shall undertake a stability risk assessment that would be expected for a landfill permit application, and for a bespoke DfR application unless the need for it is

discounted, in whole or in part, via a screening exercise. For Deposit for Recovery and Inert Landfill activities the *Consultant* undertakes the risk screening exercise and prepares the stability risk assessment in line with the Environment Agency's guidance. For a Non-Hazardous Landfill activity, the *Consultant* undertakes the risk screening exercise and prepares the stability risk assessment in line with the Environment Agency's guidance.

#### **2.6.3.8. Optimisation of the landscape design**

As part of the landscape design work the *Consultant* shall review the proposals in accordance with 2.4.3.11. Following this, as noted in 2.6.3, the *Consultant* shall undertake an assessment to determine the expected quantity of material necessary to construct the scheme (including the landscape requirements), including any design tolerances and noting the constraints on accuracy imposed by the ground investigation data.

This optimisation work will provide an indication of the amount (if any) of surplus material available for the diversion of material to other suitable sites.

#### **2.6.3.9. Consenting strategy and permit applications**

The *Consultant* supports the *Client* and Consenting Services supplier in developing and managing the Consenting Strategy for the scheme, in line with the materials management recommended approach.

The *Consultant* shall notify the *Client* if any information received during the course of its *service* presents a significant risk to the viability of the material management recommended approach or the Consenting Strategy.

The *Consultant* prepares the technical information required to support the permitting applications for the recommended approach described in the accepted revised Materials Management Strategy, the Waste Recovery Plan, and the Consenting Strategy.

Risk assessments and/or specific and detailed Reports should be completed to support the permit application and shall include and not be limited to the below:

1. A hydrogeological risk assessment, which should be submitted to the *Client* for acceptance
2. An assessment of the risks and potential recovery of energy from landfill gas, in line with Environment Agency guidance and the Waste Recovery Plan. The report should be submitted to the *Client* for acceptance.
3. An assessment of the design, construction, and operational impacts of complying with the landfill engineering requirements of the Waste Framework Directive. The report should be submitted to the *Client* for acceptance.

The *Consultant* shall support the *Client* in pre-application engagement and consultation with the *Client's* National Permitting Service in respect to environmental permits.

#### **2.6.4. Mineral Resource Assessment**

Where the scheme does not propose to extract all mineral resource from Minerals Safeguarding Areas, the *Consultant* shall undertake a Mineral Resource Assessment which should set out (but not be limited to):

- the investigations undertaken to establish the quantity and quality of the mineral resource (the depth and quality of mineral) in the national and local market,
- the viability of the deposit,

- justification for the scheme and whether the merits of the development clearly outweigh any impacts on mineral resources or mineral infrastructure,
- any constraints,
- information on the volume of soils and overburden that would be generated from any mineral extraction and their intended end use and,
- if the total volume of mineral is not to be extracted from Abbey Meads, justification for why this is not proposed.

### 2.6.5. Technical Engagement

The *Client* forms a multi-organisational steering group (referred to as Material Management Steering Group) focused on enabling wide specialist consultation and advice that can assist the *Consultant* in developing the revised Materials Management Strategy. The steering group includes representatives from the ESE Services provider, Surrey County Council, and specialists from the *Client*.

The *Consultant* shall provide as a minimum an appropriate person (as defined in section 4.1) to be part of the steering group. Other members of the *Consultant* team should attend as required by agenda and ongoing works.

The steering group meets monthly until such time that is no longer required by the ongoing works and is to be a joint decision between *Client* and *Consultant*.

The *Client* shall set the terms of reference and objectives of the steering group and organises the initial start-up meeting.

The subsequent involvement of the Steering Group shall be agreed between the *Client* and the *Consultant* and subsequent meetings are to be organised and chaired by the *Client* with material prepared and meeting minutes recorded by the *Consultant*. The recorded meeting minutes are to be officially submitted via document control for information and circulation within the *Client* team.

## 2.7. Engineering and Construction Contract

### 2.7.1. Overview

The RTS assets are proposed to be built by a construction partner using a NEC4 ECC Option C contract. The works will be procured via an open market tender process.

The *Client*, from market engagement, is proposing to use option X22 and have a period of ECI – thus creating a two-stage process. It should be noted the ESE Services provider will continue to provide construction advice to the *Client* until the construction partner contract has been awarded.

The two stages of the ECC contract shall be:

1. Detailed design; consenting and permitting; site investigations; supply chain development; DCO examination support
2. Construction and handover.

The *Client's* governance process does not allow Stage Two to proceed until the DCO has been granted and the FBC approved.

### 2.7.2. Engineering and Construction Contract deliverables required

The *Consultant* shall be responsible for developing the ECC technical contract documents. These are intended to be:

- The ECC scope,
- The site information,
- Reference technical information and,
- A configuration and consultation plan.

The *Consultant* shall produce a product description for each item above, as well as the product itself. All deliverables shall be submitted to the *Client* for acceptance. The *Consultant* shall ensure that the ECC Scope development is developed in parallel with the other deliverables in the programme. The *Consultant* shall work with the *Client* to develop and where possible, finalise the elements of the scope that are well defined early in the programme and not leave the drafting of the ECC scope to a later point in the *Consultant's* programme.

### **2.7.3. Engineering and Construction Contract deliverable specific requirements**

#### **2.7.3.1. General Requirements**

The *Consultant* shall assume there will be two rounds of drafting and revision with the *Client* for each deliverable in this section of the Scope. The *Consultant* shall subsequently update the deliverables following negotiation with short-listed tenderers before contract award.

The *Client* shall conduct further construction market engagement and develop tender documents, the tender evaluation process, and the non-technical contract documents. Following receipt from the *Client*, the *Consultant* shall review the *Client* prepared documents and through consultation with the *Client* identify and agree amendments to the technical and non-technical documents to best suit the objectives of the wider programme. Following this review, consultation and amendment process the *Consultant* shall exercise reasonable skill and care to provide the *Client* with a statement of assurance regarding contract document consistency.

The *Consultant* shall assist the *Client* with responses to technical clarifications that arise during the selection and tender processes. During tender negotiations, the *Consultant* advises the *Client* on the implications of proposed changes to the ECC scope and site information. As described above the *Consultant* shall revise the technical contract documents with the outputs of these negotiations and obtain acceptance from the *Client*.

#### **2.7.3.2. ECC scope**

The *Consultant* shall use the 'NEC4 User Guide Volume 2 – Preparing an Engineering and Construction Contract' and the ECC scope template referenced in section 4 to develop the ECC. Where there is conflicting guidance, the suggested content and numbering system in the 'NEC4 User Guide' takes precedent.

The *Consultant* shall engage and consult with the *Client* on the key points to be considered in the ECC scope. If no overriding RTS or *Client* direction is available, the *Consultant* shall use industry best practice and the contents of the *Clients* Collaborative Delivery Framework schedules to define the requirements.

The *Consultant* shall lead all sections except as follows where they shall support the *Client*:

- S 1600 Ultimate holding company guarantee,
- S 1700 Undertakings to the *Client* and Others,

- S 1800 Transfer of rights,
- S 2000 Performance bond and

The *Consultant* shall develop the ECC scope accounting for the content of the following subsections (2.7.3.2.1 – 2.7.3.2.12), noting this not an exhaustive list.

#### **2.7.3.2.1. S100 description of works**

The *Consultant* shall ensure the description of works is consistent with the deliverables produced by this Scope, the *Client's* construction partner procurement strategy, the *Client's* collaboration agreement with Surrey County Council and any outputs from ESE. The *Consultant* shall ensure any work in Stage One is detailed including site investigations, condition surveys or enabling works.

#### **2.7.3.2.2. S200 General constraints on how the Contractor provides the works**

The *Consultant* shall ensure all constraints identified as part of this Scope, the other packages OBC-FBC packages (described in section 1.5) or contained in the constraints register are stated. This shall include land access constraints or those arising from consultation undertaken during the DCO process.

