

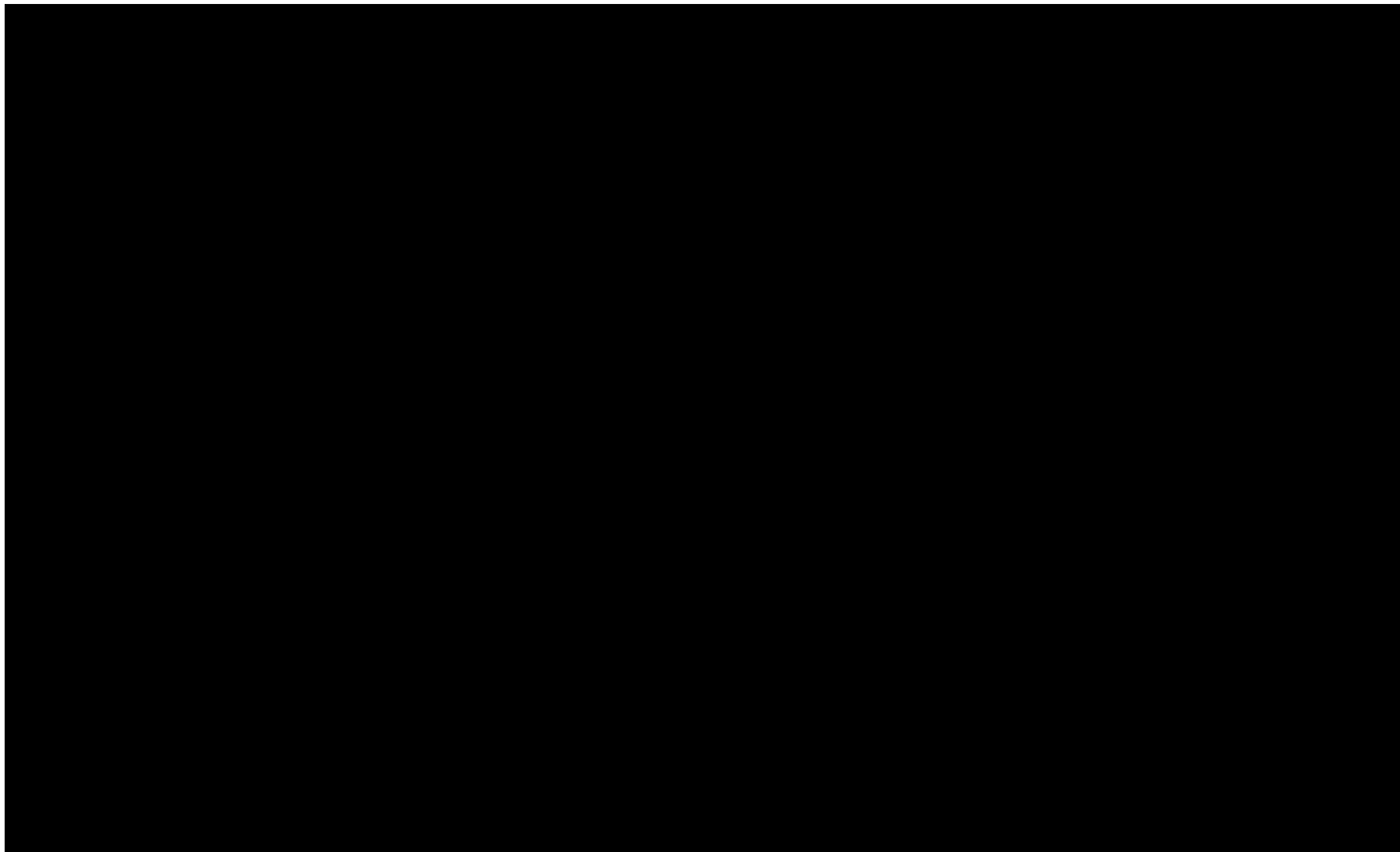
H&S Hazards	Severity	Likelihood	Risk	Residual Risks	Severity	Likelihood	Risk
Vehicular Incursion	5	4	20	Post Mitigation →	5	1	5
Description: During off-peak lane closures to facilitate topside investigations, there is a risk of vehicle incursions (both intentional and unintentional) into working areas, causing serious injury to workers and road users.							
Management: We held collaborative planning sessions at tender stage and developed an access plan which eliminates the risk of working adjacent to live traffic for 64% of our investigation shifts. All Traffic Management (TM) requirements will be developed and coordinated with significant stakeholders (e.g. TfL and Highways England (HE)) to ensure early warning is given to users and suitable traffic diversions are in place prior to inspection. TM arrangements will be approved and delivered by National Highway Sector Scheme (NHSS) 12 accredited personnel to maximise productivity and reduce the time spent on site. FMC will secure working areas with crash tested varioguard vehicle restraint systems, intelligent alert cone sensors and Impact Protection Vehicles.							
Work at Height	5	4	20	Post Mitigation →	5	1	5
Description: The nature of the Brent Cross structures (free edge), scope of works and our strategy to minimise disruption to the TfL Road Network will require work at height (WAH).							
Management: The programme will be designed to ideally avoid, or other minimise, WAH activities by utilising drones and CCTV equipment. Where WAH is unavoidable we will utilise MEWPs where the operators work within secure baskets, wear fall restraint lanyards, and are attached to the MEWP via a harness. A three stage 'permit to work' must be authorised by FMC's qualified H&S personnel before work can begin. All necessary WAH equipment will exceed the minimum required standards and be rigorously checked prior to work starting.							
Confined Spaces	5	4	20	Post Mitigation →	2	2	4
Description: Confined space entry will be required when carrying out investigation works on River Brent channel retaining wall, Clitter House Brook Culvert and Clitter House Brook Culvert Extension. These spaces may be poorly ventilated, difficult to access, and potentially toxic.							
Management: Where possible, drones and other digital tools will be used to avoid confined space entry. If this is not possible the programme will minimise the time spent in these conditions. All works will be planned and governed in accordance with the Confined Spaces Regulation 1997 and subject to FMC's three stage 'permit to work' process. Prior to entry into these spaces FMC will conduct air tests, ensure radio communications are working and cover the specific emergency rescue plans with the team. Lone working will be prohibited, all personnel 'high-risk confined space' trained, and gas monitors will be always worn during these activities.							
Asbestos	5	4	20	Post Mitigation →	4	1	4
Description: Due to the date of construction the structures may contain asbestos-containing-materials (ACMs). Asbestos is a class 1 carcinogen and highly toxic if inhaled.							
Management: We will engage with key stakeholders, and conduct desktop studies to locate all ACMs and programme work away from these locations. All design drawings will include Hazard triangles where ACMs are present and be distributed by Arcadis to the construction team. Where activities are unavoidable, they will comply with the Control of Asbestos Regulations 2012 and HSG247. These activities will require a 'Permit to work' to ensure a safe system of work and be subject to our 'Stop Work' policy. In High-risk areas, visual inspections will be made, and material samples tested, to confirm no ACMs are present prior to work commencing. If asbestos is identified, we will appoint a specialist asbestos contractor accepted by TfL to undertake these surveys.							
Working around Water	5	3	15	Post Mitigation →	3	1	3
Description: Our investigations for Work Package 7, require the use of pontoon mounted scaffolds on the River Brent and entry into the water to inspect the culverts. The water itself and the surrounding environment may contain rodents and is potentially toxic. Exposure to these conditions can lead to the transmission of diseases (e.g., Leptospirosis, Hepatitis), Hypothermia, Slips, Trips and Falls, and drowning.							
Management: During the desktop study, we will work with the Canal and River Trust and Brent Council to identify all the site-specific risks (especially to determine if quicksand-like silt is present along the river banks) and plan suitable control measures across the River Brent Sites. We will collect water samples to test for the presence of harmful bacteria and minimise the duration of activities where entry into the water is required. When working above water, personnel will wear safety lines / harnesses and edge protection will be provided at all times. In areas of deep water, life buoys and rescue line will be installed and regularly checked.							

Table 7.2.1 Our approach in mitigating the top five key H&S risks identified in delivering Brent Cross investigation works

APPENDICES

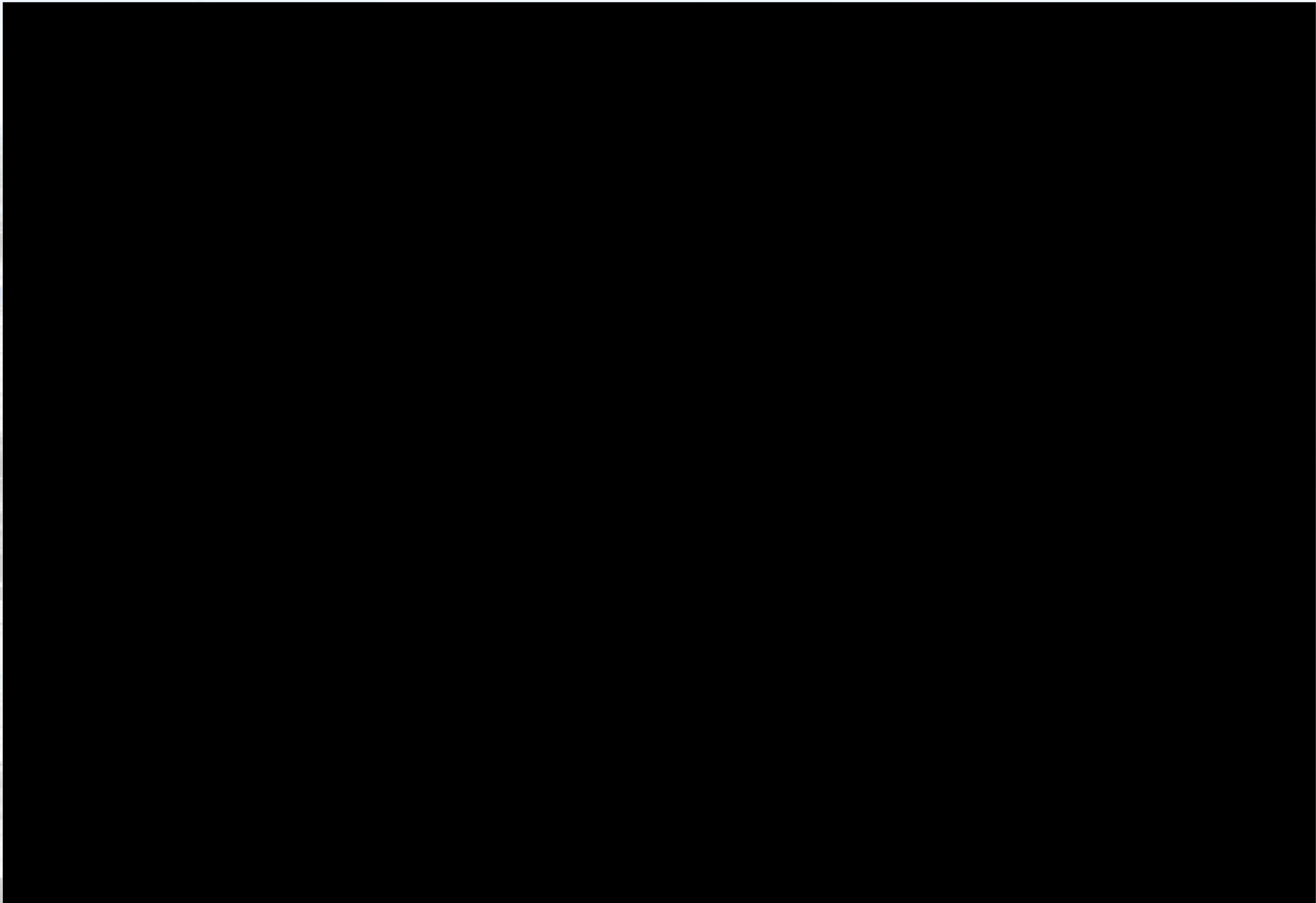
APPENDIX A

Skills Matrix



APPENDIX B

Stakeholder Map




















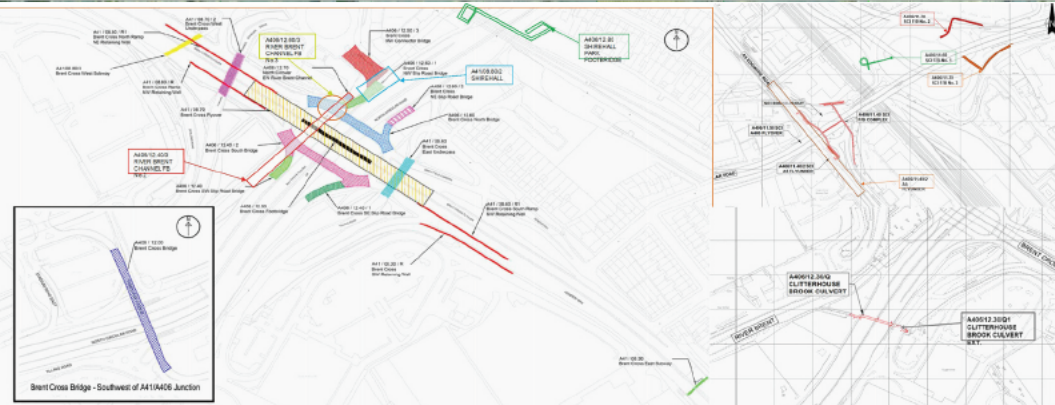








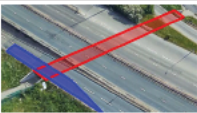


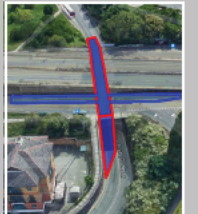

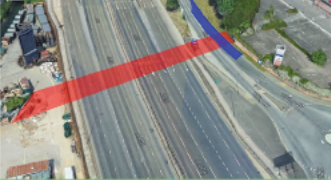





APPENDIX C

Traffic Management and Access Plan

Brent Cross Structures Feasibility Study

Structure Summary | 2021 - Works location and Traffic Management

Key: ● Work off the network ● TM required

Work Package 1		Work Package 2																				
A4/08.70 Brent Cross Flyover underside inspections: <ul style="list-style-type: none">Piers inspections - footway closureDeck soffit and parapets using spider MEWP - no TM required 		A406/12.60 Brent Cross North: <ul style="list-style-type: none">Underside inspections - to be completed at the same time with South Bridge within the same closures (Lane 2&3 A406 closure one direction at a time)Topside inspections - TM full closure of the North Bridge  		A406/12.40/2 Brent Cross South: <ul style="list-style-type: none">Underside inspections - TM combined 2 shifts on each direction lane 2&3 A406 to cover Brent Cross North and Brent Cross BridgeTopside inspections - full closure of the South Bridge 		A406/12.60/2 Brent Cross N/E Slip Rd: <ul style="list-style-type: none">Underside inspections - no TM required, bearing inspections to be combined with other worksTopside inspections - Lane 1 closure 		A406/12.60/1 Brent Cross N/W Slip Rd: <ul style="list-style-type: none">Underside inspections - No TM requiredTopside inspections - A406 - on slip lane closure 		A406/12.50/3 Brent Cross NW Connector: <ul style="list-style-type: none">Underside inspections - No TM requiredTopside inspections - Lane 2 back to back closure Cooper Rd 		A406/12.40/1 Brent Cross SE Slip Rd: <ul style="list-style-type: none">Underside inspections - No TM requiredTopside inspections - slip road lane closure 		A406/12.40 Brent Cross SW Slip Rd: <ul style="list-style-type: none">Underside inspections - No TM requiredTopside inspections - slip road lane closure 								
A4/08.70 Brent Cross Flyover topside inspections: <ul style="list-style-type: none">A41 lane 1 both directions closureA41 lane 2 both directions closure 		A406/12.50 Brent Cross Footbridge: <ul style="list-style-type: none">Underside inspections to be completed during A406 closure combined with other worksTopside inspection to be completed during night shift-footbridge closure required 		Work Package 3		Work Package 4				Work Package 5												
A41/08.80/R1 Brent Cross North Ramp NE R/W: <ul style="list-style-type: none">Lane Closure - night shift to be combined with the A41/08.80/3 and A41/08.70 carriageway works 		A406/12.00 Brent Cross Bridge: <ul style="list-style-type: none">Underside inspections - TM required on A406, to be combined with Mid level bridgesTopside inspections - Traffic light lane closure over the bridge  		A406/11.40/2 Brent Cross SW Slip Rd: <ul style="list-style-type: none">Topside works - lane closuresUnderside works - off the network shifts    		A406/11.40 Footbridge Complex: <ul style="list-style-type: none">Topside works - Footbridge closuresUnderside works - off network shifts 																
A41/08.80/R Brent Cross N Ramp NW R/W: <ul style="list-style-type: none">Lane Closure 								Work Package 6														
A41/08.60/R1 Brent Cross South Ramp SW R/W: <ul style="list-style-type: none">Lane Closure 								A406/11.60/1 SCI Footbridge No 1: <ul style="list-style-type: none">Topside works - Footbridge closureUnderside works - off network shifts 														
A41/08.30/R Brent Cross South Ramp SW R/W: <ul style="list-style-type: none">Access from Tesco - no TM required 								A406/11.70/2 SCI Footbridge No 2: <ul style="list-style-type: none">Topside works - Footbridge closureUnderside works - off network shifts 														
								A406/11.70/3 SCI Footbridge No 3: <ul style="list-style-type: none">Topside works - Footbridge closureUnderside works - off network shifts 														
Work Package 7	A406/08.30/ Brent Cross East Subway: <ul style="list-style-type: none">Underside works - pedestrian managementTopside works - lane closure A406 to be combined with other works 		A406/08.80/3 Brent Cross West Subway: <ul style="list-style-type: none">Underside works - pedestrian managementTopside works - lane closure on the slip road, to be combined with NW Retaining wall works 		A41/08.60 Brent Cross East U/pass: <ul style="list-style-type: none">Underside works - Traffic lights lane closureTopside works - Slip road lane closure, to be combined with other works  		A41/08.70/2 Brent Cross West U/pass: <ul style="list-style-type: none">Underside works - Traffic lights lane closureTopside works - Slip road lane closure, to be combined with other works 		A41/08.80/2 Shirehall: <ul style="list-style-type: none">Pedestrian management required to undertake all inspections 		A406/12.30/Q Clitterhouse Brook Culvert: <ul style="list-style-type: none">Underside - off network shiftsTopside - same TM as or Brent Cross Mid level structure - A406 closure 		A406/12.30/Q1 Clitterhouse Brook Culvert Extension: <ul style="list-style-type: none">Underside - off network shiftsTopside - traffic lights lane closure 		A406/12.50/ R1 River Brent Channel RW: <ul style="list-style-type: none">TM not required - off network shifts 		A406/12.80 Shirehall Park Footbridge: <ul style="list-style-type: none">A406 closure, utilizing TM from other workspedestrian management required 		A406/12.60/3 River Brent Channel FB No3: <ul style="list-style-type: none">Pedestrian management required to undertake all inspections 		A406/12.70 North Circular NE River Brent Channel: <ul style="list-style-type: none">No TM required - off network shifts 	

APPENDIX D

B550 Colney Hatch Lane Bridge Bearing Replacement CPP and RAMS



CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

TO UNDERTAKE

COLNEY HATCH BEARING REPLACEMENT

ON BEHALF OF

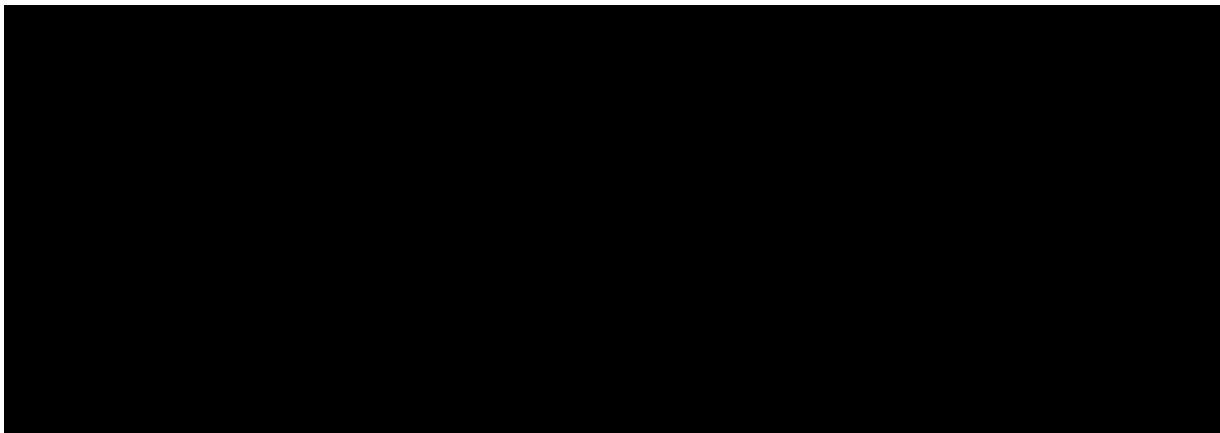
The Transport for London



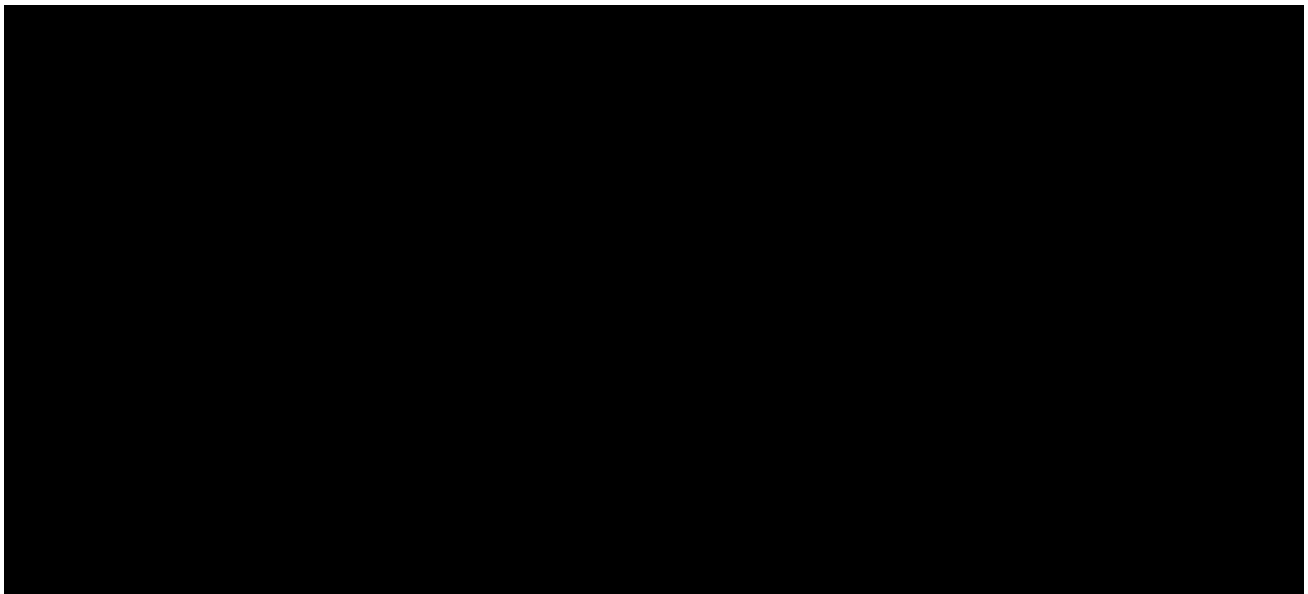
Document Control

Document pre-issue Acknowledgements





--



--	--	--	--	--



Document Revision

Revision No.	Revision details	Date	Revised by:	Checked By (Intls):
Draft	Draft	06/03/2020		IS
Rev01	Comments by IS addressed	13/03/2020		IS
Rev02	Comments by TFL	20/07/2020	AG	IS

Introduction

This plan will provide in detail, how Health and Safety will be managed while Conway Aecom are performing as the Principal Contractor so that we fulfil our obligations under both the Health and Safety at Work Act and the Construction (Design) and Management Regulations 2015

Although this plan is specific to this contract, it is to be read in conjunction with our Health and Safety Policy that is held by all supervisory staff working for Conway Aecom and is available on all our contracts for cross-referencing standard operating procedures and arrangements.

