


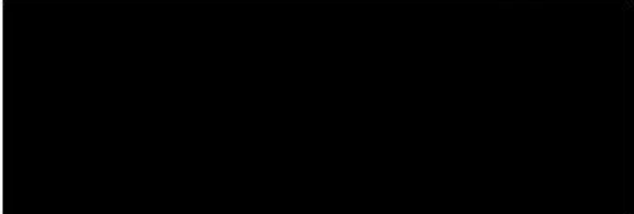
VF-B n/a	VF-C n/a	VF-R ✓	VH n/a	VR n/a	VS n/a	VB n/a	VGE n/a	VL n/a	VI n/a	Shared Services n/a
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<b>Business Unit:</b>	<b>VF Rail</b>	<b>Contract no. &amp; name:</b>	<b>C13791 Brent Cross West Station</b>
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# Environmental and Social Management Plan

## Brent Cross West Station

March 2020 – September 2022

<b>Prepared by:</b> Name: Tom Hodgkins Job title: Site Agent	<b>Signature:</b> 	<b>Date:</b> 19/02/2021
<b>Reviewed by:</b> Name: Graham Taylor Job title: Environmental Manager	<b>Signature:</b> 	<b>Date:</b> 19-02-2021
<b>Authorised by:</b> Name: Gordon Hunt Job title: Senior Project Manager	<b>Signature:</b> 	<b>Date:</b> 19/02/2021

*This Environmental and Social Management Plan (ESMP) is the property of VolkerFitzpatrick Ltd (VF). It has been developed based upon known activities and information available at the time of preparation, in association with the contract documents, including those produced for tender purposes, and is complementary to VolkerFitzpatrick's Health & Safety, Environment, Quality and Sustainability (HSEQS) Management System.*

*The ESMP has been prepared specifically to address the environmental and social requirements for this contract, including any restrictions that may affect the work, such as neighbouring buildings, utility services, vehicular and pedestrian traffic flows, and work activities of the client. Any variations to the Company Procedures and documents referred to in the HSEQS Management System shall be detailed within this document.*

<b>Review and acceptance by:</b> Name: Job title: On behalf of Client	<b>Signature:</b>  	<b>Date:</b>  
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*The ESMP shall be submitted to the employer's representative at least 28 days before on site works commence. If contract mobilisation is less than 28 days, the ESMP shall be submitted at least 14 days before on site works commence.*

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<b>Approved for IMS:</b>	IMS Manager	<b>Document owner:</b>	Rail Standards & Compliance Manager	<b>Workspace file:</b>	11.1 Page 1 of 51

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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# Environmental and Social Management Plan (Non-NR)

R03-02

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### Revision record

Minor changes to the ESMP do not warrant a re-brief of the ESMP to the project team. These can be recorded in the table below. Major changes, or six subsequent minor changes, do require a full briefing to the project team and a new issue number. Signatures on the front sheet of the ESMP shall be obtained. The ESMP shall be reviewed at sixth monthly intervals and updated if required.

Issue no.	Date	Change history	Author
1	March 2020	Submitted for Approval	GT
2	December 2020	Intermittent review and update – consideration for coverage of instructed TOC works across the scheme	IJ
3	February 2021	Intermittent review and update – consideration for coverage of station eastern entrance works across the scheme	TH
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5			
6			

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VF-B	VF-C	VF-R	VH	VR	VS	VB	VGE	VL	VI	Shared Services
n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

## 1. SUMMARY

The Brent Cross Cricklewood Regeneration project is the LBB's most significant growth and regeneration programme and will create a new sustainable mixed-use town centre for Barnet and North London. Outline planning permission Ref No. C/17559/08 ("2010 Permission") for the comprehensive redevelopment of Brent Cross Cricklewood ("BXC") was granted in October 2010. A Section 73 planning permission Ref No. F/04687/13 ("2014 Permission") to develop land without complying with conditions attached to the 2010 Permission was granted by London Borough of Barnet ("LBB") on 23 July 2014.

The new station intended as part of the proposals (Brent Cross West), is to be consented under a 'Reserved Matters' planning application. This RMA application was submitted to the Local Planning Authority (LPA) in December 2019 and was approved on 2<sup>nd</sup> July 2020. As part of the 2014 Section 73 (Town and Country Planning Act 1990) planning conditions were imposed by the LPA. With the determination of the station RMA ongoing, and in anticipation of continuing works within the Phase 2 (South) (Thameslink Station) sub-phase, we hereby seek to discharge certain pre-commencement conditions attached to the 2014 S73 permission (F/04687/13).

The Brent Cross Station Eastern Entrance will create the gateway to the Brent Cross Cricklewood Regeneration scheme. Planning permission was granted on 30<sup>th</sup> November 2020, under planning application ref: 20/3845/FUL.

The ESMP and accompanying Site Waste Management Plan (SWMP) has been prepared to discharge the following three conditions attached to the 2014 F/04687/13 consent fully for the Phase 2 (South) (Thameslink Station) sub-phase and to discharge condition 3 of 20/3845/FUL:

**Condition 8.3 (Ref. F/04687/13)**, which states:

*"Not to begin the Development in any Phase and/or on any Plot or any other construction site within any Phase unless and until the Construction Environmental Management Plan relating thereto shall have been submitted to and approved by the LPA on the basis that such Construction Environmental Management Plan shall be in accordance with the CoCP and shall apply the principles and parameters of the CoCP to the specific circumstances of the relevant Phase Plot or construction site (as the case may be) and the part of the Development to be carried out thereon".*

**Condition 28.1 (Ref. F/04687/13)**, which states:

*"Not to begin Construction work or any site engineering and preparation works, plot development, or in relation to any Building or Bridge Structure on any Sub-Phase Plot or other part of the Site unless and until a ESMP for all Site Engineering and Preparation Works, Plot Development, Building or Bridge Structure has been prepared and approved in respect of such Phase Sub-Phase Plot or other part of the Site in accordance with Condition 8.3 and all works in relation to such Phase Sub-Phase Plot or other part of the Site shall be undertaken fully in accordance with the approved ESMP.*

**Condition 28.2 (Ref. F/04687/13)**, which states:

*"Not to begin Construction work or any site engineering and preparation works, plot development, or in relation to any Building or Bridge Structure on any Sub-Phase Plot or other part of the Site unless and until a Site Waste Management Plan for such Construction work Site Engineering and Preparation Works, Plot Development, Building or Bridge Structure has been prepared in accordance with the parameters and principles in paragraphs 2.50 and 2.51 if the DSF and the Demolition and Site Waste Management Strategy approved in accordance with Condition 9.1. All works carried out in relation to such Phase Sub-Phase Plot or other part of the Site shall be undertaken planned and managed fully in accordance with the Demolition and Site Waste Management Strategy, the Code of Construction Practice and the requirements of the Environment Agency, as well as the Site Waste Management Plan".*

**Condition 3 (Ref. 20/3845/FUL)**, which states:

*Prior to the commencement of the development hereby permitted a Construction Environmental Management Plan shall be submitted to and approved in writing by the Local Planning Authority. The Construction Environmental Management Plan shall include (but not be limited to) the following details where relevant:*

- i. details of the routing of construction and service and delivery vehicles to and from the site, hours of access, access and egress arrangements within the site and security procedures;*
- ii. indicative construction programme setting out site preparation and construction stages of the development;*

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

- iii. details of provisions for recycling of materials, the provision on site of a storage/delivery area for all plant, site huts, site facilities and materials;
- iv. details showing how all vehicles associated with the construction works are properly washed and cleaned to prevent the passage to mud and dirt onto the adjoining highway;
- v. the methods to be used and the measures to be undertaken to control the emission of dust, noise and vibration arising from construction works;
- vi. a suitable and efficient means of suppressing dust, including the adequate containment of stored or accumulated material so as to prevent it becoming airborne at any time and giving rise to nuisance;
- vii. noise mitigation measures for all plant and processors;
- viii. details of contractor compound and car parking arrangements;
- ix. details of a community liaison contact for the duration of all works associated with the development;
- x. details and plans of traffic management measures (e.g. temporary lane restrictions/closures/diversions, signage, parking controls, key access and crossing points, emergency vehicle access) including measures to protect the free flow of traffic and vulnerable road users;
- xi. plans should be to scale and annotated with dimensions showing all points of access (vehicular and pedestrian); position of hoardings, position of nearby trees; location of vehicle standing areas, wheel washing location and details, surrounding properties and their access points; parking bay suspensions; available footway and carriageway widths.

The development shall thereafter be implemented in accordance with the measures detailed within the Construction Environmental Management Plan.

Reason: In the interests of highway safety, noise and good air quality in accordance with Policies DM04 and DM17 of the Development Management Policies DPD (adopted September 2012), the Sustainable Design and Construction SPD (adopted October 2016), Policies 5.21, 5.3, 5.18, 7.14 and 7.15 of the London Plan (2016), and to accord with the Mayor's The Control of Dust and Emissions During Construction and Demolition SPG (2014).

Section 3.8 (Waste) of the ESMP has been prepared to discharge condition 28.2 in conjunction with the Site Waste Management Plan document (C13791 - 11.9.10 - E04-01 Site Waste Management Plan - Brent Cross West Station)". Accordingly, this ESMP when read in conjunction with the accompanying Site Waste Management Plan, and in reference to section 3.8 (waste) should be satisfy and be able to discharge both conditions 28.1 and 28.2.

This plan fulfils the requirements of all our internal and external obligations and has been prepared to include any specific environmental considerations brought to our attention by the client or their representative. The ESMP has been prepared to align with the Code of Construction Practice (CoCP) document. This ESMP has been prepared in accordance with the VolkerFitzpatrick Environmental Policy and Practice document, which is available on request and displayed onsite.

## 1.1 Project Description and Scope of Works

This Construction Environmental Management Plan covers the construction of the new rail station (Brent Cross West). This consists of:

- Entrance (cycle parking, set down pick up and station servicing yard)
- Passenger concourse area and gate line
- Two island platforms (with four platform faces)
- Platform canopies
- Stairs and lifts to each island platform
- Station facilitates (toilets, waiting areas, retail, train operating company facilities)
- Footbridge

Further to the core station delivery, the project has been instructed to undertake additional works across the scheme defined as TOC Scope of works throughout the Cricklewood Sidings area. Primary scope as follows;

- Ducting, walkways and lighting for train drivers
- Boundary fencing
- Upgrade of existing drainage and interceptor tank
- Retaining wall alongside the boundary with the existing Waste Transfer Site (WTS)

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**Environmental and Social Management Plan (Non-NR)**

**R03-02**

VF-B	VF-C	VF-R	VH	VR	VS	VB	VGE	VL	VI	Shared Services
n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

- Fuel Farm Accommodation Block

Further to the core station delivery and the TOC Scope of works, the project has been instructed to undertake additional works to design and construct the station eastern entrance. Primary scope as follows:

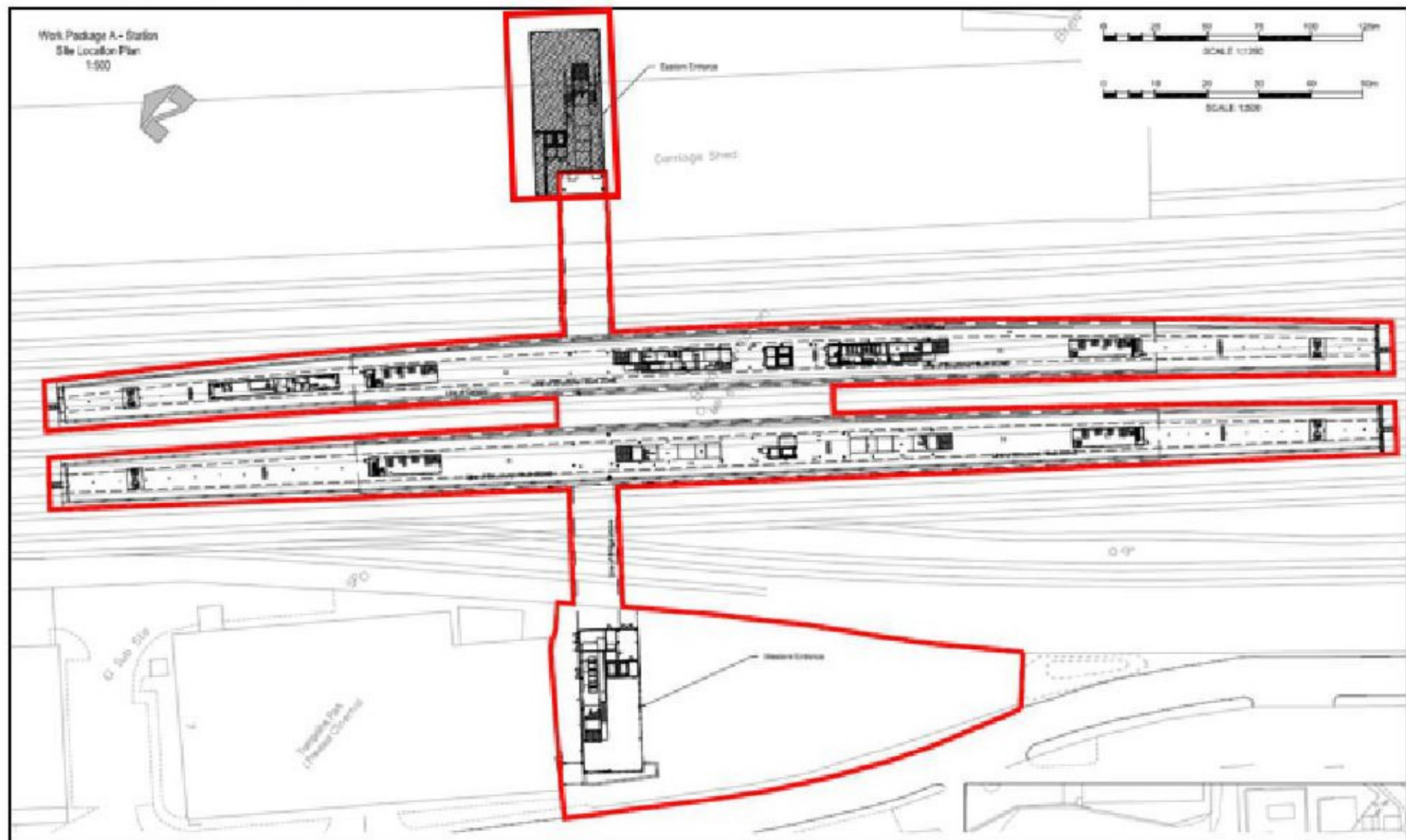
- Substructure construction (piles, drainage, ducting, pile caps & floor slab);
- Reinforced concrete superstructure construction;
- Glulam timber and glazed canopy construction;
- Internal fit out (vertical transportation, wayfinding / CIS, paving, planters, furniture);
- Hoarding along plot 1 & 2 boundaries.

