MILESTONE INFRASTRUCTURE
A part of MGroupServices

Stanhope Road Bridge

Construction Environmental Management Plan (CEMP)

Delivering what we **promise**

Project Name	Stanhope Road Bridge		
Project Start Date	February 2024		
Project Duration	39 weeks		
Prepared By	Amy Redpath Senior Environmental Advisor	Sign:	Date: 07/02/2024
Reviewed By	Angiolina Albertini Environmental Manager	Sign:	Date: 07/02/2024
Approved By (Document holder)	Hassan Soboh Senior Project Manager	Sign: Hassan Soboh	Date: 01/03/2024

Revision Table

Revision	Summary of Changes Made	Revision By	Revision Date:
01	Initial Draft	Amy Redpath	07/02/2024
02	First Revision	Amy Redpath	01/03/2024

List of Appendices

Appendix	Description	Required Y/N
A	Compound Layout Plan	Y
B	Landscape General Arrangement	Y
C	Compound Fuel and Waste Map	Y
D	Refuelling Plan	Y
E	Aspects and Impacts Register (separate document)	Y
F	Environmental Emergency Response Plan (separate document)	Y
G	Permits and Consents Register (separate document)	Y
H	Site Waste Management Plan (separate document)	Y
I	Sampling and Analysis Plan (separate document)	Y

List of Supporting Documentation

Document Reference	Description	Location
70077287-WSP-GEN-B-RP-LE-0003 AUGUST 2021	Stanhope Road Bridge Preliminary Ecological Appraisal	To be added to Procore (MIL document filing system) once final version has been approved.
70077287-WSP-GEN-B-RP-LE-0007 SEPTEMBER 2021	Stanhope Road Bridge Detailed Arboricultural Report	
70085596-WSP-GEN-B-RP-LE-0009 APRIL 2023	Stanhope Bridge Landscape Maintenance & Management Plan	
70077287-WSP-GEN-B-RP-LE-0005 SEPTEMBER 2021	Stanhope Road Bridge – Outline Construction Management Plan	
P11633-22-R1	Stanhope Road, Hornsey - UXO Desk Study & Risk Assessment	

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1.0 Summary Key Environmental Aspects

Stanhope Bridge makes up one of the ten footbridges along the Parkland Walk; a disused railway line between Finsbury Park and Highgate. The existing bridge structure has been deemed unfit for purpose and structural interventions are currently providing additional support to the bridge deck. Initial feasibility studies completed by the client; London Borough of Haringey, determined that it was not commercially viable to repair the existing structure and therefore this project is to construct a new bridge which shall be used for cyclists and pedestrians. The works shall include:

- Compound establishment (Channing School playing pitch)
- Diversion of pedestrians onto two temporary footways to allow for the Parkland Walk to always remain open
- Protection of all retained trees
- Vegetation clearance
- Management of all surface water by installing new drainage
- Demolition of bridge, including deck removal, and abutment removals down to proposed foundation
- The construction of the new bridge including reinforced earth slopes to link into the existing Parkland Walk
- Replacement of the existing access (steps) on the southeast section of the site with ramp access.
- Creation of a new permanent footway to the southwest of the bridge
- Landscaping across the site including the construction of the pond, dead hedging, and hedge and grassland creation.

The key environmental risks on the project are:

- Root Protection Areas are considered and protected at all times in line with the Arboriculture Method Statement (70077287-WSP-GEN-B-RP-LE-0007 SEPTEMBER 2021).
- Vegetation clearance on both the west and eastern elevations of the bridge to allow for the creation of temporary access routes for pedestrians and cyclist. This area shall also allow for the movement of plant and for the permanent construction of the access routes. This needs to be completed under an Ecological Watching Brief (EWB) and done in a two phased approach to ensure any herptiles and other protected species are not harmed by the works.
- Due to the abundance of sensitive local receptors, noise, dust, and vibration shall be monitored throughout the entirety of the project.
- The Parkland walk is the longest Local Nature Reserve (LNR) in London and is therefore an important feature of the local community. There are several groups that are interested in the development of this project and therefore, care in communication and interaction shall be key to the success of the project.

Several environmental opportunities to reduce carbon and resource use also exist on the project. A carbon reduction plan will be developed separately to this CEMP and will include the following:

- Reuse of bricks and concrete from the existing structure as backfill behind the abutment wall (this is to be including within the Materials Management Plan (MMP) as required)
- Hybrid generator used on site if mains power is not accessible.
- Electric vehicle charging points.
- Electric hand tools.
- Vegetation to be mulched to create temporary footway.
- Large pre-felled trees and bracken to be donated as hibernacula or habitat enhancements along the existing footway to reduce disposal costs.
- Materials to be re-used on site as much as possible

Topic	Summary – Site Specific Controls and Mitigation
Main compound	Good housekeeping practices. Root Protection Areas to be retained. Noise to be kept to a minimum. Noise protection measures to be used around plant/equipment, for example sound barriers to be installed around generators/disc cutters.
Vehicles and deliveries	Care for timings and routes to avoid commuting/school hours. Wheel washing facilities in use to mitigate pollution of the live carriageway
Community liaison	Signage for work progress to be regularly updated
Air Quality & Dust	Dust monitoring to be completed throughout the duration of works. Dust suppression and best practices shall be utilised to ensure no negative impact on local residents or landscape.
Cultural Heritage	Some existing structural elements to be retained and reused during the works such as fencing and LNR plaque.
Ecology & Biodiversity	Tree Protections Areas agreed to prior to works commencing with project arboriculturist. Vegetation clearance to be completed using two phase approach under an EWB. Cleared areas are to be covered with appropriate sheeting to suppress regrowth. Project Ecologist to attend site prior to works beginning to ensure no new live badger sets and all project team members understand the ecological risks on site
Noise & Nuisance	Noise and vibration monitoring to be utilised. Noise barriers/acoustic hording to be used between temporary footway and works. Work to set hours as outlined in section 10.4
Water Management & Pollution Prevention	Best practices followed to prevent contamination of drainage and soft standing. Introduction of wheel-washing facility during demolition works to mitigate pollution to the live carriageway. The effluent is to be captured and transported off site for disposal at a correctly licenced facility. Lined skip used for all concrete washout and disposed of in a correctly licenced facility.
Waste & Materials	Stockpiles to be kept to a minimum. Asphalt and soil & stone to be sampled prior to works beginning. Closed skips for general waste. Topsoil to be retained and the stockpile to be covered with a permeable geotextile

2.0 Introduction

1.1 Aim of the Environmental Management Plan

Milestone recognises the importance of Environmental Management and the provision of information, instruction, and training in achieving and maintaining a high standard of environmental awareness amongst its employees and subcontractors throughout the duration of works.
To this end Milestone has developed Environmental Management Procedures and gained ISO 14001: 2015 accreditation.

This Construction Environmental Management Plan (CEMP) forms part of the Environmental Management System (EMS) for the Milestone Projects Sector and provides information on how the EMS can be used to adequately manage environmental risks on the project in line with Compliance Obligations including licences and consents, the needs of the parent company (M Group Services), and the needs of the client.

The objectives of the EMS are to:

- Minimise adverse effects of the environment

- Promote good standards of environmental awareness
- Enhance environmental performance
- Maximise the efficient use of energy, fuel, and natural resources
- Minimise carbon emissions resulting from the works
- Develop environmental competence and awareness amongst site personnel at all levels
- Establish roles and responsibilities for environmental management
- Prevent nuisance to the community and avoid harm to the environment
- Implement a policy of reuse of waste, with disposal off site being a last resort
- Enable compliance to be maintained with all compliance obligations, including legal, interested parties, and the requirements of 14001
- Highlight and communicate key environmental constraints

This Plan will govern Milestone's approach to environmental management for this Project and any additional environmental objectives and targets as outlined by the Client. The controls detailed within this plan are to be carried out in conjunction with the applicable Environmental Control Procedures detailed within the Milestone Integrated Management System (MIMS), project licences, conditions, and method statements to ensure that environmental management is addressed and rigorously incorporated in all decision making.

This Plan will extend through the entire life of the project providing a transparent and verifiable audit trail for sustainable strategies and solutions, and will provide a culture of environmental responsibility, self-regulation, and encourage sustainability.

All suppliers or consultants providing a product or service are required to provide evidence to show how they will control any environmental aspects that may arise from their works, e.g., within a method statement.

1.2 Success Factors

The success of an Environmental Management System is dependent on commitment from all levels and functions of an organisation. Top management are responsible for ensuring that the system outlined in this CEMP is effectively integrated into business processes, strategic direction and decision making.

1.3 Plan, Do, Check, Act model

Continual improvement on this Project is promoted by applying the Plan-Do-Check-Act model to the EMS. This is briefly outlined below:

- Plan – Establish environmental objectives and processes necessary to deliver results in accordance with the Environmental Policy
- Do – Implement the processes as planned
- Check – Monitor and measure processes against the Environmental Policy and Objectives, and report the results
- Act – take actions to continually improve

1.4 Interested Parties

A number of internal and external factors can affect the ability to achieve the intended outcomes of the EMS. A list of Interested Parties and their requirements from an environmental perspective have been identified for this Project. Where needs and expectations become Compliance Obligations, they will be added to the Project Compliance Obligations Register.