Our key role in managing the construction phase will be to ensure that it is carried out, so far as is reasonably practicable, safely and without risk to health. This does not mean that we will manage the work of our subcontractors in detail – this will be the contractors' own responsibility. We will satisfy ourselves that any designers and contractors that we engage for the construction phase are competent and adequately resourced to carry out the works that they are likely to encounter. Furthermore, we will ensure that the construction phase is properly planned, managed, controlled and monitored, with adequately resourced, competent site management appropriate to the risk and activity.

This document will remain live throughout the life of the project while we are acting as principal contractor. Therefore it will be updated accordingly. All updates and amendments will be detailed in the document control section found on page 2, and the revised CPP will be available on site.

Principles

This document will structure the specific controls and processes that we will employ to deliver the works in compliance with the specifications, procedures and the works information.

To support the excellent standards of safety and general service delivery that we intend to achieve, we will be using the Conway Green Flag initiative as benchmark standards across all of our activities on this project.

Contents

Section 1: Description of Project

- 1.1 Project Description, Key Dates, and Site layout**
- 1.2 Contract Directory**
- 1.3 Extent and Location of Existing Records**

Section 2: Management of the Work

- 2.1 Management Structure and Responsibilities**
- 2.2 Health and Safety Goals, Monitoring and Review**
- 2.3 Arrangements**
 - 2.3.1 Liaison between parties on site**
 - 2.3.2 Consultation with the workforce**
 - 2.3.3 Exchange of design information**
 - 2.3.4 Co-ordination of Contractors**
 - 2.3.5 Dealing with design changes**
 - 2.3.6 Selection and control of subcontractors**
 - 2.3.7 Exchange of health and safety information between contractors**
 - 2.3.8 Site security**
 - 2.3.9 Site induction and Training**
 - 2.3.10 Permit to Work**
 - 2.3.11 Welfare facilities**
 - 2.3.12 Employee Welfare and Occupational Health**
 - 2.3.13 First Aid**
 - 2.3.14 Incident and Accident investigation**
 - 2.3.15 The production and approval of Method Statements and Risk Assessments**
 - 2.3.16 Site Rules**
 - 2.3.17 Fire and Emergency Procedures**
 - 2.3.18 No-go Areas/Authorisation Requirements**
 - 2.3.19 Smoking**
 - 2.3.20 Parking and Vehicular Restrictions**
 - 2.3.21 Planning Restrictions**
 - 2.3.22 Traffic/Pedestrian Routes**
 - 2.3.23 Existing Traffic Systems and Restrictions**
 - 2.3.24 Site Waste Management Plan**

Section 3: Arrangements for Controlling Significant Risks

- 3.1 Safety Risks**
 - 3.1.1 Delivery and Removal of materials**
 - 3.1.2 Services and temporary electrics**
 - 3.1.3 Fall Prevention**
 - 3.1.4 Lifting Operations**

- 3.1.5 Dealing with water, gas or electric services
- 3.1.6 Maintenance of plant or equipment
- 3.1.7 Traffic Management
- 3.1.8 Storage of materials and work equipment
- 3.1.9 Dealing with existing or unstable structures
- 3.1.10 Accommodating adjacent land use
- 3.1.11 Other significant risks

3.2 Health Risks

- 3.2.1 Removal of hazardous Material
- 3.2.2 Contaminated land
- 3.2.3 Manual handling
- 3.2.4 Use of hazardous substances
- 3.2.5 Reduction of noise and vibration
- 3.2.6 Other significant health risks

Section 4: The Health and Safety File

- 4.1 Layout and Format
- 4.2 Arrangements for the gathering and collation of information
- 4.3 Storage of information

Section 5: Appendices

Appendix A –

1.1 Project Works, Program Details and Key Dates

Project works

The purpose of the scheme is to remove and replace all the existing bearings of Colney Hatch Lane flyover, as well as concrete repairs and joint replacements.

This CPP specifically covers the works associated with this replacement, which comprise the following:

- Removal of existing bearings, reconstruction of abutment and pier tops as required, and installation of new bearings
- Concrete repairs to all defective areas of concrete to the piers and west parapet beam
- Complete replacement of all chloride contaminated concrete of the exposed faces of the abutments including
- installation of additional corrosion protection for the reinforcement
- Expansion joint replacement including an extension of the existing joint rails onto the east footway and west verge,
- construction of new concrete stop ends over the service troughs where deck concrete does not exist, and replacement of the existing joint seals with continuous seals across the full width of the bridge
- Repairs to the substructure drainage systems
- Replacement of joint sealant to the deck ends and abutments

Key Dates & Phases

F10 Notification was provided to HSE on	TBC
Planned start date of the project works is	01/08/2020
The planned completion date of the project works is	31/10/2020
Health and Safety File to be delivered to the client on	60 days after the completion of the work

Traffic Management for the whole project are as follows:

Phase 1 and 2 Bearing Replacement

Multiple daytime lane closures and night-time closures of A406 for 64 TM shifts

Lane closures on the on and Of slip for 90 TM shifts

Full closure of the Colney hatch lane in both directions for the jacking (2no nights)

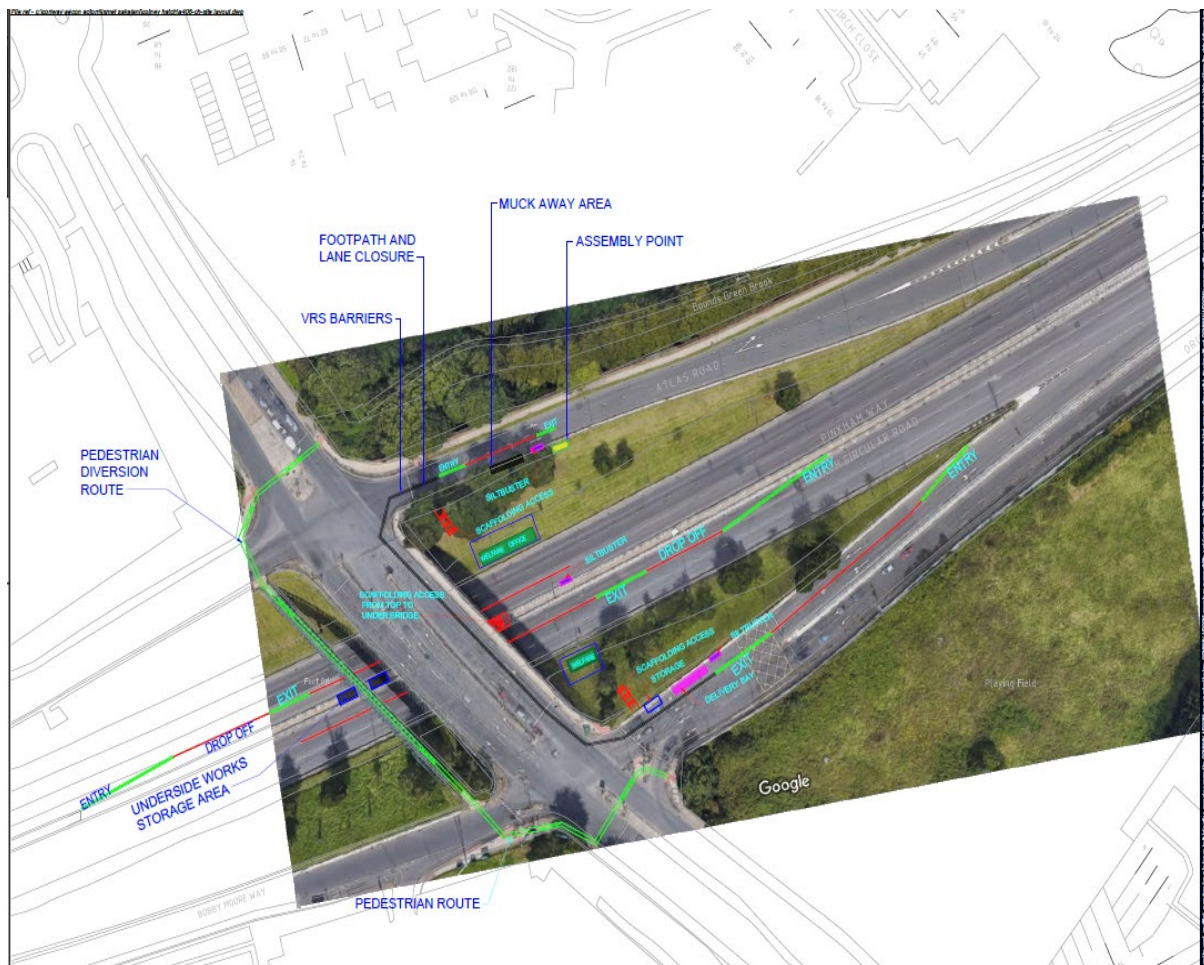
Phase 2 Concrete Repairs

Multiple lane closures and full road closures of the A406 over 10 night time TM shifts.

Phase 3 Top Site Works Joint Replacement

Multiple NB and SB block closures of Colney Hatch Lane over long weekend Friday night 2200 to Monday morning 0500

Site layout



[illegible]

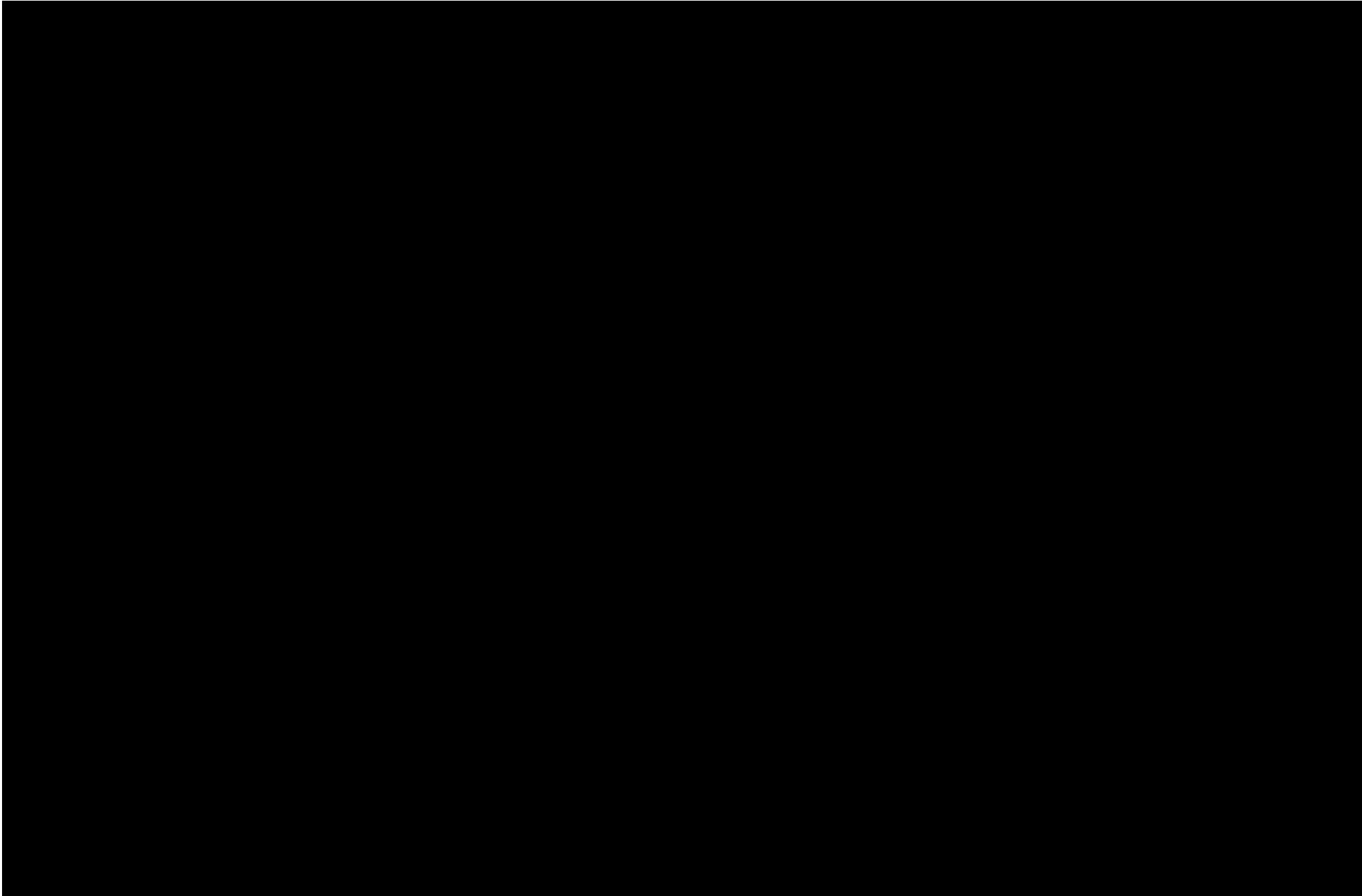
The Construction (Design and Management) Regulations 2015.	
Duty Holder – The Client	Contact Details
Client Transport for London (TFL)	Transport for London Palestra, 197 Blackfriars Road London SE1 8NJ
Contractor	FM Conway Ltd Conway House, Vestry Road, Sevenoaks, Kent TN14 5 EL
Project Manager (TFL)	
FMC Site Manager	
FMC H&S SHEQ Advisor	

1.3 Extent and Location of Existing Records

Any information relating to the location of existing Statutory Undertakers plant and equipment available to the Client and Designers shall be recorded as issued to the Principal Contractor as part of the Pre-Construction information stage. It is the responsibility of the Principal Contractor to establish the location, depth and extent of all services prior to the commencement of any works.

TYPE	INFORMATION SOURCES	LOCATION
Site Layout approved design information	Aecom SPECIFICATION APPENDICES SPECIFICATION FOR HIGHWAY WORKS	Colney Hatch Lane Flyover
Buildings, Structures, Services, etc., to be refurbished or altered	Bridge station	On-site folder
Statutory Services on or adjacent to the site.	FMC Stats pack	On-site folder
Asbestos report	4_Rail	On-site folder
Site-Specific Surveys	Conway AECOM report	On-site folder

Section 2:



The Contracts Manager will be accountable for the delivery of this project. He will oversee the entire team responsible for the effective execution of the project.

The Supervisor will be responsible for the successful implementation and completion of the project. He will oversee the team on a day-to-day basis and be responsible for the effective administration and implementation of the works. He will also take an active role in the planning of particular work orders. In addition, he will be responsible for all staff, plant and facilities used for the execution of the works. He will also be responsible for day-to-day liaison with the client representative. In addition, he will be responsible for the implementation of the works in accordance with the established method statement, contract Quality, contractual and legal requirements of the Health and Safety regulations.

2.2 Health and Safety Goals, Monitoring and Review

Health and Safety Goals – Statement

Conway Aecom will demonstrate their commitment to achieving the following goals;

- To align Conway Aecom objectives with that of The Transport for London
- To align Conway Aecom practices with the FM Conway Green Flag objectives wherever practicable
- To ensure all Site Inductions are completed prior to commencing work on site.
- To complete regular toolbox talks which are relevant to the nature of the project.
- To ensure Near Misses are reported and trend analysis determined.

In summary, it must be recognised that the principle business driver is ensuring and promoting the Safety, Health and Welfare of all employees, subcontractors and of all those, including members of the public, who may be affected by the development of this site. Developing a positive culture, the avoidance of accidents, and the improvement of standards, are key factors in ensuring the success of the project.

It will be the Managements function to provide the right circumstances under which work may be carried out safely. When meeting their statutory obligations, they will ensure that Health and Safety is met with the same priority as any other part of the business objectives and it should be recognised that this provides a firm foundation on which to support the company's activities.

Conway Aecom will undertake a shall undertake an inspection of any significant crevices with an endoscope by a suitably licenced ecologist prior to the starting date and shall produce and submit for acceptance by the Overseeing Organisation, a report of the findings. In addition, we shall also produce and submit for acceptance by the Overseeing Organisation a Bird Mitigation and Management Strategy.

Monitoring

Listed below is a summary of the techniques that will be used for monitoring compliance with this plan and the relevant regulations. Full details of our monitoring procedures are contained in our Health and Safety Policy.

Routine Inspections

- Daily -** A routine inspection of every workplace will be carried out at least once a day (more, if required depending on the risk level) by the Contract Supervisor / Contract Manager or their nominee and will be recorded on the daily inspection forms. Any significant issues will be brought to the attention of the contractors concerned who will be given a strict timescale in which to action the report. A daily task briefing sheet for each activity will be produced and briefed to the relevant staff prior to works commencing, person attending the briefing will sign and record their full understanding.
- Monthly -** The Site Manager will produce monthly inspection reports, copies of which will be left for actioning any non-compliance. The Site Manager will also conduct a monthly inspection of the developments under their jurisdiction. A report will also be issued and left on site for action by the site management team.
- Quarterly -** The Director or Senior Managers will carry out quarterly safety visits and reports arising from the inspections will be issued for action.

Health and Safety Plan

The Health and Safety Plan will be reviewed, updated and developed throughout the life of a project in line with the programme for construction and at no more than 3 monthly intervals or as conditions dictate. Details of all amendments must be recorded on page 2 of this plan and communicated to all duty holders or affected parties.

2.3 Arrangements

FM Conway will ensure all staff are provided with the relevant PPE for the task being undertaken, all staff will sign for their own personnel PPE and will ensure it is kept clean and is not tampered or modified. The FM Conway will check each individual each shift before being allowed to work to ensure they have the relevant PPE, Tools plant and equipment. This will be recorded on the daily shift report.

No persons will be permitted on site without their PPE, Signage will be displayed on the site entrance detailing the minimum requirements required. On completion of the site induction a record will also be kept, and a sticker will be displayed on the individual's hard hat containing their name, company, and date inducted.