**1.1.1 Site Address**

VolkerFitzpatrick site compound, Brent Terrace, London, NW2 1LR (Grid reference: 523093 187104)

VolkerFitzpatrick site compound, Geron Way, London, NW2 6LW (Grid reference: 522962 186994)

**1.1.2 Station Site Plan**



**1.1.3 Station Key Programme Details / Milestones**

No	Description	Start date	End date
1	Surveys and Ground Investigation	March 2020	September 2020
2	Jerich Shed Demolition	June 2020	September 2020
3	Western Entrance / Overbridge	February 2021	October 2021
4	Eastern Compound Setup	June 2020	October 2020
5	Eastern Entrance / Overbridge		
	Overbridge	October 2020	March 2021
6	Station Eastern Entrance Building	April 2021	May 2022
	Eastern Entrance Site Prep	April 2021	April 2021

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R03-02

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

	Eastern Entrance Piling	April 2021	May 2021
	Eastern Entrance Substructure	May 2021	August 2021
	Eastern Entrance Concrete Superstructure	August 2021	November 2021
	Eastern Entrance Glulam / Glazed Canopy	November 2021	February 2022
	Eastern Entrance Fit-Out / Test & Commission	December 2021	May 2022
7	Slow Platform		
	Early Access	September 2020	
	Full Platform Access	October 2020	January 2022
8	Fast Platform		
	Early Access	May 2021	
	Full Platform Access	June 2021	March 2021
9	Concourse Area	September 2021	March 2021

### 1.1.4 Working Hours

<b>Monday to Friday</b>	08:00 to 18:00
<b>Saturday</b>	08:00 to 13:00
<b>COVID Extended Hours</b>	Due to the impact of COVID-19, Section 61 approvals allow for an extended working period from 08:00 to 21:00 Monday to Saturday. The current Section 61 for the project allows for this up until the end of May and legislation is currently in place that allows application for these working hours until 13/05/2021. This may be subject to change as the pandemic situation develops.
<b>Sundays and Public Holidays</b>	No works (unless part of possession). Planned possessions will be included within Section 61 submissions for approvals and will be monitored for any changes in circumstances.

### 1.1.5 Environmental and Social Representative Details

	Environmental contact	Community Liaison Contact
<b>Name</b>	Graham Taylor	Chris Ball
<b>Job title</b>	Environmental Manager	Interface Manager
<b>Mobile number</b>	07392164161	07823 44 44 69
<b>Email address</b>	Graham.taylor@volkerfitzpatrick.co.uk	Christopher.Ball@volkerfitzpatrick.co.uk

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## 2. GENERAL REQUIREMENTS

The VolkerFitzpatrick Environmental Policy and the client's environmental policy shall be displayed on the notice boards in all fixed and temporary locations. A project specific environmental and sustainable development policy shall be developed, displayed and communicated to the workforce if applicable. The Environmental and Social Management Plan (ESMP) should be read in association with business unit policies and procedures and the pre-construction information where applicable.

The environmental pre-start meeting shall be held during the construction planning phase. This shall detail the requirements for likely permits, consents and other obligations and assign actions with appropriate timescales. The project manager for the scheme and the environmental and social representatives detailed in section 1.1.5 are the minimum level of attendance. The EMS-01 shall be reviewed at appropriate intervals so all relevant actions can be closed out.

Environmental pre-start (EMS-01)	
Date meeting held	12/12/2019 Station eastern entrance environmental pre-start – Date TBC
Review date/s for action close out	31/01/2020
Workspace link to EMS-01	<a href="#">Internal environmental pre-start meeting minutes</a>

The project management team are responsible for reviewing the proposed work processes and monitoring site activities. The environmental implications of the project's activities and meeting obligations are considered during design reviews, planning meetings, work package plan and task brief reviews and on site as part of the health, safety and environment inspections. We will comply with all employers' environmental and social requirements and standards as specified within the contract.

### 2.1 Existing Records and Plans

Relevant Works Information provided by the client has been used to produce this plan. This information will then be incorporated as appropriate into Work Package Plans (WPP), risk assessments and task briefings.

### 2.2 Key Environmental and Social Risks / Opportunities

The business wide Environmental Aspects and Impacts Register (E01-01) includes all impacts which we have control or influence over. The aspects and impacts include normal, abnormal and emergency conditions. The Environmental Risk Assessment (E01-02) is used to identify all project specific environmental and social risks and opportunities.

<b>Workspace link to E01-02</b>	<a href="#">E01-02 project environmental risk assessment</a>
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Risks and opportunities from this assessment scoring  $\geq 6$  shall be considered as significant. Full control measures to deal with these will be clearly set out in section 2.0 and in WPPs and risk assessments as applicable. The following table highlights the significant risks and opportunities for this project. The E01-02 should be referred to for significance scoring. Significant environmental and social risks shall be included in relevant WPPs and associated task briefs. The effective management of activities with risks to the environment is planned, organised, controlled, monitored and reviewed at the four-weekly health, safety and environmental meetings. All persons attending site, whether visitors, employees or self-employed, will be informed of the risks together with the preventive and protective measures established, so that they understand what they need to do.

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# Environmental and Social Management Plan (Non-NR)

R03-02

VF-B n/a	VF-C n/a	VF-R ✓	VH n/a	VR n/a	VS n/a	VB n/a	VGE n/a	VL n/a	VI n/a	Shared Services n/a
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## Key environmental and social risks and opportunities

Theme	Risk / opportunity	Description	Actions / controls
Biodiversity	Risk	Nesting birds	Vegetation clearance and demolition within nesting season (March – September) to have nesting bird surveys completed.
Pollution	Risk	Noise	Works to be undertaken outside of possessions where possible. Toolbox talks on noise controls to be delivered to workforce. Section 61 consent for works outside of permitted operating hours/as required. Letter drops to inform residents of works programme and working hours. Noise monitoring near residents at night. Screening to be used where possible. Best Practicable Means to be followed.
Contamination	Risk	Excavation of contamination	Existing ground investigation reports to be used. Confirmatory chemical analysis and classification of arisings shall be completed prior to movement and storage of material. A remediation strategy and method statement shall be prepared. A Materials Management Plan (MMP) will be prepared if there is an opportunity to retain material onsite.
Pollution	Risk	Dust	Stockpiles of potentially dusty materials to be maintained as far away from sensitive locations as possible, and where possible contain or cover stockpiles to prevent dust mobilisation. Regular inspections shall be undertaken to ensure dust is not being generated. Stockpiled materials will be removed from site in a timely manner. All wagons carrying friable material/waste shall be covered. Site speed limit. Where practicable movements will be scheduled for peak traffic periods. Preparation of a construction traffic management plan.
Pollution	Risk	Pollution to land (spills)	Fuel storage to be compliant with Oil Storage Regulations. Chemicals to be contained within flammovault or similar. Refuelling procedure to be followed all times. COSHH briefings to include environmental controls. Spill kits to be at worksite and fully stocked. Plant nappies to be used under static plant and containers. Maintenance and oil only spill kits to be available. Storage of fuels to be positioned away from drainage.
Pollution	Risk	Emissions	NRMM compliance to be adhered to. No idling policy to be enforced. Signs to be displayed onsite at welfare locations and within the main compound. Plant and equipment to be maintained in accordance with the manufacturer's requirements. If plant is emitting black smoke other than at start-up it shall be quarantined for repair or removed from site.
Waste Management	Risk	Waste storage and removal	All duty of care checks to be undertaken prior to movement of waste. Copies of waste carrier licences and permits to be held on Workspace and details of check recorded within the SWMP. All movements of waste to be accompanied by waste transfer notes. Authorised persons only to sign off waste tickets.
Biodiversity	Risk	Interface with Invasive Species	Japanese Knotweed noted as an access interface within the WTS. Works methodology to be assessed and planned accordingly as to not to disturb or spread. Giant Hogweed noted as an interface on the southern boundary of the western compound. Additional 2m offset fence to be established with signage to note no access permitted. Works will not require disturbance or direct interface.
Contamination / Pollution	Risk	Existing drainage – train oil discharge	It has been noted that the existing track drainage within the South Sidings may contain a considerable amount of train oil discharge. Part of the works scope involves upgrading the drainage and an outfall interceptor. Works methodology to be planned to ensure that any over pumping requirements minimise spillages and over pumping at the point of the interceptor includes a temporary facility to manage oils and other.
Pollution	Opportunity	Minimise diesel usage and	We will look at the feasibility of onsite renewable energy and for any grid connection we will sign up to a green tariff.

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## Environmental and Social Management Plan (Non-NR)

R03-02

VF-B n/a	VF-C n/a	VF-R ✓	VH n/a	VR n/a	VS n/a	VB n/a	VGE n/a	VL n/a	VI n/a	Shared Services n/a
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		associated emissions	
Biodiversity	Opportunity	Benefits for wildlife and habitats	We will look for onsite enhancements which will not hinder future maintenance or operation functionality station.
Pollution	Opportunity	Trial new technology to minimise noise / emissions onsite	Alternative powered plant and equipment.
Utilities	Opportunity	Reduce reliance on potable water supplies	Rainwater harvesting for use during construction e.g. for welfare facilities, road sweeping and dust suppression.

### 2.3 Permits, Consents and Licences

Legislation compliance is managed through the H03 *Legislation Compliance* procedure. The legal register is maintained externally through subscription to the ENDS Compliance Manager which is managed centrally by the Corporate Responsibility department. The ENDS Compliance Register document (H03-01) details all applicable environmental legislation and is available within the document library on Workspace. Full *details* of how we manage legal compliance are detailed in VolkerFitzpatrick (VF) procedure H03 Legislation Compliance.

The project will meet its legal requirements through compliance with any planning, local authority, enforcement agency conditions and to all relevant legislation. Updates will be made available to the project team via the environmental representative detailed in section 1.1.5.

The Consents and Licences Checklist document (H03-05 *Consents and Licenses Checklist*) shall be used as a guide to inform the Environmental Planning Meeting Agenda (EMS-01). Where there is a requirement for environmental permits/consents/licences then this will be detailed within the EMS-01 *Environmental Planning Meeting Agenda*. Consents will be programmed with sufficient timescales to allow for dialogue with the granting authority and the application process. The table below details the current environmental permits / consents / licences required or likely to be required for this project.

Permit / consent / licence type	Issuing body	Location / work site	Status	Workspace link to approved permit / consent / licence
Section 61	London Borough of Barnet	All station and TOC works	Approved through to March 2021 Ongoing submissions	<a href="#">C13791 - 11.9.13 - COPA 1974 Section 61 - Approval - Station works Sep 20 to Mar 21</a>
Discharge agreements	Thames Water	Temporary and permanent connections	Consultation phase	TBC

Environmental Permit to Work (EMS-10) system to protect environmentally sensitive areas on site (e.g. waterways) will be instigated when required and records will be maintained in the site offices and on workspace section 11.6. The requirement for environmental permits to work shall be agreed during the EMS-01 *Environmental Planning Meeting Agenda*.

### 2.4 Site Accommodation and Utilities

When locating site accommodation, material storage and car parking, consideration shall be given to the following:

- Accessibility of existing electricity, water and sewerage connections

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

- Suitability of existing hard standing / brownfield areas
- Proximity to sensitive receptors and potential noise / visual impacts / fumes
- Accessibility for staff and visitors

Connection of services and other ancillary requirements will be completed with care and consideration. On project completion, the area will be returned to pre-existing conditions or according to contract / client requirements. Refer to section 2.3 for associated consents / permits for connections and discharges. The table below details the utilities required and the monitoring arrangements. A smaller satellite setup will be located on the western side which will likely to be self-sufficient in water, waste and power provisions through tanker deliveries, effluent removal and a generator respectively.

	Provision description	Consents / approval required	Monitoring arrangements
<b>Water supply</b>	Existing connection	Existing connection associated with shed	Meter readings
<b>Wastewater</b>	Tanker	Regular collections from Septic Tank	Collections
<b>Electricity</b>	Existing connection	Existing connection associated with shed	Meter readings

## 2.5 Objectives and Targets

The following table summarises project specific objectives derived from the project's sustainability strategy objectives. Review of performance against these objectives will be conducted as part of internal audits and progress meetings. Progress against objectives and targets shall be communicated to the wider project team and the construction workforce through noticeboards, posters, tool box talks and meetings.

Client targets		
Sustainability Theme	Target	Monitoring arrangements / metric
BREEAM	Rating of 'very good' for station	BREEAM Assessor and associated tracker
VolkerFitzpatrick corporate objectives		
Community	Register Considerate Constructors Scheme (CCS) and score a minimum of 40 out of 50 points	CCS monitor reports
Energy	Reduce Carbon Usage by: Target - 5%, Stretch - 10% based on 2018 normalised emissions	Carbon assessment report (baseline 2018 consumption), sustainability dashboard
Energy	Green energy supply for fixed offices and temporary site set ups	SWMP
Waste	Zero waste sent to landfill (non-hazardous)	SWMP

## 2.6 Key Performance Indicators (KPIs)

Reporting to the client will be undertaken on a four weekly basis or at a frequency agreed with the client or client representative. The KPIs are collated from each project and then submitted by the central HSES team. KPIs will be completed on a 4 weekly basis detailing the information below.

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

- Number and type of incidents
- Number and type of close calls
- Number and type of complaints
- Quantity of petrol used
- Total volume of water used
- Quantity of electricity used
- Quantity of natural gas used
- Quantity of red diesel used
- Waste produced - non-hazardous landfill, reused, recycled, recovered
- Quantity of hazardous waste produced

### 2.7 Resources, Roles, Responsibility

It is the responsibility of management and supervisory staff to ensure that the Environmental Management System (EMS) is complied with on this project. Key project specific environmental responsibilities are identified during the environmental pre-start meeting.

Whilst the overall accountability for the environmental and social compliance, obligations and performance of these works rests with the project manager, specific environmental and social roles may be performed by competent nominated persons identified in the Allocation of Responsibilities document (HSE-33). These responsibilities are reviewed at the 4-weekly health, safety and environmental meetings. Current responsibilities for this project are summarised in HSE-33 which is held within the Construction Phase Plan (CPP). General duties of employees with respect to environmental management are set out in the VF Environmental Policy and Practice document.

Allocation of site-specific responsibilities and a record of signatures shall be maintained on the HSE-33 as applicable. HSE-33 requires allocation of a responsible person to the following site project roles:

- Demolition coordinator
- Emergency coordinator
- Environmental coordinator
- Waste coordinator
- Fuel storage coordinator
- Community liaison representative
- Noise monitoring
- Energy & utility warden

All those responsible persons, named in HSE-33 must sign the form as a record of their signature and acceptance of responsibilities.

All relevant project management staff must be briefed on this ESMP and their roles according to HSE-33, and records of the briefings must be retained onsite.

The project's environmental representative is responsible for:

- Obtaining any required consents or permits required in relation to these works.
- Ensuring environmental information is provided to the design team to inform sustainable design and that these are taken through to construction where applicable.
- Provide the interface between specialist environmental personnel/bodies where required.
- Ensure that training and environmental awareness is delivered in relation to the design development and construction.
- Provide advice on legal and contractual compliance related to the environment.
- Undertaking monthly site inspections and internal EMS audits.

The project's social representative is responsible for:

- Overseeing the delivery of notification letters.

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

- Providing the client's community relations representatives with any information they require in relation to the works.
- Managing the process for rights of access.
- Ensuring the social performance requirements' of the contract are fulfilled.

## 2.8 Competence, Training and Communication

The project manager will ensure that all individuals employed on the contract have the appropriate training and experience required for the implementation of this ESMP. In particular those members of staff identified as having an environmental role in HSE-33 above must be suitably experienced and competent to undertake the role.

A VF programme of environmental awareness training is mandatory for the majority of job roles. This will be in alignment with our Rail Competency Matrix (R06-G01) held within our rail compliance department. This one day course is accredited by the Institute of Environmental Management and Assessment and is delivered in house by approved trainers.