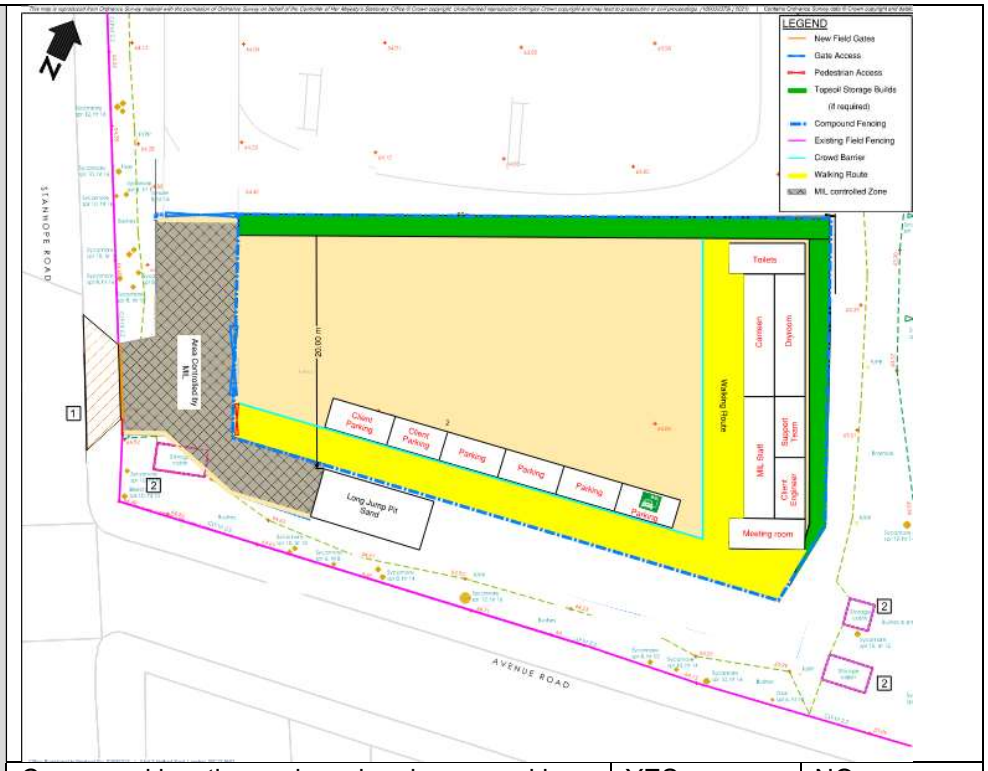
The Project Manager is responsible for liaising with the main stakeholders which includes but is not limited to the following interested parties:

- London Borough of Haringey,
- M Group Services
- Local Environmental Health Officers
- Local Heritage Officer
- Local Arboricultural Officer
- Local Ecologist
- Local Residents
- Road users, pedestrians, and cyclists
- Local Commercial Properties
- Landowners
- Environment Agency
- Natural England
- Friends of the Parkland Walk
- Channing School
- STATs- Thames Water, UKPN, Cadent, Virgin Media

2.0 Project Details

2.1 Site Location

Location	Parkland Walk, London N6 5NB
Grid reference	TQ 29347 87833
Compound location	As shown in Figure 1 below, the compound area is approximately 100m north of the site within Channing School playing pitch. Within this compound, welfare space (canteen / dryroom), single storey offices for MIL + client, toilet/showers, space for four carparks, topsoil bund, and material storage shall be required. Basic layout of the compound can be seen in Figure 2 below. *Figure 1: Location of compound area* *Figure 2: Layout of compound area*



Compound location reviewed and approved by Environment Team	YES ☒	NO ☐

2.2 Proposed Works

Description of works	The works shall include: • Compound establishment (Channing School playing pitch) • Diversion of pedestrians onto two temporary footways to allow for the Parkland Walk to always remain open • Protection of all retained trees • Vegetation clearance • Management of all surface water by installing new drainage • Demolition of bridge, including deck removal, and abutment removals down to proposed foundation • The construction of the new bridge including reinforced earth slopes to link into the existing Parkland Walk • Replacement of the existing access (steps) on the southeast section of the site with ramp access. • Creation of a new permanent footway to the southwest of the bridge • Landscaping across the site including the construction of the pond, dead hedging, and hedge and grassland creation. • Site demobilisation.

2.3 Work phases

The project is broken down into five main phases of work as shown below, alongside the main areas of environmental focus for each phase. For further information on the phases,

refer to the Construction Phase Plan (CPP) and works programme. The areas of environmental risk are described in more detail in section 10 of this document.

Phase	Brief work description	Environmental focus areas
Phase 1	Site Establishment Env. Monitoring Stations to be set out Surveys completed (Dilap, Demo, Utility, Env.) TM - Half-road closure De-vegetation of temporary footways Temp walkways Erect site fencing Pedestrian crossing	• Protection of reptiles and other protected species during vegetation clearance. • Noise from tools impacting local environment • Root Protection Areas retained at all times
Phase 2	TM - Close road Set up wheel-wash facility Close footbridge Protection deck & bridge removal Demolish abutments Topsoil strip & earthworks excavation Install piles Excavate pond area Construct access ramps	• Noise from demolition impacting local environment • Waste management including possible hazardous waste (soil and stones, bituminous waste containing coal tar) • Unexpected finds • Dust from demolition and ground works • Spill and pollution from plant and vehicles • Root Protection Areas retained at all times
Phase 3	TM - Half-road closure Install piles & pilecap Construct abutments Drainage & backfill Reinforced earthworks (NW, NE & SW)	• Noise from demolition impacting local environment • Vibration from piling impacting local environment • Dust from demolition and ground works • Spill and pollution from plant and vehicles • Root Protection Areas retained at all times
Phase 4	Add bridge bearings Kingpost wall to be constructed Drainage Permanent steps and ramp Reinforced Earthworks (SE) Remove temporary access Landscaping	• Noise from demolition impacting local environment • Vibration from piling impacting local environment • Dust from demolition and ground works • Spill and pollution from plant and vehicles • Root Protection Areas retained at all times • Landscaping completed at the correct time to ensure success
Phase 5	TM - Close road Install new bridge Reconstruct footways Reconstruct raised table Surfacing Line-marking & finishes Demobilise and open road	• Noise from demolition impacting local environment • Vibration from piling impacting local environment • Dust from demolition and ground works • Spill and pollution from plant and vehicles • Root Protection Areas retained at all times

2.4 Plant and Machinery used

Below is an approximate list of plant and machinery to be utilised during the works. Where applicable, these shall be registered for London's 'Low Emission Zone' for Non-Road Mobile Machinery (NRMM) (https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/pollution-and-air-quality/nrmm):

Plant	Size	Number
Excavator	5T	1
	34T	1
	22T	1
	14T	1
Dumper	3T	1
	9T	1
	6T	1
Forklift	N/A	1
Roller	TBC	1
Crane	200-300T	1

2.5 Project duration

Activity	Start date	Completion
Mobilisation	19/02/2024	01/03/2024
Main works	03/04/2024	18/11/2024

2.6 Working Hours

Monday-Friday	0800 – 1800
Saturday	0800 - 1300
Sunday & Public Holidays	N/A
Night Working	N/A

2.7 Key Project Contacts

Milestone	Senior Contracts Manager	Alan Babbage	07817 933067
	Senior Project Manager	Hassan Soboh	07817 262454
	Site Agent	Ryan Carley	07811 581072
	Senior Environmental Advisor	Amy Redpath	07526 193951
	Health, Safety and Wellbeing Advisor / Manager	Kenny MacKellar	07594512088
	Community Relations Officer		
Client	Client Manager	Alex Rogers	07588 03 99 68
	Senior Site Supervisor	TBC	
	County Arboriculturist	TBC	
Supply Chain	Ecological Clerk of Works	TBC	
	Specialist Emergency Response	Adler and Allan	0800 592 827
	Environment Agency	Herts and North London	
Regulators		24-hour hotline	0800 807 060
		Non-emergency enquiries	08708 506 506
	Natural England	TBC	

	Local Authorities	Haringey London Borough Council	020 8489 1000

3.0 Leadership Roles and Responsibilities

3.1 Leadership

Top Management, for the purposes of this CEMP, shall include the Project Manager, Commercial Manager and Environmental Advisor. They are responsible for demonstrating leadership and commitment to the EMS by:

Commitment	Action
Taking accountability for the effectiveness of the Environment Management System	• Responsibility for Significant Aspects and Impacts (see separate Appendix E) • Monitoring and checking EMS during site inspections • Reviewing EMS at Monthly Business Review meeting
Ensuring that the Environmental Policy and Environmental Objectives are established and are compatible with the strategic direction and context of the organisation	• Including Environment as a strategic focus in the Business Plan • Assisting with communication of Policies and objectives • Reviewing EMS at Monthly review meetings • Ensuring Environmental matters are considered in decision making
Ensuring the integration of the Environment Management System requirements into the organisations business processes	• Responsibility for Significant Aspects and Impacts (see separate Appendix E) • Monitoring and checking EMS during site inspections • Reviewing EMS at Monthly Business Review meeting
Ensuring that the resources needed for the Environment Management System achieves its intended outcomes	• Environmental resources to be reviewed monthly at the Monthly review meetings • Environmental resources considered during the bid and planning stages
Directing and supporting persons to contribute to the effectiveness of the Environment Management System	• Ensuring mandatory environmental training is completed • Ensuring adequate resources are available
Promoting continual improvement	• Driving and sharing best practice with other business units • Reviewing continual improvement at Monthly review meetings
Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility	• Responsibility for Significant Aspects and Impacts (see separate Appendix E) • Monitoring and checking EMS during site inspections • Reviewing EMS at Monthly review meetings

3.2 Milestone Infrastructure Ltd Environmental Policy

Milestone's Environment Policy Statement is managed issued and updated by the Head of Sustainability. The Environment Policy Statement shall be communicated to employees working for or on behalf of Milestone Infrastructure Ltd. A copy of the Policy Statement can be viewed on the MIMS system. Alternatively, a copy can also be viewed on Environment, Health and Safety (EHS) noticeboards and a reference to the policy is included in the visitors induction pack.

3.3 Roles and Responsibilities

Clear definition and communication of environmental roles and responsibilities are required to facilitate effective environmental management.