2.3.1 Liaison between parties on site

Communications with contractors will be by those methods listed below

<u>Method</u>	<u>Frequency</u>	<u>Contact</u>
Pre-start meetings	Once prior to start on site	Site Manager
Progress meetings that include Health and Safety as an item on the agenda	Once per shift (minimum)	[REDACTED]
Emergency meetings	As required by Conway Aecom and Client	Site Manager/ Supervisor
Written instructions	As necessary	Project Manager
Verbal instructions	As necessary	Project Manager
Walkabout	Daily	Site Manager/ Supervisor
Co-ordination meetings	Once per day - High risk	Site Manager/ Supervisor
	Once per week - Medium risk	
	Once per month - Low risk	
Daily Task Briefing	Daily	Site Manager/ Supervisor

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

Purpose of Above Proposed Meetings

- Introductions – attendees noted.
- Safety topics discussions
- Design changes and or amendments to design,
- Method statement reviews, task briefing reviews
- Discuss CDM 2015 requirements.
- Contractor liaisons – clash monitoring
- Temporary works designs (future)
- Discuss and advise on matters of general health and safety.
- Encourage the communication, co-operation and co-ordination processes between all interested parties.
- Discuss and coordinate Design changes where applicable.
- Ensure Construction Phase H&S Plan is maintained.
- Ensure H&S File is being collated and maintained.
- Improvement management (focus session on areas of improvement)
- Preventative forum – corrective measures
- Wash up closure, capture and record all above items, actions and close out dates.

Communications with Site workers and Client

Communications with site workers will be maintained by:

- Health and safety induction – General Induction recorded
- Daily contact on site and open-door policy;
- Toolbox talks that will include feedback opportunities from the site personnel
- All site personnel are issued with Employee Health and Safety Handbooks and Site Documentation Packs.
- The designated safety notice board(s) on the project is located in the welfare facilities and site offices.
- Signs and posters;
- Site-Specific induction of all FMC staff before any working.
- Construction Advice Notifications, when issued, will be briefed to all personnel, the briefing will be recorded on the daily site diary.
- FM Conway will brief all FMC HSE Bulletins and Alerts and record on the daily shift report.

The Site Manager will be responsible for monitoring communications between team members and other parties, and ensuring that all matters relevant to the project, of which he becomes aware, are communicated to team members as quickly as possible, i.e. during site meetings, memo's etc.

The Site Manager and Site Supervisors will be expected to brief their teams on all matters affecting the project by the most effective means possible.

All relevant communications between parties concerning the project must be clearly identified as directed by the Site Manager and where necessary included in the project safety file.

Adequate records of all communications, i.e. site inductions, toolbox talks, all meetings, (Initial and Review) to be kept for audit purposes.

Communications with third parties

Adequate measures will be put in place to liaise with the local community and local businesses. Conway Aecom will work closely with the Trusts Publicist; this will be co-ordinated via Conway Aecom Community Liaison Officer. Newsletters and onsite information boards will be used to the public and local businesses informed.

2.3.2 Consultation with the workforce

The consultation will be conducted in compliance with The Health and Safety (Consultation with Employees) Regulations 1996.

Employees will be consulted on relevant matters of health and safety, including but not necessarily restricted to: -

- The introduction of any measure in the workplace that may have an effect on them.
- Arrangements for Competent assistance and who/where that assistance is available from.
- Information contained within Risk Assessments and Method Statements.
- Relevant control measures.
- Training requirements and personal development.
- Emergency contact information and procedures.
- First Aid provisions.

Open communications.

All site personnel, at all levels, are actively encouraged by the Contracts Manager to discuss any health and safety recommendations or concerns which actively reduce risks or provide a safer working culture.

Open communication will be encouraged by:-

- Site Induction.
- 'Management, by Walking About' and inviting views from the workforce.
- Cultivating an approachable manner at all levels.
- Use of toolbox talks to encourage feedback and participation, not just to deliver information.
- Conway Aecom welcome and open-door approach
- Conway Aecom will manage/control and issue all relevant documents in line with contract conditions.

2.3.3 Exchange of design information

Requests for and answers to technical information will be directly between FM Conway Ltd and the designer. Copies of all correspondence will be copied to the relevant Manager at the Head office.

New design information will be forwarded directly to FM Conway Ltd by the designer.

The FM Conway Ltd site Management Team will manage all relevant exchanges of design information in accordance with a strict document control process.

2.3.4 Co-ordination of Contractors.

Conway Aecom are committed to achieving the best industry practice by establishing an outcome led, totally integrated management and delivery model, bringing together the best in terms of professional services and operational delivery.

Our integrated model is achieved through bringing together innovation & management from FM Conway and appointed supply chain partners supporting this contract with products, materials and specialist services.

Our supply chain management approach will illustrate:

1. Practical corporate processes and steps taken in assuring the selection and approval of competent supplier and subcontractor partners
2. Approach in sustaining an 'Approved List' of competent supply chain partners throughout the term of the contract creating long term, sustainable relationships with key organisations.
3. Procedures to ensuring subcontractors are fully engaged with our commitments to quality, health & safety, environment and customer care.
4. Mechanism and systems to facilitate performance reviews and encourage continuous improvements year on year.

Supply Chain Strategy & Approach:

To ensure maximum resource flexibility and service resilience, we will appoint specialist supply chain partners who will enhance Conway Aecom capability in delivering planned maintenance works.

Our supply chain management strategy aims to provide a long-term, sustained provision of high-quality services, materials and products that is complementary to, and in support of, our own service delivery. We will aim to use local supply chain where possible to support local growth, to encourage responsible use of resources and to offer opportunities for businesses and communities to share our future success.

We will achieve this by building partnerships, working collaboratively with all supply chain partners and involving them in early discussions and decisions.

Please also see Appendix 1 in this document, where we have included all relevant FM Conway supply chain management procedures that will ensure consistency in the delivery of safety, quality and environmental objectives. All suppliers will be enrolled into our tailored code of conduct and partnering charter through attendance at a workshop to engage those personnel who will be managing and working on this contract.

We will treat our supply chain fairly and engage them on terms that allow them to collaborate with us for the benefit of The Rochester Bridge Trust, including payment of agreed valuations within set periods, and to share risk on a reasonable basis where the organisation who is best placed control the risk, takes ownership for it. Terms will be back to back with the main contract - where that is the best way of delivering value for our client.

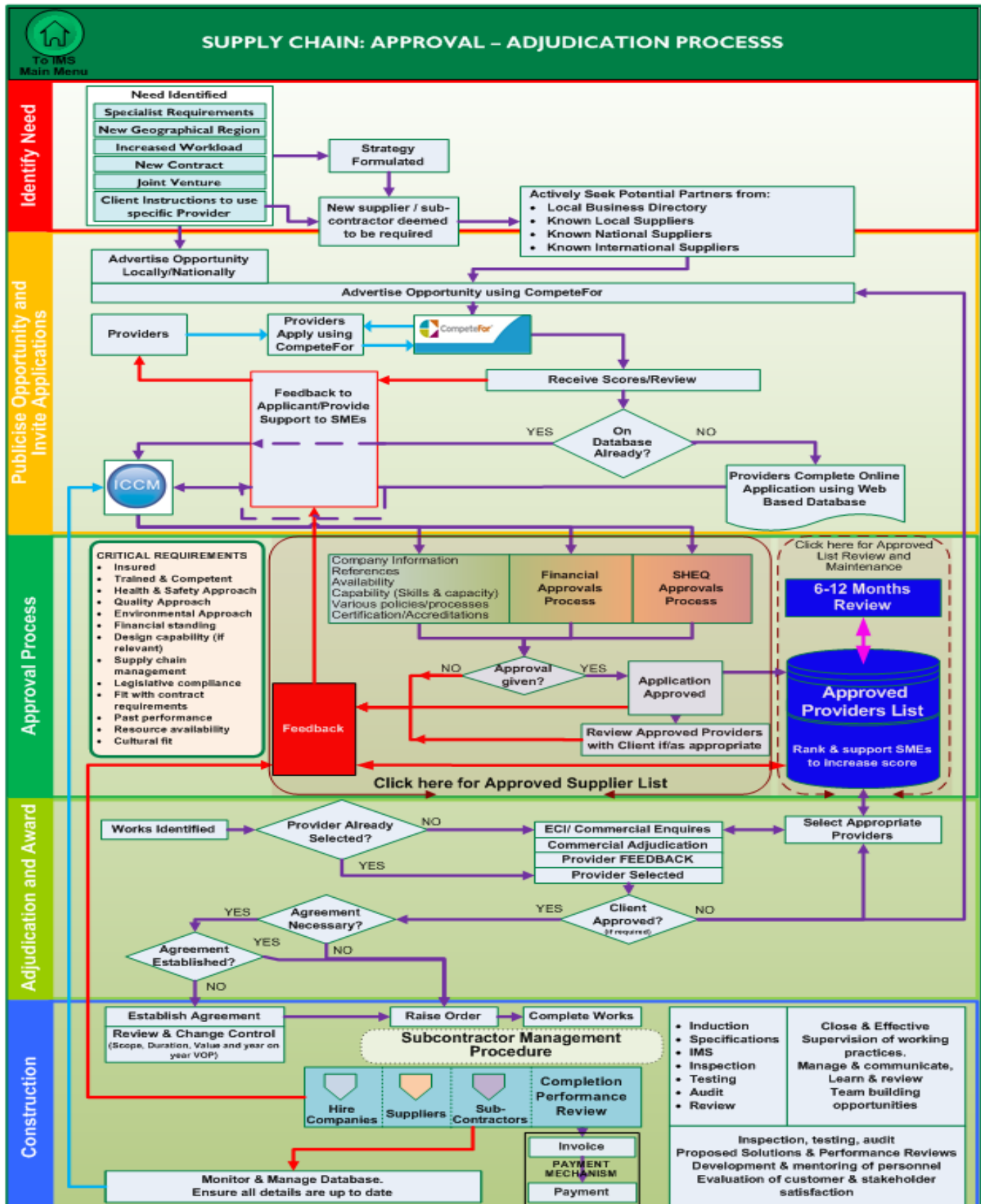
Conway Aecom will provide a list of supply chain partners that we intend to engage for the Project Manager's approval prior to contract commencement and maintain the list over the course of the contract, notifying the project Manager of any changes.

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

We propose to engage a select number of professional companies who specialise in their individual fields and disciplines, example – Freyssinet is included in section 1.2 above.

Our supply chain management process provides the means for on-going management of our approved supply chain partners, ensuring sustained levels of competency and commitment to deliver high levels of performance and quality standards in support of the Specification. This approach has been formulated upon an outcome led philosophy, revolving around the following five elements, which will facilitate effective service delivery:

1. Understanding Requirements: We will focus on understanding the client, customers and stakeholder requirements, the politico-socio-economic environment and commercial constraints. Such understanding will facilitate explicit communication of requirements, objectives and targets to all our supply chain partners.
2. Options Appraisal: By engaging in early discussion and involvement with our specialist suppliers and subcontractors we will formulate solutions that make the best use of industry wide best practice and innovation, highlighting whole life cost benefits and any other short, medium- and long-term advantages.
3. Optimal Design and Delivery Methods: In full collaboration with the client, key stakeholders and supply chain partners, we will facilitate the selection and agreement of optimal construction solutions in order to deliver value for money.
- 4 Nurturing Trust: We will pursue a collaborative culture through complete supply chain management and integration; open, honest, transparent communication, and consistent professional behaviours.
5. Performance Management: Through monitoring, evaluating and reviewing supply chain performance and behaviours, using performance measures that mirror those in the contract, we will imbed a common and consistent approach to service delivery. This will sustain and improve a competent supply chain portfolio, with approved supply chain partners embracing our sponsorship of optimal services and materials, continuous improvement, innovation and sustainable delivery; achieved through robust and fair supply chain agreements.



2.3.5 Dealing with a Design Change

The co-ordination of contractors will be implemented by the following methods:

Localised co-ordination between Foremen whose work activities interact.

- Pre planning and implementation for major activities.
- Interface meetings with all subcontractors
- Shared open forums to discuss potential design clashes to reduce any impact on cost, time and resource.
- Method statements workshops, any issues will be captured in the meetings and any assigned actions documented with close out dates.
- Emergency preparedness plan will be produced for each site.
- Each supplier or contractor will provide Conway Aecom full support during production of documentation, all documents requiring approval will be provided with a specific recorded document number. Arcadis will return any comments for amendment. FM Conway will review and amend said documents and again reload.
- Early recognition of issues, The Conway Aecom Site Manager will highlight any risk, issues or activities requiring attention on the daily shift report, the report section will highlight any items and will also provide a solution for discussion.
- Early recognition leads to early solution and foremost to early resolution.

All co-ordination meetings will be documented, and the Site Manager will be kept informed verbally of any localised co-ordination between Supervisors. Conway Aecom encourage and engage feedback with all staff, personnel and their suppliers.

The originating consultant of a design change will forward the revised requirement directly to the Contracts Manager. Any specific reasoning for the change that is not apparent on the drawing will be considered by Conway Aecom who will include the particulars to accompany the drawing issue.

FM Conway Ltd will issue any changed detail designs as per section 2.3.3.

All design changes shall be subject to a design Risk Assessment by the originating party. Any revised or new Designers Risk Assessments shall accompany the drawing issue and be revised where applicable. The design change or amendment will form part of a gap analysis which aims is to determine any changes in methodology, changed to sequencing and changes in resource or resource levels.

Regular meetings between the Site Manager, Construction Managers and key supply staff will capture interfaces with daily responsibilities, tasks and activities. These meetings will provide the opportunity to avoid clashes and the opportunity to re-schedule activity's and mitigate resource.

2.3.6 Selection and control of subcontractors

Any subcontractor wishing to work for Conway Aecom must first be approved. Any potential contractor is issued with a prequalification form that must be completed in full and returned together with all supporting documentation. Once approved, the contractor can commence on-site work subject to the provision of site-specific Method Statements and Risk Assessments.

The full approval procedure is contained in the Health and Safety Policy.

Conway Aecom will formally notify the project Manager of all Sub Contractors and suppliers who will be engaged to complete works and or activities on the CBR Project as per QUENCH conditions.

2.3.7 Exchange of health and safety information between contractors

A copy of the initial Construction Phase Health and Safety Plan will be issued to all contractors who are short listed to work on the project who must consult the document prior to submitting their final tender. Copies of all contractor's information must be submitted to FM Conway Ltd and checked as part of the prequalification process as per the procedures detailed in the Health and Safety Policy.

On-site, all Health and Safety information will be issued at the weekly progress meetings. Any revised information required from the contractors will be required at the weekly progress meetings.

All exchanges of Health and Safety information will be recorded in the minutes of the weekly progress meetings.

Conway Aecom will manage all site tasks and interfaces with a daily toolbox talks, site-specific briefings and method statements, these will be recorded on-site, and the details will be incorporated within the daily shift report. The Daily shift report will provide evidence of planned works completed, progress, delays, shift times and resource. Each week the reports will be checked, and the Site Manager/ programmer will update the programme. The weekly updated programme will be provided to the Project Manager for review.

Conway Aecom will workshop and review each method statement submission (Contractor / Supplier) prior to submitting to the Project Manager as per the contract.

2.3.8 Site security

All personnel attending the site will sign in and out on the daily site register, electronic shift reports will also be used. The Conway Aecom register will be used by the Supervisor in charge to record all numbers as required; this data will be recorded and will form part of the key performance indicators.

The Site will be adequately be secured by the traffic management team to prevent unauthorised access by utilising traffic management barriers, and pedestrian barriers. Conway Aecom will produce a TM drawing for the road closure and submit the designs to the Project Manager (TFL). All gates will be locked; each site entry will have FM Conway attendance at all the times and signage with telephone contact details . Regular meetings will be held with the FM Conway Site Manager and the Project Manager to ensure planned works are coordinated and security arrangements as set out in the Emergency Preparedness Plan remain effective /current.

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

Security and the emergency preparedness plan will consider staff walkways and any areas of the interface such as the presence of staff, etc., and whether the area is a known walkway and or fire escape route. Considerations to public will be controlled and managed with site-specific method statements for each activity and interfaces.

All Plant and Equipment shall be adequately secured to prevent theft.

No keys to be left unattended in Plant or Equipment. All Plant and Equipment is to be locked when not in use.

All equipment will be secured when not in use, all powered equipment will be switched off when not in use.

Only authorised persons will enter the site working area. FMC will ensure routes are left clear and unobstructed. Each location will have an emergency plan produced, specific to each site which will be posted on site. All accesses to and from any temporary *works* or fenced-off areas, must be locked outside working periods or when not actively manned to avoid unauthorised access.

2.3.9 Site induction and Training

Site Inductions

All persons wishing to work on the project will be required to attend the site safety induction. Even if the person wishes to work for only one hour, then that person is not deemed a visitor and therefore must attend an induction

Staff attending the induction will receive a sticker with their contact details and dated induction, the sticker will clearly be displayed on their hard hat. Each person working on site will have completed their CSCS.

Visitors will not be allowed access to the project without being met at the site entrance by the person whom they are visiting. They will then be required to sign the visitor's attendance sheet located in the site office. They must be escorted at **ALL TIMES** by a competent person.

For the initial works on site, Inductions will be carried out as required. It will be the responsibility of all the subcontractors to brief new starters on the day of their arrival and present them at the designated time for the induction. They must not commence work until they have been inducted.

The Site Manager or his nominee will carry out the induction and all persons attending will be required to sign the induction form to record that they have been inducted and received the relevant information. The induction procedure may be subject to review as the nature of the project and information dictates.

All Supervisors will be required to brief their operatives on the appropriate Method Statements and Risk Assessments before permitting them to commence work. This procedure will be recorded on the relevant form and attached to the back of the relevant document.

New starters arriving to work directly for Conway Aecom will be subject to a Company induction as per the requirements of the Health and Safety Policy.

Records of all inductions will be located in the site safety records file.

Note that the introduction of an induction session sends a clear statement of commitment to safety by site management to the workforce.)

Training

Conway Aecom will check and ensure that people on site have been and continue to be provided with both general and task-specific health and safety talks and briefings throughout the project. This will be achieved by: -

- The individual completes a declaration and will provide all the relevant certificates and accreditations, relevant training expiration dates populated into the training matrix which will provide an early alert for either re-test or recertification, the Conway Aecom document controller will maintain and update the log.
- Spot-checks of operatives to ensure they were adequately briefed before starting work.
- The Site Supervisor will conduct toolbox talks that will be given at least every two weeks. The toolbox talks should be kept brief and to the point and be relevant to the activities on site. The attendance sheet should be held on site and copied to the office for inclusion in the central safety files. A member of the Management team may choose to attend any of the toolbox talk briefings to check that the content is both suitable and sufficient.

Further training courses may be provided as required. This procedure is detailed in the Health and Safety Policy.

Should any operatives training be required by external training providers, then Conway Aecom will expect that all such providers are recognised by the Construction Industry Training Board (CITB) or other similar national training body and approved via the FM Conway Ltd internal system.

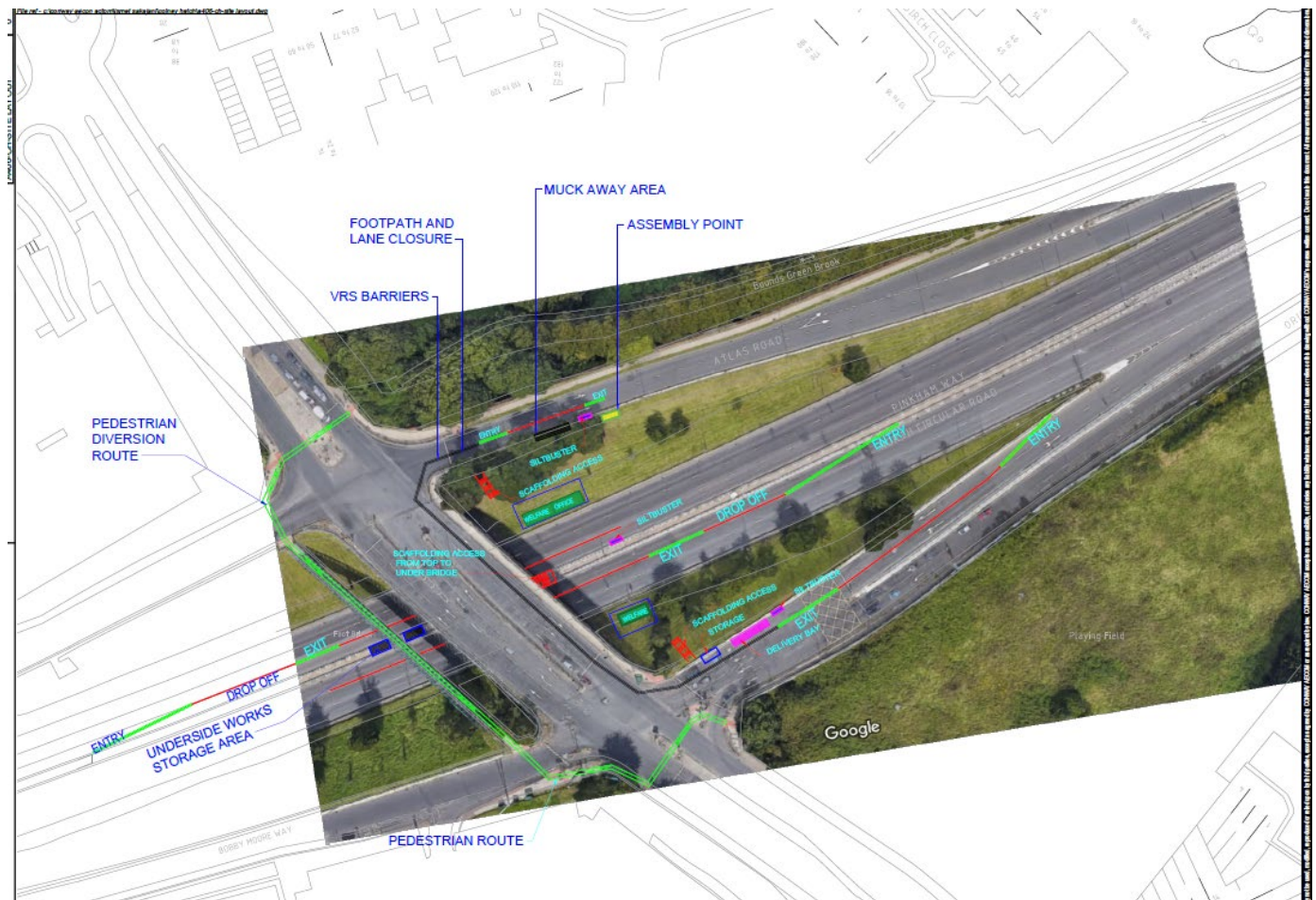
2.3.10 Permit to Work

A Permit to Work system shall be in operation to control access to the site and maintain daily records. The permit shall be issued by the Site Manager or Supervisor. The permits likely to arise are-

- Permit to dig
- Lifting permits
- Working at Hight
- Hot works permit

2.3.11 Welfare facilities

Welfare unit will be placed as shown on the photo below
Proposed cabins



The following will be in place for the site Peronnell:

- Hot running water
- Liquid Soap
- Antibacterial hand gel for use away from units
- Adequate welfare to allow social dic

2.3.12 Employee Welfare and Occupational Health

- Conway Aecom retains the services of Industrial Diagnostics Company and add Safety-Critical medicals.