The *Consultant* shall consider and include the following constraints, over and above those referenced in paragraph one:

- The ECC contractor should provide a suitable project office which has capacity to accommodate the *Client's* team and other key stakeholders. The office location shall facilitate continuity with Stage Two,
- How the ECC is to ensure consistency with and delivery against the RTS objectives,
- Sustainability and carbon management requirements and constraints are consistent with the *service* delivered in this Scope,
- The ECC contractor shall be encouraged to develop plans for low carbon construction methods and materials and reducing the impacts of fuel usage, plant operations, water, and power usage,
- How artifacts recovered from archaeological investigations and construction activities are to be archived,
- Waste removal, recycling and re-use shall be consistent with the materials management strategy
- Requirement for attaining CEEQUAL targets during the ECC phase and registration with the Considerate Constructors Scheme and the expectation for the RTS to be Ultra Site
- Interfaces and constraint which regard elements delivered by Others such as National Highways.

#### **2.7.3.2.3. S300 Contractor's design**

It shall be explicitly clear that the ECC contractor is responsible for the detailed design of the RTS except for elements around National Highways M3 motorway assets and utility diversions and connections. It shall be clear the RTS hydraulic design with respect to the capacity, remains the responsibility of the *Client* however the ECC contractor shall be responsible for ensuring the design life and performance requirements are achieved.

The ECC contractor shall provide all detailed design information during Stage One and should be developed from the *Consultants* reference design. The detailed design shall be consistent with the RTS objectives including sustainability and carbon management.

The ECC contractor shall undertake value engineering where there are real opportunities to not reduce the quality of outputs or impact known constraints. The ECC contractor shall present opportunities to *Client* for acceptance.

The ECC contractor shall develop the design to enable construction innovation and optimisation of approaches such as design for manufacture and assembly. Additionally, all design approvals, required of Others (such as landowners and utility companies) shall be explicit.

The ECC contractor shall develop a Design Management Plan which includes a structure of regular design meetings with the *Client* and detail of the logical packages they will use to submit the designs to the *Client*.

#### **2.7.3.2.4. S400 Completion**

Completion shall be set as upon completion of all work including landscaping, 12 months' landscape maintenance and all documentation accepted by the *Client*, including the health and safety file.

Sectional completions shall be used for each weir complex at Sunbury, Molesey and Teddington including the fish passes, the two channel sections and all landscaping installation and establishment.

Proprietary software or an internet-based system shall be used for defects management, it shall allow multi-user access, status reporting and tracking.

#### **2.7.3.2.5. S500 Programme**

This section shall be drafted by the *Consultant* with input from the *Client's* planner.

#### **2.7.3.2.6. S700 Tests and inspections**

The ECC contractor shall prepare a commissioning plan for acceptance. The plan shall include but not be limited to details of testing pile seals, building services commissioning and, how the intake and weir gates will be tested and brought into service.

#### **2.7.3.2.7. S800 Management of the works**

Additional to the standard meeting and reporting requirements, the ECC contractor shall attend the following meetings:

- Monthly strategic governance board meetings to report on progress, performance, risks, and issues,
- Monthly SHE and well-being performance

#### **2.7.3.2.8. S900 Working with the *Client* and Other**

It shall be clearly stated what requirements the ECC contractor has with respect to around existing weir complexes, highways, and utilities. Additionally, any responsibilities identified through delivery of this Scope shall also be listed.

#### **2.7.3.2.9. S1000 Services and other things to be provided**

The accommodation shall be provided in accordance with S200 and the *Client's* objectives for sustainability and carbon management. This section shall include the relevant details from the planning procurement strategy developed by this Scope.

#### **2.7.3.2.10. S1100 Health and Safety**

This section shall align to the requirements of the *Client's* SHEWCoP document reference in section 4.

#### **2.7.3.2.11. S1200 Subcontracting**

The ECC contractor shall produce a subcontract procurement plan for acceptance. The plan shall detail the planned subcontract packages, estimated value, timing and the proposed procurement and contract route.

The ECC contractor shall prioritise the use of local small and medium sized enterprises wherever possible and report on opportunities for their engagement as part of the requirements in S800.

#### **2.7.3.2.12. S2500 Early Contractor Involvement**

The *Consultant* shall ensure the work required in Stage One is described, it is stated that Stage Two cannot proceed until DCO is granted and FBC approved, and design submission and acceptance information is consistent with S300.

The *Client* shall provide the Budget for this section however the *Consultant* shall consult with the *Client* when drafting this section with particular interest to the Budget, Stage Two prices, and the activity schedule.

#### **2.7.3.3. Site information**

The *Consultant* shall use the 'NEC4 User Guide Volume 2 – Preparing an Engineering and Construction Contract' to develop the site information. The *Consultant* shall submit the site information to the *Client* for acceptance.

The *Consultant* shall review the requirements of this Scope and the existing information referenced in section 3 to prepare a site information data gap analysis report. The report shall detail the additional information required, the reasons it is needed, timescales and cost estimates. The report shall be submitted to the *Client* for acceptance and the *Client* notifies the *Consultant* how the additional information is to be obtained.

#### **2.7.3.4. Reference technical information**

The *Consultant* shall collate the technical information that is referred to within the ECC documents and submits the reference technical information to the *Client* for acceptance.

#### **2.7.3.5. Configuration and consultation plan**

The *Consultant* shall develop a configuration and consultation plan for the development of the ECC scope and site information. The plan shall include the following:

1. Details of how control is to be maintained over consistency and accuracy of the documents during their development and
2. A detailed plan of who is to be consulted from the *Client's* team and Others in the development of each section of the documents.

The *Consultant* shall submit the plan to the *Client* for acceptance and shows consultations on the programme.

## **2.8. Full Business Case**

The *Client* shall use the approved OBC as a basis for drafting the FBC. The *Consultant* shall ensure the deliverables required for the FBC are sufficiently developed and included in the FBC deliverables to allow a full cost and benefits analysis to be undertaken. An indicative list of sections and the remit of the *Consultant* is provided below. The *Consultant* shall liaise with the *Client* to agree the full list of technical information to be delivered as part of the Scope prior to submission of the FBC. The *Consultant* shall support the *Client* during the FBC review and approval process by developing responses to questions relating to information provided by the *Consultant*.

### Scheme Plans

The *Consultant* shall prepare a series of scheme plans suitable to be read by individuals from a non-engineering background and visible at A3. The scheme plans shall show the key scheme features and characteristics of the scheme.

### Technical Reports

The *Consultant* shall update the existing technical reports and develop any new reports as described by this Scope or required to reflect the scheme at the time of the FBC submission. The *Consultant* shall demonstrate technical changes in the scheme since OBC as well as the technical aspects of the scheme.

### Environmental Reports

The *Consultant* shall update the existing technical reports and develop any new reports as described by this Scope or required to demonstrate the impacts of the scheme have been suitably considered with the scheme.

### Carbon assessment and technical method statement

The *Consultant* shall complete the Carbon Assessment of the scheme in accordance with the relevant sections of this Scope.

### Cost and Benefit Analysis

The *Consultant* shall review and update the cost and benefit elements of the OBC to account for the reference design at the FBC stage.

#### **2.8.1. Assumptions for engagement during FBC review**

The *Consultant* shall assume 500 hours of support by the relevant technical and non-technical parties during the FBC review and approval phase to resolve queries and provide further information.

## **2.9. Development Consent Order**

The *Consultant* is required to provide *service* to support the DCO process.

Over and above the *services* described in this Scope, the *Consultant* shall provide the following during the Pre-Application phase of the DCO process:

- Provision of technical information, plans and drawings to support the DCO Requirements
- The production of relevant management and mitigation plans that are to be secured through the DCO and section 106 Agreements,
- Assisting the Legal provider in developing the DCO Requirements and section 106 obligations required and associated documentation,
- Assisting the Consenting, Land and Legal providers in determining the land requirements for the Scheme and negotiating with landowners,
- Assisting the Consenting and legal providers in determining the limits of deviation and parameters that are to be applied to the consent and,
- Introduction to the relevant bodies and familiarisation of the expert witnesses who will be representing the project at DCO Examination.

Over and above the *services* described in this Scope, the *Consultant* shall provide the following during the Pre-Examination, Examination, and post-Examination/pre-Decision periods of the DCO application.