It is essential that all disciplines and functions work as an integrated team during design and construction to enable compliance with this CEMP, contractual requirements and relevant legislation.

All Milestone employees are responsible for supporting the EMS which is embedded into MIMS and accredited to ISO 14001: 2015. Specific environmental roles and responsibilities are detailed within this section.

Role	Key Responsibilities
Project Manager	• Overall senior management responsibility for the Environmental Management System (EMS) • Ensuring compliance with the principles of ISO 14001 is implemented across the Business • Providing adequate resources to implement the EMS effectively
Commercial Manager / Quantity Surveyor	• Compliance with Milestone's Sustainable Procurement Policy • Ensuring compliance with the Milestone Restricted Materials Register • Communicating Milestone policies such as The Sustainable Procurement and Environmental Policies to the supply chain during pre-start meetings • Requesting pre-construction information at bid stage • Considering environmental resource at bid stage
Construction Manager and Supervisors	• Ensuring the requirements of MIMS are delivered via this CEMP and that environmental control measures are actioned appropriately • Ensuring compliance with the CEMP • Implementing relevant MIMS Environmental Procedures on site • Complying with the requirements of this CEMP and briefing it to Milestone employees or those working on behalf of Milestone • Managing sub-contractor and supply chain environmental performance • Reporting performance for Environmental KPI's on a monthly basis • Obtaining and recording Duty of Care information • Training Milestone staff or sub-contractors • Applying for licences and legal consents and ensure that the conditions of such consents are adhered to • Ensuring that their area of works is managed in accordance with the principles of good environmental practice
Environmental Advisor / Manager	• Responsible for the day-to-day co-ordination of the EMS • Checking that all licences and legal consents are obtained and that the conditions of such consents are adhered to • Reviewing environmental information in plans and documents • Reporting information relating to environmental objectives and targets • Undertaking internal environmental audits • Delivering training, awareness and assessing competence • Reviewing non-conformances and ensuring corrective and preventative actions are completed • Assisting with emergency preparedness and emergency response • Identifying significant environmental aspects and impacts • Providing advice, support, and assistance to all Project personnel to enable them to manage their environmental and sustainability responsibilities
Ecological Clerk of Works Aboriculturalist	• Oversee the works and any ecological and Arboricultural mitigation in accordance with the CEMP, Ecological Assessment and supporting documentation listed at the start of this document. Ecologist must be suitably experienced and a member of CIEEM • Ensure adherence to the required working methodology and site monitoring requirements as specified by permits and consents • Ensure compliance with any applicable wildlife legislation

All Employees	• Familiarise themselves with the Environmental Policy • Co-operate with the company in fulfilling its compliance obligations • Co-operate with the company to prevent pollution • Conform to requirements of this CEMP • Monitor their workplace for potential threats to the environment

4.0 Planning

4.1 Environmental Aspects and Impacts (see Appendix E for full register)

An **Environmental Aspect** is defined as an element of the project that can interact with the environment. A significant environmental aspect is an environmental aspect that has, or can have, a significant environmental impact.

An **Environmental Impact** is defined as any change to the environment, whether adverse or beneficial, resulting from an aspect of the project.

An **Environmental Risk** is defined as a change to the environment which has potential adverse effects.

An **Environmental Opportunity** is defined as a change to the environment which has potential beneficial effects.

The Aspects and Impacts Register shall be updated following a significant change in risk to the environment from activities related to this Project as determined by the Environment Advisor/Manager and Project Manager. This will also include reviews triggered by changes to compliance obligations associated with work activities. An annual review of the register will also be undertaken as part of the annual management review of the EMS.

The Aspects and Impacts Register is available on the projects shared drive.

4.2 Compliance Obligations

Milestone Infrastructure maintains a Legal Register which details all legal and other legislative requirements applicable to the environmental aspects and impacts of the company's activities. This register is regularly reviewed by the Head of Sustainability and updated by the Legislation Update Service, The Compliance People.

The environment advisor is responsible for disseminating relevant new information to the contract team via:

- Emailing an update
- Discussion at monthly contract meetings
- Discussion at the annual Management Review

Non-legal obligations will be communicated in the same manner. Current non-legal environmental obligations on this project include:

Requirement	Owner
Retain existing highway boundary fencing	Site Agent
Retain Local Nature Reserve plaque	Site Agent
Works are to comply with the relevant recommendations for construction phase outlined in the Preliminary Ecological Appraisal (Aug 2021)	Site Agent

4.3 Environmental Authorisations, Permits and Consents

Projects, sites, or individual works packages may require environmental authorisations, permits or consents to operate. This is determined based on the scope of works and any pre-construction information.

Compliance with the conditions of Environmental Authorisations, Permits and Consents is to be assessed during site inspections and audits.

The Permits and Consents Register for this contract is a live document that should be updated following the attainment of any new authorisations, permits or consents. The Environmental Manager is responsible for reviewing this document to ensure it is updated and check for any impending renewals.

Below is a list of potential permits & consents required for the project works, details of these will be contained within the live Permits and Consents Register once applied for:

- Section 61 – not required currently but is being looked into for the potential crushing activity

5.0 Environmental Objectives and Targets

5.1 Milestone Objectives and Targets

Milestone have Environmental Objectives and Targets which are reported to M Group Services.

The Site Agent is responsible for reporting data to the Environment Advisor on a monthly basis, including (where applicable) electricity readings, fuel consumption, water consumption, environmental incidents, materials use, waste tonnages and recycling rates. The Environmental Advisor/Manager is responsible for reporting this data via the Environment Reporting Hub.

Milestone currently has the following objectives and targets related to the Environmental policy:

KPI	2022 target	Coverage	Data source	Data published
Compliance	Reduce Environmental Incident Frequency Rate <0.2	All contracts	Optimus	Milestone Environmental Reporting Hub
Training	95% of staff to have received mandatory training	All contracts	Training database (MGS)	Env Training Dashboard (MGS)
Circular Economy	98% of waste to be diverted from landfill	All contracts	Waste dashboard	Milestone Environmental Reporting Hub
	30,000tt of materials recycled via permits	All contracts	Permit data	Milestone Environmental Reporting Hub
Carbon	10% reduction in carbon intensity	All contracts	Oracle data	Carbon Dashboard

5.2 Client or Contractual Targets

Project environmental performance will be reported and discussed at the monthly progress meeting with the client. Submission of sustainability metrics to the client shall be implemented as agreed. The following data will be available to report on a monthly basis:

- HVO (litres used and CO2e).
- Water use.
- Electricity use (kWh).

6.0 Support

6.1 Resources

Top Management are responsible for the provision of appropriate resources to establish, implement, maintain, and continually improve the EMS. Resources and requirements are discussed monthly at the Project Management meeting.

6.2 Competence and Training

Training is an essential part of MIMS. It is vital that all personnel are aware of their responsibilities under law, the Project and MIMS. Any person performing tasks for or on behalf of Milestone that have the potential to cause significant environmental impacts must be adequately trained and deemed competent by site management. Training will be assessed on the basis of appropriate education, training or experience and documented in the Business Training Matrix.

All Milestone staff with responsibilities for on-site work activities will attend the Milestone Environmental Training Scheme (METS). The training takes approximately four hours and provides an overview of key Environmental considerations, legislation, and Environmental Policies and Procedures. The Environment Advisor/Manager shall be responsible for organising and delivering environmental training.

Attendance at training briefs/induction will be recorded in writing and the records held centrally by the Site Manager. At the start of the Project the Site Manager will review training requirements of site staff and operatives and any training identified will be arranged.

Environmental issues for the attention of subcontractors shall be communicated in a variety of methods, including environmental briefings, toolbox talks and information on site notice boards.

6.3 Awareness

The Project Management Team are responsible for ensuring that persons doing work under Milestone's control are aware of:

- The Environmental Policy
- The significant environmental aspects and impacts associated with their work
- Their contribution and the effectiveness of the EMS
- The implications of not conforming with the EMS requirements, including not fulfilling the Compliance Obligations such as the requirements of any consents, licenses or relevant legislation (see Appendix G).

Site specific environmental constraints will be identified during the site induction and included in TBTs and daily briefings. Specific environmental/ecological risks will be managed through targeted TBTs and briefings when relevant to the construction works. TBTS will be issued monthly. Hold points will be identified within the construction programme where environmental briefings or supervision is required.

Attendance at training briefs/induction will be recorded in writing and the records held centrally by the Site Manager. At the start of the Project the Site Manager will review training requirements of site staff and operatives and any training identified will be arranged.

Environmental issues for the attention of subcontractors shall be communicated in a variety of methods, including environmental briefings, toolbox talks and information on site notice boards.

6.4 Communication

6.4.1 General

The Environmental Advisor is responsible for internal communication with regards to the EMS.

Communications will primarily be delivered at the weekly Project Review Meetings. Senior Management are responsible for responding to relevant communications on the EMS and retaining documented information as evidence of communications as appropriate.

Any consultation with relevant Statutory Environmental Bodies and other interested parties shall be identified and undertaken as determined by the relevant MIMS Environmental Procedure.

6.4.2 Internal Communications

Information relating to the Environmental Management System will be communicated internally to the various levels and functions of the business via routes including but not exclusive to:

- Project progress meetings
- Client meetings
- Site Tours

6.4.3 External Communications

Information relating to the EMS will be communicated externally to interested parties via routes including but not exclusive to:

- Project Review meetings
- Environmental reporting
- Newsletters and external communications as appropriate

6.5 Documentation and Document Control

The EMS determines the documentation required to ensure the delivery and effectiveness of Milestone's Integrated Management System (MIMS) and the requirements of IS014001.

6.5.1 Creating and Updating Documented Information

All documents required by the EMS shall include a record of the revision status and identify any changes from the previous document within the revision record. All current versions of documents required by the EMS shall be available on the shared drive. Only live active documents shall be published and made available on the shared drive to prevent unintended use of obsolete documents.