Services that they provide include: -

- Occupational Health advice
- Health Surveillance Assistance, including: -
- Hand Arm Vibration

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

- Respiratory
- Musculoskeletal
- Skin Diseases
- Noise Assessments, etc.
- Nurse visits to the site
- General Health checks
- Vaccinations
- Back to Work Medicals

2.3.13 First Aid

First Aid shall be assessed and available as required. First Aider details will also be included, such as contractors First Aiders and First Aid Appointed Persons. All details will be published in the site office and during site safety inductions. Each shift the nominated first aider will identify himself to all workers. This role may change each shift so will be named in the site log.

First Aid Kits (Including Burns Kit):				
	Type and Size:	Location:	Contact Number:	
1	First Aid 10-person kit	Welfare Unit	Based At Location	
2	First Aid 10-person kit	All company vehicles	On-site	
3				

First Aid equipment will be located in the main site office working area as well as the 3 locations shown on the site map. There will be a sufficient number of ten-person kits with eyewashes available for the amount of personnel on site. A defibrillator will also be available.

The accident database will be located in the site office/welfare and is to be requested for completion from the Supervisor or his nominee. Any details entered will remain secure and private details will not be released.

The location of the nearest Accident Emergency Unit (AEU) will be displayed together with a map in the Welfare Facility, together with all contact details and within the site documentation. If any injured person is treated by a First Aider and referred for further medical treatment, then it is the responsibility of the injured person to follow the advice given.

All contractors are to inform the Site Manager as to the progress of any injured person who has been referred for further medical treatment such as hospitalisation etc.

All accidents are to be reported and recorded in the accident database. However, Conway Aecom may permit subcontractors to complete their own database provided that Conway Aecom is supplied with a copy for our records.

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

Details regarding all accidents including any subsequent investigation reports will be copied to the client.

If site attendance by ambulance is required Conway Aecom senior management will be informed immediately.



Nearest Hospital:

Finchley Memorial Hospital

Granville Road
LONDON
N12 0JE

020 8349 7500

2.3.14 Incident and Accident investigation

The reporting of accidents, incidents of ill health and dangerous occurrences shall be in accordance with Health and Safety Executive requirements as set out in the Conway Aecom Safety Manual which is available to all employees and contractors.

Accident/ incident and near-miss investigation shall be carried out by the Conway Aecom Central Services Department and FMC Supervisor and any other parties concerned.

All accidents, incidents of ill health and dangerous occurrences shall be recorded in the site Accident database or relevant documentation and reported to the FMC Site Manager and FMC SHEQ Department.

Near misses shall be reported immediately, and place control measures in place to prevent a reoccurrence. All information shall be passed to FMC SHEQ Department.

The incident will be reported to the H.S.E. where required by RIDDOR regulations by a member of the SHEQ Department.

All contractors are required to immediately report to the Site Manager, every accident, dangerous occurrences, and near miss arising from work activities involving employees, self-employed and members of the public etc.

All contractors are responsible for:

- Notifying the SHEQ Department by the quickest available means as soon as is practicable of all reportable injuries and diseases.
- Method of contact shall be via telephone as per information provided on site.

The Site Manager/SHEQ Department must be notified immediately of all accidents and incidents in particular, any potential RIDDOR incidents / accidents. All incidents will be notified to Arcadis within 24 hours.

If a RIDDOR incident should occur, we will investigate the incident in accordance with the procedures as laid down in our Health and Safety Policy.

The amount of Incident and accident information required will be dependent on the severity, however, as a minimum, the following documents will be required:

- A copy of the relevant page of the contractor's accident database (if using their own);
- Copies of statements from any witnesses;
- Where possible, a copy of a statement from the injured party;
- The results of an in-depth accident investigation undertaken by the contractors Health and Safety Advisor detailing the:
 - Photographs of the incident can be used to support the full report.
 - Full details and nature of injuries;
 - Accurate details of the treatment received, both on and off site;
- A copy of the completed F2508 form issued to the HSE or a reference number if reported by telephone; see appendix A
- Circumstances leading up to the accident;
- Circumstances of the accident;
- Direct reasons for the accident;
- Indirect reasons for the accident (lack of supervision, training; etc.);
- Measures taken to prevent a re-occurrence of the accident; and
- Details of how the preventative measures have been communicated to those who could be affected.

Where a contractor is involved in a reportable dangerous occurrence, the following information must be provided to Conway Aecom

- Copies of statements from any witnesses;
- The results of an in-depth accident investigation undertaken by the contractors Safety Manager detailing the:
 - Full details and nature of occurrence;

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

- Circumstances leading up to the occurrence;
- Circumstances of the occurrence;
- Direct reasons for the occurrence;
- Indirect reasons for the occurrence (lack of supervision, training; etc.);
- Measures taken to prevent a re-occurrence; and
- Details of how the preventative measures have been communicated to those who could be affected.

Contractors are also required to keep Conway Aecom informed of the subsequent developments of long-term injuries, diseases and dangerous occurrences, e.g. claims, etc.

Arrangements for Informing Client (if applicable)

All information relating to the accident and incident and subsequent investigations will be made available to the client. It will be the responsibility of the Management Team to cooperate with the clients Health and Safety representative and to keep the client informed of all progress, developments and subsequent involvement from the enforcing authorities, and to ensure the passing on of all information.

2.3.15 The production and approval of Method Statements and Risk Assessments

Any activity that carries a significant risk to a person's safety or health must be addressed using the process of risk assessment. From this assessment, a safe system of work can be devised and formulated using a safety method statement. A key factor in eliminating, reducing and controlling the risk is prior planning and preparation of the works.

NOTE: No activity will be permitted to commence until the Site Management Team has approved a suitable safe system of works.

All Method Statements and Risk Assessments shall be produced by competent personnel after a thorough review of relevant documentation and where feasible, after a thorough review of the site.

All Method Statements and Risk Assessments produced by Conway Aecom for works on site must be submitted for approval by the Client where required in the contract. It is expected that these documents will be submitted 2 weeks in advance of the works so as to allow the Client, a sufficient amount of time to approve them or make comments pending approval. The approval of these documents will be recorded. The comments will be attached to the back of the documentation and filed in the Contractors Method Statement File.

Upon successful evaluation of the Method Statement and Risk Assessment, the contractor concerned will be expected to brief their operatives on the contents of the document and record the briefing session. This evidence must be copied to the Site Management team and filed with the documentation.

Note: No Operative may be permitted to commence work until their Method Statement and Risk Assessments have been and briefed to the operatives. The method statement must be signed and recorded.

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

2.3.16 Site Rules

The rules detailed below have been determined and apply to everyone working on the project. Site staff and tasks will be controlled by site specific method statements and task briefings. Each person attending the CBR site will be inducted, receive a full briefing on the emergency preparedness plan and the relevant task briefing sheets.

The Management Team may impose additional or amended rules as the result of continued risk assessment, on all or part of the project. The site inducted rules for the sites will be strictly followed.

Any persons found contravening the rules below may be subject to disciplinary action, which could include exclusion from site.

We will ensure that the safety rules are brought to people's attention by the following means: -

- Safety induction training.
- H & S discussed at all progress meetings.
- Signs and posters.
- Methods detailed in section 2.3.1
- Consultation meetings.
- Project briefings.
- Toolbox talks

Rules for the client's agents, designers and planning supervisor: -

The clients' agents, designers and CDM Co-ordinator must comply with the relevant requirements of this Health and Safety Plan (and future revisions). They are also required to comply with the safe methods of work to reduce risk at the work face and ensure that all their employees and contract/agency staff adhere to the rules accordingly.

Rules for contractors: -

All contractors on the project (whether in direct contract with Conway Aecom or not) are under a legal obligation to manage their work so that they comply with all the relevant requirements of this Health and Safety Plan (and revisions). They are also required to comply with all agreed safe methods of work and ensure that those under their control are competently supervised to ensure compliance with all relevant site safety rules.

Rules for site workers: -

Site workers are defined as all individuals working on the project (including the project team personnel).

All people working on site are required to comply with the following site safety rules:

Site Safety Rules

The following specific site rules do not relieve contractors of their obligations under the relevant statutory, regulations that take precedence over the site rules.

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

Before commencing work on this project, personnel **MUST**: -

- Attend a safety induction.
- Read and understand their Company Health & Safety Policy.
- Read understand and sign the Method Statement/ Risk Assessment acceptance form applicable to the safe system of work that they are working to.
- Foreman to have Asbestos awareness training

THEY MUST

- Strictly follow all agreed Method Statements/ Safe Systems of work/ COSHH Assessments etc. (see below)
- Wear full Hi-Visibility Jacket/trousers, hard hats and Safety Boots, gloves & eye protection (**these items are mandatory**)
- Wear ear protection where noise levels can damage your hearing.
- Wear protective clothing and respirators when required by a COSHH assessment.
- Observe the Fire Precautions, get to know the Fire Escape routes and identify where the Fire Fighting Equipment is located. (Please refer to Fire Plan document for further details).
- Report anything, which might adversely affect anyone's Health and Safety.
- Report any accident sustained on site.
- Report any unusual objects, unusual substances or strong smells encountered while carryout excavations or digs.
- Comply with site signage
- Stop work when instructed by their site supervisor, or any FM Conway Ltd Manager
- Stop working in unsafe or unhealthy conditions and notify their supervisor immediately.
- Use designated pedestrian routes at all times.
- Use site dedicated toilet facilities only.
- Inform their supervisor if they are using prescribed or non-prescribed medication that may affect their ability to work safely.
- Attend, understand and record their full understanding of site briefings, tool box talks, construction advice notes.
- Attempt to modify, change or alter and safety feature on tools or plant. Report any defective plant or machinery immediately to the FM Conway site manager.
- Respect any persons whom they may come in contact with

THEY MUST NOT: -

- Be in possession of alcohol, illegal drugs or other intoxicants whilst on site. Anyone found in possession or under the influence, will be escorted from site.
- Be in possession of firearms or other offensive weapons on site
- Use tools, ladders, stepladders, scaffolding or other forms of access which are defective, faulty or without a current scaff-tag.
- Interfere with fire extinguishers, alarm systems or other safety equipment.
- Consume food and drink other than within the designated office/welfare accommodation provided. NB. No food to be consumed immediately outside the site boundary.
- Smoke on site other than within designated areas

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

- Interfere with or adapt any scaffold or ladder access.
- Interfere with or adapt any electrical installation or apparatus.
- Interfere with any unusual objects while carrying out excavation or dig works
- Use a scaffold where the "Scaffold Incomplete" sign is displayed.
- Operate plant or equipment when not qualified to do so.
- Abuse anything on-site, including welfare facilities. Any person found to be responsible for defacing or vandalising anything on site will be removed from the site and not re-admitted.
- Do anything that could affect anyone's health and safety.
- Use portable Radios and portable Stereos.
- Fight or fool around. Persons found to be fighting or fooling around will be removed from the site and not re-admitted.
- Any additional rules and information will be provided at the safety induction.

Failure to comply with these rules will result in disciplinary action and, where necessary, dismissal from the site.

Rules for Drivers: -

All drivers on-site are required to comply with the site delivery method statement, the emergency preparedness plan and any relevant rules/conditions where applicable: -

- All drivers must use the specific access route to the site, detailed in the site delivery method statement.
- All drivers must comply with the "Traffic Management Controls" in place.
- All drivers must report to the site office and wait for instructions before proceeding on site.
- All drivers on site must wear safety helmets and safety footwear and high visibility clothing when vacating their cab for ANY reason
- Drivers who have not attended the project health & safety induction must remain with their vehicles unless escorted.
- The site speed limit, one-way systems, prohibited areas and reversing procedures must be strictly adhered to. And the use of a Banksman.
- The instructions of relevant Banks men must be followed.
- All vehicle/plant lights, warning lights and other warning devices must be fully operational.
- The sheeting or netting of loose loads must be carried out before leaving the site.
- The use of mandatory reversing alarms, where this has been considered necessary.
- All drivers must vacate their vehicles whilst being loaded.

2.3.17 Fire and Emergency Procedures

Fire

A Site-Specific Fire Plan (Emergency preparedness plan EPP) will be produced for the CBR site and serves as a Fire Risk Assessment. It contains details of all Fire Personnel and Equipment that is to be implemented on this contract. An RVP will be clearly signed and the emergency plan will be posted in the site welfare area.

Fire points will be strategically placed at key points around the contract. The location of these fire points will be marked on the site fire plan layout drawing (EPP) and briefed to all operatives at induction.

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

A Fire Action Plan will be posted in the site offices and Welfare Facilities and will give instructions to follow in the event of a fire or upon hearing an alarm.

In an emergency, personnel should contact the emergency services by dialling 999 or 112. FM Conway will comply with the provisions of the Joint Code of Practice on the Protection from Fire of Construction Sites, published by the Fire Prevention Association and discharges the duties and obligations of the Principal Contractor.

2.3.18 No-go Areas / Authorisation Requirements

Site-specific method statements will clearly define areas of work and any prohibited areas. No one is allowed to go near the hydro-demolition works expect trained people who will is working there and have signed a permit.

Written permit is required for hydro-demolition area and getting access into lane closures

2.3.19 Smoking

Smoking is prohibited within all site areas unless a dedicated smoking area has been agreed/established, should an area be identified a fire extinguisher and or a sand-filled bucket will be made available. The smoking policy applies to E-Cigarettes and vaping.

2.3.20 Parking and Vehicular Restrictions

Parking to be restricted to authorised and prioritised vehicles and should be kept within the site boundaries. All deliveries will be planned in advance and local characteristics / geographical conditions and or restrictions will be considered to reduce the volume of traffic particularly in areas recognised for high traffic flows.

Only contractor's vehicles and plant are allowed in the works area. Client's vehicles will be permitted if chapter 8 livery is attached, and with the permission of the duty manager or supervisor.

All personnel shall abide by relevant legislation and parking restrictions within the area surrounding the work activity.

2.3.21 Planning Restrictions

There are no known planning restrictions associated with this project

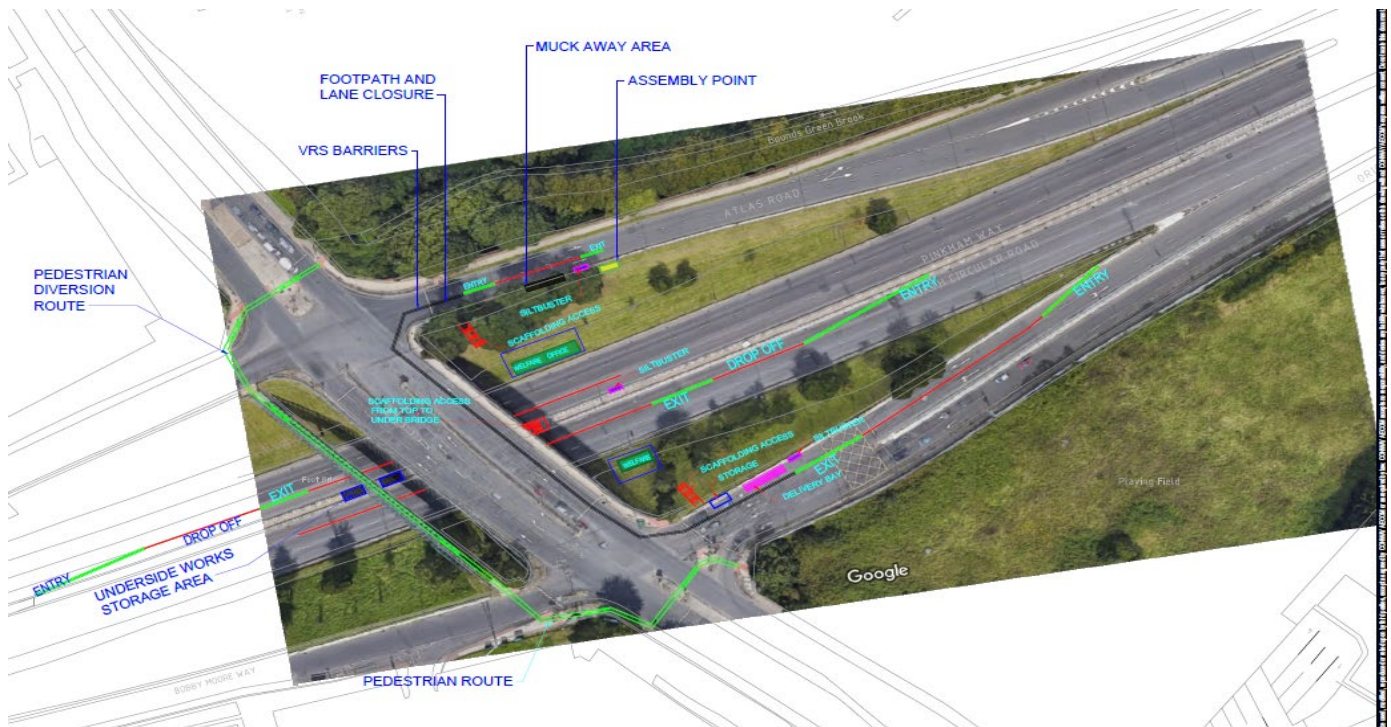
2.3.22 Traffic / Pedestrian Routes

The Traffic Management Plans and Pedestrian Management Plan layouts to be in accordance with Chapter 8 requirements.

The pedestrian routes on the flyover will be closed to pedestrians during the works and the will be managed during the works by the FMC TM Division.

Conway Aecom will produce a site-specific traffic management method statement which will be coordinated directly through FM Conway's Traffic Management department.

Access to site will be via the main enbtrance shown on the figure below



2.3.23 Existing Traffic Systems and Restrictions

This section of the A406 has a 50mph speed limit. Most of the works involves lane closures but no full closures of the A406. Colney Hatch Lane Flyover has a speed limit of 30mph of which work will involve full closures. There are no weight restrictions in force for this structure.

2.3.24 Site Waste Management Plan

A permit to discharge the effluent waste from the hydro-demolition - after filtration and pH stabilization - has been applied for. Larger pieces of concrete debris and stone from the works will be collected from the joint pocket and loaded onto Lorries for transportation to a licensed recycling station. The steel components of the old expansion joints and the temporary type one materials will be removed by the joint specialist and sent by them for recycling.

A Site-specific Waste Management Plan is incorporated into the Quality & Environmental Plan which is included within the Site Documentation. The environmental plan will be submitted under separate cover. Waste Carrier licences, Waste Facility licences and copies of Waste Transfer Notes will be uploaded to the system as required. All skips to be covered and removed of site to secured area

Section 3:

Arrangements for Controlling Significant Risks

3.1 Safety Risks

3.1.1 Delivery and Removal of materials

All deliveries and collections will be subject to the conditions and traffic routes as determined by the Traffic Management Plan referred to in section 3.1.8 of this document.

All deliveries are to be scheduled with the site management team. The Buying Department will inform all supplier haulier of this requirement. The key to minimal impact or disruption on site and the surrounding users such as residents and others, who may be affected due to congestion with surrounding roads, is prior planning of the logistics of the site.

Heavy Plant

Plant and the use of plant will be managed by site-specific method statements

Work Equipment and Materials

Any deliveries that are scheduled for arrival at site must obey the directions given by the Site Supervisor upon arrival as detailed in the Logistic Plan.