- Any necessary updates to application documents or the RTS reference design.
- Attendance at, preparation for and actions following discussions with stakeholders and landowners including assisting with Statements of Common Ground, land agreements and section 106 Agreements.
- Drafting submissions throughout the Examination process and participating in the review process for such submissions, including but not limited to responding to Examining Authority questions and Written Representations.
- Providing expert witnesses for the Examination hearings including their time for hearing preparation sessions with Counsel and Legal provider; and contributing to written briefing notes and post hearing oral submissions.
- Assisting the Legal provider in developing updates to drafting of the DCO and section 106 Agreements and,
- Production of new management and mitigation plans where this becomes necessary because of third-party submissions or Examining Authority questioning.

As with the relevant sections of this Scope, the *Consultant* shall ensure the requirements of the Consenting Services provider are understood, agreed, and documented to support the delivery of this *service*.

An indicative list of the deliverables and the responsibility of the *Consultant* is contained in Appendix A, in addition to these deliverables the *Consultant* shall:

- Provide a consents and agreements position statement detailing the status of all consents outside of the DCO,
- Review and input to the draft consultation strategy. Develop a RACI to confirm who should be consulted on each element of the design and make recommendations on groupings of consultees to form 'discussion' or 'steering' groups.
- Review the commitments register produced by the Consenting Services provider and ensure that the commitments have been accommodated in the design proposals.

### **2.9.1. Assumptions for engagement during DCO Examination**

The *Consultant* shall assume 250 hours each from 4 relevant technical experts to support the DCO examination process.

## 2.10. Consultation and Engagement

To meet the *Client's* objectives in section 1.4, extensive consultation and engagement with stakeholders is required by the *Client*, the *Consultant* and Others. The *Client* has developed a high-level DCO consultation strategy referenced in section 3. The Consenting Services provider has an overall coordination role. The *Consultant* and the Consenting Services provider are equally responsible for achieving the Development Consent Order.. The *Consultant* is responsible for consultation and engagement with stakeholders (including sponsors and their stakeholders) required to develop the technical information in this Scope and inform them of progress. The *Consultants service* shall include ensuring the reference design has undergone reasonable consultation and engagement prior to the Consenting Service's consultation process to enable the successful completion of statutory consultation.

The *Consultant* shall review the requirements of this Scope and existing information referenced in section 3 to develop a matrix of parties which require consultation and engagement to deliver their Scope. The *Consultant* shall use the outputs of this review, *Client's* DCO Consultation Strategy (specifically roles and responsibilities listed in Appendix B of it) to develop a Stakeholder consultation and management plan. The plan shall include an explanation of who the Consultant will engage, the level of consultation and, how they will manage their responsibilities. The plan shall detail:

- How they record all engagement with stakeholders
- How the engagement shall support the design development and technical products

The Consultant shall review the currency of the plan at key intervals such as six months prior to non-statutory consultation, following non-statutory consultation and similarly for statutory consultation and other key engagement events, revising and submitted for acceptance accordingly. This plan shall include details of how the *Consultant* shall:

- Consult and engage with technical steering groups and specialists identified in section 6,
- Lead consultation and engagement with designated stakeholders, such as environmental bodies or utility/infrastructure companies (including but not limited to Wildlife Trusts, Thames Water, National Trust, National Highways, Esso, county, or borough ecologists/waste/highways/environmental health officers) required to deliver an integrated reference design and those identified in Appendix B of the 'DCO Consultation Strategy',
- Ensure all consultation and engagement is co-ordinated through designated stakeholder account managers defined in the 'DCO Consultation Strategy',
- Support *Client* led engagement with Natural England and Historic England,
- Prepare, discuss, and reach agreement on statements of common ground with the bodies they are responsible for consultation with as per the DCO consultation strategy. This shall include demonstration of areas where common ground cannot be achieved and what has been done to achieve agreement,
- Support the agreement of environmental and design-related elements of statements of common ground with local authorities negotiated by the Consenting Services provider,
- Record all engagement with stakeholders,
- Ensure the engagement supports the design development and technical products,

- Engage with non-statutory consultees and adopt their concerns. This shall include the information to ensure publicly accessible spaces are designed to consider the needs of local communities,
- Identify gaps in the current list of consultees, design challenges which are likely to cause statutory consultees concern and how these shall be address through statutory and non-statutory consultation and other engagement
- Ensure all consultation and engagement activity is recorded in accordance with the requirements of the Consenting Services provider and is sufficiently thorough to achieve the adequacy of consultation test,
- Collaborate closely with the Consenting Services provider to comply with the requirements of statutory consultation periods in relation to information being provided by the *Consultant* and inputting to other consultation and engagement tools and products that the Consenting Services provider develops,
- Identify and produce information to support non-statutory and statutory consultation in relation to the Scope, such as technical and non-technical information for audiences in support of digital and non-digital consultation,
- Support all non-statutory and statutory consultation events as subject matter experts, including providing information in preparation for and running and/or partaking in the events as required to deliver the *service* and,
- Support the *Client* in liaising with the local planning authority’s planner group as defined within the service level agreement, together with other project governance groups and stakeholders.

Table 6 below provides an indicative list of engagement events planned during the tender or contract award timeline, the *Client* shall provide, within two weeks of the *starting date* of the *service*, outputs from the events. The *Consultant* shall review the outputs and adopt them into their delivery plans and provide technical responses as required by the *Client*.

Group	Description
July	
Councillors	Face to face briefings to reintroduce the scheme
Local Planning Authority	Face to face briefings to help develop the Statement of Community Consultation (SOCC)
Landowners	1-1 Engagement begins with those impacted due to shift in scheme boundary
August	
Local Planning Authority	Face to face engagement on Green Belt and planning policy, Environmental scoping report and, Technical issues, especially minerals and flooding.
Landowners	Ongoing engagement around survey access

**TABLE 6: INDICATIVE INFORMATION ON SUMMER 2022 ENGAGEMENT EVENTS**

Table 7 shows the events planned for the Autumn 2022, the *Consultant* shall upon award ensure the relevant elements of the *service* are conducted to support these.

Group	Description
Autumn	
Local Planning Authority	Ongoing Face to face engagement around minerals/waste policy and flooding
Landowners	Ongoing engagement around survey access

**TABLE 7: ENGAGEMENT PLANNED AUTUMN 2022**

A Non-Statutory Consultation event is planned for November 2022. The *Consultant* shall support the non-statutory consultation event and use the outputs from the event to inform the following:

- Landscape Concept, Landscape elements, the consultant shall use this information to inform the landscape options and the proposed material management strategy by considering land forms, active travel routes, active recreation areas, ecology/habitat areas, visitor centre(s), play areas, segregated dog walking areas, car parks, open vistas/park land
- Benefits and Goals - Which are the most important benefits that the RTS brings to the community. The Consultant shall use this information to better understand the questions about landscape elements and so feed into the landscape design brief.
- Waste Policy – The client will introduce the concept of the waste management, materials re-use vs landfill / disposal considerations. The consultant shall use this to build evidence of our waste management policy.
- Desborough Cut Capacity – Consults on options to address capacity at the Desborough cut.

The *Client* shall plan the proposed event and prepare all required material, the *Consultant* shall attend and support discussion.

Within two weeks of contract award the *Client* will provide a familiarisation briefing to the *Consultant*, in preparation for the planned non-statutory consultation event.

Within four weeks of contract award the *Consultant* will have concluded a review of existing project data and provide any recommendations for additional points that they feel should be addressed at the non-statutory consultation event. This will include any questions to inform the waste management policy.

Within two weeks of contract award the *Client* will provide familiarisation with the

Within four weeks of contract award the *Consultant* will submit a plan for engagement and consultation with statutory consultees, that will be undertaken ahead of the formal statutory consultation event.

The *Consultant* shall collaborate with the *Client* and Consenting Services provider in agreeing and subsequently delivering the technical information and materials for Statutory consultation. This shall include reviewing materials produced by the Consenting Services provider as required to ensure the technical information is aligned. The *Consultant* shall provide technical specialists to support all Statutory consultation activity

### 3. Existing information

The embedded excel file below contains a summary of the key information and data provided by the *Client* or Others.