6.5.2 Control of Documented Information

Environmental Documentation required for this Project will be included in the Site Folder and held electronically on the shared drive. The Site Manager will ensure that hard copies of all Waste Transfer Notes and Waste Exemptions notices are held on site and forwarded to the Environment Manager and the client as required. The Site Manager will update Milestone's SWMP on a regular basis and ensure that Waste Carrier Licence details and checks on tipping facilities are completed to ensure legal compliance.

7.0 Operation

7.1 Operational Planning and Control

Procedural environmental controls are considered during the activity planning phase, or where applicable during the design phase. Communication of requirements is achieved via relevant

environmental documentation such as Construction Environmental Management Plan (CEMPs) and Construction Phase Plan (CPPs).

The environmental processes and procedures applied to this contract are defined in MIMS.

7.2 Emergency Preparedness and Response

An Environment Emergency Response Plan has been produced for this Project. This plan details information on all stores, bulk storage vessels, drums or containers intended for storing oils, chemicals or other potentially polluting materials.

Site staff involved with emergency response will be familiar with and have access to the site plan, information on materials on site and their health, safety and pollution risks, appropriate spill response equipment and training in incident response procedures.
The Site Manager will maintain a record of the equipment and materials on site to deal with pollution incidents, including absorbent materials, drain mats or covers, pipe blockers, booms pumps (as applicable), over drums (as applicable).

All environmental incidents and near misses shall be logged on the Environmental, Health and Safety database known as Optimus. Optimus incident notifications are received via email and a text message on receipt of notification of an incident at the Customer Service Centre (CSC). For Intermediate and Significant incidents, the Environment Advisor/Manager will complete an Environmental Incident Notification (EIN) and forward it for further distribution to the Environment Team and wider business.

The Callout personnel for 24-hour coverage shall be arranged by the Project Manager to take control of and investigate out of hours incidents. The names and contact numbers of these personnel shall be displayed on site and relayed to site personnel during the induction process and are detailed in the Environment Incident Control Plan.

Milestone will consult with relevant stakeholders on the appropriate course of action in the event of:

- A substance has entered a drain or watercourse, soaked into the ground or been released into the atmosphere, ground or water in breach of permit conditions
- An unexpected discovery of protected species or habitats
- An unexpected discovery of archaeological importance

Spill response training will be undertaken within three months of works commencing on site to ensure that the plan is appropriate, and that staff are prepared to deal with an environmental incident.

Major incidents and environmental breaches are to be escalated to a member of Senior Management, usually the Business Director.

8.0 Performance Evaluation

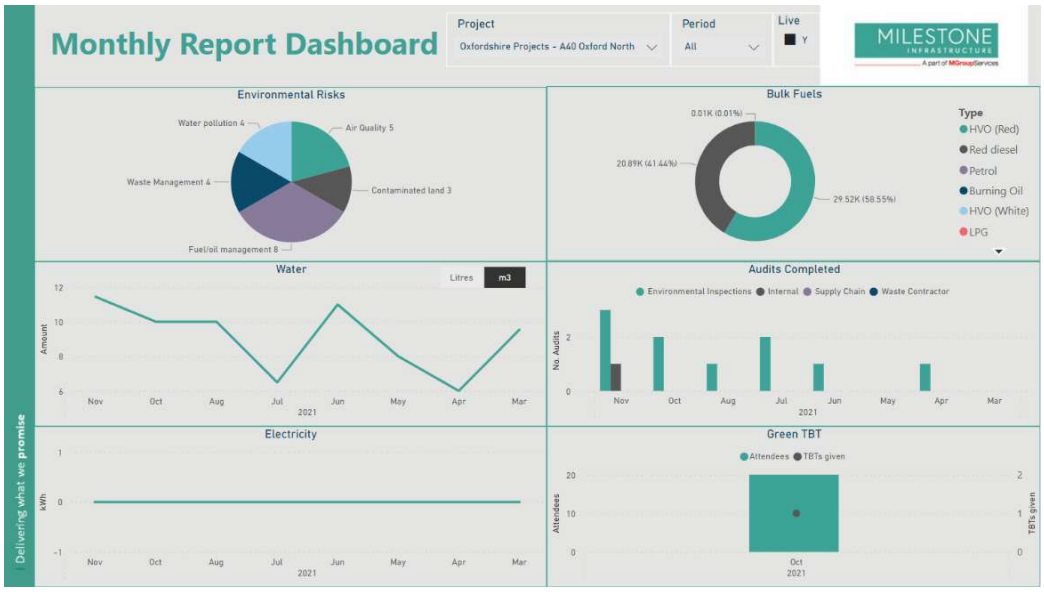
Continuous monitoring of environmental issues and controls on this Project will establish compliance of employees and contractors within the requirements of MIMS, this Environment Management Plan, client requirements and compliance obligations.

8.1 Monitoring, Measuring, Analysis and Evaluation

8.1.1 General

Environmental performance will be measured and reported monthly. Performance measures contribute to the business Objective and Targets. Issues will be reported at a regular SHEQ or operational meeting.

An environmental dashboard similar to the below will be shared with the project and client as required.



8.1.2 Evaluation of Compliance

Milestone shall take periodic evaluations of environmental requirements by completing environmental inspections and audits. Regular inspections will be undertaken by the Site Manager and Environmental Advisor. Any non-conformances will be shared with the site team and client.

8.2 Internal Audit

8.2.1 Internal Audit Programme

The aim of an Environmental Audit is to assess compliance with processes and documentation as set out in the Integrated Management System.

In addition, where local process or documents are in use they will be assessed for suitability. This audit will determine if relevant components of the EMS are implemented and determine whether the requirements of this Environment Management Plan are effective.

Internal ISO 14001 Environmental audits shall be scheduled and undertaken in accordance with the central audit schedule. Records of audits undertaken shall be held electronically. Audits are undertaken by a member of the Milestone Environment Team. All audit reports are to be sent to the Environment Advisor, Site Manager, Project Manager, Business Director and Sustainability Manager. All corrective actions are managed and recorded on the Procore system. Any observations or non-conformances will be actioned in advance of a subsequent audit taking place.

8.2.2 Environmental Inspections

The aim of an Environmental Inspection shall be to assess and inspect environmental compliance. Environmental Inspections are to be undertaken by the Environmental Advisor after project commencement. All inspections should be completed, and findings recorded using the Health Safety Environment Inspection template on Procore.

Any compliance issues identified will be raised and communicated as necessary.

8.2.3 Client Internal Inspection Programme

The Environmental Advisor will complete joint inspections with the client where requested.

8.2.4 Non-conformances and Corrective Actions

Any non-conformances or corrective actions shall be identified through near miss environment reporting, environment incident reporting, environmental inspections, and environmental audits. All non-conformances and corrective actions shall be recorded electronically on the Procore system.

Any required actions shall be appropriate to the scale of the anticipated or actual environmental impact. The Environment Advisor shall determine if change is required to the Business EMS and associated documentation.

The Environment Advisor is responsible for ensuring that the required actions are implemented following a non-conformance or corrective action.

As a minimum any actions raised on the Procore system should:

- Identify the root cause of the issue or non-conformance
- Identify the actions required to mitigate any associated environmental impact (corrective action)
- Identify the actions required to prevent recurrence on the nonconformity (preventative action)
- Identify the person who is responsible for completing the action
- Identify a timeframe for the action to be completed by

The Environment Advisor shall hold responsibility for:

- Raising the non-conformance
- Identifying the root cause
- Identifying any associated environmental impacts
- Identifying any requirements to prevent reoccurrence
- Assigning responsibility for undertaking any identified action
- Identifying an appropriate deadline for undertaking any required action

The results of the inspections and audits will be reported to the Business Manager and any person required to carry out corrective actions.

Any corrective actions recorded must be closed out within the given timeframe. Those items not closed out completely shall be carried forward to the next inspection until they are closed out. If the deficiency persists or is a serious breach, then the Business Director shall be notified directly by the Environmental Advisor/Manager.

8.3 Management Review

The purpose of this review will be to ensure the continuing suitability, adequacy and effectiveness of the Project's EMS, and compliance with the CEMP.

Minutes of Monthly Business Review meetings are to be retained and will record findings from the review process and responsibility for implementing change. The frequency at which the EMS review is held may be increased by the agreement of the Business Director.

9.0 Improvement

9.1 General

Opportunities for environmental improvement will be identified during internal reviews such as audits. Where appropriate this information will be added to the Aspects and Impacts Register.

9.2 Non-conformity and Corrective Actions

Non-conformances will be identified and managed as per Section 8.2.4 above. Any lessons learnt will be shared and evaluated at Sector Monthly Review meetings.

9.3 Continual Improvement

This Project aims to continually improve environmental performance by:

- Driving, trialling, and sharing best practice and innovations
- Implementing goals and targets outlined in the Business Plan

10.0 Detailed Environmental Controls

Note: This section is to be read in conjunction with the Project Aspects and Impacts Register

10.1 Pollution Prevention

Standard Requirements

- All site staff shall receive a toolbox talk on the spill response and incident reporting procedure prior to commencing work onsite.
- Any fuels, oils or hazardous materials will be appropriately stored and kept in bunded areas to prevent pollution of surface and ground waters. Where possible these shall be stored inside to avoid rain increase or on Green Rhino drip trays (https://greenrhinoglobal.com/product/enviropad/) where there is risk to rain ingress which allows rain to run through the nappies but capture any oil and fuels.
- Spill kits will be provided on site for the duration of the works and construction staff trained in their correct application.
- Static plant equipment such as compressors, generators, and tower lights will be equipped with drip trays. Green Rhino drip trays shall be utilised where there is risk to rain ingress i.e.: such as under plant.
- Fuels, oils, materials (hazardous and non-hazardous) or plant shall not be stored closer than 10m from any watercourse or drains.
- No refuelling of any machinery shall take place within 10m of any watercourse or drains.
- In the event of a pollution incident the Environment Agency will be contacted immediately. The EA's 24-hour incident hotline number is: 0800 807060.
- Further information on pollution prevention control can be found in the Environmental Emergency Response Plan.