Conway Aecom will ensure that all vehicles unloading or collecting equipment or materials adhere to a safe system of work for load security and for ensuring that loads are secure before they leave the confines of the site. Upon arrival all vehicles movements will be controlled by a reversing assistant to and off site, drivers are to ensure that they follow the dedicated traffic route and vacate the immediate area. All plant and equipment will be recorded on the daily FM Conway plant register, any faulty equipment will be quarantined, and a replacement provided.

Unloading and Collection Areas

An area will be set aside for most deliveries or collections. The delivery plan for each will be detailed within the site-specific method statements. FM Conway will aim to ensure all laydown areas and delivery routes are planned and agreed with the Project Manager. The locations and any restrictions will be providing

in the emergency preparedness plan, should the plan require hoarding design and temporary works design will be produced and the plan provided for review / approval.

3.1.2 Services and temporary electrics

FM Conway will provide a power source for sites via bunded diesel generators. Should the contract have a provision for an allowance for a temporary electrical supply from a designated electrical room then a full survey will be conducted, this will include a load survey, load application and a load design, the data will be collated and a design produced, this will then be supplied to the Project Manager for review / approval.

Services

A STAT pack will be issued to site and updated every 3 months. Services will be traced and a permit to dig will be completed before any excavation works. All records will be checked, and any unknown services will be marked up on the red line drawings and submitted as part of the deliverables.

The only service in the structure is a street lighting cable within the central reservation. This cable lies within a duct and will be disconnected before the commencement of the hydro-demolition, with a temporary link installed for the duration of the works. It will be re-connected on completion of the joint installation. Any temporary electrics will be provided from mobile generators. No unauthorized person will be allowed to adapt any electrical connections, all installations must be tested and certificated prior to use. Details of all test regimes to be followed are contained in the Health and Safety Policy.

Temporary Electrics

Any temporary electrics will be provided from existing supplies and regulated to 110V. No unauthorised person will be allowed to adopt any electrical connections; all installations must be tested and certificated prior to use. Details of all test regimes to be followed are contained in the Health and Safety Policy. All electrical tools shall have a current 3-month PAT certificate.

Trailing Leads

Trailing leads will be managed on-site by specific method statements, the importance to manage the use of the extension leads will form part of the toolbox talks. Measures such as clipping up the leads overhead and grouping them together to reduce the amount of individual trip hazards will greatly increase their working life and reduce the amount of trip hazards present. Will actively encourage this best practice while we are working on the contract.

3.1.3 Fall prevention (Working at Height)

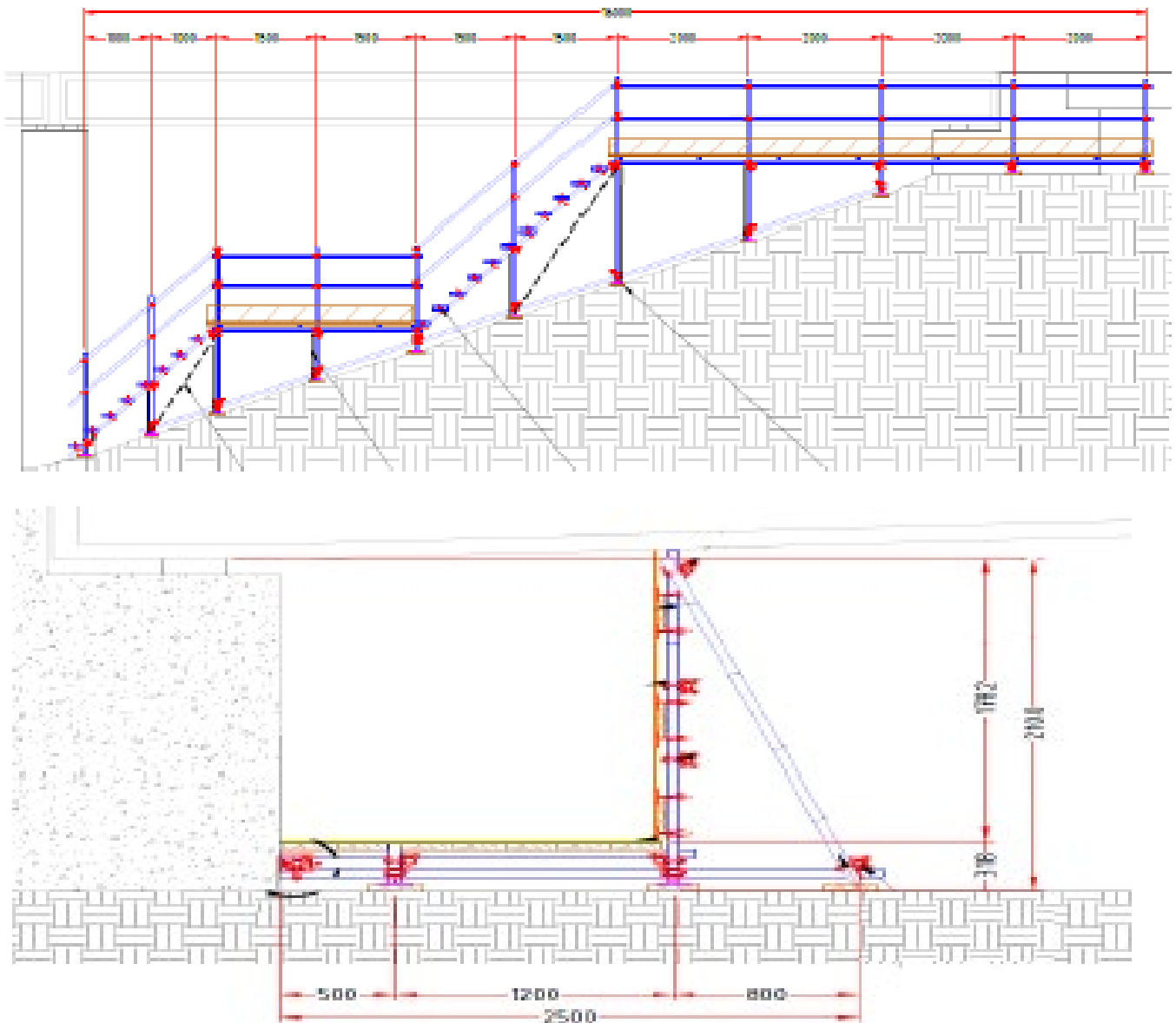
Conway Aecom have produced a detailed policy and accompanying procedures for all work at height activities carried out on our contracts.

All contractors who will work on the contract will be subject to both the procedures and requirements of our assessment that must be incorporated into their own documentation.

In brief, we will ensure that:

- All work at height is avoided where practical.
- All work at height is properly planned and supervised by competent personnel
- All operatives who carry out work at height are trained.
- Working platforms fitted with guard rails are used to prevent falls.
- Suitable access is provided.
- Collective fall prevention is used where guard rails cannot be used, and safety boat provided whilst working over water.
- If personal fall prevention is used, work restraint takes preference over fall arrest.
- Scaffold system, any fixed scaffold system will have a temporary design, the design will be produced, and have a current scaff-tag.

Access to the work area will be by the full access scaffold with emergency access staircase in place



3.1.4 Lifting Operations

All Lifting Operations shall be conducted in accordance with procedures as detailed within FMC Health and Safety Manual and available on request.

In brief: -

A Risk Assessment shall, if applicable, be conducted and included within site documentation relevant to LOLER / POWER regulations

A Safe System of Work, if applicable, shall be developed and included within relevant method statements.

All personnel conducting Lifting Operations shall be deemed competent by Conway Aecom and be trained and qualified for the tasks they are undertaken.

All Lifting Equipment and Accessories shall be certified and routinely inspected in accordance with relevant legislative requirements.

Lifting plans will be produced as required.

3.1.5 Dealing with water, gas or electric services

Service drawings will be reviewed / consulted to determine if the design has any impact on other services. Prior to breaking ground, the area will be cat scanned at 100mm intervals managed by FM Conway's safe dig procedures. A permit to dig will be produced for each excavation and any services identified will be detailed within the permit to dig. These will then be produced in the red lines / as-built drawings.

Before any excavation work is carried out, the site will be scanned with cable detectors, statutory drawings available will be checked and trial holes taken by hand excavation, using shovels and forks taken with great care. Any cables left exposed will be protected on all sides by fencing. The cables will be clearly marked.

Prior to any works being carried out, any statutory undertaker's equipment known or suspected to be within the works area will be identified.

This will be achieved through consultation with statutory undertaker's drawings and site visits (such as Dial before you Dig), CAT and Genny scans, ground radar scans (if deemed necessary), use of any health and safety file information available, previous as built drawings, and client supplied information.

Where equipment is found to be present, this will be marked up on drawings for future reference during the works and inclusion within the health and safety file.

Trial holes will be dug by hand to establish exact locations prior to any excavation works if the services are believed to be within the excavation zone, or where required.

Services will also be marked on site using colour coded spray paint, marker flags, barriers, or other methods that delineate services and safe working zones to the satisfaction of the site supervisor.

Ground conditions will be noted from onsite inspection and existing records and noted. Inspections will be carried out regularly to ensure that all work areas are made safe from collapse or other hazards as necessary.

3.1.6 Maintenance of plant or equipment

All equipment provided on-site to Conway Aecom will be via internal hire or a reputable plant hire company who will ensure that:

- All equipment will be serviced and maintained in accordance with the manufacturer's recommendations and legal requirements.
- All equipment will be checked prior to despatch from the depot and accompanied with the inspection information.
- All equipment will be checked on arrival on site.
- Lifting equipment will be accompanied by a certificate of Thorough Test and Examination either valid for six or twelve months (depending on the requirement- 12 months appliances, 6 months accessories).
- All equipment will be checked prior to use, following any service or repairs and recorded.
- Faulty equipment will be taken out of use immediately and reported to the Management Team who will arrange for a repair or replacement. Any faulty items will be quarantined. Full details on work equipment are contained in our Health and Safety Policy.
- Each site will file contain the current plant register.

3.1.7 Traffic Management

Traffic Management for the whole project are as follows:

Phase 1 and 2 Bearing Replacement

Multiple daytime lane closures and night-time closures of A406 for 64 TM shifts

Lane closures on the on and Of slip for 90 TM shifts

Full closure of the Colney hatch lane in both directions for the jacking (2no nights)

Phase 2 Concrete Repairs

Multiple lane closures and full road closures of the A406 over 10 night time TM shifts.

Phase 3 Top Site Works Joint Replacement

Multiple NB and SB block closures of Colney Hatch Lane over long weekend Friday night 2200 to Monday morning 0500

The FM Conway TM Division will manage all TM connected with this scheme. All permits are in place, and the TM drawings form part of the scheme Health & Safety File.

Plant and Pedestrian routes will be segregated, and all personnel will be informed of these routes during inductions. Any amendments to the traffic plan will be briefed to the operatives via toolbox talk briefings. A Banksman will manage and control all reversing operations on and off site.

3.1.8 Storage of materials and work equipment

All storage areas will be maintained in a safe and accessible condition. All materials will be stacked in a stable condition.

If Flammable Materials are to be stored, they will be in a secure and ventilated cage or compound and marked with a "Flammable Materials, No Smoking" sign. They will be stored on a bunded area that will be capable of holding 110% of the stored contents. A storage licence will be sort and displayed.

A fire point will be located adjacent to the flammable materiel store.

Hazardous Materials will also be stored in a bunded and secure area and appropriate signage posted externally in case of emergency

Housekeeping in all storage areas will be maintained to a high standard so as to maintain clear and safe access.

3.1.9 Dealing with existing or unstable structures

Conway Aecom is not aware of any issues raised by the client, but if, during work activities, any arise, they will consult the client as to the best means of dealing with them.

The requirement for temporary works design will be evaluated during the design phase. Where appropriate a temporary works design will be produced and be provided to the Project Manager. Requirements and

conditions for any temporary works will be controlled and managed by site-specific method statements; designers risk assessments.

3.1.10 Accommodating adjacent land use

The surrounding land use is a combination of Business, residential and infrastructure structures. No plans or permissions are in place or have been applied for use of the business or residential areas.

The Flyover and surrounding road infrastructure is a TFL asset, and will be used at various times during the duration of the scheme.

3.1.11 Other significant risks

Method statements will be produced to manage, and control recognised and significant risks that include demolitions, excavations, temporary works, and working with fragile materials, these will be evaluated periodically. In the event an unforeseen risk is identified the works will stop until the risk has been reduced and controlled.

High-pressure water jetting. This is addressed in the appended Sabre hydro-demolition RAMS
Health risks arising from other activities include (but are not limited to). All are addressed in the appended RAMS:

- **Manual handling:** toolbox talks will be undertaken. Repetitive strain operations are to be shared and adequate breaks taken.
- **Vibration:** Freyssinet UK will manage vibration throughout the course of the works. Site operatives using percussion or vibrating tools are to comply with HAVS data sheets and ensure correct breaks are taken.
- **Slips, Trips & Falls:** Risk of falls will be managed by Maurer UK, and risks shall be identified in advance. Daily briefings will highlight risks during the day's activities to staff and operatives working on the site.

3.2 Health Risks

Conway Aecom will periodically evaluate their staff/personnel via health checks. Generic health risks will be controlled and managed such as dust inhalation, noise, vibration etc. via PPE and COSHH datasheet control measures. Any additional risks not recognised or controlled by Conway Aecom in the first instance will be evaluated, control and management mitigation will be introduced and briefed to the relevant staff.

Protection guidance from environmental conditions which include sun/UV, heat, wind and cold weather will be briefed out to everyone attending site via toolbox talks and daily task briefings. Items like sun-block and UV eye safety protection glasses will be made available on site.

3.2.1 Removal of Asbestos

TFL will provide an asbestos register for all sites, should asbestos be located a qualified UKAS accredited approved company will assess and advise on the management process. Any found or suspected ACM's will be controlled and the areas quarantined, and the correct signage posted. The FM Conway Supervisor will be asbestos awareness trained; however, everyone on site will be provided with asbestos guidance during the site induction.

Asbestos present-

An asbestos survey has been carried out and there is not asbestos on this structure.

Procedure for dealing with asbestos if encountered during construction

Conway Aecom is not licensed asbestos removers. However, should any suspect substances be found and thought to be or contain asbestos, then work in the immediate area will cease and the area fenced off pending confirmation from an analysis expert. The ground thought to contain asbestos will be segregated off and dampened down. Once confirmed as asbestos, the contaminated ground will be transferred to a covered skip and disposed of accordingly to a licensed tip by a licensed carrier. Should suspected substances be identified the area will be cordoned off, left safe and the incident reported.

At no time must the contaminated area be allowed to dry out which will allow the particles to become airborne or be moved around the site and increase the risk of contaminating the whole area.

Working near and over water

NA.

3.2.2 Contaminated land

Where required Conway Aecom will carry out their own soil testing, Laboratory results will determine the quality of the soils and will establish any further requirements and control measures should contaminants be located. A full survey (WAC) test has been undertaken and the results will be submitted to the Project Manager.

3.2.3 Manual handling

Manual handling procedures are detailed within the Health and Safety Policy section. All contractors working on this project will need to produce a specific assessment for their activities involving manual handling and the arrangements they will ensure to reduce the risk to their operatives.

3.2.4 Use of hazardous substances

All uses of substances that are defined under the COSHH regulations may only be used once the material safety data sheet has been consulted and a COSHH assessment has been carried out for the process. Conway Aecom utilises the Sympol web-based COSHH Assessment system for obtaining their assessments.

These assessments have been reviewed and are summarised on the COSHH Assessment Summary, which is included within Site Documentation.

All contractors who will be using COSHH substances on this contract will be required to provide a material safety data sheet together with a COSHH assessment for inclusion in the site COSHH file.

The site COSHH file will be available in the site documentation should consultation be required for the administration of medical treatment.

All users of COSHH substances will be briefed on the contents of any given assessment via a toolbox talk briefing which will be recorded.

3.2.5 Reduction of noise and vibration

Noise

FMC will apply with the Control of Pollution Act – 1974 and abide by any / all conditions. Noise will be kept to an absolute minimum at all times. The local environment officer will consult the planning conditions to determine the noise restrictions imposed on the project.

Noisy operations that exceed 80dB (A) will be specifically assessed. Conway Aecom has produced a specific assessment for noise and this information is contained in the Noise and Vibration assessment. Full details on Conway Aecom arrangements for noise are contained in of the Health and Safety Manual.

- Controlled by acoustic blankets or barriers at source.
- Select appropriate tools and equipment to lower the target levels

Vibration

The main sources of reducing vibration exposure on the contract will be:

- The elimination of direct contact by design
- Mechanical breaking methods – breakers attached to excavators
- The use of vibration reduced hand tools
- Job rotation
- FMC will review each task and the tools required to complete the works and will assess the requirement for HAV metering

A full assessment of vibrating tool use is contained within FMC Documentation and includes the vibration readings and maximum exposure time allowed by the user.

All contractors working on the project will be expected to comply with this requirement and provide detailed assessments of their vibrating tool use together with vibration levels and maximum exposure times allowed.

3.2.6 Generic health risks

Risk Assessment Table

Probability	Description	Rating
Improbable	No known instances of such an event occurring.	1
Remote	Past experience suggests that event rarely occur.	2
Possible	Experience shows that events occur on occasions.	3
Probable	Experience shows that events occur frequently.	4
Likely	Very likely to happen unless actively prevented.	5

Severity	Description	Rating
Minor	Minor accident, resulting in no serious injuries or lost time; little or no damage to property.	1
Moderate	The Potential injury necessitating less than 3 days off work damage to property	2
Serious	The Accident reportable under RIDDOR 95; serious damage to property or the environment	3
Major	Accident resulting in serious or permanent injury; major or permanent.	4
Catastrophic	The Accident results in death or sever disablement; destruction of property.	5

		Severity				
		5	4	3	2	1
Probability	5	25 H	20 H	15 S	10 M	5 L
	4	20 H	16 H	12 S	8 M	4 L
	3	15 S	12 S	9 M	6 M	3 L
	2	10 M	8 M	6 M	4 L	2 L
	1	5 L	4 L	3 L	2 L	1 L

Table 4 – Risk Definitions

DoR Range	Classification of RISK	Action
0 – 5	L Low	Ensure controls are adhered to and activity need not alter.
6 – 10	M Moderate	Tolerable, but efforts should be made to reduce the risk where cost effective and reasonably practicable.
11 – 15	S Substantial	All practicable measures must be taken to reduce the level of risk; tolerable only where further risk reduction is impracticable or disproportionate to the risk involved
16 – 25	Extreme H _(High)	Unacceptable except in extraordinary circumstances; all control measures must be taken regardless of cost

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

To be assessed on a site by site basis or assessed by FM Conway Ltd prior to commencement of work activities.

Appendix A

RISK ASSESSMENT – Colney Hatch Lane

Assessment Completed by: [REDACTED]

Signed:

Date 21/07/2020

Risk Classification Guide

Severity (S)	1 – Minor: Accident resulting in no serious injuries or lost time. Minor or no damage to property or the environment	2 – Moderate: Potential injury causing lost time of less than 3 days off work. Some damage to property or the environment requiring remedial action	3 – Serious: Accident reportable under RIDDOR. Serious damage to property or the environment	4 – Major: Accident resulting in serious or permanent injury. Major or permanent damage to property or the environment	5 – Catastrophic: Accident resulting in fatality or severe disablement. Destruction of property or irreversible damage to the environment
Likelihood (L)	1 – Improbable: No historical evidence of event occurring	2 – Remote: Experience of rare occurrences only	3 – Possible: Experience shows that events occur occasionally	4 – Probable: Experience shows that events occur frequently	5 – Likely: Very likely to happen without controls in place
Degree of Risk (S x L)	1-5 - LOW RISK: If controls are adhered to activity should be safe		6-15 - MEDIUM RISK: Efforts should be made to reduce the risk where cost effective are reasonably practical		16-25 - HIGH RISK: Further levels of control should be implemented to reduce the likelihood of occurrence to a lower level unless further risk reduction are impractical or disproportionate to the risk

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

Mandatory site PPE must be worn i.e. safety helmet / safety footwear / hi-vis vest & certain sites also include safety glasses / hi-vis trousers – BE PREPARED!