Section 3 Existing  
Information 2022.06 :

## 4. Specifications and standards

### 4.1. Key Persons

The *Consultant* shall ensure the following experienced and qualified persons deliver the *service*:

Key Person	Experience Required
Project Director	Prior experience as commission lead for major project or large scale multi disciplinary commission
Project Manager	Prior experience in delivering major projects, leading multi-disciplinary design teams and working in a complex consenting and delivering Development Consent Orders.
DCO Integrator	Experience in delivering Development Consent Orders / Planning Act and or delivering complex consenting requirements
Environmental Lead	Previous experience in delivering Environmental elements of a Development Consent Order.
Engineering Lead	Hold relevant professional qualifications and prior experience of delivering in a multi-disciplinary major project environment.
Landscape Design Lead	Hold relevant professional qualifications and prior experience of delivering in a multi-disciplinary major project environment.
Economics Lead	Experience in economic appraisal for flood risk schemes, knowledge of the latest guidance and the HM Treasury business case process.
Sustainability and Carbon Lead	Experience of delivering in a multi-disciplinary major project environment.
Hydraulic Modelling Lead	Hold relevant professional qualifications, experience in 1D and 2D modelling.
Materials Management Lead	Hold relevant professional qualification and experience of large scale materials and waste management projects.
Ecology and Bio-diversity leads	Hold relevant professional qualifications and prior experience of developing EIA and technical assessment.

BIM lead	Experience of creating and using BIM environment for multi-disciplinary schemes.
Stakeholder Engagement Lead	Prior experience of managing consenting strategies and stakeholder relationships for large scale complex projects, to support planning applications and other permitting. Experience of DCO's preferred.

For each of these *key persons* the *Consultant* shall provide the Curriculum Vitae to the *Client* for acceptance prior to them starting work on the project.

#### 4.1. General standards

The *Consultant* shall ensure the following are used when delivering the *service*:

Ref.	Standard
LIT 16559	Safety, health environment and wellbeing (SHEW) Code of Practice
LIT 15695	Data management for FCRM projects
LIT 11327	Computational Modelling to assess flood and coastal risk
LIT 14847	Risk Guidance for Capital Flood Risk Management Projects
LIT 14284	Whole Life (Construction) Carbon Planning Tool
LIT 12982	Working with Others: A guide for staff
LIT 12280	Lessons Log template
N/A	RTS product description template
N/A	RTS comments tracker template
LIT 14953	FCRM efficiency reporting – capital and revenue
LIT 55124	Write a business case

**TABLE 8: GENERAL STANDARDS TO BE USED ON THE RTS**

#### 4.2. Technical standards

The *Consultant* shall ensure the following are used when delivering the *service*:

Ref.	Standard
N/A	Environment Agency Access for All Design Guide (September 2012)
N/A	Environment Agency Fish Pass Manual (November 2012)
N/A	Environment Agency Managing Plastics in Environment Agency Construction and Assets (October 2020)
N/A	Environment Agency CAD & Object Standards
N/A	Environment Agency <i>Clients</i> Information Requirements
LIT 13258	Minimum technical standards for FCERM projects
LIT 13260	NEC4 ECC scope template
LIT 13877	Minimum technical standards - environmental sustainability, design, and management – version 12 dated December 2021
N/A	Institute of Environmental Management and Assessment (IEMA) EIA Quality Mark standards
N/A	Planning Inspectorate Advice Notes <a href="https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/">https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/</a>

Ref.	Standard
N/A	The Landscape Institute (2018) Landscape <i>Consultant's</i> Scopes of Services - S1: Landscape Design and Administrative / Post-Contract Services
N/A	The Landscape Institute (2017) Landscape Digital Plan of Works – Release 1_0
N/A	The Landscape Institute Guidance Landscape and Visual Impact Assessment (Edition 3 2013)
N/A	All London Green Grid policy framework, 2011
N/A	PAS 2080 - Carbon Management in Infrastructure Verification
N/A	PAS 128 - Specification for Underground Utility Detection, Verification and Location
N/A	CEEQUAL Version 6 Technical Manual
N/A	Chartered Institute for Archaeologists (CIfA) Standards and Guidance
N/A	Historic England's Guidance
N/A	Natural England's Guidance
N/A	Marine Management Organisation's Guidance

**TABLE 9: TECHNICAL STANDARDS TO BE USED ON THE RTS**

### 4.3. Accessibility regulations

The *Consultant* shall comply with the *Client's* guidance in relation to The Public Sector Bodies (Websites and Mobile Applications) (No.2) Accessibility Regulations 2018.

The *Consultant* shall ensure the following:

1. Digital documents are published in either HTML or accessible PDF,
2. Final versions of reports are issued as both an accessible Microsoft Word document and in an accessible PDF,
3. All versions of Microsoft Excel spreadsheets must be accessibly formatted as tables and,
4. All documents produced by the *Consultant* for online publication meet the World Wide Web Consortium (W3C) Web Accessibility Initiative (WAI) Web Content Accessibility Guidelines 2.1 (WCAG 2.1) conformance level AA. The *Consultant* provides evidence that all final versions of digital documents they deliver have been tested for and comply with all the A and AA criteria of the WCAG2.1 standard.

## 5. Safety, health, environment, and wellbeing

### 5.1. Overview

The *Consultant* shall promote and adopt safe working methods and ensures that the work undertaken to deliver the *service* is fully compliant with the *Client's* SHEWCoP.

The *Consultant* shall undertake the roles of the Designer and Principal Designer under the Construction (Design and Management) Regulations 2015 and carry out the required duties in accordance with these regulations.

### 5.2. Deliverables required

The *Consultant* shall ensure that risks are considered at all stages of the design development and is able to demonstrate the application of 'principles of prevention' for their design risk mitigations. Products developed as part of the *service* are accompanied by the appropriate level of design risk management evidence. This evidence includes the following deliverables:

- Design risk analysis/assessment/hazard log,
- Hazard symbols or SHE box on drawings,
- Hazard map,
- Public safety risk assessments,
- RAG list assessment and
- Buildability statements.

The *Consultant* shall submit all deliverables to the *Client* for acceptance.

## 6. Constraints on how the *Consultant* is to Provide the Service

### 6.1. Technical steering groups

To provide assurance to the *Client* and Others the *Client* has formed an environmental and technical steering group. The *Consultant* shall engage with the steering group to ensure that deliverables are developed in a collaborative and efficient way. The *Consultant* shall ensure the technical steering groups are consulted and engaged on the relevant deliverables including taking on comments and considerations both formally and informally throughout the provision of the service. In submissions the *Consultant* shall demonstrate how the technical steering group was consulted and engaged and follow the Assurance and approval strategy (referenced in section 3). The steering group covers the following areas:

- Biodiversity including invasive non-native species, HRA, aquatic and terrestrial species,
- Water and WFD,
- Traffic and transport,
- Sustainability and carbon,
- Landscape and visual impact,
- Soils, geology, natural resources, and waste,
- Materials management,
- Flood risk,
- Cultural heritage, archaeology, built heritage and historic landscape,
- Operations and maintenance strategy and
- MEICA.

### 6.2. Quality and assurance

#### 6.2.1. Quality plan product description

The *Consultant* shall produce a product description for the *Consultant's* quality plan to be used in delivering the service within two weeks of the *starting date*. The *Consultant* shall submit the product description to the *Client* for acceptance and does not commence work on the product until acceptance is notified.

#### 6.2.2. Quality plan

The *Client's* quality and assurance processes intended to be applied throughout project delivery are outlined in the 'Integrated Assurance and Approvals Plan', referenced in section 3. The *Consultant* shall develop the quality plan to be used in delivering the service. The quality plan includes:

- References to the *Consultant's* quality policies and statements,
- How the *Consultant* is organised to provide the Service including the roles of Subcontractors,
- How the *Consultant* will collaborate with the *Client*, the Consenting Services provider, and Others in delivering the service,
- The responsibilities for preparing, checking, and approving deliverables for issue for each of the sections of the Scope,
- How comments from the *Client* and Others on deliverables are to be dealt with,
- How change control is to be dealt with,

- How and when the *Consultant* will carry out quality checks on its work and that of Subcontractors,
- How the *Consultant* will deal with standards conflicts,
- How the *Consultant* will identify, report, and manage Defects and,
- How and when the *Consultant* will undertake the assurance and verification requirements within this Scope.