Project Specific Requirements

Environmental Risk	Controls to be Implemented
Contamination of soft standing	All refuelling shall be completed with the use of a plant nappy.
Plant and on-site vehicles	Where possible electric plant and tools shall be used. Plant will be regularly inspected for leaks and regularly maintained to ensure good condition. All maintenance is to take place off site if possible or only at designated areas in the site compound. Any vehicle or plant that is considered a pollution risk is to be removed from site or repaired on hardstanding and away from drainage.

	Suitably stocked and maintained spill kit on all operational vehicles/plant.
Concrete washout	Waste concrete, slurry, debris or wash water from concrete, cement and breakout activities must not be directly discharged/released, intentionally or unintentionally, into the drainage system on site. Any concrete washout shall be stored in a lined skip and shall wait to go off. This shall then be disposed of at an appropriately licenced facility marine environment.

10.2 Water Pollution & Discharges

Standard Requirements

- Any fuels, oils or hazardous materials will be appropriately stored and kept in bunded areas to prevent pollution of surface and ground waters.
- Spill kits will be provided on site for the duration of the works and construction staff trained in their correct application.
- Static plant equipment such as compressors, generators, and tower lights will be equipped with drip trays.
- No refuelling of any machinery shall take place within 10m of any watercourse or drain.
- Silty water shall be prevented from entering drainage system through silt fences, sandbags or similar features.
- Where concrete is required, this shall be washed-out into a lined skip away from drainage.
- In the event of a pollution incident the Environment Agency will be contacted immediately. The EA's 24-hour incident hotline number is: 0800 807060.

Project Specific Requirements

Environmental Risk	Controls to be Implemented
Drainage	As there are no nearby watercourses, the risk of surface water contamination is negligible. However, care shall be required while working around drainage for more risk adverse activities including wheel washing, dust suppression, and refuelling practices to prevent pollution of nearby drainage. The wheel-washing facility will be used on site within the carriageway to minimise dust and air pollution. The water from this shall need to be captured and transported off site for disposal to a correctly licenced facility. It shall not enter the drainage on site. The drainage system shall be protected at all times to ensure pollution does not enter the system as described in section 10.1. Where applicable, drains shall be protected against surface run-off where substantial rain fall has occurred through drain protectors or localised silt fencing. An example of this is the EnviroHorn Drain Filter from Green Rhino.

10.3 Air Pollution & Dust

The below section sets out mitigation for dust and air quality as part of the Air Quality and Dust Management Plan (AQDMP) for Stanhope Road Bridge. The AQDMP is written in accordance with the Greater London Authority SPG Dust and Emissions Control (2014).

In order to gain a suitable level of understanding of the current conditions on site, a baseline assessment shall be completed using the format of The Mayor of London's 2014 Supplementary Planning Guidance, Control of Dust and Emissions during Construction and Demolition prior to works beginning on site.

The risk of each of the four key sources of dust and air pollution; demolition, earthworks, construction and track out is assessed separately to form a set risk level in which to mitigate for. For each of these areas, there are three separate considerations; annoyance due to dust; harm to ecological receptors; and the risk of health effects due to a significant increase in exposure to PM10. The baseline information is set out within the AQDMP (to follow), with the mitigations per site described within this section of the CEMP.

Standard Requirements

- No fires will be permitted onsite.
- Vehicles and plant will be well maintained and regularly serviced. All vehicles shall comply with MOT emission standards.
- Haul roads shall be damped down where necessary and kept clean of dirt and soils.
- Dust suppression shall be used on cutting, grinding and drilling activities (wetting or vacuum extraction).
- Speed limits shall be used on haul roads.
- Visual monitoring will be carried out on a daily basis.
- Stationary vehicles shall not be left to idle.

Project Specific Requirements

Environmental Risk	Controls to be Implemented
London Air Quality Management Area (AQMA)	The site is located within the London AMQA, the amount of vehicle and plant movement across site is not thought to be high. With the measures outlined below, no negative impacts are anticipated on local air quality. In order to protect local air quality and comply with Policy SI1 of the London Plan and the GLA NRMM LEZ, the site shall be registered at **nrmm.london** prior to works commencing. We shall regularly update details of plant with a net power between 37kW and 560kW on Non-Road Mobile Machinery (NRMM) during the construction period.
Planning and maintaining site	• The AQDMP shall be accessible and effectively communicated to all stakeholders on site. • All relevant stakeholders will undergo appropriate training in line with dust mitigation methods outlines within this document. • Good housekeeping procedures will be implemented and effectively manged to ensure limitation of dust and air pollution. • Controls to mitigate dust and air pollution outlined in this document will be adhered to during the entire projects lifespan. • The works will be planned so that where practicable works causing the largest amount of dust pollution will be completed away from these sensitive receptors. • If visual dust monitoring around the perimeter of the site indicates a problem or the dust monitors are triggered, the contractor will respond as shown below: 1. STOP work and contact Site Agent immediately. 2. Damp down working area before recommencing work.

	3. Review working methods to ensure best practicable means are being used. 4. Review weather forecasts to confirm whether additional control measures are required. 5. Record on Optimus reporting system. All incidents are investigated, and appropriate corrective action taken (see section 7 above).
Monitoring	**Dust monitors** shall be set up in two locations on site near local receptors to monitor dust levels. The monitors shall feed information back to a central location that is accessible to the site team and alert should a high level of dust begin to accumulate – this level shall be determined by the baseline assessment as outlined within the AQDMP. Baseline monitoring shall be completed during site set up which shall be used to compare against during more risky works. For further information this shall be set out within the AQDMP to follow. For the location of environmental stations see Figure 3 below. *Figure 3: Approximate locations of the environmental stations which shall monitor noise, dust and vibration on Stanhope Road Bridge.* **Visual inspections** across the site shall be completed regularly to ensure no dust deposition what may cause issues under different weather conditions.
Vehicles/plant operations	To limit emissions from construction equipment such as generators where reasonably practicable the use of diesel or petrol powered generators will be reduced by using mains electricity or battery powered equipment. Construction plant will operate aways from sensitive receptors were possible.

	On-site plant should be chosen carefully to avoid plant that are likely to generate excessive quantities of dust. Should this be unavoidable enclosing, shielding or provision of filters will be employed Construction plant and vehicle exhausts should be directed away from the ground and be positioned at a height to facilitate appropriate dispersal of exhaust emissions. Where suited to the vehicle, all non-road mobile machinery will use HVO fuel where possible. Latest machinery models with suitable aftertreatment systems shall be used where appropriate. The site team shall liaise with appropriate contractors on site to discuss: • Transportation of waste and material on and off the site to minimise the storage and transport periods if dust is accumulating. • The transportation route, times and dust suppression methods being used both within and outside of the site boundary should dust be caused from track-out. • Pre-Booking/Scheduling of vehicle movements to minimise congestion and dust from vehicles arriving and leaving the site. This will reduce engine idling time, therefore reduce vehicle emissions such as PM10 (Particulate Matter <10 microns) and NOx (Nitrogen oxide).
Track-out of vehicles	When required, a sweeper shall be used to ensure the public road remains dust free. A wheel-washing facility will be used on site within the carriageway to minimise dust and air pollution. See section 10.1 for information on what happens to the water from this facility. Where reasonable to enable operations to be effectively completed, the movement of plant and on-site vehicles shall be kept to a minimum. The speed limit on site will be set to 15mph across the majority of the site or 5mph in congested of sensitive areas. During the drier summer month speed limits may be further reduced to minimise dust accumulation.
Earthworks for temporary footways and other	To limit dust pollution through excavations and earthworks activities the following measures shall be taken, as appropriate: • Dust suppression shall be done through a mobile bowser on site and within the compound area. The site team shall ensure that an adequate water supply is available on site for when suppression is required. This shall be through the use of potable water. Additionally, a wheel wash will be available on site to prevent tracking of mud across the site. For more detail, see above and section 10.1. • Where applicable solid barriers/screens shall be erected around dusty activities • To control dust generation associated with the fall of materials drop heights from excavators to vehicles will be kept to the minimum practicable.

Demolition of bridge deck	Appropriate measures such as the use of tools with fitted dust suppression and/or vacuums will be used by main contractors for any processing, crushing, cutting and grinding activities as required to limit dust pollution. We shall minimise the generation of dust reducing the use of pneumatic breakers where practicable.
Construction of new bridge, footways and ramp	Dust suppression may likely be required for the crushing process should this be utilised on site. Best practices shall be implemented throughout this phase as outlined within this section.
Dust emitted from the compound area	Where practicable the topsoil **bund** within the compound area shall be turfed using the existing grass and left to self-seed. Where this is not applicable, the bund shall be covered at all times with a permeable geotextile. **General waste** shall be kept to a minimum and within in a covered skip.

10.4 Noise & Vibration

Standard Requirements

- Night works are not expected to be completed, however should this change local agreement with the local authority shall take place and a letter drop shall be undertaken.
- Any compressor brought onsite will be silenced or sound reduced models fitted with acoustic enclosures.
- All pneumatic tools will be fitted with silencers or mufflers.
- All plant items will be properly maintained and operated according to manufacturer's recommendations in such a manner as to avoid causing excessive noise.
- All plant will be sited so that the noise impact at nearby sensitive properties is minimised.
- If noise complaints are received, the Construction Manager shall keep records of the complaint and demonstrate to the complainant that Milestone Infrastructure have made all practicable efforts to ensure noise levels are limited as much as possible. The Construction Manger shall also, if practical, change the method of working or utilise alternative plant to further reduce noise levels.
- The Site Supervisor shall ensure that the peak particle velocity and frequency generated from any operation during the associated works does not present risk of damage to any structure.
- Stationary vehicles shall not be left to idle.