Activity	Hazard Description	Consequence	Those at Risk Employee / Contractor / Public / Visitor				Initial rating			Risk Control Measure	Residual rating		
			E	C	P	V	S	L	R		S	L	R
Access, egress and deliveries	Risk of injury due to unauthorised access Poorly marked access and egress routes	Possible fatalities or major injuries	Y	Y	Y	Y	5	3	15	1) Everyone to sign in and have received daily task briefing. 2) The Site Manager will ensure that all persons granted access to site have the appropriate authorisation, training and have work permits, where applicable. 3) Access and egress routes are to be clearly marked and kept clear of obstruction 4) The Site Manager/Supervisor will ensure that adequate protection in the form of barriers, warning signs and direct people management is provided to prevent access by unauthorised persons to the delivery / collection area, i.e. the provision of a Safe Area and Exclusion Zone.	5	1	5
	Delivery vehicles and offloading methods causing obstruction	Possible major injuries	Y	Y	Y	Y	5	4	20	1) The contracts manager will ensure that the necessary permission is gained to allow the positioning of vehicles, plant and other equipment 2) All loading / unloading will be completed at the station entrance. No reversing will be required hence a banksman is required. Long term parking shall be in the local area in approved parking zones.	5	1	5

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

	Delivery vehicles and offloading methods causing obstruction	Damage to property and subsequently persons	Y	Y	Y	Y	5	4	20	1) The Contracts Manager will secure safety by carefully planning the method of loading / unloading to provide safeguards and communicating this to the people engaged in the operation. See Above	5	1	5
Using a Hiab Crane	<p>Incorrect use of equipment</p> <p>Dropping the load</p> <p>Faulty equipment</p>	<p>General body injuries including possible major injuries or fatalities</p> <p>Damage to property</p>	Y	N	N	N	5	4	20	<p>1) Use only in accordance with the instructions of the crane operator</p> <p>2) Lifting equipment should only be operated by suitably trained / experienced personnel</p> <p>3) Observe all the crane operators safety instructions attached</p> <p>4) Only personnel involved in the operation should be admitted to the working area</p> <p>5) Do not exceed the safe working load (SWL) of the equipment</p> <p>6) Ensure the load is securely fixed</p> <p>7) Check all equipment before and after use for any damage</p> <p>8) Report any damage immediately to the supervisor and place the equipment out of use until it has been inspected and passed as fit to use</p> <p>9) Ensure sufficient numbers of operatives to carry out the task safely</p> <p>10) Always use a banksman during use</p> <p>11) Ensure an exclusion zone is in place</p>	5	2	10

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

									<p>12) Any works should only be carried out within the site boundary</p> <p>13) Use outriggers for support</p> <p>14) Stops should be set on the crane boom to limit extension to within the exclusion zone</p> <p>15) Slew stops set to ensure work is limited to the exclusion zone</p> <p>16) Undertake a test lift at low level first to ensure sound footing of vehicle</p>			
Interface with the Public	Deliveries occurring with the General Public present	Possible disturbance with the General Public which could cause injuries, possibly major.	Y	Y	Y	Y	5	3	<p>15</p> <p>1) The Site Supervisor shall ensure that the delivery area is sufficiently demarked with cones, tape and signage i.e. "Men at Work – No entry".</p> <p>2) Operatives shall report any transgressions immediately to the Site Supervisor and stop all operations until person has vacated the working area.</p> <p>3) Operatives to respond to any concerns from the General Public with respect.</p>	5	1	5
General Manual Handling	<p>Items too heavy</p> <p>Incorrect lifting techniques</p> <p>Unbalanced load</p>	Strains to body muscles especially back, neck and shoulders	Y	Y	Y	Y	5	4	<p>20</p> <p>1) Individual loads must not exceed 25kg per person being carried at a comfortable height or 10kg if arms outstretched or above head height. The maximum load for two men will be 50kg</p> <p>E.g.- Trough units , lids, manhole sections and covers, blocks , bricks , steel sections</p> <p>2) Assess the load before lifting and establish the safest method <u>utilising mechanical aids where available i.e. Trolleys, Genie lifts</u></p>	5	1	5

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

	Trips and slips									3) Before lifting and carrying ensure that the route is clear 4) Maintain a safe lifting posture for the entire lift: Keep back straight, lift with the legs as per recommended practises 5) Operators should receive specific training, if applicable 6) All operatives must have received manual handling training before commencing with lifts 7) Gloves are mandatory and must be worn			
	Dropping of items due to incorrect lifting	Possible damage to legs or feet. Possible damage to property	Y	Y	Y	Y	5	2	10	1) Individual loads must not exceed 25kg per person being carried at a comfortable height or 10kg if arms outstretched or above head height. The maximum load for two men will be 50kg. Assess the load before lifting and establish the safest method <u>utilising mechanical aids where available i.e. slab lifter</u> 2) Always wear mandatory safety footwear 3) If working at height special precautions should be taken to ensure no items can accidentally be dropped onto persons or property below i.e. tethering or other restraining.	5	1	5
	Cuts from sharp objects	Cuts and abrasions to hands and arms	Y	Y	N	N	3	2	6	1) Low risk – gloves are mandatory.	3	1	3
Using a slab Lifter	Incorrect or accidental operation of equipment	Possible fatality or Major injury including crushing injuries	Y	Y	Y	Y	5	2	10	1) Do not exceed the SWL (Safe Working Load) – 363kg SWL 2) Before use , ensure valid copies of plant safety certification are in place 3) Only use in accordance with approved procedures and manufacturer's instructions	5	1	5

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

	<p>Injury to other persons in the working area</p> <p>Unauthorised use of equipment</p> <p>Toppling of genie lift due to overloading or use on unsafe ground</p>	Damage to property								<p>4) Genie lifts should only be operated by suitable trained / experienced personnel</p> <p>5) Ensure the load is securely fixed</p> <p>6) Keep all personnel not involved in the lift at a safe distance from the working area and ensure no admittance to site of non-authorized persons.</p> <p>7) Check all equipment before and after use for any damage</p> <p>8) Report all damage immediately to the Supervisor and place the equipment out of use until it has been properly checked and passed as fit to use</p> <p>9) Ensure sufficient numbers of operatives are available to complete the task safely. This will include assessing loads and seeking assistance if in any doubt.</p> <p>10) Ensure that the equipment is securely positioned on solid and flat ground.</p>			
Using a manual trolley	<p>Injury to operatives due to collapse or malfunction</p>	<p>Fractures or crush injuries</p> <p>Cuts and bruises</p> <p>Muscular injuries</p>	Y	Y	Y	Y	4	3	12	<p>1) Ensure that the trolley is of a suitable size for the load to be carried in respect to both weight and dimension</p> <p>2) Visually check the trolley before loading to ensure that there are no faults</p>	4	1	4
	<p>Injury to operatives or others due to load falling off of a moving trolley</p> <p>Trolley tipping</p>	<p>Fractures or crush injuries</p> <p>Cuts and bruises</p>	Y	Y	Y	Y	4	3	12	<p>1) Do not overload the trolley</p> <p>2) Ensure the load is stacked safely and securely fastened to the trolley</p> <p>3) Check the security of the load regularly during transit</p> <p>4) Ensure the load is distributed evenly</p>	4	1	4

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

	Injury to operative during push/pull due to load strain	Muscular injuries	Y	N	N	N	3	3	9	1) Trolley loads should always be of an appropriate weight to ensure the smooth running and manoeuvrability of the trolley 2) Always ensure more operatives are available to assist.	3	1	3
Housekeeping	Slips and trips i.e. poor cable management untidy work area Stored materials collapsing or causing obstructions	Possible major injuries including broken limbs and sprains and cuts	Y	Y	Y	Y	4	3	12	1) The working area should be kept tidy at all times; free from obstructions and all surplus materials. 2) Operatives should clear up any waste, equipment and materials at the end of each shift 3) Cables, leads etc. should be kept tidily at all times and cleared away if not in use 4) Electrical extension cables should be in good condition and confined to agreed routes, protected from possible damage and cleared away if not in use 5) Stored materials should be secured in a designated safe location, away from locations where they could potentially obstruct works.	4	1	4
	Incorrect disposal of waste materials	Pollution to the environment	Y	Y	Y	Y	3	2	6	1) Store waste materials on site in a safe manner – remove waste steelwork to the agreed schedule. 2) Remove materials from site in such a way that they do not make a mess or enter water courses / drains. i.e. double bag 3) Complete appropriate Waste Transfer Notes when removing waste which previously belonged to the site 4) Once removed from site ensure waste steelwork is taken directly to waste metal recycler and paperwork is attained.	3	1	3

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

Noise	Disturbance to local homes	Irritation and possible aggression or complaints to the Client	Y	Y	Y	Y	3	2	6	1) When transferring tools and materials ensure this is done as quietly as possible i.e. avoid dropping/clashing together items 2) Avoid any unnecessary shouting / cursing	3	1	3
Working on the Trusts property.	Operatives transferring materials through site.	Damage to client assets	Y	Y	Y	N	5	3	15	<ul style="list-style-type: none"> Ensure all persons are in possession of a valid Access Permit All works must be carried out as specified in method statement & Safe system of work Co-ordinate all works with client <p>Refer to detailed precautions in SSOW</p> <p>Correct PPE must be worn at all times</p>	5	1	5
Working near/over water.	Contaminated Water Tidal. Cold water. Members of the public contemplating jumping.	Leptospiiral Jaundice Risk of drowning.	Y	N	N	N	5	2	10	<ul style="list-style-type: none"> All personnel to have undergone an induction on this site. Safety Boat Life jackets/ safety harness Emergency Services to be contacted if member of the public are contemplated entering the river, and or this incurs. Issue leptospirosis cards. All personnel to comply with instructions from the Site Supervisor. Ensure that the correct levels of PPE are maintained at all times. Good hygiene practices to be enforced by the CCS Manager. No eating or drinking within the works location. 	5	1	5

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

									<ul style="list-style-type: none"> Cuts & abrasions to be covered up before starting work. Works clothing to be removed and hands and face washed prior to eating, drinking or smoking. <p>Refer to detailed precautions in the site specific method statements.</p>			
Working Environment	<p>Contact with sharps</p> <p>Human body fluids</p> <p>Members of the public being in a non-public area.</p>	<p>Personal injury</p> <p>Fatality</p> <p>Blood Borne Viruses</p>	Y	Y	N	N	5	3	15 <ul style="list-style-type: none"> When working in such environments ensure good hygiene practises Only competent, trained and certified operatives to carry out works Operatives regularly working in these environments should maintain their immunisation against Tetanus and Polio If exposure is considered to be high, consideration should be given to immunisation and in that case Hepatitis A for excrement based exposure and then Hepatitis B for blood borne exposure No smoking, eating and drinking is undertaken in such environments Correct PPE must be worn at all times as stated in Task method statement, risk and COSHH assessment, supervisor to enforce Prevent getting any cuts, punctures wounds or abrasions, cover existing ones with waterproof dressings Where necessary, protect eyes and mouth by using a visor/goggles/safety glasses and a mask where splashing is possible 	5	1	5

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

										<ul style="list-style-type: none"> If collecting sharps/needles, use tongues/forceps to handle them All collected sharps must be placed in purpose made sharps container and disposed of as specialist waste <p>Refer to detailed precautions in method statement Correct PPE must be worn at all times Refer to COSHH Assessment</p>			
Working Environment	Contact with Pigeon or other droppings	Fatality Parrot fever Psittacosis Histoplasmosis Cryptococcus Irritation to eyes/respiratory tract	Y	Y	N	N	5	2	10	<ul style="list-style-type: none"> Operatives to be briefed of hazards before works commence PPE must be adhered to as stated in method statement, risk COSHH assessments, supervisor to enforce No smoking or eating when working in affected areas Restrict access to area Damp down any dust with water before removal Overalls must be worn when dealing with large volumes, cleaning out roof spaces Waste to be double bagged and sealed and removed to a specialist licensed waste disposal site and disposed as specialist waste as directed by EA Transfer tickets must be obtained Where regular exposure is likely health surveillance and vaccinations must be considered <p>Refer to detailed precautions in method statement Correct PPE must be worn at all times</p>	5	1	5

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

Working in environment where asbestos might be present	Asbestos dust/fibres	Personal injury fatality	Y	Y	Y	Y	5	2	10	<ul style="list-style-type: none"> All personnel must be made aware of the hazards at site induction Toolbox talk no 28 Asbestos to be given to all personnel ensuring all have understood and signed tool box attendance register Operatives to follow procedures as stated in document P334 the Management of Asbestos Any new suspected locations must be recorded on Works notification & Risk Assessment Analyse any suspect material before handling Screen off affected areas Only specialist licensed sub-contractors to remove the materials concerned and clean up remaining area Ensure all task method statements, risk assessments are available showing strict controls and Supervisor to ensure that they are adhered to <p>Ensure all materials are stored and disposed of correctly retaining copies of any transfer notes</p> <p>Refer to detailed precautions in method statement</p> <p>Correct PPE must be worn at all times</p>	5	1	5
Working in the dark	Injuries related to not being able to see i.e. trips etc	Possible fatality or major injuries	Y	N	N	N	5	3	15	<ul style="list-style-type: none"> Task lighting to be set up by FM Conway where necessary Ensure existing lighting is functional to and from site via cross passages. 	5	1	5
Using Hand Tools		Cuts and bruises	Y	N	N	N	3	3	9	1) Only use tools for the purposes for which they have been designed.	3	1	3

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

i.e. spanners, hammers etc	Injuries to the body generally due to bad working position and incorrect use of equipment	Muscle strain								2) Only use tools for which the appropriate training has been completed 3) Use only in accordance with manufacturer's instructions and tool box talks 4) Always maintain a comfortable working position 5) Safety glasses and mandatory gloves must be worn during use of hammers and the nail bar			
	Dropping tools Tools slipping during use	Cuts and bruises to hands and arms Eye injuries	Y	N	N	N	4	3	12	1) If hammering an object that requires stabilising, operatives should hold the object with another tool (i.e. mole grips etc) to remove the risk of hitting their hands during the operation. 2) Wear the appropriate PPE i.e. thick or padded gloves, safety glasses if flying debris is likely	4	1	4
Using Power Tools i.e. Nut runners Pistol drill	Injuries to the body generally due to bad working position and incorrect use of equipment	Cuts and bruises Muscle strain	Y	N	N	N	3	3	9	1) Only use tools for the purposes for which they have been designed. 2) Only use tools for which the appropriate training has been completed 3) Use only in accordance with manufacturer's instructions and tool box talks 4) Always maintain a comfortable working position 5) Always keep both hands on/behind the tool during use to avoid slipping / drill snapping 6) Do not force the tool	3	1	3
	Dropping tools Tools slipping during use	Cuts and bruises to hands and arms Eye injuries	Y	N	N	N	4	3	12	1) Wear the appropriate PPE i.e. safety footwear, thick or padded gloves, safety glasses / goggles 2) Always keep both hands on/behind the tool during use to avoid slipping / drill snapping	4	1	4

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

	Fragments flying off at speed Trip hazard	Cuts and grazes to the operative and other people in the local area	Y	Y	Y	Y	3	3	9	1) Maintain a safe working distance from people not involved in the operation 2) Keep tools that are not being used tidied away where they cannot fall on or trip anyone. Maintain tidy cable management.	3	1	3
	Build up of swarf or other debris during use	Cuts and abrasions	Y	N	N	N	4	3	12	1) Do not leave objects in the immediate area that could get caught in the equipment 2) Ensure long hair is tied back and that any rings or hanging jewellery is removed before using power tools 3) If the tool has a guard you must use it. <u>Never</u> remove a fitted guard 4) Remove swarf and other debris regularly with a blunt object. <u>Never</u> remove swarf with a rag or your glove	4	1	4
	Electrical Faults	Electrocution	Y	N	N	N	5	3	15	1) Only use plant that has a current test tag fitted 2) Only use 110V equipment 3) Before use, check leads, plugs and equipment for visual defects 4) Do not repair, modify or alter tools unless qualified to do so 5) Only use tools for the purposes for which they have been designed	5	1	5
Vibrating Power Tools	Overexposure to vibrating tools, either hand arm vibration	White finger Carpel tunnel syndrome	Y	N	N	N	4	5	20	1) All vibrating tools are provided with vibration magnitude statistics.	4	2	8

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

		Paraesthesia Painful joints Bone damage in hands & arms								2) All Method Statements will include details of HAVS exposure limits, for vibrating tools in use, both for periods of session and daily use. These limits will be maintained by the Contract Manager and trigger time sheets will be used to monitor and control significant usage. 3) Ensure that the tools are in good condition. Contract Managers are advised to investigate whether tools are available that produce lower vibration levels 4) For particularly high vibration levels specific PPE should be provided i.e. vibration reduction gel gloves 5) Should any adverse effects be felt during use operatives are to stop immediately and report the concern to their supervisor. Any effects noted outside of working hours should also be reported before the next use.			
Using an Angle Grinder / Disc Grinder	Sparks causing a fire or explosion	Major or minor burns, Fatalities or serious property damage	Y	Y	Y	Y	5	3	15	1) Do not use in areas of high fire risk 2) Clear surrounding area of any combustibles 3) Always have appropriate firefighting equipment to hand (i.e. 2 extinguishers, fire blanket). 4) Have a watchman in attendance 5) Comply with site fire regulations 6) Do not use on site without a hot works permit 7) Use screens to shield surrounding area from sparks where practical	5	1	5
	Injuries to the body generally due to bad working position and	Cuts and bruises Muscle strain	Y	N	N	N	3	3	9	1) Only use tools for the purposes for which they have been designed. 2) Only use tools for which the appropriate training has been completed	3	1	3

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

	incorrect use of equipment									3) Use only in accordance with manufacturer's instructions and tool box talks 4) Always maintain a comfortable working position 5) Always keep both hands on/behind the tool during use to avoid slipping 6) Ensure guard is undamaged and is fully secured in its correct position			
	Dropping tools Tools slipping during use	Cuts and bruises to hands and arms Eye injuries	Y	N	N	N	4	3	12	1) Wear the appropriate PPE i.e. safety footwear, thick or padded gloves, safety glasses / goggles 2) Always keep both hands on/behind the tool during use to avoid slipping	4	1	4
	Fragments flying off at speed Trip hazard	Cuts and grazes to the operative and other people in the local area	Y	Y	Y	Y	3	3	9	1) Maintain a safe working distance from people not involved in the operation 2) Wear appropriate PPE (thick gloves, safety goggles/visor, overalls) 3) Keep tools that are not being used tidied away where they cannot fall on or trip anyone. Maintain tidy cable management. 4) Ensure that cutters / discs are suitable for the material being worked on 5) Use screens to shield surrounding area from sparks where practical	3	1	3
	Electrical Faults	Electrocution	Y	N	N	N	5	3	15	1) Only use plant that has a current test tag fitted 2) Only use 110V equipment 3) Before use, check leads, plugs and equipment for visual defects	5	1	5

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

										<p>4) Do not use in wet environments</p> <p>5) Do not repair, modify or alter tools unless qualified to do so</p> <p>6) Only use tools for the purposes for which they have been designed</p>			
Dust / smoke (From grinding)	Exposure to dust / dirt from removal of components and grinding operations	Possible related health issues	Y	Y	Y	Y	3	3	9	<p>1) Create an exclusion zone around the working area</p> <p>2) Where removal of existing materials is likely to dislodge old dirt/dust ensure an FFP3 face mask is work.</p> <p>3) Face fit testing to be completed for all operatives</p>	3	1	3
	Exposure to small amounts of lead in dust/smoke from grinding operation	Possible related health issues	Y	Y	Y	Y	3	3	9	<p>1) Create an exclusion zone around the working area</p> <p>2) Where cutting of materials is likely to expose operatives to lead contaminated dust or smoke ensure an FFP3 face mask is work.</p> <p>3) Face fit testing to be completed for all operatives, all requirements will be recorded and kept within the site files</p>	3	1	3
Working with Other Contractors	<p>Conflicting operations</p> <p>Unsafe plant and equipment</p> <p>Differing Safety Standards and Working Practises</p>	From Minor Injuries and disharmony to Fatalities and Major Injuries	Y	Y	Y	Y	5	3	15	<p>1) Good communication at all levels is essential</p> <p>2) Be aware of other contractors and of work that they are carrying out</p> <p>3) Always check shared plant, i.e. scaffold towers, before use. Never assume that it has been left intact and in good order</p> <p>4) Abide by programme arrangements and all shared working arrangements</p> <p>5) Always leave plant in good working order and report any damage or malfunction immediately</p>	5	1	5

NW2019 0251 Colney Hatch Bearing Replacment EALOH2021

										6) Always leave the working area in a safe and tidy condition, clear up at the end of each shift or operation. 7) In the event of conflict report the matter to your Manager or Supervisor or Site Person in Charge. Do not allow conflicts to continue. 8) Never assume that other operatives in the working area are aware of you and the operations being performed. If any doubt exists be forceful in letting them know your intentions before beginning.			
Contamination Leptospirosis / Weils disease	Exposure to vermin – waste	Mild – minor to major	y	y	y	y	5	3	15	1) Staff to be briefed on good hygiene methods 2) Ensure welfare is serviced and provides fresh clean running water / soap 3) Ensure no food / drink is consumed in the site environment 4) Ensure the no smoking policy is adhered to 5) Ensure staff wear protective gloves at all times 6) Good housekeeping policy (empty waste to discourage vermin) 7) Vigilance 8) Brief staff – don’t put hands where you can see. ! 9) Ensure vans and vehicles contain no food waste 10) Site manager to walk the site daily and check for signs of vermin. 11) Clear site of waste materials, 12) Review environmental plan for any areas highlighted as high risk	3	1	3

COSHH ASSESSMENT

All data sheets will be held in the site file and briefed out according to the relevant task and product. Specific assessments will be provided.

Section 4:

The Health and Safety File

4.1 Layout and Format

FM Conway will provide relevant information in the format and extent that is required by the CDM 2015 to be included in the health and Safety File. The site information and operation manuals will be provided to the Project Manager.

Information shall be provided in an Electronic format and as per the Scope – in accordance with clause S 417, S 420 and S 421.