### 2.8.1 Induction

Site specific inductions will be given to all personnel entering site (as appropriate). In particular they will be made aware of the site plan, site rules, the extent of the site, ground conditions and access authorisation. This induction will highlight specific environmental/social risks and hazards on site, together with the preventive and protective measures, as well as emphasising each individual's duties with regard to environmental and social management. A record will be kept of all inductions carried out.

### 2.8.2 Subcontractors

Subcontractors' supervisors will be given specific instructions and rules prior to starting work, which will be recorded using the Site Supervisors Instructions form (HSE-17). Subcontractor's sustainability performance will be measured and reviewed quarterly.

### 2.8.3 On-going Awareness

Tool box talks (TBTs) and relevant environmental alerts will be briefed throughout the construction phase. Instructions regarding environmental issues that require immediate action will be conveyed verbally, followed up in writing when applicable. The required TBTs for this project and when they shall be briefed to the relevant workforce are detailed in Appendix 4. This can be printed and displayed as a reference aid for the project.

## 2.9 ESMP Communication

The key parts of the ESMP shall be briefed to the relevant members of the project team by the environmental and social representatives. The project lead, normally the project manager, shall be in attendance. A briefing record shall be recorded and uploaded into Workspace 11.1.

It is the responsibility of the project / site manager to authorise the EMP, and to ensure that during the contract period it is reviewed and developed to reflect the contract requirements and works being carried out, including information from designers, subcontractors and any variations. The ESMP forms part of the works information pack for all subcontract packages and full compliance must be maintained in accordance with contractual obligations. The project manager is to ensure that the key constraints and controls within the ESMP are communicated to all personnel on site and any other interested parties.

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

A summary of the communication methods can be found in the table below.

Format	People involved	Frequency
Four-weekly HS&E meetings (HSE-04)	Management / workforce / health and safety / environmental / social	Four-weekly
Toolbox talks, task briefings, subcontractor progress meeting	Workforce / subcontractors	Weekly / daily / as planned
Close call reporting (H07-06-VF) / survey monkey ( <a href="https://www.surveymonkey.co.uk/r/Close_call">https://www.surveymonkey.co.uk/r/Close_call</a> ) / you said we did boards	Directly with each employee	As required / during construction
Additional stakeholder meetings	Emergency services, Local authority, schools, residents etc.	Pre-construction / as planned

In addition to this, arrangements for all people on site to be consulted and informed on environmental and social aspects will be provided through:

- Encouraging all site staff to attend the 4-weekly health, safety and environmental meetings;
- Daily contact with employees and their employers;
- Items specifically highlighted during subcontractors' progress meetings;
- Information posted on the site noticeboard including the HSEQS Monthly Report for the Rail Division;
- Conversations during site inspections / walkouts;

## 2.10 External Communication

### 2.10.1 Communication with Client

Progress meetings will be organised with the client every 28 days or as otherwise agreed. Updates may include but not be limited to risk mitigation, ESMP updates / status, KPI performance, progress against targets and a review of inspections and audit findings.

### 2.10.2 Interested Parties

We will designate a communications lead whose will act a liaison between the Brent Cross Thameslink & Brent Cross South Communications Lead and the project as well as interface with residents and other stakeholders. All external communications will require approval by the client's communication lead prior to issue. This relates to all external communications and includes but is not limited to the following; Facebook, Twitter, Instagram, Pinterest, press releases, press articles, resident letters, newsletters, leaflets, posters, media visits, externally published blogs, company brochures and promotional material, site hoardings and any other form of mass' external communication.

All communications with statutory bodies including applications or agreements must be done in agreement with the client representative. Records of communication shall be kept. Where a statutory body makes an unplanned approach to site the client representative will be informed as soon as practicable. Records of visits, discussions and meeting minutes will be held on Airsweb or using HSE-47 *Third Party Visits*.

VW UK are an Associate member of the Considerate Constructors Scheme (CCS). As such all projects (acting in the Principal Contractor role) over six weeks duration will be registered with CCS, unless advised to the contrary by the environmental and social representatives. Compliance with the Scheme's Site Code of Considerate Practice indicates a site is achieving a standard beyond statutory requirements. The CCS code of practice shall be prominently displayed within the site offices. The policy shall be communicated to project management and the workforce through posters, tool box talks and briefings.

The five criteria of the CCS code are:

- Enhancing the **Appearance**

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

- Respecting the **Community**
- Protecting the **Environment**
- Securing everyone's **Safety**
- Caring for the **Workforce**

Project performance against these criteria will be evaluated by an independent assessment by the Considerate Constructors Scheme. A report is prepared as part of this assessment and is available on request.

### 2.10.3 Lineside Neighbours

We shall consider the potential disruption of our works on neighbours and local communities. This shall include proximity of works to local residents, work activities, duration and working times. Where works are within 150m of residential or business properties and have the potential to affect these, the client's representative shall be informed to discuss their communication procedure. The table below details the neighbours, associated considerations in relation to our works and whether communication through a letter is required.

Neighbour address	Type	Considerations	Letter drop required (✓)
78-105 Brent Terrace	Residential	Noise, dust and lighting	✓

We shall provide our nearest neighbours, those within 200m of the project, with at least 14 days' notice of upcoming major works, and as a general rule, target to provide at least a 2-month look ahead, so that residents are able to make any necessary adjustments. However, for some emergency and late notice work this will not always be possible. In this instance pre-notification shall be provided as soon as reasonably practicable. If it is not possible to provide pre-notification, then the details of the work shall be provided to the client's community relations team. Where works are out of hours a suitable contact number shall be provided on communications. A member of the project team will be nominated with responsibility for briefing all staff on acceptable conduct and arranging delivery of notification letters approved by the client community relations representatives.

### 2.10.4 Complaints Process

Where possible complaints/comments received directly to our staff onsite shall be courteously dealt with to provide a resolution there and then. The client's representative shall be notified of any complaints received directly within 12 working hours of the complaint receipt. Where a resolution cannot be met, discussions shall be had with the client team as to how best to proceed. All complaints and compliments will be recorded using the Compliments – Comments - Complaints Log form (QMF-05). A dedicated phone number will be provided on all correspondence which will be in operation during any periods of work. This phone will be held by the responsible manager of the shift.

## 2.11 Records and Documentation

All documents will be stored on our document management system, Workspace. Where possible all documentation shall be produced and stored electronically to support the paperless office environment. The Incident Response Plan (IRP) which forms part of this ESMP shall be printed and be readily accessible in the event of an incident.

Copies of all licences, consents, permits and permissions will be provided to the client project manager in accordance with the requirements of the contract and within 7 days of receipt.

Prior to completion of the contract the following will be provided to the employer's representative:

- Final surveys
- Risk assessments
- Reports
- ESMP
- Best practice
- Environmental incidents

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

## 2.12 Monitoring and Measurement

Monitoring of site operations will be carried out on a day-to-day basis by site management and supervisory staff. A Health, Safety & Environment Inspection Report (HSE-07R) shall be carried out in accordance with the Weekly Site Safety & Environment Inspection Rota (HSE-06). The rota shall be displayed within the site office and kept updated. The environmental manager (or appointed representative) shall complete monthly an Environmental Inspection form (EMS-07). Additional inspections will also be carried out by directors and senior managers which will be captured on the Senior Manager's Health, Safety, Environment and Quality Tour form (HSE-07B). Subcontractor performance is used as part of future selection processes and contributes to the further improvement of supply chain performance through the application of lessons learnt. Investigations will be carried out by site staff, or the relevant manager, of all incidents and complaints whether causing injury, loss, or near miss.

An internal environmental audit will be conducted within the first 6 weeks of project start and at six monthly intervals thereafter. The audit schedule is maintained centrally by the HSES team and is available on request. It is the responsibility of the environmental representative detailed in section 1.1.5 to ensure that the audits are completed in accordance with the schedule. The audit encompasses the whole suite of environmental and social management requirements as per sections 3 and 4 of the ESMP.

Issues identified will be categorised as major non-conformity (breach of legislation), minor non-conformity (breach of VF policy or procedure) or action (observation).

- Where a major non-conformity is identified the close out for compliance should be no more than 7 days from issue unless otherwise agreed.
- Where a minor non-conformity is identified the close out should be no more than 14 days from issue unless otherwise agreed.
- Where an action is identified this should be completed within a 1 month period and reviewed at the next audit. Where actions have not been addressed these shall be escalated to a minor non-conformity.

Non-conformities shall be captured on the Non-Conformance Report (Q04-01) which shall be uploaded to 13.2. A copy of the actions taken to close out the NCR shall be documented within 13.2. All non-conformities recorded will be logged, tracked and closed out in the Schedule of Non-Conformances form (Q04-02).

The project manager will have ultimate responsibility for closing out any issues identified but they may choose to delegate to appropriate individuals of the project team.

The following table summarises the monitoring arrangements in place for this project.

Monitoring Type	When	Method
Site inspection	Daily	Site tour (Safe Start Safe Finish)
HSEQ inspection	Weekly	HSE-07R as per HSE-06 rota
Senior manager inspection	Monthly	HSE-07B
Subcontractors Supervisor Meeting (HSE-05)	Monthly / end of package	HSE-05
Environmental inspection	Every four weeks	EMS-07 by environmental manager
Internal environmental audit	6-8 weeks then 6 months	Audit report and NCRs
14001	Planned	Registration body, audit report and NCRs
Statutory inspections	Planned	As required
Site visits by HSE or EA	Generally unplanned	Inspection report, HSE-47

## 2.13 Tax Allowances and Rebates

Opportunities for tax allowances, rebates and incentives for sustainable design outcomes shall be investigated. This includes schemes such as the Enhanced Capital Allowance (ECA) scheme for the selection of energy efficient technologies and the remediation of contaminated land. Where there is opportunity for energy/water saving technology and/or the remediation of contaminated land on the project then discussions shall be had with the client's commercial representative about completing the enhanced tax relief review form.

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

### 3. ENVIRONMENTAL IMPACT AREAS

This section details the specific impact areas and mitigation the project will employ to manage the environmental risks and opportunities available.

#### 3.1 Biodiversity

##### 3.1.1 Background Information

No habitats will be lost to the proposals and consequently direct impacts upon faunal species are considered to be a low risk.

Clearance of vegetated areas to be checked by ecologist and report provided upon request.

##### 3.1.2 General Control Measures

- Take all reasonably practicable measures to minimise harm to and disturbance of wildlife caused by noise and vibration, dust and light pollution.
- Minimise habitat loss by keeping the working corridor and extent of working areas to the minimum necessary for the works.
- Adjacent habitats which are to be retained will be fenced off and sign posted to prevent incursion or damage.
- All areas of temporary land take will be restored as agreed with landowners and landscape design as applicable.
- The workforce and staff on the project shall be briefed on all ecological requirements and records retained.
- Site lighting should avoid linear habitats such as hedgerows, tree lines and watercourses;
- On discovery of any unexpected protected species or invasive species in areas not identified in the ecology surveys, works in the area shall cease and the unexpected finds procedure detailed in the Incident Response Plan (IRP) will be followed.

##### 3.1.3 Species Specific Measures

The following mitigation is proposed, based on current understanding of the species likely to be present.

Nesting birds - if vegetation clearance works are not fully undertaken during the winter, preventative measures will be adopted during the clearance works to prevent impacts on nesting birds. Where possible, vegetation will be cleared outside of the core breeding bird season (March - August). If any vegetation clearance is required during the core breeding bird season, the area will be subject to a nesting bird survey prior to clearance. If an active nest is found an appropriate size buffer (min. 5m) will be created around the nest with no construction activity within this exclusion zone until the chicks have fledged the nest.

##### 3.1.4 Protection of Trees

The protection of trees shall be undertaken in accordance with the approved Tree Protection Methods Statement, approved under Condition 27.1 and 27.2 of the S73. This will likely not require any removal of trees, as outlined within the Method Statement. However, if trees are required to be removed on site, the following actions would be taken:

- The loss of trees shall be avoided as far as reasonably practicable and it is not anticipated that this scheme will require tree removal. However, prior to any lopping or felling of trees within the working corridor, they will be assessed for their suitability for protected species / TPOs and any necessary measures taken.
- All tree surgery operations shall comply with BS3998:2010 Recommendations for Tree Works and shall be undertaken by specialist contractors.
- Woody materials generated should be retained on site as far as reasonably possible.
- Selective removal of lower branches in an approved manner, to reduce mechanical damage by construction plant.
- Where trees are to be retained they shall be protected from damage (if likely) with fencing and signage to the extent to the drip line.
- The use of matting around the root zone to minimise soil compaction.
- The use of chestnut paling around tree trunks to prevent damage.
- No heavy materials or plant shall be stored within the canopy extent.

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

## 3.2 Contaminated Land

### 3.2.1 Background Information

A site-specific remediation strategy will be developed by VolkerFitzpatrick and approved by the LPA. All remediation works will then be completed in accordance with the remediation strategy, and a remediation verification report will be submitted for approval to the LPA to confirm this. The Ground Investigation report prepared by Capita dated March 2018 identified 2 out of 55 samples were considered hazardous for waste classification purposes.

One sample (16301 @ 0.5m) was hazardous due to elevated total petroleum hydrocarbons.

One sample (16309 @ 1m) was hazardous due to elevated copper concentrations.

Asbestos fibres were detected within the sample matrix of two out of forty-seven samples (reference 16303 @ 0.9m and 26619 @ 0.6m).

The principal historical sources of contamination identified which have the potential to affect current receptors are:

- Contaminated made ground from any historical uses within the proposed works location including along the railway which are no longer present;
- Contaminated made ground associated with the construction, operation, and maintenance of the railway track; and
- Contaminated groundwater or perched water associated with the construction, operation, and maintenance of the railway track.

### 3.2.2 General Control Measures

General measures to be incorporated include:

- The data, assessments and reports will provide details on the expected quantities and locations of contaminated waste, and inform suitable material management;
- Site setup to consider inclusion of quarantine area for contaminated wastes; any brushing down and spraying heavily used hard standing areas should include drainage interceptors to avoid contaminating surface/groundwater;
- The design will ensure that minimal excavation is carried out and where possible repetition of design or simplification and standardisation will be used to reduce bespoke on site work;
- Efforts will also be made to source local material, or reuse of material within the wider scheme;
- The project will explore the option to use the CL:AIRE code of practice to retain soil and stones for reuse on site, within the agreed threshold limits, removing any environmental permit requirements;
- Efforts will be made to reduce the area of ground impacted by the works, to reduce the transportation of materials on and off site, and the storage of materials on site for significant time;
- Where asbestos is present a suitably qualified contractor will be employed to safely remove and dispose of all asbestos (as necessary);
- Any piling or excavation in areas of confirmed contamination should be designed in accordance with Environment Agency guidance;
- Contaminated spoil requiring disposal will be classified through representative sampling. On-site treatment should be the preferred option followed by off-site treatment, and disposal at landfill should be the least preferred option if on-site or off-site treatment options are not practicable; and
- Preferred disposal options should be identified in the project Site Waste Management Plan (SWMP) and disposal will be undertaken by an appropriately licensed waste carrier. Disposal will be at an appropriately licensed facility and waste records will be maintained.

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

### 3.3 Noise and Vibration

#### 3.3.1 Background Information

Consent under Section 61 of the Control of Pollution Act shall be sought from the London Borough of Barnet prior to the main works commencing. The table below details the baseline monitoring which was completed as part of the Noise and Vibration chapter of the Environmental Statement.