Project Specific Requirements

Environmental Risk	Controls to be Implemented
Nuisance, sensitive receptors	Noise may present an issue during both the demolishing works and the crushing of aggregate on site to local receptors. Where reasonably practical, works will seek to avoid and reduce noise (including vibration) from construction activities to minimise potential disturbance to sensitive receptors. This will include: • White noise reversing warnings to be used during any night-time works.

	• All works shall be completed during the hours of **0800 – 1800 Monday to Friday, 0800 – 1300 Saturday.** Should works be required outside of these time agreement with the Local Authority shall be required and a Section 61 be required. • Due to the proximity of local receptors on site (~20m), the project shall undertake both noise and vibration monitoring in two locations on site as shown in Figure 3 above in Section 10.3. This will be live tracked, and an alert shall be raised when noise levels are breached. The risk of nuisance to the surrounding environment is highest during the vegetation clearance, demolition of the bridge and potential crushing of materials. **Noise limits** are as set out below as determined by the client. *'During normal working hours 08:00 to 18:00 hours, the sound level, measured one metre outside the facade of any occupied building, shall not exceed the following:* • *70 dB - $L_{A\ eq,}$12 hour or 3 dB above the residual level, whichever is the greater, and* • *73 dB - $L_{A\ eq,}$6 hour or 5 dB above the residual level, whichever is the greater (provided that the six hours fall within the period 0800 to 1600hours) and* • *76 dB - $L_{A\ eq,}$3 hour or 3 dB above the residual level, whichever is the greater (provided that the six hours fall within the period 0800 to 1300hours), and* • *85 dB - $L_{pA,\ max}$ and, in the case of noise of an impulsive nature (e.g., drilling)* *Outside normal working hours, the sound level measured one metre outside the facade of adjacent occupied building, shall not exceed the following:* • *60 dB - $L_{A\ eq,1\ hour}$ or 3 dB above the residual level, whichever is the greater (1900 hours to 2200* • *hours), and* • *55 dB - $L_{A\ eq,1\ hour}$ or 3 dB above the residual level, whichever is the greater (2200 hours to 0700* • *hours) and* • *70 dB - $L_{A\ eq,max}$ and, in the case of noise of an impulsive nature:* • *70 dB - $L_{A\ eq,01}$ (measured over one cycle).* **Noise barriers/acoustic hording** shall be used between the pedestrians and main works during noisy activities. The use of noise curtains around loud plant shall be used where feasible. Works near residential areas, white noise reversing warnings to be used during any nighttime works. If noise complaints received, then working methods may need to be re-evaluated and noise monitoring undertaken.
Public interaction	All local receptors will be kept informed throughout the duration of the works through the use of signage. Information shall include the nature, scale, and timings of works as well as who to contact if they are disturbed.

	The Site Manager is responsible for the notification to residents that may be affected by potential disruptive activities.

10.5 Sampling & Testing

Standard Requirements

- Whenever waste of unknown condition and characteristics (soil, planings, demolition waste etc) is removed from site then appropriate sampling and testing must be undertaken prior to its disposal.
- A 'Sampling and Testing Plan' must be completed for each site prior to waste removal.
- All samples must be tested in accordance with the appropriate test suite detailed in HazWaste Online.
- All results must be run through HazWaste Online by a competent, trained member of staff.
- Results from the samples will determine how the waste will be managed and disposed of.
- The 'Sampling and Testing Plan' together with all results must be kept on file and also provided to the waste contractor

Items to Consider:

- Location of site in relation to risk areas (watercourse, residential areas etc)
- Previous site usage/historic records/known pollutants
- Number of samples
- Depth of samples
- Spread of samples
- Testing criteria

Project Specific Requirements

Environmental Risk	Controls to be Implemented
Soil and stone	All soil and stone is to be sampled prior to removal from site and will commence prior to works beginning on site. Should this require stockpiling while awaiting results, no further material shall be added once samples have been taken. Results shall take approximately seven days to come back which shall require consideration to prevent delay of works.
Asphalt containing coal tar	All bituminous material shall be sampled prior to works beginning via core sampling. Should there be any doubt of the materials condition such as a strong odour or visual discontinuity, PAK spray will be available on site at all times for additional testing.
Lead	Sampling for lead is currently being completed by the client. Results are to be added here.
Asbestos	Sampling for asbestos is currently being completed by the client. Results are to be added here.

10.6 Contamination & Hazardous Substances

Standard Requirements

- Soil arisings will be tested in accordance with WM3 technical guidance. If this has not been done in advance of commencing on site, the Construction Manager must coordinate the testing via the Environment Team.

- No soil arisings will leave site without contamination testing results.
- Hazardous soils shall be removed by a licensed waste carrier and accompanied by a hazardous waste consignment note.
- All containers of hazardous material (including oils and paints) shall be stored in a bunded area in accordance with COSHH requirements.
- Hazardous waste must not be mixed with non-hazardous.
- Any used spill kits are to be disposed of as hazardous waste.
- If any evidence of contamination is encountered onsite (i.e., discoloured soils, unexpected odours, fibrous texture to the soils, presence of underground tanks, and evidence of waste pits) works shall halt and the Environment Manager contacted immediately.

Project Specific Requirements

Environmental Risk	Controls to be Implemented
Storage	Should testing show any waste to be contaminated, this shall be segregated on an impermeable surface to prevent leaching of contaminants. The stockpile shall be covered when not in use to prevent material being disperse and to protect from rain.

10.7 Waste Management

Standard Requirements

- The waste hierarchy shall be adopted in all instances (prevent, minimise, re-use, recycle, or recover before disposal).
- All waste generated shall be segregated as far as practically possible.
- All waste shall be stored within a suitable holding facility (designated skip or bin etc.).
- Waste containers shall be clearly marked with their intended contents.
- The Site Supervisor shall ensure that copies of waste contractor permit, and exemptions are held within the site file and included within the Site Waste Management Plan PRIOR to waste being removed from site.
- Waste movements shall be accompanied by a Waste transfer ticket. The Site Supervisor shall ensure that the information held on this ticket is passed to the Environment Team on a monthly basis for inclusion within the Milestone Environmental Report Hub
- Hazardous waste movements shall be accompanied by a Consignment Note. The Site Supervisor shall ensure that the information held on this ticket is passed to the Environment Team on a monthly basis for inclusion within the WMS.

Project Specific Requirements

Environmental Risk	Controls to be Implemented
On-site material reuse	All work shall be completed in line with the projects Site Waste Management Plan (SWMP) (Appendix H) which outlines the amount of waste estimated to be produced and where the waste shall be taken (or kept as a resource on site).

10.8 Materials

Standard Requirements

- All stored materials shall be covered to prevent dust and litter dispersion and to prevent ingress of rainwater.

- All timber imported shall be FSC or PEFC certified.
- Where feasible recycled products shall be preferred over virgin.
- Material stockpiles should be tidy and secure to prevent damage and loss.
- Soils stored on site should be covered to prevent runoff.

Project Specific Requirements

Environmental Risk	Controls to be Implemented
Reuse of material in abutment	Providing the material is suitable to use, the existing bricks and aggregate on site shall be crushed on site and used as the backfill behind the abutment wall. To prove this is reused material and not a waste, a Materials Management Plan shall be created in line with CL:AIRE guidelines.
Existing sleepers	Existing sleepers to possibly be used for the temporary footway if they are in good condition. The suitability of this shall be determined once on site. Once they have been utilised on site, they shall be disposed of to a correctly licenced facility if there is no further use for them. Location shall depend on whether they are hazardous from previous treatments.

10.9 Ecology & Wildlife

Standard Requirements

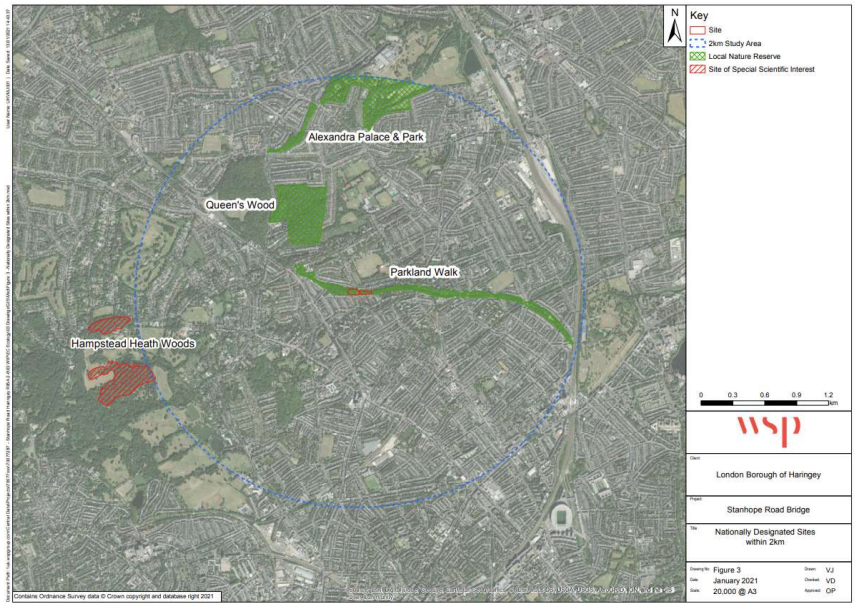
- Should works encounter any protected species, works shall halt and a member of the Environment Team consulted.
- Should works encounter any invasive or injurious species, works shall halt and a member of the Environment Team consulted.
- All vegetation clearance shall be undertaken between September and February where possible.
- If vegetation clearance is required between March and August inclusive, the area of works shall be thoroughly searched for bird's nests on the morning of each day of works prior to the start of clearance. If a bird nest is found works shall not commence until a member of the Environment Team has been consulted.
- Roots of trees to be retained shall only be cut using a clean hand saw, not a spade or mechanical digger.
- Damp sacking shall be placed around exposed roots of trees to be retained until ready for backfilling.
- All backfilling shall be undertaken ensuring roots are not damaged and soils are not heavily compacted.
- All vegetation clearance, cutting and pruning and other works relating to vegetation shall be undertaken by an NHSS18 Accredited organisation and suitably competent operatives (refer to the NHSS 18 Quality Plan for further information).
- Damage to tree bark and branches of trees that are to be retained shall be avoided at all times. If accidental damage to trees occurs, the Environmental Advisor shall be consulted at the earliest opportunity.