The *Consultant* shall submit the quality plan to the *Client* for acceptance within two weeks of the product description being accepted. The *Consultant* shall review the currency of the quality plan at quarterly intervals and submits further revisions to the *Client* for acceptance.

### 6.2.3. Assurance reviews

In addition to the technical assurance provided by the steering groups in section 6.1, the *Client* may decide to appoint Others to review deliverables, processes, methodologies, Subcontractors, or people the *Consultant* uses or proposes to use to deliver the Scope. The purpose of these reviews will be to provide assurance to the *Client* of compliance with the acceptance criteria.

Where Others are appointed to undertake an assurance review, the scope of this review will not include the *Consultant's* pre-existing intellectual property.

The *Client* shall notify the *Consultant* about the arrangements for an assurance review and the *Consultant* shall provide information to allow the review to be carried out.

## 6.3. Risk, efficiency, and issues management

The *Consultant* shall produce a quantitative register which records the risks, opportunities and issues which relate to the *Consultant's* risks, opportunities, and issues in delivering the Scope. The *Consultant* makes the registers available for inspection by the *Client* when notified. The *Consultant* shall update the registers each month and report on updates in the progress report.

The *Consultant* shall contribute to the *Client* managed RTS risk, opportunities and issues registers monthly.

The *Consultant* shall contribute to the *Client* managed capital efficiency reporting tool monthly.

## 6.4. Progress reporting

### 6.4.1. Reports

The *Consultant* shall produce a detailed progress report each month. The report shall include:

- Programme RAG report section including summary of the work undertaken against each of the sections of the Scope in the month together with a discussion on the variances in the work from the previous look-ahead report,
- Programme RAG report section including deliverables issued and accepted in the month together with a discussion on the variances in the deliverables issued and accepted that was planned in the previous month's report,
- A summary of the collaboration and information sharing with the Consenting Services provider and Others,

- Four-week look-ahead report, including planned work and deliverables to be issued,
- A programme variance section with a detailed commentary on the variances and changes from the Accepted Programme contained within the latest revised programme submitted for acceptance. This section includes an overview of the critical path,
- A commercial variance section with a detailed commentary on the variances from the forecasts shown in the latest application for payment, forecasts for the next month and details of Subcontractor procurement activities undertaken in the month and
- A summary of updates to the risks and issues registers managed by the *Consultant*.

The *Consultant* shall agree the RAG status criteria with the *Client* prior to issue of the first progress report and shall agree the report statuses with the *Client* prior to each submission of the report.

The *Consultant* shall submit the draft progress report to the *Client* for information at least one week before the progress meeting in section 6.4.2. Within one week of the progress meeting, the *Consultant* shall revise the draft progress report, if required, and submits the progress report to the *Client* for acceptance.

The *Consultant* shall produce a weekly programme status report which identifies activities ongoing within the next three months, their percent complete and a RAG status against the programme with comments provided accordingly. The format of the weekly programme status report shall be agreed with the *service manager* and submitted weekly.

#### **6.4.2. Meetings**

The *Consultant* shall arrange a monthly progress meeting with the *Client* and Others as appropriate. The *Client* shall chair the meeting, and the *Consultant* shall record the minutes. The meeting is used to review and discuss the *Consultant's* progress report which the *Consultant* revises if required after the meeting. The *Consultant* issues the recorded minutes with the progress report.

The *Consultant* shall attend a weekly meeting with members of the *Client's* team to review contract communications and the actions and decisions required.

## 7. Information and things provided by the *Client* and Others

The *Client* shall provide access to FastDraft for contract communications, the common data environment, and the tool for creating the MIDP.

The *Client* shall provide access to the existing information listed in section 3.

Information provided by the *Client* or by Local Authorities is provided as being correct and does not require further checks by the *Consultant* before being adopted, unless stated otherwise at the time of issue. Such information is provided on a free of charge basis.

The *Client* provides the RACI schedule which identifies those in the *Client's* team and Others that should be engaged with during development and on the distribution list for deliverables issued by the *Consultant*. This document also described the inputs required by the *Consultant* to be review works of Others.

Land access onto private land shall be arranged by the *Client's* land agent.

Construction contractor input and advice is provided by the ESE Services provider.

## 8. Timing, programme, and Completion

### 8.1. Programme format and requirements

#### 8.1.1. Programme format

The *Consultant* shall prepare each programme submitted for acceptance using Primavera professional planning software.

#### 8.1.2. Requirements of each submitted programme

The *Consultant* shall provide each programme submitted for acceptance as an Adobe acrobat portable document file and in the native Primavera format with a data date of the first working day of each month.

The *Consultant* shall ensure that each programme submitted for acceptance adopts a work breakdown structure consistent with the Activity Schedule and shows:

- A unique activity ID,
- Total float and time risk allowances for each activity,
- The programme critical path,
- The percentage completion, predecessors, and successors of each activity,
- The resource responsible for each activity, for example the *Client*, the *Consultant* or Others such as the Consenting Services provider,
- Include interface milestones as agreed with the *Client* and Others, such as the Consenting Services provider and ESE contractor and,
- All deliverables identified in the MIDP.

Before submitting each programme for acceptance, the *Consultant* shall collaborate with the Others including the *Client*, Consenting Services provider, and ESE provider to ensure the integration and consistency of the programme.

### 8.2. Milestones

The *Client* has identified the following milestones which the *Consultant* shall target and report against when planning the delivery of the Scope:

Milestone	Date of completion
Non-Statutory Consultation Completion	November 2022
Statutory Consultation Completion	July 2023
Design updates post Statutory Consultation	September 2023
DCO Submission	July 2024

**TABLE 10: MILESTONES TO BE CAPTURED IN PROGRAMME**

The *Consultant* shall collaborate with the *Client* and Others in a 'Project First' approach to minimise slippage to these milestones.

### 8.3. Definition of Completion

To allow the *Client* to certify Completion, the *Consultant* shall prepare a completion report. The completion report includes:

- Details of what the *Consultant* has done to meet the requirements of each section of the Scope, verified through the provision of assurance evidence,
- Details of where the *Consultant* has not been able to deliver the requirements, together with reasons and mitigations that have been proposed,
- Details of Defects the *Consultant* has not corrected,
- An appendix containing a detailed document and drawings register, with hyperlinks to the common data environment, of each product the *Consultant* has produced, revised, or updated to complete the *service*,
- Details of the materials purchased by the *Consultant* to deliver the *service* and paid for by the *Client* that could now be kept and used by the *Client* and,
- Confirmation that the FBC has been approved by the *Client*.

The *Consultant* shall submit the completion report to the *Client* for acceptance and the *Client* does not certify Completion until the report is accepted.

#### 8.4. Definition of Sectional Completion

As above for each section:

<b>Section</b>	<b>Definition of Completion</b>
1. Completion of the ECC scope for the main works	Completion of the <i>service</i> relating to and impacted by section 2.7 of this Scope in so far as to allow the <i>Client</i> to issue the ECC tender out to market. This includes agreement with the <i>Client</i> regarding the applicable deliverables and that they are accepted by the <i>Client</i> . For the avoidance of doubt this does not include the responses to tender queries or updates required to the ECC scope during and following negotiations.
2. Completion of activities required for statutory consultation	All technical information required for statutory consultation accepted by the <i>Client</i> and deemed suitable by the Consenting services provider. This shall include agreement with both parties on the deliverables required to meet the sectional completion.
3. Completion of activities required for FBC submission	All technical information required for FBC submission accepted by the <i>Client</i> . This shall include agreement with the <i>Client</i> on the deliverables required to meet the sectional completion as per section 2.8.

**TABLE 11: DEFINITION OF SECTIONAL COMPLETION**

## **9. Other requirements of the *conditions of contract***

### **9.1. Payment**

The *Consultant* shall use FastDraft to upload all applications for payment for certification by the *Client*.

#### **9.1.1. Information to be shown on each application for payment**

The *Consultant* shall ensure that the build-up for each application for payment includes the following information:

- The names, time charge rates and hours of people included in the build-up,
- Details of the materials and expenses in the build-up with reasons for their being incurred and
- Details of any Disallowed Cost and,
- A detailed breakdown of the amounts for each Subcontractor including people, materials and expenses or an Activity Schedule.