Period of the week	L <sub>Aeq, T</sub> (typical)	L <sub>A90, T</sub> (typical)
Daytime weekday (Mon-Fri 0700-1900)	56	49
Evening weekday (Mon-Thu 1900-2300)	52	46
Night time weekday (Mon-Thu 2300-0700)	51	47
Evening Friday (1900-2300)	49	41
Night time Friday (2300-0700)	47	41
Daytime Saturday (0700-1900)	51	43
Evening Saturday (1900-2300)	49	42
Night time Saturday (2300-0700)	48	41
Daytime Sunday (0700-1900)	52	45
Evening Sunday (1900-2300)	51	44
Night time Sunday (2300-0700)	51	44
<i>Typical noise levels, in dB, at 104 Brent Terrace</i>		

#### 3.3.2 Management of Working Hours

- The management of working hours shall be used to mitigate the impact of noise and vibration on sensitive receptors.
- Normal working hours shall be 0800 to 1800 Monday to Friday and 0800 to 1300 on Saturday.
- Due to the impact of COVID-19, Section 61 approvals allow for an extended working period from 08:00 to 21:00 Monday to Saturday. The current Section 61 for the project allows for this up until the end of May and legislation is currently in place that allows application for these working hours until 13/05/2021. This may be subject to change as the pandemic situation develops.
- There shall be no working on Sundays and Public Holidays unless work on the operational railway is required under temporary possession and communicated to the Local Authority through the Section 61 process and affected residents.
- A start up and shut down period of half an hour before and half an hour after respectively shall be utilised for the following activities only:
  - ✓ Arrival and departure of workforce and staff on site;
  - ✓ Deliveries and unloading;
  - ✓ Checks and examinations of plant and machinery (including test running) and the carrying out of essential repairs / maintenance to plant and machinery;
  - ✓ Re-fuelling of plant and machinery engines;
  - ✓ Site inspections and safety checks prior to commencing work;
  - ✓ Site briefings / meetings; and
  - ✓ Site clean-up.
- Deliveries to site shall be outside of peak traffic times (but during the daytime) where possible to minimise disruption to the local road network.
- Consideration shall be given to noise sensitive periods such as school exams or religious services.

#### 3.3.3 Work Outside of Normal Working Hours

- Where possible all works shall take place during normal working hours. The duration and extent of any work that must be carried out outside of normal working hours shall be minimised. Section 61 consent for works outside of permitted operating hours will be sought as required.

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R03-02

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

- Emergency works are unforeseeable works which are urgently and unavoidably required in the interests of health and safety or the preservation of a building structure. Where emergency works are carried out which may have a significant effect on residences the Local Authority shall be notified as soon as reasonably practicable of the extent, duration and likely impact of the emergency works.

### 3.3.4 Siting and Orientation

- Worksites, compounds, semi-static and static equipment (e.g. generators, compressors and pumps etc.) will be sited and orientated so as to minimise the impact of noise on sensitive receptors (e.g. use of existing structures as acoustic barriers). Acoustic barriers and enclosures shall be used to minimise the impact of noise on sensitive receptors, where this will make a significant difference to noise exposure. Attenuation shall have a mass per unit area of at least 7kg/m<sup>2</sup>.
- Acoustic barriers are most effective when placed as close as possible to the source of the noise or to the receptor.
- Work areas may also be screened to mitigate visual nuisance.

### 3.3.5 Plant, Vehicles and Equipment

- Modern, silenced and well-maintained plant will be used at all times. Where practicable, plant will be fitted with efficient attenuators, mufflers or acoustic covers. All plant and equipment will be expected to meet noise limit and noise marking requirements prescribed by the Noise Emission in the Environment by Equipment for Use Outdoors Regulations 2001.
- All compressors shall be 'sound reduced' models which have sealed acoustic covers which shall be kept closed when in use. All pneumatic percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers.
- Wherever possible, equipment shall be substituted with lower-noise equipment;
- All equipment will be shut down when not in use, vehicles will be required to switch off engines if waiting unless required for operational or safety reasons. This requirement will be briefed out to all associated project staff and contractors as part of the induction process and enforced through inspections.
- Wherever practicable, mains electricity will be used instead of generators. If generators are required for use, hybrid or low noise ("super silenced") models shall be used as well as acoustic enclosure to ensure noise is minimised.
- No impact piling shall take place unless it has the approval of the LPA under Section 61 of the Control of Pollution Act 1974 as required in planning condition 28.11.
- All materials will be delivered, handled, stored and used in a manner that minimises noise.
- Except for on-track plant and where available, all vehicle audible warning systems (including reversing alarms) shall be of broad spectrum ("white noise") type.
- Reversing alarms shall be disconnected in certain circumstances (e.g. work outside of normal working hours or when in close proximity to sensitive receptors) and a banksman allocated to ensure noise nuisance is reduced to a minimum while maintaining safe working practices.

### 3.3.6 Site Rules and Behaviour

- All VolkerFitzpatrick staff and associated contractors shall be subject to the generic site rules governing shouting and the use of inappropriate language.
- Shouting and raised voices shall be kept to a minimum except in cases where warnings of danger must be given. Anti-social behaviour by staff will not be tolerated and disciplinary action will be taken where warranted, by VF site management.

### 3.3.7 Vibration

- To protect residents and users of buildings from nuisance and harm vibration dose values will not exceed those specified in BS6472:2008.
- To protect buildings from physical damage, peak particle velocity levels should not exceed 5mm/sec, except for particularly sensitive buildings where the level should not exceed 3mm/sec.

### 3.3.8 Monitoring and Inspections

- Noise monitoring and reporting will be undertaken onsite as agreed with the Environmental Health Officer, and as approved by the LPA as per the noise and vibration monitoring strategy (BXT-CAP-0000A-RP-Z-0227) under condition 29.2.

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### 3.4 Emissions to Air

This section should be read in conjunction with the letter submitted to discharge condition 30.1 air quality monitoring (Ref: BXT Condition 30.1 (F/04687/13)).

The site is located within the London Borough of Barnet Air Quality Management Area (AQMA) and close to the London Borough of Brent AQMA. There will be little potential for dust generation (even with no mitigation in place) because:

- 49% of days the rainfall is greater than 0.2mm where there will be natural dust suppression
- During winter surfaces tend to stay damp for significant periods of time
- 49% of the time winds typically are less than moderate strength and would not suspend dust in the air

The risk assessment of the dust from demolition and construction phases of the works conclude that the dust impacts from construction are considered to pose a low to negligible risk to human health and dust soil effects.

#### 3.4.1 Traffic and Vehicles

A Construction Traffic Management Plan is to be developed to include measures to manage traffic flows during construction. However, general mitigation measures to be implemented in relation to traffic and transport, including non-motorised users, will include:

- Wherever possible construction vehicles will travel along the strategic highway network, avoiding residential areas and villages;
- During the works, access to the local area will be maintained for vehicles with as much construction as possible being conducted outside of peak hours;
- Site rules for drivers shall be established and will be signed by the driver to conform to the standards. A copy of the site rules will form part of the traffic management plan.

This will include:

- Permitted routes to and from site;
- No idling while waiting to be loaded or unloaded;
- No parking in residential streets surrounding the site;
- Site speed limit will be adhered to;
- Follow signage and only reverse under supervision of competent banksman;
- Drivers to wait in designated areas and wear Personal Protective Equipment (PPE) when out of their vehicles;
- All loaded vehicles leaving site should be sheeted;
- Where required, vehicles shall be washed down prior to leaving site.
- All plant and equipment will be well maintained and regularly inspected to ensure that exhaust fumes and particulate matter is kept to a minimum. If a fault is identified the plant shall be quarantined and repaired as required;
- Vehicles or plant will not be left running if not in use unless required for operational or safety reasons;

#### 3.4.2 Non-Road Mobile Machinery

As the project is located within the Greater London Authority (GLA) we will register all in scope non-road mobile machinery. Plant and equipment with a power rating between 37-560kW that will be onsite for more than 5 working days must meet stage IIIA of EU Directive 97/68/EC as a minimum and then stage IIIB from September 2020. Stage IIIA generators remain compliant until September 2020 and from then will need to be stage V generators.

#### 3.4.3 Construction Dust

Where possible, dust creating activities will be completed away from sensitive receptors e.g. crushing or cutting of concrete materials. The following control measures will be implemented as a minimum:

- Dust suppression is required in times of dry weather, particularly during excavation and demolition. All personnel working on site will ensure damping down of dusty materials using water sprays is carried out. This shall be done in a controlled manner to prevent excessive mud or flow of dirty water;
- Dust logs will be maintained during dry periods (frequency to be confirmed);
- Making sure that loose materials are stockpiled on site for the shortest possible time and keeping stockpiles or mounds at a height of no more than 3m. Stockpiles of material shall be covered during extended dry periods;

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- Slopes on stockpiles will be no steeper than the natural angle of repose of the material and maintain a smooth profile;
- Long term stockpiles shall be left to re-vegetate to stabilise surfaces;
- Bentonite, grout, concrete and other similar materials will be mixed only in designated areas which will be enclosed or shielded as appropriate;
- Confining haulage and delivery vehicles to designated roads within the site in accordance with the traffic management plan;
- Requiring contractors to use self-sheeting lorries for the transport of dusty materials to and from site;
- All vehicles carrying friable material from the site will be fully sheeted;
- A mechanical road sweeper will be utilised on the public highway to maintain the route free from mud and dust;
- Providing an approved and easily cleaned hard surface and keeping clear of loose surface materials on all site areas where vehicles regularly move around;
- Regularly brushing down and spraying heavily used hard standing areas on site;
- Establishing speed limits no greater than 10mph across the site.

#### 3.4.4 Ballast dust

Ballast and other aggregate has the potential to cause significant amounts of dust when moving on and offsite. Prior to the delivery or removal of aggregate the following shall be reviewed as part of the works package plan:

- Volume of material and intermediate storage if required;
- Method of delivery (including requesting wet delivery) and unloading;
- Time of year and likely weather conditions;
- Location of environmentally sensitive areas and nearby receptors;
- Dust suppression system feasibility.

#### 3.4.5 Odour

To prevent odours from the site the following will be implemented:

- Site toilets shall be positioned away from public areas;
- Welfare effluent shall be emptied regularly;
- Wastes that have the potential to generate odour (food, vegetation) shall be enclosed and removed frequently;
- Materials used inside the buildings will be selected to ensure they do not emit Volatile Organic Compounds (VOCs).

#### 3.4.6 Lighting

Lighting will be implemented in line with the BS5489, Code of Practice for the Design of Right Lighting and the Guidance Notes for the Reduction of Lighting Pollution (Institute of Lighting Engineers, 2000). Lighting type, quantity, direction and positioning shall be such to minimise the impacts on housing and adjacent habitats. Lighting should be placed in such a way as to not cause significant nuisance or disturbance to surrounding properties, dwellings and habitats. Construction lighting will be directed away from roads and residential areas, to reduce light pollution.

- Lighting will be switched off when not specifically required for construction, security or health and safety. PIR lighting shall be used in offices so unused areas will switch off automatically.
- Restrict high-level floodlighting installations to areas of major construction and possibly the main site compounds. Sky glow will be minimised through the use of low spill lights.

### 3.5 Energy and Carbon

In collaboration with the designer, opportunities for low carbon solutions shall be sought. The project will look to make a connection to the grid rather than use temporary generators and the acceptance of this CEMP by the client's representative shall be deemed as written agreement to do this. A 100% renewable tariff shall be sought. The use of generators will be required for transient cabin setups or where the remote nature of compounds means that a mains connection is not feasible. Site office accommodation will be eco-efficient models and will include:

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- Highly insulated cabins (including floors);
- Windows will be fully double glazed windows;
- Heating control will be either by thermostat or timer;
- Lighting will be via energy efficient high frequency fittings with low energy bulbs controlled by passive infra-red (PIR) sensors;
- Instant hot water will be provided but will be suitably insulated;
- Drying rooms will be through a combination of heaters and dehumidifiers.

Onsite controls of energy management will be:

- Plant operators will be required to switch off all plant and machinery where not in use;
- All plant operators will ensure that any defect or malfunction in plant is reported and quarantined until a repair can be undertaken;
- Energy efficient plant will be chosen where practicable;
- Plant and equipment shall be maintained to maximise fuel efficiency and minimise carbon emissions. Maintenance records shall be maintained;
- During the procurement process, consideration shall be given to energy efficiency and carbon emissions;
- Alternative energy sources, for example batteries or mains power, rather than generators are preferred.

Energy use in office accommodation will follow best practice:

- PCs to be set to energy saving modes;
- Employees will be required to switch off office equipment when not in use;
- Employees will be encouraged to only print if necessary and double sided printing;
- All printers are configured to go into energy-saving mode when not in use;
- Office equipment purchased to have at least a energy rating of 'A';
- The appointed energy and utility warden (as allocated within the HSE-33) shall ensure the above is being implemented.

## 3.6 Materials

### 3.6.1 Responsible Sourcing

Where products are available, we shall specify UK manufactured steel, concrete and aggregate based materials which are certified to BES6001, the standard for the responsible sourcing of construction products. Where specification allows, cement replacement and high recycled content steel shall be procured.

Aggregate shall be specified to be from secondary (recycled) material where appropriate and available.

Evidence that the material meets the end of waste criteria will be obtained and kept on file. This shall include:

- Factory production protocol;
- Specification testing;
- Chemical testing;
- Permits/exemptions for supplier operations.

Compliance testing shall be in accordance to VF procedure E09 *Use of Materials on Projects* for orders over 1000 tonnes. New ballast shall conform to the required specifications and be from primary sources free from contamination.

### 3.6.2 Timber Sourcing

New timber products must be certified by either the Forestry Stewardship Council (FSC) or the Programme for the Endorsement of Forest Certification (PEFC). FSC timber is preferred and should be sourced in favour of other sustainable forestry schemes. PEFC is only acceptable for timber sourced from the UK, European Union or United States. If PEFC is sourced, the species and country of origin must be reported.

Delivery notes for all timber, including subcontractors shall be retained and uploaded to Workspace 11.9.12. Timber products must be supported by evidence of valid certification and chain of custody from the merchant supplying the timber.

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n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

### 3.6.3 Low Impact Products

Where possible construction materials will be selected with regard to their environmental impact associated with their use.

- Sourcing materials from as close to the site as possible to reduce transportation impacts.
- Insulation materials and refrigerants will be selected that have zero potential to reduce the ozone layer. Insulation materials will have as low a global warming potential as possible (based on availability and commercial considerations), less than 5.
- No materials proscribed in the Montreal Protocol will be used in the construction or fit-out of buildings.
- No peat or natural weathered limestone will be used in buildings or landscaping.
- Materials used inside the buildings will be selected to ensure they do not emit Volatile Organic Compounds (VOCs).
- Where specification allows, the use of cement replacements will be investigated to lower the embodied carbon or concreting operations.
- Where viable, all materials used for the construction and fitting out of the buildings will be selected from A to C rated options given in BRE's 'Green Guide to Specification'.

### 3.6.4 Herbicides

The application of herbicides shall be strictly controlled and only selected and applied by a person with the appropriate, valid, BASIS certificate. Where application is required near to watercourses, ecological sensitive sites (statutory and non-statutory), drains or ditches, this shall be risk assessed.