4.2 Arrangements for the gathering and collation of information

FM Conway Ltd will commence the collation of the required information, including information from contractors and format the information, the following information will be included;

- A description of the works carried out
- A list of contractors involved in the construction
- A list of suppliers
- Residual hazards and how they have been dealt with (for example asbestos, buried services, contaminated land)
- Key structural principals incorporated in the design of the structure
- Hazards associated with the materials used (e.g. hazardous substances, special coatings etc.)
- Information regarding the removal or dismantling of installed plant and equipment
- Health and Safety information about equipment provided for cleaning or maintaining the structure
- The nature, location and markings of significant services, including drainage, cable ducting and communications services
- Information and as built drawings of the structure, its plant and equipment

4.3 Storage of information

FM Conway will produce a detailed storage licence clearly defining the area required, items

5.0 Appendices



METHOD STATEMENT

For
COLNEY HATCH LANE
BRIDGE BEARINGS REPLACEMENT
EALOH2021

FMC-EALOH2021-MS-AD-rev A

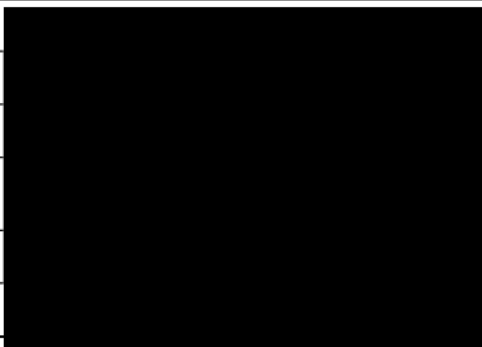
	Company
	FM Conway
	FM Conway
	FM Conway
	FM Conway

PERSON UNDERTAKING METHOD STATEMENTS:	DATE OF ASSESSMENT:	APPROVAL SIGNATURE:
Ismet Sakajani		



Introduction

The purpose of this method statement is to provide the reader with a description of how FM Conway principal Contractor to Client, will conduct each task of the project to adhere to the Company's Health and Safety Policy documents. In addition, the Risk Assessments and COSHH Assessments prepared for this project should be read.

Site Management Structure		
FM Conway	Head of Structures	
FM Conway	Contract Manager	
FM Conway	Project Manager	
FM Conway	Site Agent	
FM Conway	Site Supervisor/Foreman	

Nature of Project

Colney Hatch Lane Bridge (structure ref. A406/18.70) carries the B550 dual carriageway over the A406 North Circular Road, a 3 lane dual carriageway, in the London Borough of Barnet (Figure 1). The speed limit over the structure is 30 mph and the speed limit under the structure is 50 mph. The B550 over the bridge comprises 4 lanes in the northbound direction and 3 lanes in the southbound direction. There is also a paved footway on the east side of the bridge and a raised verge on the west side. Colney Hatch Footbridge is located approximately 10 m southwest of the structure.

The bridge was constructed in 1975 as a continuous 4 span structure with a skew angle of 25.5 degrees and an overall deck width of 26.6 m. The two central spans over the A406 have a skew span of 20.25 m between centrelines of piers and the two side spans have a skew span of 13.75 m between centrelines of piers and abutment bearings. The bridge deck comprises precast pre-tensioned M beams composite with a cast in-situ reinforced concrete top slab.

The deck beams are supported on laminated elastomeric bearing pads on cast in-situ reinforced concrete abutments and three intermediate reinforced concrete piers. The bridge is fixed translationally at the centre pier with lateral restraint provided at the remaining supports. The wing walls are cast in-situ reinforced concrete and are integral with the abutments. The abutments, piers and, wing walls are supported on bored concrete piled foundations.

Bridge modification works were carried out in 1998 which included carriageway realignment of the B550. Steel post and rail parapets are provided on either side of the



superstructure. The central pier is protected with w-beam safety barrier on either side and open-box beam safety barriers are provided in the verges adjacent to the intermediate piers.

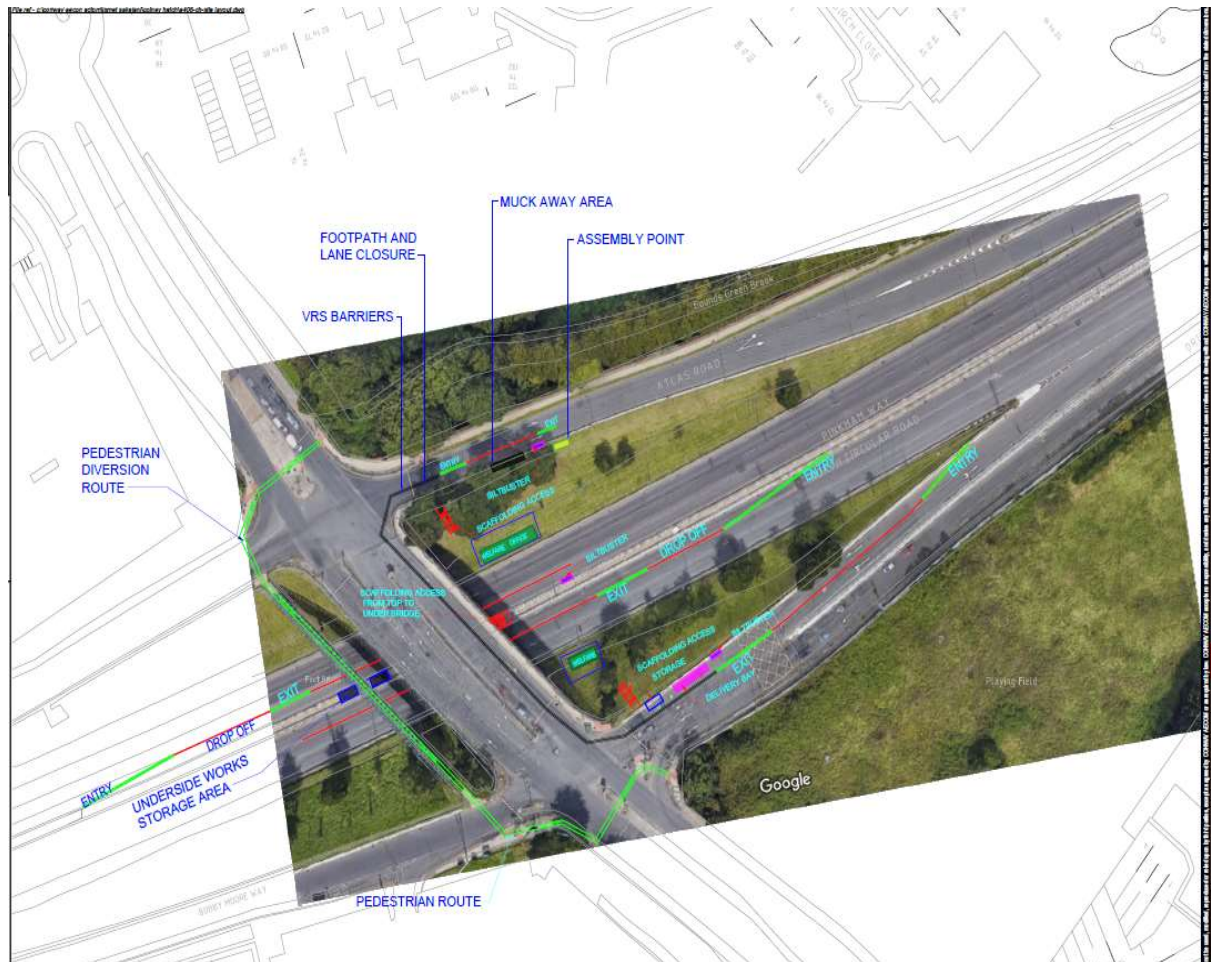


Figure 1: Location plan of the Colney Hatch Bridge



Description of the Works

The purpose of the scheme is to remove and replace all the existing bearings of Colney Hatch Lane flyover, as well as concrete repairs and joint replacements.

This CPP specifically covers the works associated with this replacement, which comprise the following:

- Removal of existing bearings, reconstruction of abutment and pier tops as required, and installation of new bearings
- Concrete repairs to all defective areas of concrete to the piers and west parapet beam
- Complete replacement of all chloride contaminated concrete of the exposed faces of the abutments including
- installation of additional corrosion protection for the reinforcement
- Expansion joint replacement including an extension of the existing joint rails onto the east footway and west verge,
- construction of new concrete stop ends over the service troughs where deck concrete does not exist, and replacement of the existing joint seals with continuous seals across the full width of the bridge
- Repairs to the substructure drainage systems
- Replacement of joint sealant to the deck ends and abutments

Works Methodology

The works will be carried as per the methodology below:

The majority of the enabling/ground works will be undertaken by FM Conway, in accordance with this method statement and risk assessment and the design of the work, appended to this document. FM Conway's Works Supervisor and Project Manager will check the works periodically to ensure that they are being carried out in accordance with the documentation.

Phase 1 and 2 Bearing Replacement- Freyssinet

Multiple daytime lane closures and night-time closures of A406 for 64 TM shifts

Lane closures on the on and Off slip for 90 TM shifts

Full closure of the Colney hatch lane in both directions for the jacking (2no nights)

Phase 2 Concrete Repairs

Multiple lane closures and full road closures of the A406 over 10 night time TM shifts.

Phase 3 Top Site Works Joint Replacement

Multiple NB and SB block closures of Colney Hatch Lane over long weekend Friday night 22:00 to Monday morning 05:00



Safe Digging

Please refer to the Stats pack for full information.

The area is barriered off, and works will be carried out within the barrier area.

The engineer will mark out the excavation; service drawings will be checked. A Cable avoidance tool (CAT) scan will be carried out to locate or confirm the positions of any underground services. These positions will then be marked-up to identify their location using an appropriate marking system (such as line-marking paint). Once marked the workforce will be briefed on the markings and confirm what markings identify what service type. The supervisor will issue a permit to dig prior to any excavation works being carried out.

The excavation will be carried out in the following order:

- The area will be CAT scanned, and each service will be located and marked.
- Trial holes will be excavated to locate any identified services.
- The full extent of the reduced level dig will be marked out.
- The area will be excavated using an 8t -16t excavator with a banksman.

Operatives should never assume that the location or depth of a service indicated by drawings or CAT scans are accurate, all information should be treated as guidance and proceed with caution as services may have been laid shallow or have cover reduced since being laid.

ALL SERVICES ARE TO BE TREATED AS LIVE AT ALL TIMES

The risk assessments and method statements will be briefed to the workforce. Operatives are to sign to accept the understanding of all documents and control measures.

In addition to full PPE, all operatives are to wear flameproof overalls and only use insulated digging tools.

A safe access and egress point are to be established into the excavation as the works progress.



The area will be excavated by hand to either a depth of 150mm or to the top a service, whichever one ever is higher, a CAT scan will then be carried out.

CAT scans are to be carried out every 150mm and services are to be identified as the works progress.

If any unknown services are discovered, works are to stop, and the supervisor is to be informed.

The requirement for temporary works to support either the services or the excavation will be assessed as the works continue; all temporary works will be installed in accordance with any temporary works design or to industry standards.

All spoil will be removed from site via an FM Conway grab lorry or loaded into a muck away lorry using an excavator.

Exposing services

Due to the number of services within the area, good digging techniques should be followed at all times; the supervisor should monitor the operatives carrying out the excavations at all times.

Frequent and repeated use should be made of the CAT & Genny during the course of the work, the works will be CAT scanned at 150mm intervals as the excavation progresses. Care will be taken when CAT scanning, a CAT may not be able to distinguish between cables or pipes running close together and may present them as a single item.

Any exposed service is to be excavated alongside rather than directly above it. Final exposure of the service by the horizontal digging technique will be carried out, as the force applied to hand tools can be controlled more effectively.

Insulated tools should be used when hand digging near all services. Spades and shovels (preferably those with curved edges) will be used rather than other tools. They should not be thrown or spiked into the ground, but eased in with gentle foot pressure; Picks, pins or forks will not be used.

Exposed Services

Where required Services will be supported using temporary works, services should never be used as hand or footholds for climbing out of excavations.

Cables should not be moved aside unless the operation is supervised by the cable owners.



All services should be assumed to be live unless proven otherwise by a competent and authorised person (e.g. by a utility representative at the point of work). Ensure written confirmation is obtained of disconnection before removing a redundant service. The written confirmation must be both the owner/operator of the service and from F M Conway.

Failure to identify services correctly is another common cause of accidents. A wide variety of materials and colours have been used for services over the years. Furthermore, some services run in ducts made of various materials making them difficult to identify; until exposed, it should be treated as an electrical cable or gas pipe until proved otherwise.

Damaged services

In the event of damage to any service, the following procedure will be followed.

Stop works immediately and inform the supervisor. The supervisor is then in turn to inform the works supervisor, Project Manager and Central services.

In the case of electricity cables, gas pipes, other pipelines or high-pressure water mains, arrangements must be made to keep people well clear of the area until it has been made safe or repaired by the owner/operator.

NEVER return to any excavation if a cable has been damaged. If the cable has tripped, then the Owners/operators can enliven the cable, and this may lead to a further explosion.

Remember if a gas connection to a building has been damaged, it may cause a leak in the building. Warn the occupants of the building, and of the adjoining buildings, to leave. Ban smoking, and naked flames and other sources of ignition within at least 10m of a gas leak.

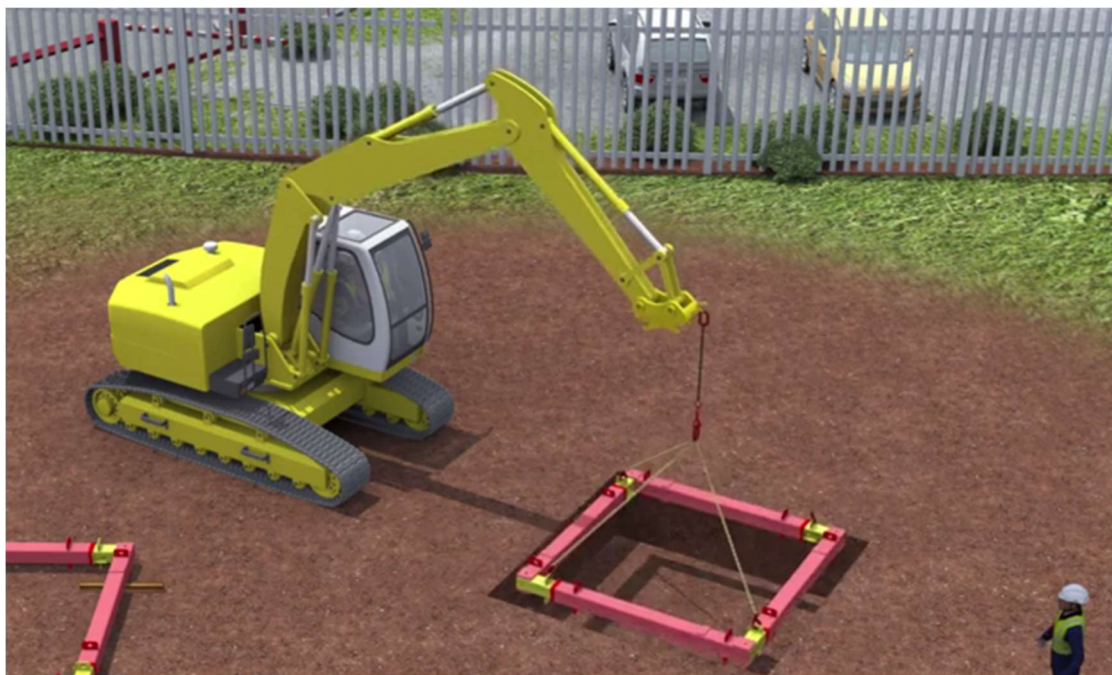
In case will be necessary Sheet Piling Installation will be required

Trench Sheet Install and Excavation

- The excavation area will be set out by the engineer.
- FMC supervisor will issue a permit to dig
- All excavation works will be carried out in accordance with the safe digging section of this document.
- All lifting operations will be carried out using a 8t -22t excavator, using certified lifting equipment, all excavator drivers will be CPCS certified with lifting ops category included on their cards.
- All lifting operations will be banked and controlled by a CPCS certified slinger signaller and lifting supervisor
- The extent of the excavation will be marked out by the site engineer.



- The first meter of the excavation will be dug out in accordance with the safe digging procedure outlined in this document.
- A slip trench 500mm deep and 300mm wide will be excavated around the perimeter to check for any services prior to driving the sheets if the trench is clear it will be backfilled and the sheet pile installation can commence.
- Mechshor frames will be assembled at the side of the excavation.
- Place the Mechshor frame next to the trench and connect hoses to valves on the near side rail ensuring the pump valve is open.
- Connect lifting slings to eyebolts.
- 4 no. Hydraulic Groundforce Mechshor frames will be lifted into the excavation as per below.



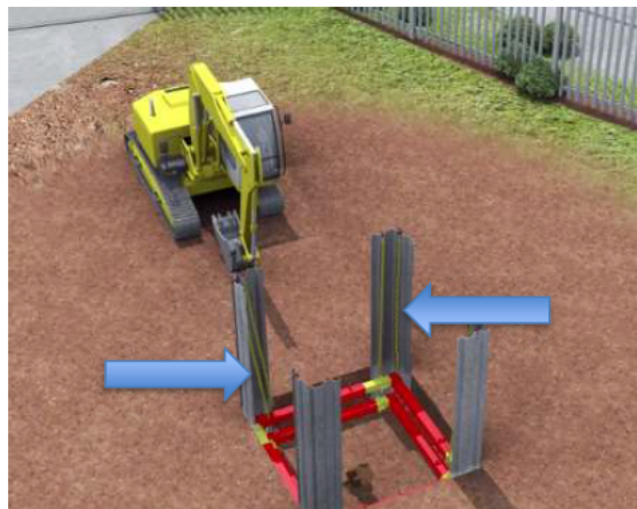
- Place a corner sheet in the trench, between the Mechshor frame and the excavation; care is to be taken to ensure the sheets are installed plumb.
- Prior to the sheet pile being disconnected from the lifting equipment, the top Mechshor frame will be pumped out to support the sheets pile,
- Using the excavator push the trench sheet into the base of the excavation to toe it in until the Mechshor frame and the ground fully support it.
- The above process will be repeated until the sheets are installed in all four corners or as required.
- Close the pump valve, pump out to required psi and check pressure does not drop.
- Place release tool with end behind the collar, flick handle towards you and coupling will spring free. Note some models may be fitted with a lock-off



valve adjacent to the hydraulic coupling. If this is the case, using the tool provided, close the valve (by turning clockwise) and depressurise the delivery hose at the pump before removing the hose by hand.



- Attach restraining chains to 4 eyebolts and secure to the top of each trench sheet.





- Continue to install the trench sheets around the perimeter of the excavation. Ensure the sheets are slotted together to ensure a tight fit.
- A gap will be left at one end of the excavation to allow ladder access to be installed as per Groundforce temporary works design.



- Install the restraint chains between the top frame and the second frame, as the excavation progresses the second frame will be lowered until the chains are at full length.
- As the excavation progresses, the excavator will be used to push the sheets to depth; sheets will be pushed to refusal (minimum 500mm).
- As soon as the top of the sheet is lower than 1.2m from ground level the edge protection will be installed to the top of the sheets.
- Close the pump valve, pump out to required psi and check pressure does not drop.
- Set the chains to length for frame 3 and repeat the process above.
- Repeat the process for frames 3 and 4 and continue the excavation to 6m deep.
- All hydraulic frames will be installed at centres in accordance with approved temporary works design.
- Care will be taken not to excavate below the toe of the sheet.
- On completion of the excavation all safety equipment will be installed, tested and inspected; including, edge protection, ladder access landing, access ladder and davit arm.
- The davit arm will be attached to the top of the sheet piles in accordance with the temporary works design.



- A roll-up rescue stretcher will be located at the entry point of the excavation to aid with evacuation.
- The temporary works will be inspected, and a permit to load will be issued prior to any operatives entering the excavation.
- Temporary works will then be inspected every day before an entry and weekly and findings recorded.





Temporary Works Removal

On completion of the works, the excavation will be backfilled, and the temporary works will be removed as follows;

- Backfill the base of the excavation using type 1 and compact in accordance with the information supplied below.
- When backfill is 100mm below the bottom frame remove the bottom frame
- Attach lifting sling to the bottom frame and disconnect connecting chains from the frame.
- Place release tool over lip of rail and push handle away to release pressure on each cylinder valve. Ensure cylinders retract sufficiently to allow the frame to clear sides of the excavation.
- Using 8t-22t excavator lift frame out of the excavation and place to the side.
- Once removed pull sheets out until the toe of the sheet is 600mm below the frame 3.
- Repeat process above, removing frames and pulling sheets until within 1m of existing ground level, then remove all temporary works and reinstate area.

Excavation Entry

- At the start of each shift, FMC Foreman/Supervisor will visually inspect the excavation and temporary works including:
 - The davit arm and winch.
 - Edge protection
 - The ladder and access platform
 - Sheet piles and frame
 - Air monitor calibration



All findings will be recorded and logged.