The *Consultant* shall present the information broken down by activities that are consistent with the Activity Schedule. The *Consultant* shall provide details of variances from the forecasts in the progress report in section 6.

### **9.2. Accounts and records**

#### **9.2.1. Timesheets**

The *Consultant* shall ensure that all people involved in delivering the *service* complete timesheets which can be inspected and referenced against time spent on each activity within the Activity Schedule.

#### **9.2.2. Materials and expenses**

The *Consultant* shall keep records, invoices, and all other documentation to support the payment of all amounts for materials purchased and expenses incurred.

#### **9.2.3. Records and accounts**

The *Consultant* shall keep accurate records and accounts in respect of the *service*.

#### **9.2.4. Audits**

The *Client* reserves the right to audit the *Consultant's* records and accounts kept in relation to providing the *service*.

## 10. Acceptance and procurement procedures

### 10.1. Submission and acceptance

#### 10.1.1. People

If the *Consultant* decides to change any of the *key persons*, the *Consultant* shall submit the curriculum vitae and time charge rate of the proposed replacements to the *Client*. The replacement *key persons* do not commence work until the *Client* notifies acceptance of the replacements. The *key persons* shall be of equivalent experience to the incumbents.

#### 10.1.2. Applications for payment

The *Consultant* shall submit applications for payment as described in section 9.

#### 10.1.3. Deliverables

The *Consultant* shall do the work necessary to deliver the *service* and produce the deliverables described therein. Where a deliverable requires a collaborative or iterative approach in its development that involves the *Client's* team or Others, the *Consultant* does this work until a point when the draft final version of the deliverable is ready for submission.

Before submission, the *Consultant* checks the *Client's* RACI schedule described in section 7 to determine who the deliverable is to be distributed to. The *Consultant* then:

- Uploads the deliverable to the *Client's* common data environment ensuring that metadata is consistent with the MIDP,
- Issues the deliverable to the identified recipients together with a copy of the *Client's* comments tracker referenced in section 4,
- Notifies the *Client* in FastDraft of the deliverable that has been issued for acceptance, if required by the Scope.

The *Client* ensures the completed comments tracker and, where appropriate, a marked-up version of the deliverable is issued to the *Consultant* for final updating using the common data environment. The *Consultant* does the work necessary and issues the final version of the deliverable and the comments tracker with responses using the common data environment.

#### 10.1.4. Acceptance of deliverables

The *Client* accepts the deliverables based on the acceptance criteria.

The acceptance criteria are:

- Compliance with the Scope,
- The product description, where applicable and,
- The *Consultant's* quality plan.

The *Client* shall notify the acceptance of the deliverable in FastDraft.

### 10.2. Procurement procedures

The *Consultant* shall prepare a Subcontractor procurement schedule for Subcontractor who have not been previously engaged with the Scope. The schedule includes the planned Subcontractor packages, estimated value, timing and the proposed procurement and contract route and is submitted to the *Client* for acceptance.

Once accepted the schedule is updated quarterly by the *Consultant* to include the status of each package and notified to the *Client*.

The *Consultant* shall prioritise the use of local small and medium sized enterprises wherever possible to comply with the respective policies of Surrey County Council and Environment Agency.

For each Subcontractor package where the Subcontractor has not been previously engaged by the *Consultant* in delivery of work on the River Thames Scheme, the *Consultant* shall obtain a minimum of three quotations and for packages with an estimated value greater than £25,000, the *Consultant* shall prepare a procurement recommendation report for that package. The report shall be submitted to the *Client* for acceptance and the Subcontractor contract is not executed until acceptance is notified. Where there is urgency in engagement of the Subcontractor, the requirements of this paragraph may be waived by agreement with the *Client*.

Subcontractors shall be procured through a NEC4 Professional Service Subcontract unless otherwise agreed with the *Service Manager*.

## 11. Information modelling

The *Consultant* complies with the *Clients* Information Requirements (EIR) referenced in section 4.

The common data environment is Asite: <https://www.asite.com/login-home>.

### 11.1. Master Information Delivery Plan

The *Consultant* shall review and verify the *Client*-issued information referenced within the IDP and the requirements of this Scope.

Following this review, the *Consultant* shall prepare a MIDP and submits it to the *Client* for acceptance within six weeks of the *starting date*.

### 11.2. Post-BIM execution plan

The *Consultant* shall prepare a detailed plan of how they will implement BIM and comply with the EIR in a post-BIM execution plan. The plan shall be submitted to the *Client* for acceptance within six weeks of the *starting date*.

## Appendix A – Indicative list of deliverables by DCO volume

An indicative list of documents that are likely to be included in each volume of the DCO application are contained within Table 12 below. Table 12 below indicates whether the document is a deliverable from the *Consultant* and an indicative level of input required when a deliverable is owned by Others. The indicative level of effort follows a rating of Minimal, Low, Moderate or Significant.

Volume	Ref.	Indicative documents	Consultant Deliverable?	Level of input required
Volume 1 - Application overview	1.1	Cover letter to PINS	No	Minimal
	1.2	Application form	No	Minimal
	1.4	Introduction to the application/navigation document	No	Minimal
	1.4	Electronic index	No	Minimal
	1.5	Section 55 checklist	No	Minimal
	1.6	Application document tracker	No	Minimal
Volume 2 - Plans and drawings	2.1	Location plan	Yes	N/A
	2.2	Red line boundary plan	Yes	N/A
	2.3	Strategic options report	No	Moderate
	2.4	Land plans	No	Little
	2.5	Works plans	Yes	N/A
	2.6	General arrangement drawings	Yes	N/A
	2.7	Engineering section drawings and channel plans	Yes	N/A
	2.8	Channel crossing drawings for the M3 motorway	Yes	N/A
	2.9	Drawings for crossings underneath roads	Yes	N/A
	2.10	Footbridge drawings	Yes	N/A
	2.11	Parameter plans	Yes	N/A
	2.12	Rights of way and access plans	Yes	N/A
	2.13	Outline drainage works plans	Yes	N/A
	2.14	Landscape general arrangement plans	Yes	N/A
	2.15	Existing and proposed levels and contours	Yes	N/A
	2.16	Weir drawings	Yes	N/A
	2.17	Utilities and services drawings	Yes	N/A
	2.18	Permanent compound drawings	Yes	N/A
	2.19	Temporary compound drawings	Yes	N/A
Volume 3 - DCO and Consents	3.1	Draft DCO	No	Moderate
	3.2	Explanatory Memorandum	No	Minimal
	3.3	Consents & Permits Positions Statement	No	Moderate
Volume 4 - Compulsory acquisition information	4.1	Statement of reasons	No	Moderate
	4.2	Book of reference	No	Little
	4.3	Funding statement	No	Minimal
Volume 5 - Reports/statements	5.1	Consultation report	No	Moderate
	5.2	Consultation report appendices	No	Moderate
	5.3	Statements of common ground	No	Significant
6.1	Environmental Statement (ES) main chapters		Yes	N/A
	Introduction ES chapter		Yes	N/A