### 3.6.5 Material Storage

The follow measures shall be followed to minimise wastage of materials:

- Storage areas shall be clearly marked;
- Where hazardous materials are required these will be locked away;
- Where applicable, storage containers shall be maintained to a good standard;
- All materials will be securely stored to prevent breakage, vandalism or theft;
- Materials sensitive to weather shall be protected/covered;
- Storage of waste shall be separate from material storage.

## 3.7 Pollution of land and water

### 3.7.1 Background Information

Working methods shall be managed as to protect land, surface and groundwater from pollution and other adverse impacts including change to flow volume, water levels and quality. Works will be undertaken in accordance with approvals from the relevant authorities and where appropriate, site drainage, including surface runoff and dewatering effluents, will be discharged to sewers where reasonably practicable and relevant permissions will be obtained from the sewerage undertaker or statutory undertakers as required.

The site is not within proximity of a groundwater vulnerability zone nor a groundwater source protection zone. The risk from fluvial and coastal flooding is very low (<0.1% chance).

### 3.7.2 General Control Measures

- On-site drainage will identify whether the outfalls are surface or foul through appropriate signage/labels. Spray paint shall not be used due to the pollution risk from application and wearing;
- There shall be no discharge to ground or watercourses without completing an EMS-10 (permit to work) and the associated consent;
- There shall be no discharge to drains (surface or foul) without consent from the relevant sewerage undertaker;
- For new water connections (temporary and permanent) the required approval from the water supplier shall be obtained.

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### 3.7.3 Piling Operations

- Piling or any other foundation designs using penetrative methods, and the construction of boreholes (including those for ground source heat pumps) shall not be permitted other than that agreed with the LPA as part of planning condition 28.8. This shall demonstrate that there is no resultant unacceptable risk to groundwater.

### 3.7.4 Silty Runoff Management

- Where possible, grassy vegetation buffer strips (>5m) shall be maintained around areas where vegetation has been removed;
- The use of silt fencing should be positioned where overland flow occurs. Silt fences do not provide adequate silt removal from concentrated sources such as dewatering excavations or discharges through a pipe;
- Fencing shall be positioned to ensure that water cannot go around the fence nor underneath it. The silt fence shall be dug into the ground;
- When stockpiling materials, consider the gradient to ensure that during rainfall events the slope will not collapse or cause significant volumes of surface runoff;
- Stockpiles of materials and soil shall be located a minimum of 10m from watercourses or drainage gullies and inspected at regular intervals to ensure that no surrounding ground or watercourse is being contaminated by runoff or seepage. Stockpiles shall be covered or silt fencing installed to prevent runoff where required.

### 3.7.5 Concrete Wash Water Management

- Concrete washout shall be contained within an impermeable (lined) skip or similar container. Signage will indicate that this area is the agreed location for washout. Excess water shall be left to evaporate during the summer months. Where small volumes of concrete washwater is generated then additional cement can be added. Once hard it can then be removed as an inert waste. Where larger quantities of concrete wash waters are generated then a settlement and pH adjustment of the water with CO<sub>2</sub> shall be used. This will then enable treated washwaters to be reused onsite. Prior to the discharge of treated washwaters the environmental manager shall be consulted to confirm it is not likely to cause pollution. This shall be done in line with guidance on low risk waste activities;
- Containment will be positioned around concrete pumps and mixers to prevent excess concrete contaminating the bare ground;
- No concrete operations or washout shall take place within 10m of a watercourse or drains without a specific risk assessment being completed

### 3.7.6 Fuel, Oil and Chemicals Management

- Each site must nominate a fuel storage coordinator (as detailed in HSE-33) and all storage locations / mechanisms must be inspected weekly and recorded on HSE-07;
- Equipment that uses fuel or oil (including generators and hydraulic equipment) must be positioned on plant nappies on an impermeable surface where practicable;
- The use of plastic or metal drip trays are not permitted onsite for use as secondary containment;
- No detergents or surfactants shall be used where they may enter to the drainage system or watercourse. In addition, oil separators will be adversely affected with detergents and surfactants and shall not be used.

### 3.7.7 Fuel Storage

It is a legal requirement to bund (secondary containment) oil storage tanks, drums or containers above 200 litres. The bund capacity must meet 110% of the largest container/tank, or 25% of the aggregated capacity (whichever is higher). No fuel storage of any size is permitted within 10 metres of a watercourse or drain.

All tanks, drums and containers over 200 litres must:

- ✓ Be always be locked shut when not in immediate use, even if empty;
- ✓ Be correctly labelled;
- ✓ Be sufficiently protected from vehicle collision;
- ✓ Display the spill procedure (E03-G01);
- ✓ Have sufficient absorbents in close proximity;
- ✓ Have the correct firefighting provisions in place;
- ✓ Be situated on level, firm ground and ideally on an impermeable surface;
- ✓ Have a plant nappy available for refuelling and decanting.

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Smaller containers of fuel can be used for petrol and diesel. Where bulk storage of petrol is required, a specific risk assessment must be completed.

The key criteria for petrol storage are:

- The maximum size of the container is 10 litres;
- The containers must be suitably constructed and adequately labelled;
- Containers shall be stored in the fuel store within the site compound when not in use;
- The storage place must be more than 6m from the nearest building, highway or footpath;
- Any storage area must be bunded or the fuel store must be leak-proof;
- When used remotely on site, to fuel pumps or generators, containers must be placed on a plant nappy and a spill kit must be on hand in case of spillage.

### 3.7.8 Refuelling Procedure

This procedure outlines the steps to be taken when refuelling on site.

- All local watercourses must be identified and site drainage determined prior to any refuelling taking place. This information should be recorded / available on site maps or clearly identified onsite through labels / signage;
- No plant or machinery is to be refuelled within 10m of any watercourse without a specific risk assessment and Work Package Plan being in place;
- Where possible, all plant must be taken to the main fuel tank for refuelling. For large or stationary plant and equipment a bunded fuel bowser shall be filled from the main tank in order to distribute the fuel;
- A spill kit or absorbent granules must be kept adjacent to the main tank, carried with any mobile bowser and kept in the machines to be refuelled. The operative carrying out the refuelling operations shall check this prior to transferring any fuel;
- Prior to transferring any fuel the person carrying out the operation must dip the tank to be filled to assess the quantity required;
- All ancillary equipment (hoses / pistols / valves etc.) must be kept within secondary containment;
- When not in use, nozzles on fuel tanks / bowsers must be securely padlocked to prevent accidental / deliberate discharge;
- In the event of a leak or spillage on site, refer to the E03-G01 *Emergency Spill Procedure* in Section 5.10. This is to be displayed with all spill kits and on the site noticeboards.

## 3.8 Waste

### 3.8.1 General Requirements

This section and the associated Site Waste Management Plan document has been prepared in accordance with the Brent Cross Cricklewood Regeneration Scheme Demolition and Site Waste Management Strategy. In addition, waste will be managed in line with the Demolition Environmental Management Plan submitted and approved as part of the demolition of Jerich Shed Ref 19/4900/FUL.

Waste can have significant effects on the environment. Waste management preferred contractors will be selected to help VF achieve its goals, increasing reuse and recycling rates, and reducing waste sent to landfill. Evidence shall be requested from waste management contractors of their recycling rates prior to waste being sent there. All waste shall be managed in accordance with the waste hierarchy principles:

**Eliminate > Reduce > Reuse > Recycle > Recover > Dispose**

- The Site Waste Management Plan (E04-01) (in addition to any client Site Waste Management Plan) must be completed for all waste and non-waste movements and maintained as a live record in Workspace folder 11.9.10.
- The following duty of care information shall be recorded on workspace (including those of all subcontractors removing waste):
  - Copies of all waste carrier licences
  - Copies (including originals) of all waste transfer notes and hazardous waste consignment notes
  - Copies of all waste facilities (permits/exemptions)
  - Key waste contractors facilities to be visited and documented

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Duty of care checks made on the public register shall be made and documented within the SWMP. Where waste is produced, reports (preferably waste returns) will be requested to show the actual tonnage of waste produced and the breakdown of how this waste was dealt with, e.g. diversion from landfill rate.

- VF procedures E04 *Waste Management* and E09 *Use of Materials on Projects* provides further detail on managing waste.

### 3.8.2 Waste Elimination, Reduction, Reusing and Recycling

The table below outlines measures that will be considered during the construction phase.

General	
Reduction	Reuse
Designed elements to use standard module sizes of available materials.	Groundwater and concrete wash out water to be used for dust suppression or in wheel or boot wash facilities (following treatment). This shall be done in line with guidance on low risk waste activities.
Procure size-specific items which do not require cutting to size.	
Accurate measurement to ensure minimal wastage when ordering materials.	
Materials are to be delivered just in time for the work package to minimise storage requirements and risk of damage onsite.	
Materials are to be stored and transported correctly so as to avoid damage.	
Materials while onsite are to be kept off the ground by the use of pallets or timber bites.	
The following components are to be prefabricated where possible: Steelwork Concrete Rail equipment Glulam timber	
All operatives are to receive training on the agreed reduction measures.	
Where applicable, decommissioned Network Rail owned equipment will be taken by Supply Chain Operations (SCO), an Network Rail service for internal management of resources and redundant assets.	
Demolition	
Reuse	Recycling
A pre-demolition audit of major buildings (Jerich Shed) to identify waste streams and reuse / reclamation of goods and materials	Soft strip to maximise recycling of materials
Look at feasibility of material exchange schemes to reuse materials / assets	
Concrete and hardcore	
Reduction	Recycling
Concrete orders to be as accurate as possible to reduce possibility of waste.	Use recycled aggregate / cement where specification allows in accordance with a documented Quality Protocol.
Use excess concrete elsewhere or return to batching plant where possible.	
Excavated material	
Elimination	Reduction

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Where possible excavated material will be used in accordance with CL:AIRE Code of Practice.	Trenches to be sheeted rather than battered to reduce excavated material.
<b>Timber</b>	
<b>Reduction</b>	<b>Reuse</b>
Reusable pallets to be used.	Reusable formwork to be employed wherever practicable.
System shuttering to be used wherever practicable.	Loose timber can be re-sized and used for formwork.
PVC hoarding to eliminate the use of timber. This would be retained after the project for use on future projects.	Designated area for waste timber to be stored before being sent to Community Wood Recycling Scheme.
<b>Packaging</b>	
<b>Reduction</b>	<b>Reuse</b>
Educate workforce to handle items carefully which can reduce the requirement for excess packaging.	Where packaging is unavoidable, arrange with the supplier to take back packaging for reuse or recycling.
	Where timber pallets are delivered, these are to be sent back to the supplier for reuse.
	Consider different types of packaging such as heavy duty or permanent packaging which can be returned to the supplier and reused.

### 3.8.3 Waste Disposal

- Full environmental permits, exemptions or other evidence will be obtained and checked to ensure that disposal locations can accept the waste type to be sent there, and in the quantity required;
- All waste transfer notes / hazardous waste consignment notes are to be checked before signature to ensure all required information is recorded before the waste is removed;
- All waste duty of care information and waste movements will be captured in E04-01;
- No burning of waste materials will take place on site;
- All work sites to be left clear of waste on completion of the project.

### 3.8.4 Waste Storage

- All waste containers will be signed to show the accepted waste stream (including EWC code);
- Where space allows, different waste streams will be segregated to aid in maximising reuse and recycling rates. Consideration shall be given to wait and load arrangements to aid segregation of waste where space is limited;
- Containers and skips shall be enclosed or secured as required to prevent waste from escaping and pests/rodents getting access;
- Hazardous waste will be stored separately from inert and non-hazardous waste, and different hazardous waste will not be co-mingled;
- Hazardous waste shall be stored in a specific area and stored in suitable containment where required;
- Storage of waste shall be on impermeable hard standing and positioned away from drains;
- Consideration shall be given to position the waste storage area away from receptors near to the main compound. This will also reduce noise impact during bin emptying or skip exchanges;
- Exemptions for storing waste onsite shall be obtained as required.

## 3.9 Sustainable Travel

### 3.9.1 General Requirements

A construction worker travel plan has been prepared to discharge planning condition 12.2. This will detail specific arrangements to promote sustainable travel within the workforce.

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### 3.9.2 Travel Reduction

Video conferencing and teleconferencing are widely available throughout VolkerFitzpatrick. All work laptops have Skype for Business enabled and the facilities onsite will include ICT equipment to facilitate virtual meetings.

The table below suggests the best form of communication/meeting for different scenarios. Thoughtful planning of meetings and communications enables cost savings, avoids wasted time, reduces carbon emissions and protects staff wellbeing.

Meeting type	Most appropriate situations
Face to face	Initial meetings to get to know clients or other team members Where conflict is likely to occur To discuss serious complaints or difficult matters Where there are a range of different interested parties (workshops) Post-project review and closure meetings
Teleconference	For discussing reports and updates To exchange views Where geographic spread of attendees is great Where visualising information is not required
Videoconference	Maintaining established relationships can be assisted through this method as it maintains body language communication
Web conferencing (webinar)	When sharing information for a large number of people Where documents are presented or talked through Where tools or models are being demonstrated

### 3.9.3 Car Charging

Consideration shall be given for the provision of temporary car charging points during the construction phase. These will be available for those with pure electric or hybrid vehicles and will be situated close to the office.

## 3.10 Water Resources

### 3.10.1 General Requirements

The project will look to utilise existing water connections where economically viable. The relevant regular/statutory undertaker shall be contacted for agreement.

### 3.10.2 Reduction Measures

During the development of the project the following will be considered:

- Where water will be used (including what construction activities);
- Where could water potentially be wasted;
- What behaviours and or technologies (push taps, aerators, low flow fixtures, save a flush devices, PIR sensors for urinals) can be introduced to reduce water wasted onsite;
- Where an existing building is to be used consideration shall be given to retrofit water saving devices. The water supplier for the area often support businesses looking to improve their water efficiency;
- Metering and measuring facility water use helps to analyse saving opportunities. This also assures water using/saving devices are operating correctly to help prevent water waste from leaks or malfunctioning equipment.

The table below details where water will be used, how usage will be recorded and what measures can be implemented to reduce consumption.

Where water will be used and what activities will use water	Proposed source of water	How usage will be recorded	Options for increasing efficiency / Reducing reliance on potable water
Dust suppression	Attenuation from hard standing / mains	Water use logs / meter	Reuse of water from onsite water treatment facility Attenuation pond Use of chemical binders

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Office	Rainwater / mains	Sub-meter	Rainwater for WCs Duel flush toilets Control on urinals Tap aerators
Boot wash	Mains	Sub-meter	Water recycling tank

### 3.11 Weather Resilience and Climate Change Adaptation

This section is primarily associated with designer responsibilities at earlier stages. However, during construction consideration shall be given to the impact of flooding on site. Fuel storage areas and stockpiles shall not be stored on areas liable to surface water flooding / water logging. Risk assessments shall include abnormal and emergency weather events (strong wind, extreme heat, lightning, heavy rainfall, flooding and snow) and the potential impacts and associated controls.

Where extreme weather is forecasted, the following will be considered:

- Removal of stockpiled materials / equipment / chemicals which may cause pollution if damaged;
- Removal / protection of materials which may be damaged.

### 3.12 Heritage and Historical Assets

#### 3.12.1 Background Information

Archaeological reports (Outline and Site-specific written schemes of investigation) prepared by Waterman to partially discharge planning condition 43.1 has been previously submitted. A heritage impact assessment was prepared for the site in September 2017 (updated February 2019) by Young Heritage Ltd.