Project Specific Requirements

Environmental Risk	Controls to be Implemented
Root Protection Areas – Works area	A **pre-commencement meeting** shall be conducted with the Arboriculturist to ensure tree protection measures are clear and

	sufficient. Details of this meeting shall be written up, circulated, and understood by the project site team. A regular **monitoring** schedule shall be completed by the project Arboriculturist with the frequency to be determined after the initial visit. Meetings with the Arboriculturist shall take place as follows (during MIL phase of works): • Pre-start meeting • Completed of approved tree works (no further tree works expected) • Installation of protective fencing and ground protection measures • Ensure compliance to protected areas during construction • Monitoring of soft and hard landscape works The specification for the protection fencing and ground protection can be found within the Arboricultural Method Statement written by WSP (Section 6.9, 70077287-WSP-GEN-B-RP-LE-0007 SEPTEMBER 2021). Regular **checks** shall be completed by the Site Agent to ensure that all tree protection fencing is still in place. Any damage shall be reported and rectified without delay. No storage of materials, waste, plant, or equipment shall be completed within the protected areas.
Root Protection Areas - Compound	The compound set up shall be agreed in advance with the project arboriculturist to ensure the roots of the trees making up the boundary of the school field are not compacted, resulting in damage and/or death to the trees. Once agreed with the LBH arboriculturist prior to construction, the location shall be shown in Appendix A & C.
Reptiles	Due to the potential for reptiles on site, vegetation clearance shall be completed with a precautionary approach under an Ecological Watching Brief (EWB). Prior to works beginning, an initial walkover survey shall be completed and any refuge such as log piles etc shall be carefully dismantled by hand where possible under the supervision of the ecologist. Once dismantled vegetation shall be cut no lower than 200mm moving away from the road edge. This shall be done with hand tools. The area shall be left overnight to allow for any wildlife to disperse. A second walkover survey will then be conducted the following morning, and should it be safe to continue, a second lower cut to ground level shall be completed. Open trenches shall not be left open overnight, however, if this is unavoidable, one end of the trenches shall be left at a 45° angle to

	allow for the escape of any trapped wildlife or means of egress be provided.
Bats	Initial surveys completed by WSP have shown there to be moderate potential for bats within the bridge itself and within the two trees shown in Figure 4 below. These trees are not being felled as part of the works and will be protected as part of the Tree Protection Plan. Noise shall be monitored throughout the construction phase and minimised as much as practically possible, while artificial lighting should not be required due to the timing of works. *Figure 4: Drawing showing the two trees with potential for bats (in yellow)*
Excavations	Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the Site is closed (e.g.: overnight) to prevent entrapment of animals.
Badgers	A walkover survey prior to construction commencement shall be completed by LBH to ensure no badgers setts have become active between the original survey completion.
Parkland Walk Local Nature Reserve (LNR) and Parkland Walk, Queen's Wood, and Highgate Wood Site of Importance for Nature Conservation (SINC)	It is not expected that works will have a detrimental impact on either LNR or SINC providing best practice methods are followed including nuisance mitigation, retention of Root Protection Area's and successful landscape planting. Should there be any doubt of this, contact with the Projects ecology team shall be made without delay. *Figure 5: Drawing showing the location of the Parkland Walk Local Nature Reserve (LNR (in green)*



10.10 Archaeology, Cultural Heritage & Listed Buildings

Standard Requirements

- Should works encounter any coins, pottery, bone fragments, brick/stone foundations, spearheads, or other suspected artefacts, works shall halt, and the Environmental Manager/Advisor consulted

Project Specific Requirements

Environmental Risk	Controls to be Implemented
Retain LNR signage and fencing	Although previous reports have not identified any archaeological risk on site, the client have requested some existing features of the bridge and foot access to be retained. These shall be removed and stored safely until the time they are to be reused on site.
Unexploded Ordinance (UXO)	A UXO Desk Study & Risk Assessment was completed by Zetica UXO on the 31st March 2022. This survey report (P11633-22-R1) found no records indicating that the Site was bombed and no significant sources of UXO hazard were identified. For this reason, the Site is considered to have low UXO hazard level and no further surveys or actions are required above standard best practice. For further information see the Zetica report.

10.11 Visual Impacts

Standard Requirements

- All waste shall be stored within a suitable holding facility (designated skip or bin etc.).
- Any artificial lighting shall be positioned with care to avoid light spill onto any neighbouring properties or vegetation.
- Good housekeeping shall be adopted throughout the Project to ensure a clean and tidy site.

Project Specific Requirements

Environmental Risk	Controls to be Implemented

Compound area and main site security.	Due to the location of the compound area within a school field, security will be installed to ensure there will be no access to members of the public. Additionally, all materials and waste shall be kept tidy.
Community Engagement Arrangements	Signage shall be displayed on public noticeboards describing the progress on site and explaining the reason for any activity that has the potential to cause nuisance for locals. This shall be regularly updated, and will include a contact number for the community liaison officer. Initial conversations with the stakeholders on site during tender and ECI stage have/shall highlight any major areas of concern. A stakeholder meeting organised by LBH prior to construction shall provide further discussion time on main areas of risk. Through the use of signage described above and direct contact with groups such as Friends of the Parkland Walk and Channing School, we aim to mitigate any potential complaints by dealing with concerns early on.

11.0 Project specific toolbox talks

The Site Supervisor shall ensure the following Project specific toolbox talks are delivered to all relevant site staff at the approved stage in construction:

Discipline	Description	Must be delivered prior to construction	May be delivered throughout construction period
Pollution prevention	Fuel & oil	☒	☒
	Silt	☐	☐
	Cement & concrete if making concrete	☐	☒
	Bentonite	☐	☐
	Pumping & over pumping	☐	☐
	Washing down of plant machinery	☐	☒
Nuisance	Dust & air quality	☒	☒
	Noise & vibration	☒	☒
	Be a good neighbour	☐	☒
Good Practice	Materials handling & housekeeping	☒	☒
	Archaeology	☐	☒
	Working on previously developed land	☐	☐
	Energy/Fuel efficiency	☐	☒
Nature conservation	Bats	☒	☒
	Badgers	☐	☒
	Dormice	☐	☒
	Great crested newt	☐	☐
	Adders	☐	☒
	Nesting birds	☐	☒
	Common Reptiles	☒	☒
	Giant Hogweed	☐	☐
	Himalayan Balsam	☐	☐
	Japanese knotweed	☐	☒
	Working around trees	☒	☒

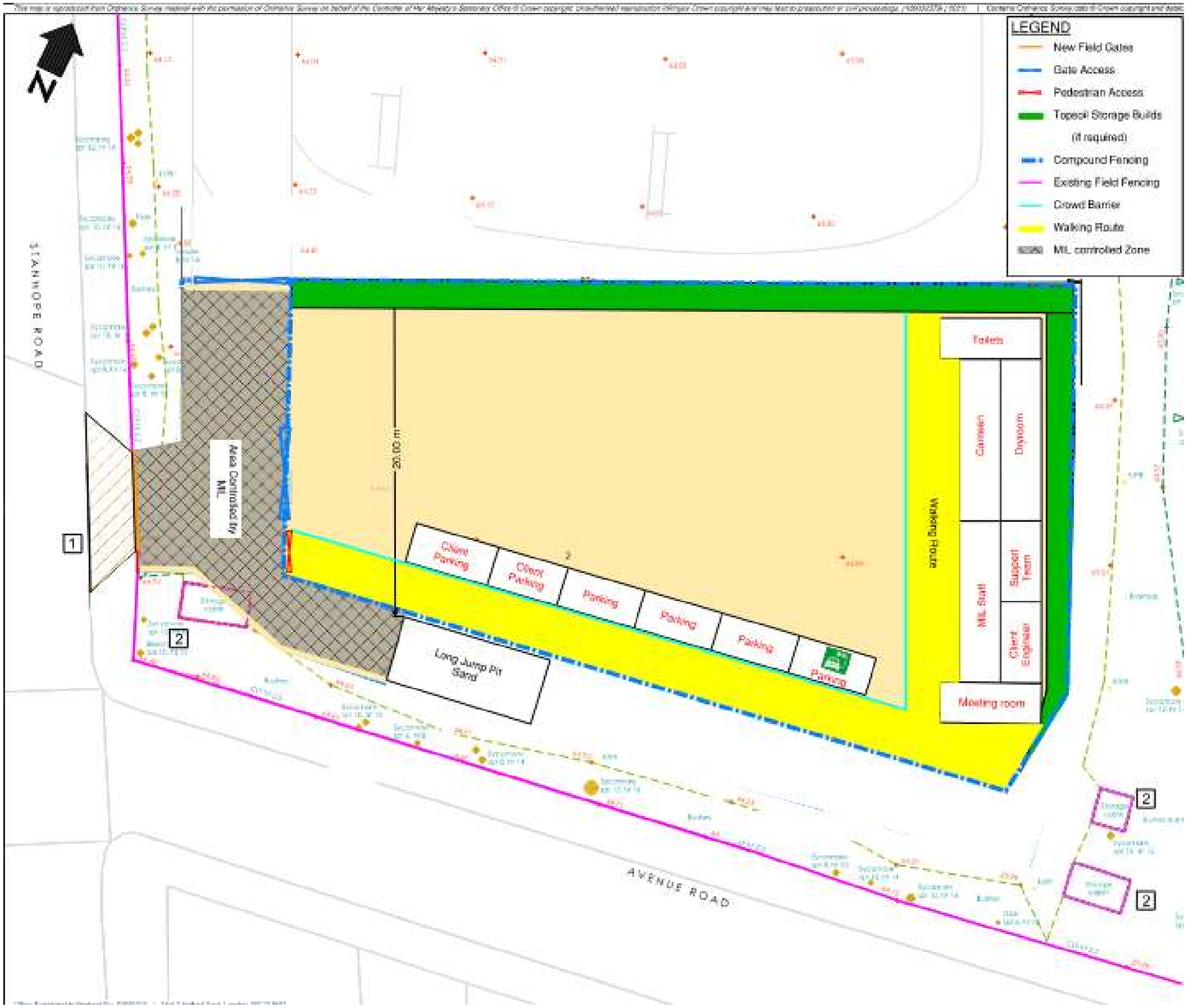
Waste	Control of sweeper arisings	☐	☒
	Segregation of waste	☒	☒
	Storage of waste	☒	☒
	Waste hierarchy	☐	☒