Volume	Ref.	Indicative documents	Consultant Deliverable?	Level of input required
Volume 6 - Environment information		The Scheme ES chapter	Yes	N/A
		Alternatives ES chapter	Yes	N/A
		Environmental assessment methodology ES chapter	Yes	N/A
		Air quality ES chapter	Yes	N/A
		Biodiversity ES chapter	Yes	N/A
		Climatic factors ES chapter	Yes	N/A
		Cultural heritage, archaeology and built heritage ES chapter	Yes	N/A
		Flood risk ES chapter	Yes	N/A
		Landscape & visual amenities ES chapter	Yes	N/A
		Natural resources & waste ES chapter	Yes	N/A
		Population (including noise, vibration, land use, health) ES chapter	Yes	N/A
		Soils & geology ES chapter	Yes	N/A
		Traffic & transport ES chapter	Yes	N/A
		Water environment ES chapter	Yes	N/A
		Cumulative effects ES chapter	Yes	N/A
	6.2	Environmental Statement figures	Yes	N/A
		Environmental site appraisal plan	Yes	N/A
		Environmental masterplan	Yes	N/A
		Indicative landscape plans	Yes	N/A
		Temporary works plans	Yes	N/A
		Air quality figures	Yes	N/A
		Biodiversity figures	Yes	N/A
		Climate figures	Yes	N/A
		Cultural heritage, archaeology and built heritage figures	Yes	N/A
		Flood risk figures	Yes	N/A
		Landscape & visual amenities figures	Yes	N/A
		Population figures	Yes	N/A
		Soils & geology figures	Yes	N/A
	Traffic and transport figures	Yes	N/A	
	Water environment figures	Yes	N/A	
	Cumulative effects figures	Yes	N/A	
	6.3	Environmental Statement technical appendices	Yes	N/A
		Construction Strategy	Yes	N/A
Scoping Opinion, Scoping Opinion Schedule of Comments and Responses		Yes	N/A	
Assessment of Major Accidents and Natural Disasters		Yes	N/A	
Air Quality technical appendices		Yes	N/A	
Biodiversity technical appendices (Protected Species Reports)		Yes	N/A	
Climate technical appendices		Yes	N/A	
Sustainability statement	Yes	N/A		

Volume	Ref.	Indicative documents	Consultant Deliverable?	Level of input required
		Cultural heritage appendices	Yes	N/A
		Flood risk assessment	Yes	N/A
		Landscape technical appendices (e.g., visual baseline and impact schedules)	Yes	N/A
		Transport assessment	Yes	N/A
		Traffic management plan	Yes	N/A
		WFD assessment and article 4.7 compliance statement	Yes	N/A
		Water quality report	Yes	N/A
		Drainage strategy report	Yes	N/A
		Augmented flow rationale statement	Yes	N/A
		Arboricultural impact assessment report (including tree plans)	Yes	N/A
		Minerals safeguarding assessment report	Yes	N/A
		Contaminated land risk assessment and associated appendices.	Yes	N/A
		Noise and vibration management plan (draft)	Yes	N/A
		Assessment of nature conservation effects (including biodiversity offsetting and net gain report)	Yes	N/A
		Equality impact assessment	Yes	N/A
		6.4	Environmental Statement non-technical summary	Yes
	6.5	Statement of statutory nuisances	Yes	N/A
	6.6	Habitat's regulations assessment report	Yes	N/A
	6.7	Environmental action plan/outline environmental management plan	Yes	N/A
	6.8	Materials management plan	Yes	N/A
	6.9	Materials processing plan	Yes	N/A
	6.10	Materials management strategy	Yes	N/A
	6.11	Materials processing plan	Yes	N/A
	6.12	Open space assessment	Yes	N/A
	6.13	Health impact assessment	Yes	N/A
Volume 7 - Other reports	7.1	Need case	No	Little
	7.2	Planning statement	No	Moderate
	7.3	Transport assessment and travel plan	Yes	N/A
	7.4	Design and access statement	Yes	N/A
	7.5	Energy statement/climate change/net zero	Yes	N/A
	7.7	Hydraulic modelling reports	Yes	N/A
	7.8	Groundwater modelling report	Yes	N/A
	7.9	Details of associated development (with references to documents)	No	Little
	7.10	Development consent obligations (S106)	No	Little
	7.11	Code of Construction conduct	Yes	N/A

**TABLE 12: INDICATIVE LIST OF DOCUMENTS TO BE INCLUDED IN EACH VOLUME OF THE DCO**

## Appendix B – Indicative list of consents and permits

An indicative list of consents and permits that are likely to be required for the RTS are contained within Table 13 below. Many of these consents and permits will be included as part of the DCO application (either in full or outline), whilst others should be progressed in parallel but will not necessarily be required to be submitted as part of the DCO application. Current assumptions are shown in Table 13, but these will be further developed by the *Consultant*, the *Client*, and the Consenting Services provider.

Consent or permit	Consenting authority	Timescales	Responsibility
Thames path closure/diversion (permanent)	Elmbridge Borough Council, Spelthorne Borough Council	Full consent to be submitted as part of DCO application	Technical Support
Footpath closure/diversion (permanent)	Elmbridge Borough Council, Runnymede Borough Council, Spelthorne Borough Council		Technical Support
Highway's diversion	Surrey County Council		Technical Support
Highway's closure	Surrey County Council		Technical Support
Mineral's extraction licence	Surrey County Council		Technical Support
Navigation rights	Department for Environment, Food and Rural Affairs		Technical Support
Thames Conservancy Act consent (Section 79)	Authority to be confirmed		Technical Support
Pipeline works authorisation (PWA) or PWA variation	Oil and Gas Authority		Technical Support
Listed building consent	Historic England		Technical Support
Scheduled monument consent	Historic England		Technical Support
Consent for the design of highway bridges and structures	National Highways		Technical Support
Wayleave's agreement	National Highways		Technical Support
Section 278 agreement	National Highways		Technical Support
Utility company diversions consents	Various utility companies		Technical Support
Developer connection consents	Water companies		Technical Support
Marine licence	Marine Management Organisation (MMO)		Technical Support
Site of Special Scientific Interest Assent	Natural England		Technical Support
Airport / bird strike consent - class licence and general licence	Natural England and Heathrow Airport Limited (HAL)		Technical Support
Ordinary watercourse consent	Surrey County Council and Environment Agency		Technical Support
Flood risk activity environmental permit	Environment Agency		Technical Support
Protected species licences	Natural England	Technical Support	
Port of London Authority river works licence	Port of London Authority	Technical Support	

<b>Consent or permit</b>	<b>Consenting authority</b>	<b>Timescales</b>	<b>Responsibility</b>
Water abstraction (transfer) licence	Environment Agency	Prepared in parallel to DCO but likely to be submitted separately to the DCO application	Development
Impoundment licence	Environment Agency		Development
National fish pass approval	Environment Agency		Development
Recovery from waste permit	Environment Agency		Development
Waste disposal permit	Environment Agency		Development
Variation to existing landfill waste permit	Environment Agency		Development
Waste storage/treatment (hubs) permitting	Environment Agency		Development
River Thames accommodation licence	Environment Agency		Development
Section 61 consent	Elmbridge Borough Council, Runnymede Borough Council, Spelthorne Borough Council, Richmond Borough Council		Development