#### 3.12.2 Mitigation and Monitoring Arrangements

The residual effect was calculated for the unknown archaeological assets and it was deemed a watching brief would be suitable mitigation against ground intrusive works. The production of the site-specific written scheme of investigation detailing mitigation and monitoring arrangements is required.

#### 3.12.3 Information Sharing

Opportunity shall be taken to promote the local historic environment. This will be through:

- Information boards on site hoarding;
- Website information / media;
- Open days to view archaeological monitoring/finds (if applicable);
- Engagement with the local community in relation to the archaeological works will be explored which may include school visits, open days and viewing platforms. Any programme of outreach or public engagement will be undertaken following consultation with the client's representative.

Reports and archives from the baseline studies shall be submitted prior the end of construction to the relevant local government Historic Environment Record (HER). This will be completed by the appointed archaeological consultant.

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## 4. SOCIAL IMPACT AREAS

### 4.1 Managing Visual Impacts

The following measures shall be implemented to minimise landscape and visual impacts during construction:

- Tree and vegetation removal will be avoided where possible;
- Materials and machinery will be stored in a manner to minimise the impacts on views;
- The compound will be located away from residential properties as far as possible and kept to the minimum size required for effective operation;
- On completion of construction, all remaining construction materials will be removed from the site;
- Compounds will be fenced to provide visual attenuation.

The following measures shall be implemented to minimise landscape and visual impacts during operation:

- Landscaping to be undertaken at the end of the project in accordance with the design;
- Due to the extents of the construction work site it is expected that there will be loss of vegetation in some areas. This will be replaced with similar species and provide opportunities for both visual screening and ecological benefit.

### 4.2 Connecting Communities with the Environment

Local communities value their surrounding environment and whilst working in their communities we shall look for opportunities to enhance environmental protection and education. The following will be considered:

- Hold public information events in regard to tree and vegetation removal and associated plans to compensate for the loss;
- Deliver environmental projects through local schools and wildlife charities;
- Participating in national environmental campaigns such as the annual World Environment Day,
- The use of social enterprises within the supply chain to optimise resource efficiency while providing benefits to local communities.

### 4.3 Marketplace and Workplace

- As a member of the Supply Chain Sustainability School we shall promote this within our own employees and across our supply chain.
- Opportunities for our existing Science, Technology, Engineering and Maths (STEM) ambassadors shall be considered as part of this project. This may involve partnering with a local school and could include career support programmes, mock interview events, construction workshops and site tours. Opportunities for work experience will be provided for local young / unemployed people.
- Where goods and/or services are being procured then opportunities to procure from SMEs and local business shall be identified. British products and materials (including prefabricated) shall be preferred over alternatives where economically viable.

### 4.4 Keeping Communities Safe

Throughout the construction phase temporary and permanent accesses to railway infrastructure shall be kept locked at all times. A secure perimeter will be maintained at all times to prevent unauthorised access into both construction sites and railway infrastructure. If damage is identified then this shall be temporarily made safe until a permanent (if applicable) repair can be undertaken. To discourage unauthorised entry, materials shall be stored away from perimeter boundaries and out of public view where possible.

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## 5. INCIDENT RESPONSE PLAN (IRP)

### 5.1 Scope

The purpose of this plan is to ensure the effective management and co-ordination of resources in the event of a leakage or spill or any other environmental emergency occurring on or at locations where works by VolkerFitzpatrick (VF) are being undertaken.

It also defines the criteria for the reporting and the investigation of leakages and spills occurring on or at VF locations. This IRP can be printed off separately and shall be referred to in the event of an environmental incident or emergency.

### 5.2 Site Information

<b>Name of company</b>	VolkerFitzpatrick Ltd
<b>Head office address</b>	Hertford Road, Hoddesdon, Hertfordshire, EN11 9BX
<b>Project address that this IRP relates</b>	VolkerFitzpatrick site compound (Eastern Entrance), Brent Terrace, London, NW2 1LR VolkerFitzpatrick site compound (Western Entrance), Geron Way, London, NW2 6LW
<b>Grid reference of main compound</b>	Grid references: 523093 187104 (Eastern Entrance). 522962 186994 (Western Entrance).
<b>Nominated emergency coordinator</b>	David Goodey (Senior Works Manager)

### 5.3 Contact List

External Contacts		
Contact	Description	Contact Number
Environmental regulator incident hotline	Environment Agency	0800 807060
Local Water company / authority	Thames Water	0800 316 9800
Network Rail	Emergency / incident number	0345 711 4141
National Grid Gas	24 hour gas emergency number	0800 111 999
UK Power Networks	24 hour emergency / supply loss	0800 783 8866
British Telecom	UK based corporate sector customers	0800 028 5314
Client Project Manager	Ian McLeod	07908 249542
Local Authority EHO (LBB)	Ralph Haynes	020 8359 7448
Adler and Allan	Emergency spill response	0800 592 827
Internal Contacts		
David Goodey	Emergency Coordinator (as per HSE-33)	07740 585521
VolkerFitzpatrick Head Office	Main switchboard	01992 305 000
Gordon Hunt	Senior Project Manager	07824 474125
David Goodey	Works Manager	07740 585521
Adrian Shah-Cundy	Head of CR	07789 031090

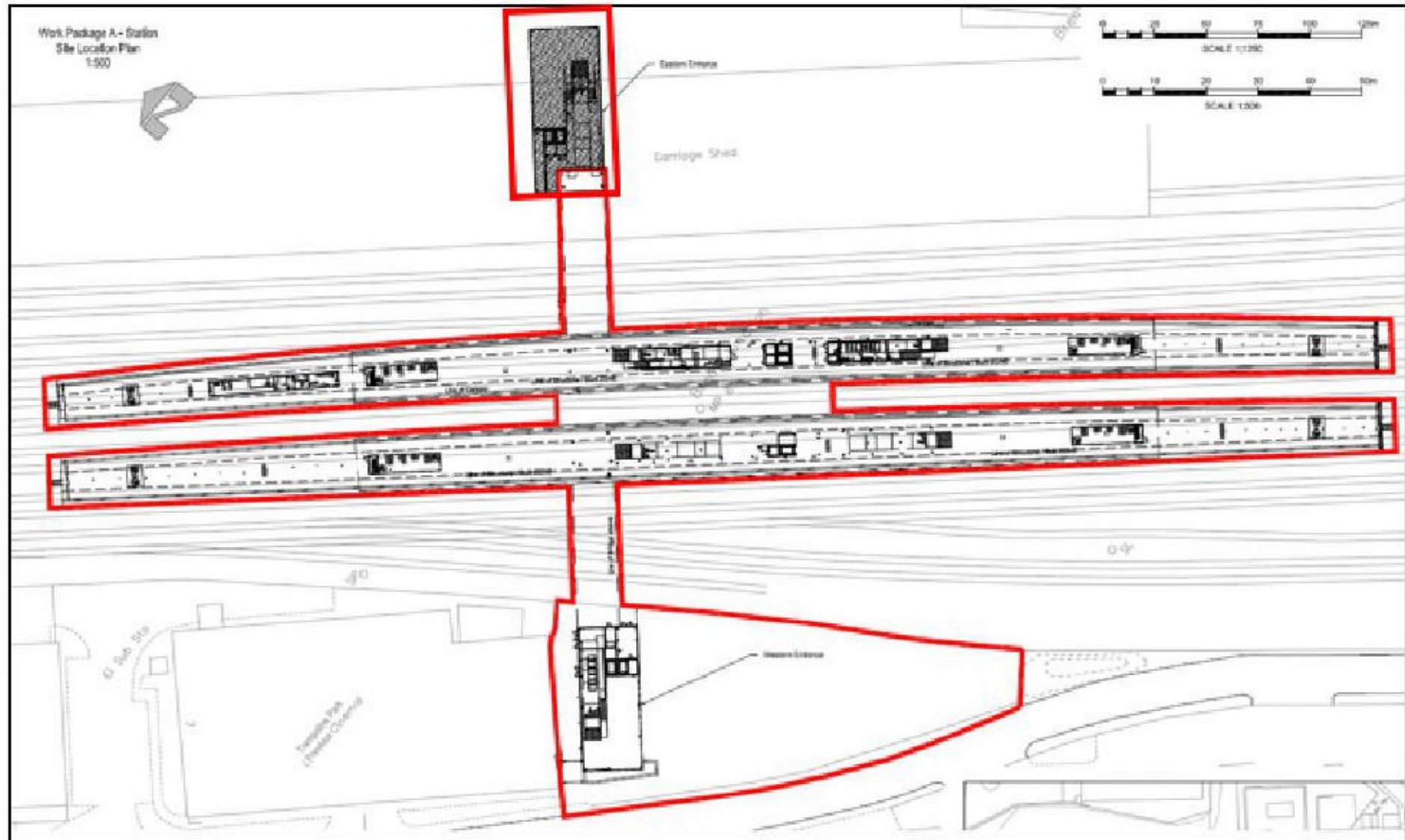
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Andrew Battye	Head of HSES - VF	07786 335995
James McMorrow	Head of HSES - Rail	07824 599353
Tim Jackson	Health and Safety Manager	07876 876233
Graham Taylor	Environmental Manager	07392 134161
<b>Christopher Ball</b>	<b>Community Liaison</b>	<b>07823 444469</b>

**5.4 Station Site plan**



**5.5 COSHH Inventory**

The inventory below details the main chemicals and fuels stored onsite. This should detail the main COSHH onsite, including diesel and petrol.

Contractor / trade	COSHH type	Quantity	Storage type	Storage location
Power generation	Diesel	2000l	Bowser / tank	Compound
Small tools	petrol	100l	Jerry cans	Compound (COSHH store)

**5.6 Unexpected Archaeological Finds procedure**

Where there is an unexpected find (suspected buried archaeology treasure / bones), this procedure will be followed:

1. Works in the area shall be stopped in a safe condition and all those working onsite made aware.
2. Personnel shall not attempt to pick up / disturb the unexpected find.
3. The area will be protected with barriers to prevent further disturbance.

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4. Suspected issues are reported to the VF supervisor and VF project manager who shall inform the environmental manager and the employer's representative.
5. If suspected human remains have been found the police must be informed immediately.
6. Specialist input shall be obtained through an archaeological consultancy.
7. Where the find is classified as treasure (Treasure Act 1996) then it must be reported to the Coroner within 14 days.
8. Works shall not recommence until sanctioned by the relevant authorities.

## 5.7 Unexpected Ecological Finds Procedure

Where there is an unexpected find (suspected protected or invasive species), this procedure will be followed:

1. Works in the area shall be stopped in a safe condition and all those working onsite made aware (if an animal has been injured or killed then works on the whole site shall stop).
2. Personnel shall not attempt to pick up / disturb the unexpected find.
3. Photographs should be taken to aid with identification.
4. The area will be protected with barriers to prevent further disturbance.
5. Suspected issues are reported to the VF supervisor and VF project manager who shall inform the environmental manager and the employer's representative.
6. Specialist input shall be obtained through an ecological consultancy.
7. Works shall not recommence until sanctioned by the relevant authorities.

## 5.8 Unexpected Contamination Procedure

Where there is suspected land contamination (strong odour, dark ground, rubbish, sheens) this procedure will be followed:

1. Works in the area shall be stopped in a safe condition and all those working onsite made aware.
2. Personnel shall not attempt to pick up / disturb the unexpected find.
3. The area will be protected with barriers to prevent further disturbance.
4. Suspected issues are reported to the VF supervisor and VF project manager who shall inform the environmental manager and the employer's representative.
5. The Local Authority should be notified of significant contamination.
6. Specialist input shall be obtained through a remediation consultancy.
7. Works shall not recommence until sanctioned by the relevant authorities.

## 5.9 Reporting of Incidents

In the event of an environmental incident then the following actions shall be instigated as per H07-05 *Actions Following Safety or Environmental Incident*. Incidents are captured following the process detailed in H07 *Investigation and Reporting of Accidents, Incidents and Close Calls*. Any incidents on the live railway should be reported to the NR Asset Management Control Centre. The employer's representative shall be informed at the earliest available opportunity.

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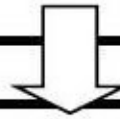
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## 5.10 E03-G01 Spill Procedure

### IN THE EVENT OF A LEAK OR SPILLAGE ON SITE

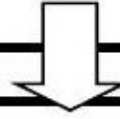
#### STOP WORK immediately and RAISE THE ALARM

- Fast, immediate response is vital
- Raise the alarm if necessary
- At the very least make sure everyone in the vicinity is aware of the incident
- Do not rush into unknown situations



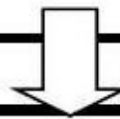
#### BE AWARE - IDENTIFY THE SPILL

- Identify the source and substance spilling, don't try to identify the substance by touch or smell
- If you are not sure what the substance is, don't take any risks
- If the spillage is flammable, extinguish all sources of ignition
- Safety for you and others is the number one priority
- Do you need to evacuate the area?



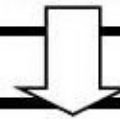
#### PROTECT YOURSELF

- PPE - safety boots, gloves, non-absorbent overalls, must be suitable for the liquids spilled and goggles if there is risk of splashing



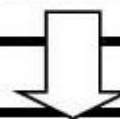
#### HELP THE INJURED

- If anyone is injured help them first, but only if it is safe to do so. Rushing in could make you a victim too. Do you need the emergency services?



#### STOP THE SOURCE

- For example: patch holes in drums with leak sealing putty; turn off valves, pumps or engines; or upright drums or containers
- If the spillage is flammable, extinguish all sources of ignition



#### SCALE OF THE SPILL - DO YOU NEED AN EMERGENCY SPILL CONTRACTOR?

- Is it a small spill or heavy flow?
- Can you and your colleagues tackle it or do you need the one of our emergency spill contractors?
- Contact the emergency spill contractor if for example:
  - It is a large chemical / hydrocarbon spillage (e.g. oil, biodegradable oil, paraffin, diesel, petrol) even if have been able to prevent the spillage from spreading / entering a watercourse or if it has already entered a watercourse / seeped into the ground
  - It is a large chemical / hydrocarbon spillage near an identified "sensitive" area e.g. SSSI
- Adler and Allan are on a companywide retainer for all projects, contact:

**Adler and Allan 0800 592 827**

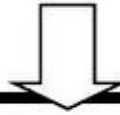
**Quote project name (), site contract number () and full name**

**Email: [nationaloperations@adlerandallan.co.uk](mailto:nationaloperations@adlerandallan.co.uk)**

Response time is a maximum of 4 hours.