- An air monitor will be lowered into the excavation for 5 minutes to check for the presence of gases or oxygen deficiency.
- Assuming the air check is acceptable; operatives will then clip on to the davit arm and access the excavation via the in-situ ladder, ensuring three points of contact. The top-man will keep a register of all personnel entering and exiting the subway.
- All operatives entering the excavation are to wear harnesses at all times.
- If the air check is not acceptable then there will be no entry to the excavation, the same process will be repeated 5 minutes later. If there is no improvement in the air quality FMC supervisor to report to the Project Manager and will contact the FMC SHEQ team.
- A competent Topman will be appointed for each shift; the Topman will monitor the air quality throughout the shift, keep a tally of all operatives entering and exiting the excavation and have means of contact for the emergency services in case of emergency.

Trench Boxes

- In certain situations, it may be preferable to employ the use of a trench box (or boxes). The use of these does not require a Temporary Works Design, but the manufacturer's instructions must be adhered to, along with the site-specific RAMS for the intended works.
- All the pre-excavation checks and criteria listed above will apply, as will the Emergency Evacuation procedure detailed below.

Emergency Evacuation

In the event of an emergency within the excavation all operatives within the excavation must:

- Alert others and immediately leave the excavation.
- Topman to check all operatives out of the excavation using the tally board.
- The Topman should remain on site and ensure all operatives are kept at a safe distance.
- The Topman will report to the appropriate emergency service when they arrive.



1.1 Traffic Management and Site Set Up

- Site set up will be as per the information given on the site layout drawings and is subject to updates when necessary.
- Road closures will be in place as per TM plan
- All works will be carried out within the hoarding line/ TM .
- All traffic management will be as per the safe working practice road signs manual by competent persons under supervision at all times.
- All works will be carried out behind the site compound.
- Road closures will be installed on :
 - Lane 2 Atlas Road-permanent
 - Lane 2 Colney Hatch Lane – over the bridge-permanent
 - Lane 2 The Off Slip from A406 to Lane 4 Orion Road-permanent
 - Sequence of Lane Closures on A406 variable-night shifts
 - Hole bridge for short term

1.2 Access

- Attention shall be given to ensure the work site is safe including safe access and egress for all persons who may be affected by the works.
- Vehicle access to the site shall be via the Access points at the Atlas Road and Orion Road
- Pedestrian access will be via access point from Atlas Road through the scaffold staircase straight to compound
- Safe access routes will be provided as separate from working area
- Third parties must be segregated from the work site at all times by the use of barriers, cones and fence
- Correct signing and guarding against being in place at all times ensuring a safe route through the on-going works. (see site map for more details)

1.3 Undertaking the work

Site attendance

- Management, design and working teams established
- Sub-contractors appointed
- All personnel inducted
- All qualifications checked
- Site access will be provided ONLY to authorised persons
- Sign in/out points provided

Site set up

- Road closures will be installed prior to commencing of the works
- Site extends will be set according the site layout drawings



- The compound area and working areas will be cleared of vegetation before commencement of the works.
- All road working areas will be delimited by VRS, barriers, cones and signs according TM design drawings
- The compound area, welfare facilities and walking routes is to be cordoned off by means off Harris fencing/green barriers,
- Appropriate signs will be in place to advice pedestrians about the ongoing works and access routes;
- All works vehicles will be escorted through access routes by traffic marshals always;
- Access Scaffolding stairs will be erected to both North and South sides and Central reserve
- The scaffold will be inspected at the start, during and when leaving site by FMC TWS + once a week by Alltask engineer for integrity;

Ground works

- Prior starting abutments excavations, a number of trial pits will be carried out to determinate the ground and area conditions
- Trial pits will be carried out each time is necessary to determinate any issues in regards of services or unknown conditions of the working area
- FMC site engineer will set out excavations extends.
- Once a permit to dig has been issued excavations at the abutments can take place.
- A specific area at both east and west side of each abutment will be reduce to create safe access under the bridge area.
- Muck away will be stored safely in the vicinity of the working area for reuse.
- Small size (5 tonne) excavators one for each abutment will be used during the works with a gang of 3 ground workers and a foreman
- Concrete slabs will be removed carefully and stored safely
- Excavations to reduce the ground levels to a specified depth will be carried out day/night shift
- Ground surface at the abutment vicinity will be slopped and a channel will be provided for water draining outside the working area (possible use pumps)
- Excavation will be carried out at both ends of the internal piers (3 piers x 2 excavation areas) to expose piers foundation prior temporary supports installation.
- All excavations will be carried out under safe digging practice buy trained operatives under competent supervision.

Temporary works

- Temporary works agreements in place
- Design issued and accepted
- Erection as per design and under competent control
- Temporary work to be checked daily/weekly and recorded accordingly
- Scaffolding access stairs will be installed to access working areas
- Scaffolding platforms will be installed at each abutment and piers
- Temporary support props will be installed at each end of the internal piers to secure the bridge



- Temporary works provided by others during jacking the bridge will be installed in accordance with design and specific methodology
- NO CHANGES will be allowed to temporary works except this was designed and instructed by TWC
- Any issues to be discussed with Site supervisor before commencing the works

Actual works for replacing the bearings

- All this works will be carried out by Freyssinet under specific methodology
- No unauthorised person should involve in this works without instructions
- RAMS will be attached to the site file at the main office

Services

- STATS pack will be attached to site file for any requirements
- All services will be marked prior starting the works
- All diggings around services will be carried out according G003 and Safe digging practice
- A system of permits will be in place

2.0 General Arrangements

- The wearing of a hard hat, safety footwear, gloves, safety glasses and high visibility long sleeved upper wear are mandatory. All operatives will be issued with head, ear, hand and eye Personal Protective Equipment (PPE). This PPE will be used where there is a risk of associated injuries.
- Any complaints from members of the public will be directed to the Public Leasing officer or Project Manager. A report of the complaint will be made and submitted to the FM Conway senior management team.
- The site will be maintained in a clean and tidy condition at all times.
- Covid19 rules to be in place
- Fully qualified First Aiders (3 days trained) will have the words FIRST AID depicted on their high visibility jacket with at least one first aid trained person present throughout these works.

2.1 Environmental Issues

- All drains and watercourses shall be protected, so far as is reasonably practicable, from the possibility of contamination from spillages by the use of drain covers or other appropriate equipment as determined.
- All site personnel shall be made aware of the FMC Spill Response Procedure, as detailed on Company Standard Form C55 Spill Response, posted in the site welfare unit and available on request for viewing.
- In the event of a spillage, site personnel shall cease relevant activities and contain any spillage using standard Spill Kits as available for use on site and strategically placed to ensure ease of access.
- Where an incident is not contained, and contamination of a drainage system/watercourse occurs, site personnel shall be aware of the requirement to report immediately to FM Conway and the Environment Agency, any details and imminent dangers in order to implement further action to minimise any further contamination.



- A full and thorough investigation shall be conducted by FM Conway or appropriate party in order to determine the causes of the incident and identify remedial action to be implemented to ensure there is no repeat.
- FM Conway shall also fully co-operate with any enforcing authority conducting an external investigation.
- Contaminated waste from work activities and/or clean up procedures shall be disposed of in accordance with Company and legislative requirements. Records of Waste transfer Notes and Consignment Notes shall be available on request.
- Company details of relevant waste disposal sites to include PPC licenses and Waste Carrier's Licenses shall be available on site for viewing and provided to the client prior to commencement of the contract.
- Great care will be taken to ensure that machinery is free from fluid leaks and that no chemical will enter a watercourse or contaminate land.

2.2 Surveillance of Ground conditions

- Any damaged areas identified to carriageways, footpaths or walls and buildings etc. will be brought to the attention of the client before the onset of works. Care will be taken to protect existing finishes where appropriate.
- Additional care will be taken with hazards identified and controlled while accessing the site due to the uneven ground conditions of loose materials.

2.3 Potential hazards identified at the site

Manual handling

Working Adjacent to live services

Working with concrete.

Excavations

Loading/ Unloading

Vehicles

Working adjacent to the public

Working at height

Working inside road closures

Live traffic

Temporary works

(list not exhaustive)

Please see separate risk assessment with all potential hazards.



2.4 Storage

Storage areas will be located within the works area. (see site plan)

Any spoil from the excavation will be stored on site just not necessary muck away will be removed from the site on a regular basis and send for recycling where applicable

2.5 Site Induction/Tool Box Talks

Before being allowed on to site, all will be required to undertake a Site Induction given the FM Conway Contract Manager or in his absence the Site Supervisor or Foreman.

If the working methodology has been altered from that depicted in this document, a revised method statement addendum and toolbox talk to site staff will be required to 'bring them back up to speed'.

The site induction will consist of the following points:

- Site location including welfare, stores access points etc
- Security arrangements
- A description of who is who and what each person's role is
- Emergency procedures including muster points
- Location of the nearest hospital and how to get there
- How to identify First Aid personnel
- A read through of method statements pertinent to their task and with implications to their work
- Briefing on safe systems of work for Ladder's and scaffolding towers procedures
- Risk assessments relevant to their task and control measure addressing risks from identified hazards.
- Site rules including PPE requirements
- Environmental implications and emergency plan
- Signing in/out the procedure
- Complaints procedure

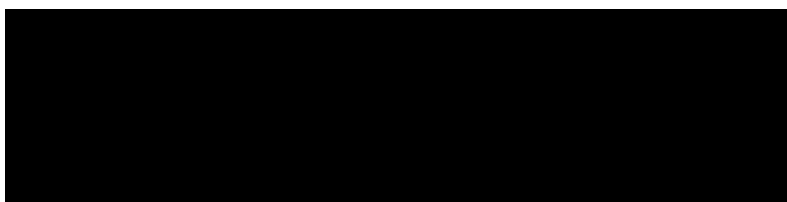
2.6 Waste Material

The Supervisor will ensure waste from working operations is collected in designated areas and not allowed to accumulate. All waste will be removed and disposed of by licensed waste carriers. The site will be kept clean and tidy.

3.0 Site team

All operatives will be trained and deemed 'competent' for their tasks and registered to Appointed Person Register.





- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.

4.0 Training

All operatives attend the FM Conway Health and Safety Awareness Induction "Toolbox Talk", in addition, operatives are suitably trained and experienced for the tasks that they will carry out. Certification is available upon request of training standards achieved.

Regular toolbox talks are given to raise awareness of job associated risks and how and why control measures can be introduced to address risks present from identified hazards.

These talks are informal, and operatives are encouraged to voice their opinions and ask appropriate questions.

5.0 Portable Tools & Temporary supply of water and Electric

Tools and equipment will be used in accordance with the Provision and Use of Work Equipment Regulations (PUWER) 1998 as far as is reasonably practicable. All small tools will be checked for defects prior to use. Electric tools will be 110V, regularly serviced and portable appliance tested (PAT).

6.0 Mechanical Plant

1. 5t, 8t, , and 1.5t excavators will be used.
2. 6t, 3t swivel dumpers
3. Groundworks temporary equipment
4. Delivery lorries
5. Welfare vans
6. Pick up trucks
7. MEWP
8. Mechanical Props
9. Jacking mechanical plant
10. Compressors/generators



11. Etc.

7.0 Personal Protective Equipment

A minimum of safety boots, hard hat, safety glasses, gloves and hi-viz vest will be worn at all times. Dust, ear, hand, head, harness and eye protection will be supplied and used as required. Control measures will consider PPE as a last resort when controlling risks.

8.0 Security

Access point to the site will be via a designated site access point at the Atlas Road/Orion Road.

The gates will be secured from members of the public at all times.

At the end of the each shift, the appointed gate man to check at the site hoarding inter-lock all the fences arrange barriers.

No tools will be left outside

In case of working day and night shift the day shift foreman will handover to night shift foreman any keys or instructions.

All machine operators must lock their machines when they leave, and bring the key to site foreman or in the office.

First day or night shift time entry to site will be to the Atlas Road Compound. Put the PPE on, Sign in and then go to site. Exit will be to the Atlas Road after sign out.

9.0 Hours of Working

Working hours will be 07.00hrs and 17.00hrs day shift and 20.00 to 06.00 night shifts, (sometimes extend if required)

To be confirmed on site by Contract Manager/ Supervisor

10.0 Work Permits

A permit to work- Digging Authorisation shall be issued for all planned works prior to commencement of any excavations. It shall be issued by a Contracts Manager or Supervisor and accepted by the Foreman/Lead Ganger responsible for overseeing the activities. It shall be valid for no longer than seven days.

The permit holder must remain on site to oversee the excavation activities. If the permit holder is required to leave the site, then the activities shall cease until he returns. They shall review the conditions of the permit on a daily basis and shall inform the Contracts Manager or Supervisor of any changes that have an effect on the working conditions and where applicable, the permit shall be cancelled pending revised information.

General permits shall be issued every week and shall be valid for no longer than seven days

Hot works permit shall be issued if required and shall be valid for one shift only



11.0 Welfare

Main Site Compound will be placed on the North East area with access from Atlas Road comprising:

- 2 canteens
- 2 offices
- Toilets (M+F)
- Storage
- Solar panels unit

Second unit will be placed at the Orion Road provided with office, canteen, toilet

11.0 Lifting operations

All lifting operations shall be conducted in accordance with procedures as detailed within FMC health and safety manual and available on request.

In brief: -

For any operations involving mobile cranes or adapted machines, a lift plan must be submitted.

A risk assessment shall, if applicable, be conducted and included within site documentation.

A safe system of work, if applicable, shall be developed and included within relevant method statements.

See separate lifting plan for any lifting activities.

12.0 First Aid

All first aiders will be identified by the words FIRST AID or orange sticker on their high visibility jackets/helmet

First Aiders on this site are:



The first aid kit will be on the site office and site points (see site map), and accident book will be kept on the site folder (office)

All accidents and near misses will be recorded in the accident book and a report of any such incident issued to FM Conway.

Reporting of Injuries Diseases and Dangerous Occurrences Regulations (RIDDOR) 1995 will be adhered to as far as is reasonably practicable.



If a person has an accident which requires further treatment than that which the first aider can give, they shall be transported to the nearest accident and emergency department. Details of the nearest A&E given in section 13.0

13.0 Emergency Procedures

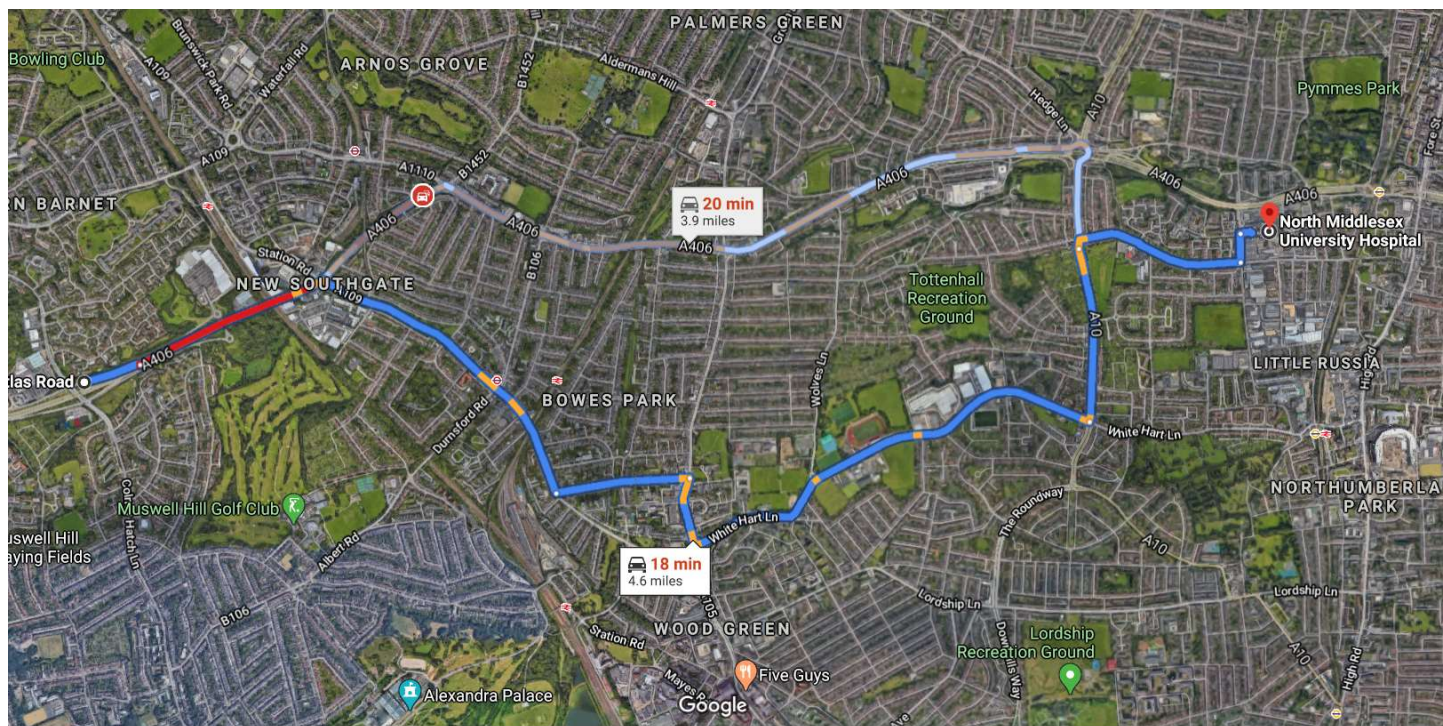
Should any accident occur which cannot be dealt with by the First Aider, the site management will inform the emergency services. Where necessary the Environmental Agency will be notified.

If a service is damaged, then the procedure in section 1 will be followed.

A report will be made as soon as possible with details of persons involved, an injury sustained, and damage to property, time and location of the incident. The details will be entered in the site accident book and if necessary the Health and Safety Executive will be informed. The site Management will also inform senior FM Conway management.

The site evacuation procedures will be explained at the site induction. Any person who is not accounted for will have their details given to the Emergency Services.

The nearest Hospital is:



North Middlesex University Hospital
Address: Sterling Way, N181QX
Phone: 020 88872000



I have read/been briefed on the requirements and safe working practices detailed within this Method Statement/Risk & COSHH assessment. I have understood and agreed to comply with these requirement and safe working practices.

[illegible]

[illegible]

[illegible]

APPENDIX E

Westway Post-Tensioned Special Inspection (PTSI) Scheme CPP and RAMS

LoHAC NW A40 Westway PTSI

Produced for
Transport for London

Works Package 1: Construction Phase Plan for PTSI Site Investigations

Document Reference: 60486237-M406-CPP-0001-A

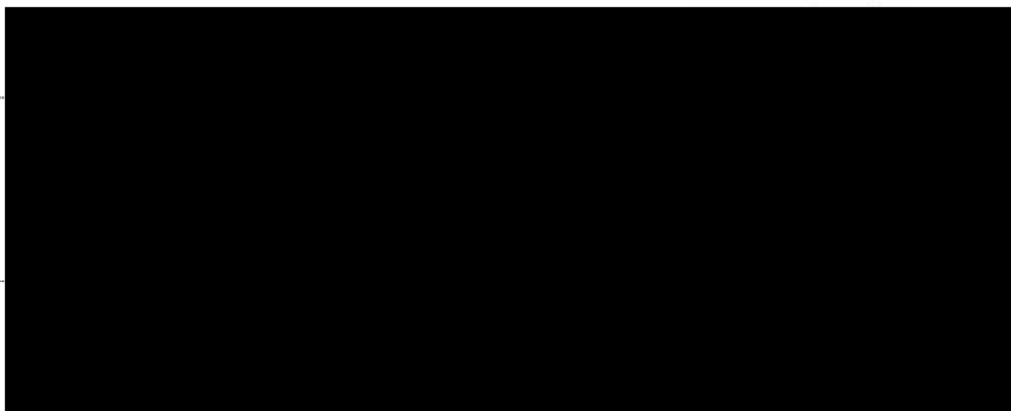
Task Order: NW2019_TO_0055P

Issued: January 2020



Prepared by:

Verified by:



A40 Westway PTSI

Works Package 1: Construction Phase Plan for PTSI Site Investigations

Rev No	Comments	Accepted by CONWAY AECOM for issue by	Date
A	First Issue		

29 North Acton Road, NW10 6PE

Telephone: 020 8639 3500

Website: <http://www.conwayaecom.com>

Job No. 60486237

Reference: 60486237-M406-CPP-0001-A

Date Created: 2020-01-03

This document has been prepared by CONWAY AECOM Limited for the sole use of our client (the "Client") and in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between CONWAY AECOM Limited and the Client. Any information provided by third parties and referred to herein has not been checked or verified by CONWAY AECOM Limited, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of CONWAY AECOM Limited.

Contents

1	Project Description.....	1
2	Management of Work.....	10
3	Control of Specific Risks.....	13

Figures

Figure 1:	Location plan of A40 Westway PTSI Work Package 1A.....	1
Figure 2:	Location plan of A40 Westway PTSI Work Package 1B.....	1
Figure 3:	Location plan of A40 Westway PTSI Work Package 1C.....	2
Figure 4:	Route from A40 Westway to St Mary's Hospital, Praed Street, Paddington, London, W2 1NY.....	12

Tables

Table 1:	Key dates for work items	9
Table 2:	Key project member's information.....	9
Table 3:	Summary of significant CDM 2015 Schedule 3 risks.....	13
Table 4:	Summary of significant other site specific risks.....	13