**TABLE 13: INDICATIVE LIST OF CONSENTS AND PERMITS**

## Appendix C – Status of environmental survey information

Data available/ to be available to the <i>Consultant</i>	Survey scope to be obtained by the <i>Consultant</i>
<ul style="list-style-type: none"> <li>• Set out in Table 3.2 of Environmental Survey Gap Analysis (ESGA) the results from the following surveys are available  <a href="#">ENVIMSE500260-GBV-ZZ-3ZZ-RP-EN-10016-S3-P02-C0100-EA3-LOD3-Environmental Survey Data Gap Analysis (6).pdf</a> </li> <li>- PEA and P1HS plans for weirs, channel sections, landscape enhancement areas, downstream of Desborough cut and Ankerwyke (2014/15) and validations surveys for the whole area (2020)</li> <li>- River Condition Assessment (2019 and 2020)</li> <li>- Terrestrial INNS (2017/18 and repeat surveys in 2019/20).</li> <li>- Bats Scoping and dawn dusk surveys (2017)</li> <li>- Great Crested Newts 2017 and eDNA 2021.</li> <li>- Reptile Surveys (2017, 2019 and 2021)</li> <li>- Hazel Dormice (2021)</li> <li>- White Clawed Crayfish (2021)</li> <li>- Water Vole (2017/18 and 2021)</li> <li>- Badger 2017, 18, 19 and validation in 2020)</li> <li>- Bats Scoping (2017/18 and 2019) and Bat Transect Survey (2021)</li> <li>- Otter Survey Results (2017, 2020 and 2021)</li> <li>- Breeding Birds (2017/19, 2021)</li> <li>- Wintering Birds (2017-2021)</li> <li>- National Vegetation Classification / Botany (2019-2019)</li> <li>- Hedgerows (2017 and 2020)</li> <li>- Terrestrial Inverts (2017-19 and 2021)</li> <li>- Phytoplankton, Zooplankton and Phytobenthos (2012 – 2015)</li> <li>- Fish eDNA hydroacoustics (2016 ad 2019)</li> <li>- Electric Fishing (2015 and 2019)</li> <li>- Macrophytes (2019/20)</li> <li>- Benthic Inverts (2012-2021)</li> <li>- Archaeological Survey Results Stage 1 (2016/17)</li> <li>- Archaeological Survey Results Stage 2 (2018/19)</li> <li>- Geophysical Surveys (archaeology) 2021.</li> <li>- Site Investigation Surveys (soils and geology (2015/16)</li> <li>- Lake and Groundwater Level Data from (2012-current)</li> <li>- Lake, rivers and tribs and groundwater water quality data (2019-current)</li> </ul>	<ul style="list-style-type: none"> <li>• Protected Species Surveys in EIA scoping boundary subject to the results of the UKHab Condition Survey <ul style="list-style-type: none"> <li>- Dormice / Hazel Dormice</li> <li>- Great Crested Newts</li> <li>- Reptiles</li> <li>- White Clawed Crayfish</li> <li>- Water vole</li> <li>- National Vegetation Classification / Botanny</li> <li>- Hedgerows</li> </ul> </li> <li>• Diffusion Tube Monitoring</li> <li>• River Condition Assessment</li> <li>• Badger Survey</li> <li>• Bats <ul style="list-style-type: none"> <li>- Transect Surveys</li> <li>- Roost Assessments</li> <li>- Further monitoring of where high levels of bat activity have been recorded</li> </ul> </li> <li>• Otter Survey - Phase 4</li> <li>• Breeding Birds Survey for EIA scoping boundary</li> <li>• Wintering Birds Survey update prior to submission</li> <li>• Terrestrial Inverts Survey update prior to submission</li> <li>• Terrestrial INNS Survey update prior to submission</li> <li>• Fish Hydroacoustic surveys - Scope, fee, and programme</li> <li>• Fish and Fish INNS and Pathogens - Scope, fee, and programme</li> <li>• Phytoplankton, Zooplankton and Phytobenthos – testing and reporting of samples collected by the <i>Client</i>.</li> <li>• Macrophytes (Inc INNS) preconstruction survey</li> <li>• Benthic Inverts – Validity check</li> <li>• Stage 1 and 2 Archaeological Site Evaluations on HCAs and new areas of interest – Stage 1a onwards</li> <li>• Cultural Heritage setting surveys stages 3 to 5</li> </ul>

<b>Data available/ to be available to the <i>Consultant</i></b>	<b>Survey scope to be obtained by the <i>Consultant</i></b>
<ul style="list-style-type: none"> <li>- Spot Flow Monitoring on Tributaries (2019-current)</li> <li>- Hydro-morphology (2019-2020)</li> <li>- Suspended Sediment Survey Results (2016)</li> <li>• In addition to those in the EGSA these results will also be available around Quarter 4 2022: <ul style="list-style-type: none"> <li>- UKHab Condition Survey</li> <li>- Badger Survey Scope</li> <li>- Otter Survey Results Phases 1 and 2</li> <li>- Terrestrial and Aquatic INNS Survey Scope and Results</li> <li>- Phytoplankton, Zooplankton and Phytobenthos – initial findings</li> <li>- Electric Fishing Results – Mead Lake Ditch and Abbey River</li> <li>- Macrophytes (Inc INNS) Results</li> <li>- Tree Survey Results</li> <li>- Non-motorised User Survey Results</li> <li>- Gas Monitoring Results</li> <li>- Cultural Heritage setting surveys stages 1 and 2</li> <li>- Water Quality DBA for EIA scoping boundary</li> <li>- Archaeology survey for EIA scoping boundary</li> <li>- Traffic survey for Thorpe Park</li> <li>- Otter phase 3 (data and technical note only)</li> <li>- Desk studies related to Agricultural land Classification, Land Use and Lighting receptors</li> <li>- DBA for surface water quality, Lake Levels, bacteria assessment, groundwater levels</li> <li>- River Condition Assessment.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Topographic and Tree surveys for EIA scoping boundary</li> <li>• Summer views accounting for Landscape Optioneering Appraisal.</li> <li>• Noise Survey</li> </ul>

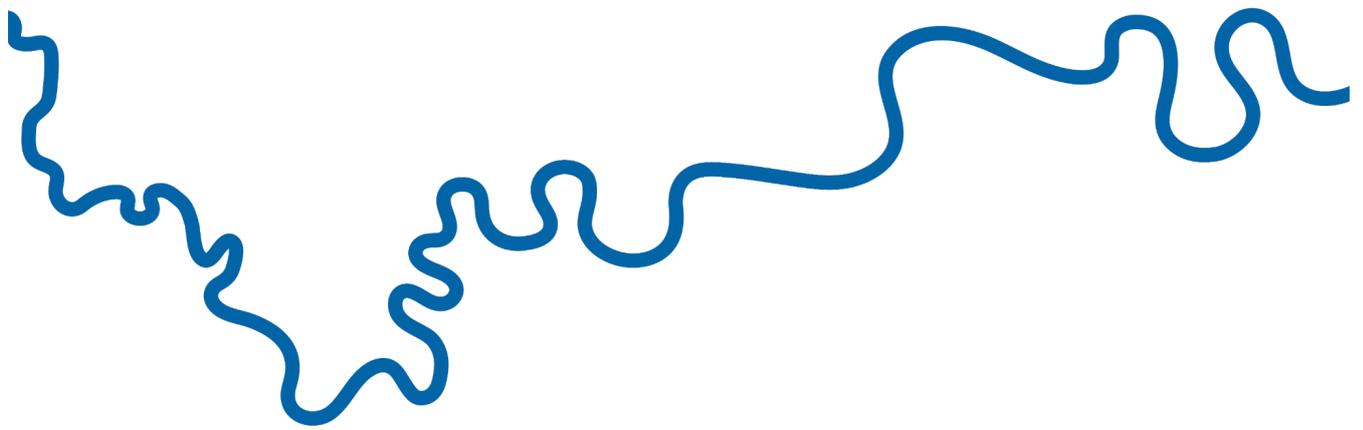
**TABLE 14: STATUS OF ENVIRONMENTAL SURVEY INFORMATION**

## Appendix D – Indicative list of registers / trackers contained in the Scope

The Table 15 below contains a list of registers and trackers referenced throughout this scope where the *Consultant* shall be involved.

<b>Tracker/Register</b>	<b>Reference</b>	<b>Owner</b>	<b>Responsibility of Consultant</b>	<b>Interfaces</b>
Benefits Register	1.4	<i>Client</i>	Review and Input in line with the design development	<i>Client</i>
Stakeholder relationship management platform	2.10	Consenting Services	Review and Input of Consultation and Engagement activities	<i>Client</i> , Consenting Services
Interface Trackers	2.1.2	<i>Consultant</i>	Develop, update, and agree contents	Consenting Services, ESE Contractor, Others
Technical Assessment Mitigation Register	2.2.3.1	<i>Consultant</i>	Develop, update, and agree contents	<i>Client</i>
Design Changes Tracker	2.4.3.12	<i>Consultant</i>	Develop, update, and agree contents	<i>Client</i>
Constraints Register	2.4.3.13	<i>Consultant</i>	Develop, update, and agree contents	ESE Contractor, <i>Client</i>
Utility Engagement Tracker	2.4.3.6	<i>Consultant</i>	Develop, update, and agree contents	Utility Companies, <i>Client</i>
Bridges and Structure Engagement Tracker	2.4.3.7	<i>Consultant</i>	Develop, update, and agree contents	Highway's authorities, Private Landowners, <i>Client</i>
Value Engineering Opportunities - Cost/Carbon	2.4.3.9	<i>Consultant</i>	Develop, update, and agree contents	<i>Client</i> , Consenting Services, ESE Contractor, Lands Package
Risks and Issue Register	6.3	<i>Consultant</i>	Develop, update, and agree contents	<i>Client</i>

**TABLE 15: INDICATIVE LIST OF TRACKERS AND REGISTERS REQUIRING CONSULTANT INVOLVEMENT**



The River Thames Scheme, delivered in a partnership led by the Environment Agency and Surrey County Council, will reduce flood risk for residents and businesses and improve the surrounding area.