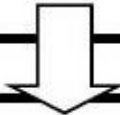
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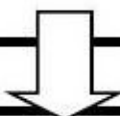
**CONTAIN THE SPILL**

- Stop the spill from spreading and from reaching drains, open ground or sensitive areas
- Use spill granules, sand, bunds or socks and booms to contain the spill
- Cover or protect drains (even if some of the spill has entered the drain)



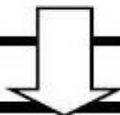
**NOTIFY**

- Notify a VF representative on site
- Notify your project's Environmental Manager
- If your Environmental Manager is not immediately available contact your H&S Manager
- If the spill has reached a surface water drain, stream or ditch or soaked away in open ground, the EA should be contacted immediately on the 24hr helpline 0800 80 70 60
- The Environmental Manager will liaise with the Environment Agency as per Section 3.3 of the IRP
- If it has reached a foul drain, the sewer provider should also be notified as soon as possible
- At times there may be incidents that do not fall into any precise category, and if there is any doubt, the Environment Agency should always be contacted



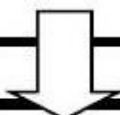
**CLEAN-UP**

- Cordon off the area to make sure no-one walks or drives through the spill
- Use absorbents (granules, pads and/or pillows) to soak up the spill
- Work from the outside of the spill inwards



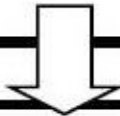
**WASTE DISPOSAL**

- Used spill kit materials, rags and anything else that's become contaminated including PPE will need to be disposed of correctly
- Take the disposal bags to the waste to avoid trailing spent or leaking absorbents around the site
- Tag each bag with a clear description of its contents
- If the waste resulted from an oil or chemical spill it will be classified as hazardous and must be disposed of as hazardous waste
- If you are unsure of how to dispose of the waste ask your Environmental Manager in the first instance



**RESTOCK**

- Make sure the site manager is aware of the situation and that the spill kit is restocked
- An empty spill kit is as bad as no spill kit
- Don't use spill kits for any other purposes



**REPORT**

- The incident should be reported according to the requirements of R30-02 *Accident and Incident Report Form*

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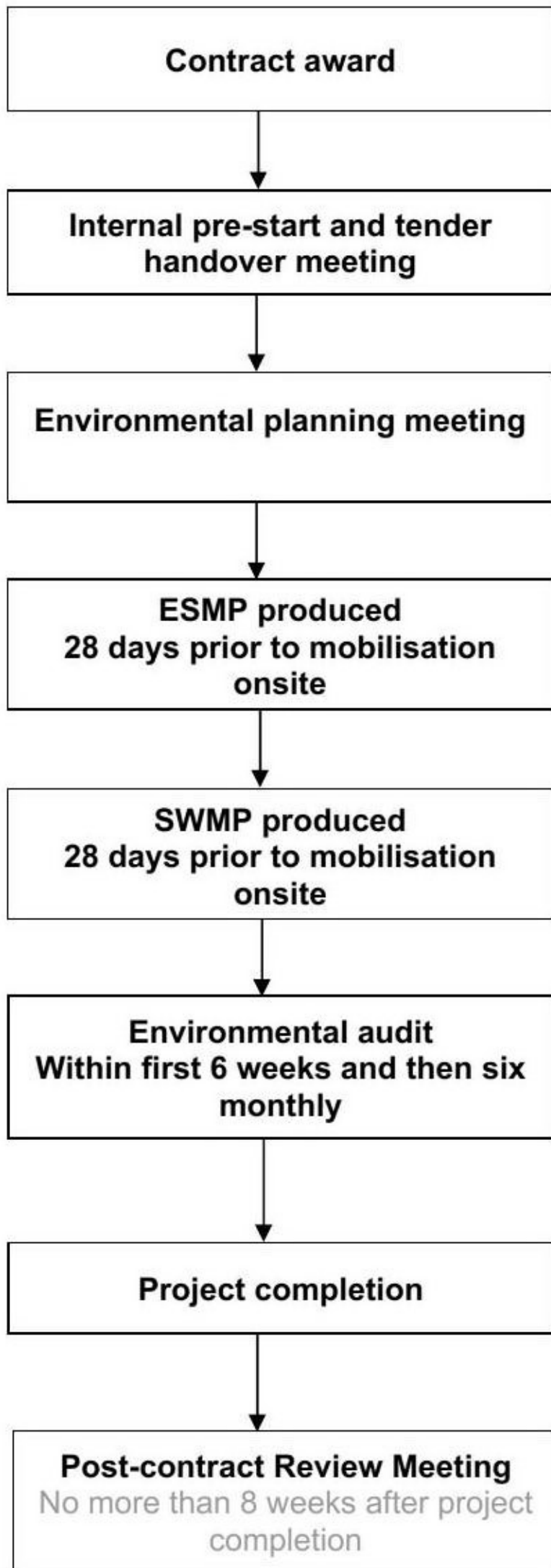
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## Acronyms

Acronym	Definition
CCS	Considerate Constructors Scheme
CPP	Construction Phase Plan
ECA	Enhanced Capital Allowance
EMS	Environmental Management System
EPC	Energy Performance Certificate
ESA	Environment and Social Appraisal
ESMP	Environment and Social Management Plan
ESRA	Environment and Social Risk Assessment
FSC	Forestry Stewardship Council
HER	Historic Environment Record
HSES	Health, Safety, Environmental and Sustainability
IRP	Incident Response Plan
KPI	Key Performance Indicators
LPA	Local Planning Authority
PEFC	Programme for the Endorsement of Forest Certification
PPE	Personal Protective Equipment
PRoWs	Public Right of Ways
SMEs	Small and Medium Enterprises
SSSIs	Sites of Special Scientific Interest
STEM	Science, Technology, Engineering and Maths
SWMP	Site Waste Management Plan
TBTs	Tool Box Talks
TPOs	Tree Preservation Orders
VF / VF	VolkerFitzpatrick Ltd
VW UK	VolkerWessels UK
WPP	Works Package Plan
WSI	Written Scheme of Investigation

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**Appendix 1 Project environmental and social management flowchart**

**Key outputs / actions at each stage**

- Contract award memo
- Internal Pre Start Meeting (QMF-20)
- Tender Handover Document Transmittal
- Environmental Planning Meeting Agenda minutes (EMS-01)
- Environmental Risk Assessment (E01-02)
- Environmental and Social Management Plan (R03-02)
- Site Waste Management Plan production (E04-01)
- Audit report
- Any non-conformance reports (Q04-01) or observations
- Post Project Review and Closeout (Q05-04)
- Completed SWMP (E04-01)

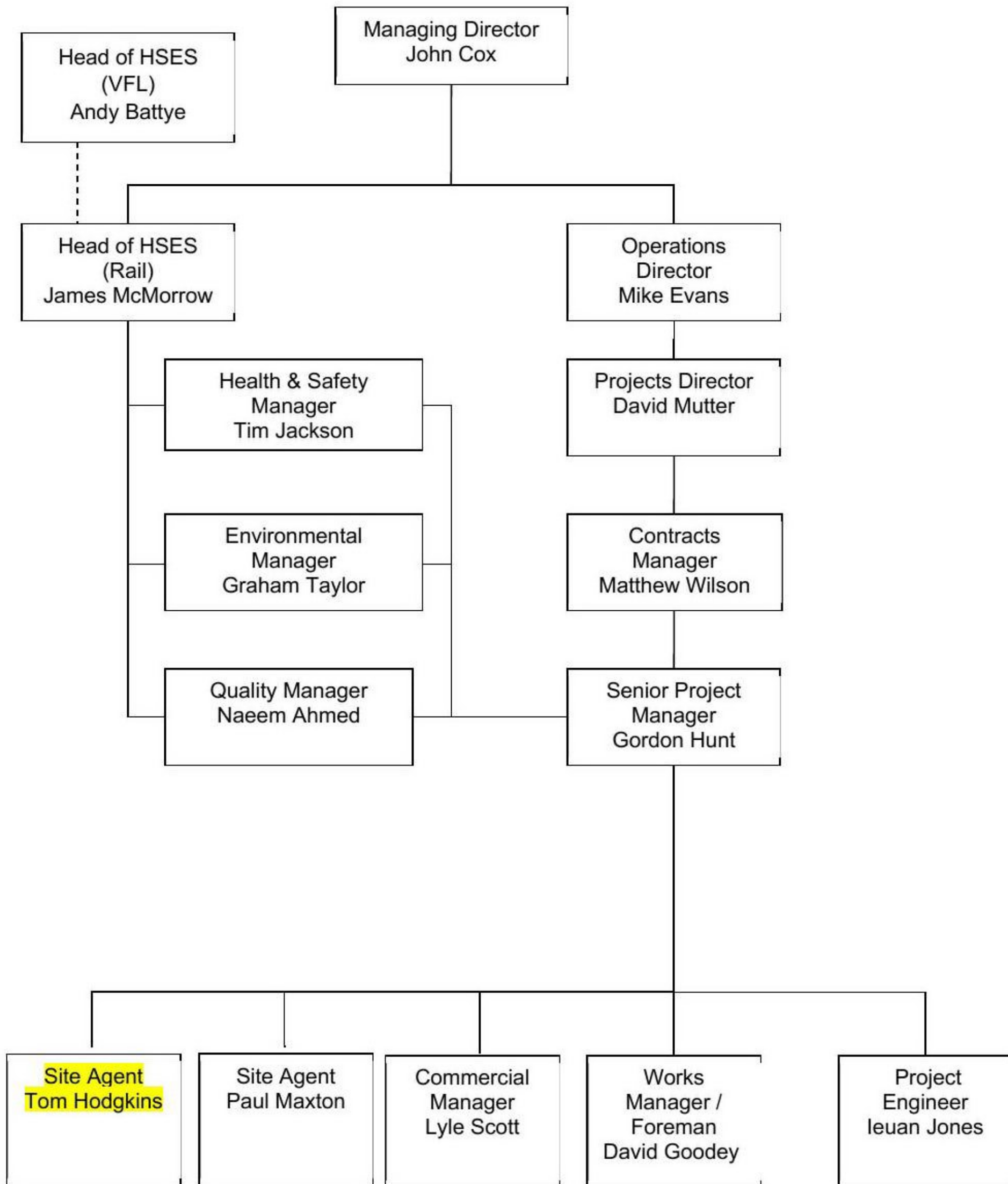
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## Appendix 2 Organisation Chart

The following chart should be used to summarise the basic structure for the management of the project. The full project team must be shown on the internal contacts list of the project record in Workspace. HSE-33 *Allocation of Responsibilities* details the full range of responsibilities assigned to team members.



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### Appendix 3 Tool-box Talk Schedule

Tool box talk title	Relevant phase / location of works
Noise and vibration	Primarily night working
Dust	Earthworks / demolition
Waste duty of care	Throughout project
Re-fuelling and spills	Throughout project
Protected species – bats	Prior to demolition works
Protected species – birds	Prior to demolition works
Concrete wash water	Piling works /
Asbestos	Groundworks / demolition
Land contamination	Groundworks / piling
Being a good neighbour	Throughout project
Archaeology and heritage	Groundworks / piling
CCS code of considerate practice	Beginning of project and then refresher
Water use	Throughout project
Scrap materials policy	Demolition
Material storage	Throughout project
Water pollution	Throughout project

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## Environmental and Social Management Plan (Non-NR)

**R03-02**

VF-B n/a	VF-C n/a	VF-R ✓	VH n/a	VR n/a	VS n/a	VB n/a	VGE n/a	VL n/a	VI n/a	Shared Services n/a
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### Appendix 4 Risk Assessment (E01-02)

This section contains a copy of the completed environmental and social risk assessment for the project.

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# Environmental and Social Management Plan (Non-NR)

R03-02

VF-B n/a    VF-C n/a    VF-R ✓    VH n/a    VR n/a    VS n/a    VB n/a    VGE n/a    VL n/a    VI n/a    Shared Services n/a

Activity / Aspect	Applies?	Hazard (Source)	Pathway	Receptor	Barriers (Controls)	Likelihood of exposure	Score	Consequences	Score	Multiplied	Residual Risk
Construction - placing of concrete	Yes	Concrete	L, W	Land, Controlled Waters	Concrete orders will be accurate to minimise concrete wastage and the need to discharge excess concrete. During concreting works impermeable membranes shall be placed under concrete pumps and overspill segregated, left to harden and recycled offsite.	Low	2	Mild	2	4	LOW
Construction - concrete washout	Yes	Concrete washout	L, W	Land, Controlled Waters	Any cement or similar based filling material will be mixed at least 10m away from any watercourse or drainage. Concrete washout shall be contained within an impermeable (lined) skip or similar container. Signage will indicate that this area is the agreed location for washout. Excess water shall be left to evaporate during the summer months. Where small volumes of concrete washwater is generated then additional cement can be added. Once hard it can then be removed as an inert waste. Where larger quantities of concrete wash waters are generated then a settlement and pH adjustment of the water with CO2 shall be used.	Low	2	Mild	2	4	LOW
Construction - washing of tools or equipment	Yes	Washings - containing oils, fuel, silt etc	L, W	Land, Controlled Waters	No tools or equipment to be washed within 10m of a drain. A designated area shall be assigned where washing of tools and equipment is required. The water shall be contained and either reused following appropriate treatment or disposed of. Washing of plant or vehicles (except where in contact with concrete) onsite is not permitted.	Medium	3	Mild	2	6	MEDIUM
Construction - laying of pipework/ducting	Yes	Dust	L, A, W	Humans, Flora & Fauna	Where required to cut water suppression shall be used. Where possible pipeworks and ducting will be formed to the correct length to minimise onsite cutting.	Negligible	1	Negligible	1	1	LOW
Construction - laying of pipework/ducting	Yes	Jointing compounds	L, W	Land, Controlled Waters	Method statement, risk assessment, suitable containers, COSHH controls and briefing.	Negligible	1	Mild	2	2	LOW
Construction - civil works	Yes	Lighting/visual	A	Housing	Lighting will be switched off when not specifically required for construction, security or health and safety. Lighting shall be placed in such a way as to not cause significant nuisance or disturbance to surrounding properties and dwellings. Construction lighting will be directed away from buildings and habitats to reduce light pollution. We shall maintain a high level of housekeeping and stockpile materials so not to impose on visual amenity.	Low	2	Mild	2	4	LOW

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# Environmental and Social Management Plan (Non-NR)

R03-02

VF-B n/a    VF-C n/a    VF-R ✓    VH n/a    VR n/a    VS n/a    VB n/a    VGE n/a    VL n/a    VI n/a    Shared Services n/a

Activity / Aspect	Applies?	Hazard (Source)	Pathway	Receptor	Barriers (Controls)	Likelihood of exposure	Score	Consequences	Score	Multiplied	Residual Risk
Construction - civil and rail works	Yes	Noise	L, A	Humans, Flora & Fauna	Works to be undertaken outside of possessions where possible. Tool box talks on noise controls to be delivered to workforce. Section 61 consent for works. Letter drops to inform residents of works programme and working hours. Noise monitoring where in close proximity to residents at night. Screening to be used where possible. Best Practicable Means to be followed.	Low	2	Moderate	3	6	MEDIUM
Construction - use of adhesives and mastics	Yes	Constituent chemicals	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	Use up each container/tin/tube before starting a new one, dispose of containers correctly in accordance with the datasheet. COSHH briefings to be given and recorded.	Low	2	Negligible	1	2	LOW
Earthworks - excavation of material	Yes	Arisings	L, A, W	Land, Controlled Waters	Existing GI to be used. Confirmatory chemical analysis and classification of arisings shall be completed prior to movement and storage of material. A remediation strategy and method statement shall be prepared. A Materials Management Plan (MMP) will be prepared if there is an opportunity to retain material onsite. Waste removed from site will be removed from site via train where possible.	Low	2	Moderate	3	6	MEDIUM
Earthworks - excavation of material	Yes	Groundwater from excavations	L, A, W	Land, Controlled Waters	Where groundwater is encountered the water shall be managed in line with EA guidance. A permit to pump system will be used. No discharge will be undertaken without the appropriate consents.	Low	2	Mild	2	4	LOW
Materials - storage	Yes	Dust	L, A, W	Humans, Flora & Fauna	Stockpiles of potentially dusty materials to be maintained as far away from sensitive locations as possible, and where possible contain or cover stockpiles to prevent dust mobilisation. Regular inspections shall be undertaken to ensure dust is not being generated. Stockpiled materials will be removed from site in a timely manner.	Low	2	Moderate	3	6	MEDIUM

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# Environmental and Social Management Plan (Non-NR)

R03-02

VF-B n/a    VF-C n/a    VF-R ✓    VH n/a    VR n/a    VS n/a    VB n/a    VGE n/a    VL n/a    VI n/a    Shared Services n/a

Activity / Aspect	Applies?	Hazard (Source)	Pathway	Receptor	Barriers (Controls)	Likelihood of exposure	Score	Consequences	Score	Multiplied	Residual Risk
Earthworks - transport of material around site, offsite or import	Yes	Noise and dust	L, A, W	Humans, Flora & Fauna	All wagons carrying friable material/waste shall be covered. Site speed limit. Where practicable movements will be scheduled for peak traffic periods. Preparation of a traffic management plan.	Low	2	Mild	2	4	LOW
Earthworks	Yes	ground disturbance	L	archaeology	An archaeological contractor will be engaged prior to ground disturbance as required as part of the S73 conditions.	Medium	2	Moderate	3	6	MEDIUM
Office - cleaning	Yes	Cleaning product	L, A, W	Land, Controlled Waters	Bleach-free products. Eco-friendly products where available.	Low	2	Negligible	1	2	LOW
Office - air conditioning	Yes	F gas	A	Atmosphere	Air conditioning installations and equipment that contain more than 3kg of an F gas refrigerant should be serviced once a year or quarterly if the system contains more than 30kg of F gas, checked for leaks and damage by a contractor certified to work with F gases.	Negligible	1	Mild	2	2	LOW
Office - ICT equipment	Yes	Hazardous properties	L, A, W	Land, Controlled Waters	Assets are returned to head office if no longer required or have reached the end of their working life.	Negligible	1	Mild	2	2	LOW
Office - ICT consumables (ink cartridges etc.)	Yes	Waste	L, A, W	Land, Controlled Waters	Separate collections for ICT consumables available in offices. All duty of care and waste movements to be recorded in the SWMP.	Negligible	1	Mild	2	2	LOW
Office - waste water & sewage	Yes	Foul water/waste	L, A, W	Controlled Waters	Approved connections to foul sewer. Interim site cabins to have effluent tank that will be emptied in accordance with duty of care requirements.	Negligible	1	Moderate	3	3	LOW
Office - waste	Yes	Waste	L, A, W	Land, Controlled Waters	Site Waste Management Plan, disposal/recycling point authorised to accept, Duty of Care checks. Waste transfer notes to be retained and uploaded onto workspace. Separate collections for municipal and mixed recycling waste streams.	Negligible	1	Mild	2	2	LOW

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R03-02

VF-B n/a    VF-C n/a    VF-R ✓    VH n/a    VR n/a    VS n/a    VB n/a    VGE n/a    VL n/a    VI n/a    Shared Services n/a

Activity / Aspect	Applies?	Hazard (Source)	Pathway	Receptor	Barriers (Controls)	Likelihood of exposure	Score	Consequences	Score	Multiplied	Residual Risk
Use of construction plant	Yes	Fuel, oil or lubricant	L, A, W	Land, Controlled Waters	Regular maintenance and inspection, emergency response testing, spill kits to be available at all times. Where a fault is identified, the plant shall be quarantined until a repair can be completed.	Low	2	Mild	2	4	LOW
Storage of fuels, oils and other lubricants	Yes	Fuel, oil or lubricant	L, A, W	Land, Controlled Waters	Fuel storage to be compliant with Oil Storage Regulations. Chemicals to be contained within flammavault or similar. Refuelling procedure to be followed all times. COSHH briefings to include environmental controls. Spill kits to be at worksite and fully stocked. Plant nappies to be used under static plant and containers. Maintenance and oil only spill kits to be available. Storage of fuels to be positioned away from drainage.	Low	2	Moderate	3	6	MEDIUM
Storage of chemicals	Yes	Chemical	L, A, W	Land, Controlled Waters	Locked dedicated storage facilities, COSHH briefings to include environmental controls. Spill kits to be at worksite and fully stocked. Plant nappies to be used under static plant and containers. Chemical spill kit to be available. Storage to be positioned away from drainage. Chemicals to be returned to storage when not in use.	Low	2	Mild	2	4	LOW
Storage of loose material (stone/soil)	Yes	Particulates in runoff	L, W	Land, Controlled Waters	Stockpiles will be protected with the use of silt fences if there is a risk of overland flow during rainfall. Stockpiles shall be located away from potential receptors (drainage). Stockpiles will be removed in a timely manner.	Negligible	1	Mild	2	2	LOW
Storage of loose material (stone/soil)	Yes	Dust	A	Humans, Flora & Fauna	Stockpiles of potentially dusty materials to be maintained as far away from sensitive locations as possible, and where possible contained or covered stockpiles to prevent dust mobilisation. A. Regular inspections shall be undertaken to ensure dust is not being generated. Stockpiles shall be removed from site in a timely manner so they are not a continued potential source of dust.	Low	2	Moderate	3	6	MEDIUM
Storage of cement	Yes	Cement dust	L, A, W	Humans, Flora & Fauna	Dedicated dry storage area and silos to prevent wastage and airborne particles.	Negligible	1	Negligible	1	1	LOW
Storage of salt	Yes	Salt	L, W	Land, Controlled Waters	Salt when required shall be minimal in quantity but will be protected from the rain to prevent runoff.	Negligible	1	Negligible	1	1	LOW
Utility strike - water	Yes	Water (large volume)	L, W	Land, Controlled Waters, Humans, Flora & Fauna	Safe digging practices, buried service location, permit to dig, risk assessment, method statement, emergency response plan.	Negligible	1	Moderate	3	3	LOW
Utility strike - fuel	Yes	Fuel (large volume)	L, W	Land, Controlled Waters, Humans, Flora & Fauna	Safe digging practices, buried service location, permit to dig, risk assessment, method statement, emergency response plan.	Negligible	1	Severe	4	4	LOW

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# Environmental and Social Management Plan (Non-NR)

R03-02

VF-B n/a    VF-C n/a    VF-R ✓    VH n/a    VR n/a    VS n/a    VB n/a    VGE n/a    VL n/a    VI n/a    Shared Services n/a

Activity / Aspect	Applies?	Hazard (Source)	Pathway	Receptor	Barriers (Controls)	Likelihood of exposure	Score	Consequences	Score	Multiplied	Residual Risk
Vegetation control - nesting birds	Yes	Disturbance or destruction	Vegetation	Flora	Precautions will be taken at all times of the year to avoid damaging active nests of birds that may be nesting. The majority of clearance has been completed out of nesting season. If it is not possible to remove vegetation outside the bird nesting season (March - August), an ecologist will carry out a detailed inspection of the vegetation for nesting birds no more than 48 hours prior to removal. If any nesting birds are identified during the survey or the works they will be left in situ for their entire nesting period and alternative approaches to the work proposed. This will include leaving an exclusion zone around the nests to avoid disturbance.	Low	2	Moderate	3	6	MEDIUM
Demolition / removal of bat corridor	Yes	Disturbance or destruction	Vegetation	bats	3m fence required to compensate corridor impact as a result of the removal of Jerich Shed. Lighting designs to be reviewed by bat ecologist to ensure impact is kept to the minimum.	Low	2	Moderate	3	6	MEDIUM
Vegetation control - weed spraying	Yes	Weed killer	L, W	Flora & Fauna, controlled waters	It is not anticipated that pesticides will be required. Non-persistent pesticide only and only under the authorisation from the client.	Negligible	1	Negligible	1	1	LOW
Protected species - mammals	Yes	Disturbance or destruction	Vegetation	protected mammals (badgers)	A pre-commencement walkover shall be completed prior to construction works. This shall include a check for mammal holes.	Low	2	Mild	2	4	LOW
Vehicle storage / parking	Yes	Fuel, oil or lubricant	L, W	Land, Controlled Waters	Dedicated parking areas for all vehicles. Worker Travel Plan to encourage public transport although due to the locality this will be limited.	Negligible	1	Moderate	3	3	LOW
Vehicles idling/running	Yes	Emissions	A	Humans, climate	No idling policy to be enforced. Signs to be displayed onsite at welfare locations and within the main compound. Plant and equipment to be maintained in accordance with the manufacturers requirements. If plant is emitting black smoke other than at start up it shall be quarantined for repair or removed from site.	Low	2	Mild	2	4	LOW
Vehicles idling/running	Yes	Noise	A	Humans, Flora & Fauna	No idling policy to be enforced. Signs to be displayed onsite at welfare locations and within the main compound. Use of horns to be restricted to necessary warnings only.	Low	2	Mild	2	4	LOW

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Activity / Aspect	Applies?	Hazard (Source)	Pathway	Receptor	Barriers (Controls)	Likelihood of exposure	Score	Consequences	Score	Multiplied	Residual Risk
Vehicle movements	Yes	Noise and dust	L, A, W	Humans, Flora & Fauna	Speed limit to be enforced on all surfaced and unsurfaced routes. Speed limit signs to be displayed. Vehicles will be sheeted to prevent the load from creating dust.	Low	2	Mild	2	4	LOW
Vehicle movements	Yes	Emissions	A	Humans, climate	No idling policy to be enforced. Signs to be displayed onsite at welfare locations and within the main compound. Plant and equipment to be maintained in accordance with the manufacturers requirements. If plant is emitting black smoke other than at start up it shall be quarantined for repair or removed from site.	Low	2	Moderate	3	6	MEDIUM
Vehicle & plant refuelling	Yes	Fuel	L, W	Land, Controlled Waters, Humans, Flora & Fauna	Refuelling procedure to be followed all times. Designated refuelling area within compound. Refuelling procedure to be displayed onsite at fuelling locations. Vehicles and plant to be returned to main fuelling location if possible.	Low	2	Moderate	3	6	MEDIUM
Vehicle selection	Yes	Emissions	A	Climate	Centralised transport department sourcing fleet, replacement at end of lease, green fleet policy (limit of CO2 emissions).	Negligible	1	Mild	2	2	LOW
Waste - storage of inert waste	Yes	Inert waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	Waste shall be stored in signed skips. Stockpiles/aristings shall be stored away from receptors.	Low	2	Mild	2	4	LOW
Waste - storage of non-hazardous waste	Yes	Non-hazardous waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	Container fit for purpose in accordance with Duty of Care for waste, storage time kept to a minimum.	Low	2	Mild	2	4	LOW
Waste - storage of hazardous waste	Yes	Hazardous waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	Hazardous waste storage to be limited to compound area only. Area shall be signposted and hazardous wastes stored separately. Individual containers shall be labelled. The storage area shall be on an impermeable ground or bunded with suitable spill kit available.	Low	2	Moderate	3	6	MEDIUM

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R03-02

VF-B n/a    VF-C n/a    VF-R ✓    VH n/a    VR n/a    VS n/a    VB n/a    VGE n/a    VL n/a    VI n/a    Shared Services n/a

Activity / Aspect	Applies?	Hazard (Source)	Pathway	Receptor	Barriers (Controls)	Likelihood of exposure	Score	Consequences	Score	Multiplied	Residual Risk
Waste - transport of inert waste	Yes	Inert waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	All duty of care checks to be undertaken prior to movement of waste. Copies of waste carrier licences and permits to be held on Workspace and details of check recorded within the SWMP. All movements of waste to be accompanied by waste transfer notes. Authorised persons only to sign off waste tickets.	Low	2	Moderate	3	6	MEDIUM
Waste - transport of non-hazardous waste	Yes	Non-hazardous waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	All duty of care checks to be undertaken prior to movement of waste. Copies of waste carrier licences and permits to be held on Workspace and details of check recorded within the SWMP. All movements of waste to be accompanied by waste transfer notes. Authorised persons only to sign off waste tickets.	Low	2	Moderate	3	6	MEDIUM
Waste - transport of hazardous waste	Yes	Hazardous waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	All duty of care checks to be undertaken prior to movement of waste. Copies of waste carrier licences and permits to be held on Workspace and details of check recorded within the SWMP. All movements of waste to be accompanied by hazardous waste consignment notes. Part E return to be uploaded to workspace once returned by the receiving facility. Authorised persons only to sign off waste notes.	Low	2	Moderate	3	6	MEDIUM
Waste - disposal of inert waste	Yes	Inert waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	All duty of care checks to be undertaken prior to movement of waste. Copies of waste carrier licences and permits to be held on Workspace and details of check recorded within the SWMP. Visit to the facility to confirm destination receiving waste is the same as detailed on the ticket. Follow lorry to its destination.	Low	2	Moderate	3	6	MEDIUM
Waste - disposal of non-hazardous waste	Yes	Non-hazardous waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	All duty of care checks to be undertaken prior to movement of waste. Copies of waste carrier licences and permits to be held on Workspace and details of check recorded within the SWMP. Visit to the facility to confirm destination receiving waste is the same as detailed on the ticket. Follow lorry to its destination.	Low	2	Moderate	3	6	MEDIUM
Waste - disposal of hazardous waste	Yes	Hazardous waste	L, A, W	Land, Controlled Waters, Humans, Flora & Fauna	All duty of care checks to be undertaken prior to movement of waste. Copies of waste carrier licences and permits to be held on Workspace and details of check recorded within the SWMP. Visit to the facility to confirm destination receiving waste is the same as detailed on the ticket. Follow lorry to its destination.	Low	2	Moderate	3	6	MEDIUM
Welfare facilities - toilets	Yes	Septic waste	L, W	Land, Controlled Waters	Authorised connection to sewer for main compound setup. Interim cabins during site setup to have effluent tanks which will be removed in accordance with duty of care requirements.	Low	2	Mild	2	4	LOW

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# Environmental and Social Management Plan (Non-NR)

**R03-02**

VF-B	VF-C	VF-R	VH	VR	VS	VB	VGE	VL	VI	Shared Services
n/a	n/a	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

## Appendix 5 Site Layout Plan

<b>Issue no.:</b>	1	<b>Date:</b>	Jan 2021	<b>Parent document:</b>	R03 Rail Environmental Risk Management					
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# Comm Foods



### General Notes:

- Key:**
- Plot 5 handover to AR October 2022 (end of significant VF-R works, Station Commissioning)
  - Plot 8b handover to Argent Related January 2022
  - Plot 8c handover to AR April 2022
  - Plot 9b handover to Argent Related April 2022
  - Plot 9a handover to AR October 2022
  - Plot 10c handover to Argent Related January 2022
  - Plot 10d (extension into SEEB area) handover to AR April 2022
  - Plot 12b handover to Argent Related January 2022
  - Railway Street Part 2 - July 2021 handover to VF-Civils (on behalf of AR)
  - Railway Street Part 2 - October 2021 handover to VF-Civils (on behalf of AR)
  - Railway Street Part 1 - April 2021 handover to VF-Civils (on behalf of AR)

No.	Revision/Issue	Date
020	For Information	17/02/21
019	For Information	03/02/20
018	For Information	16/12/20

Project Name and Address

**C13791 - Brent Cross Station**

Contractor Name

Drawing Reference No.

**SK002 - Eastern Compound Area**

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