12.0 Emergency Preparedness and Response

All environmental incidents and near misses shall be logged on the Environmental, Health and Safety database known as Optimus. Optimus incident notifications are received via email and a text message on receipt of notification of an incident at the Customer Service Centre (CSC). For Intermediate and Significant incidents, the Environment Advisor will complete an Environmental Incident Notification (EIN) and forward it for further distribution to the Environment Team and wider business.

Major incidents and environmental breaches are to be escalated to a member of Senior Management, usually the Business Director.

Appendix A – Compound Layout Plan



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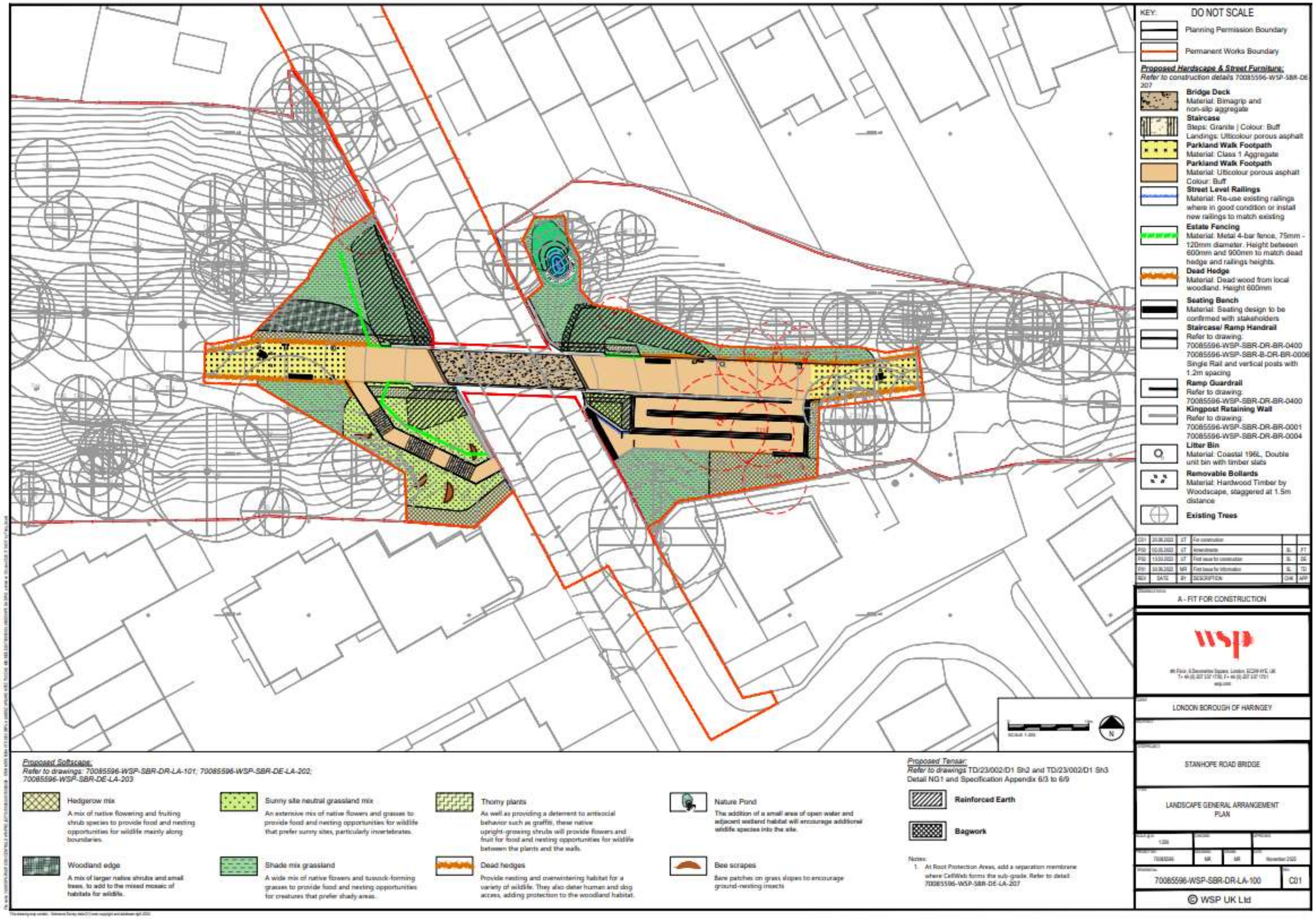
Appendix B – Landscape General Arrangement



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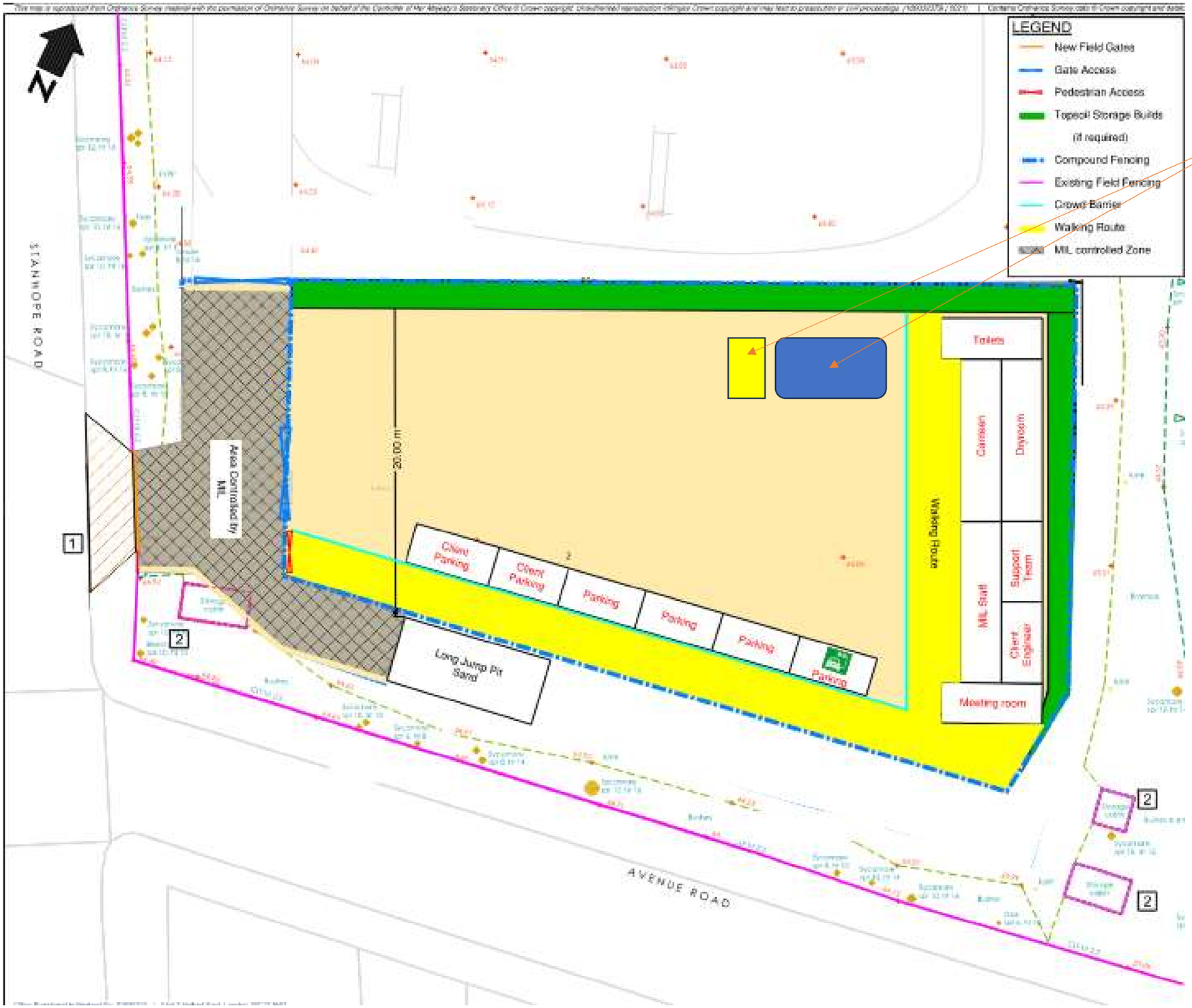
Appendix C – Compound Fuel and Waste Map



Compound Skip / Coshh / Fuel Bowser. Location to be confirmed on site.

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Appendix D – Refuelling Plan

Refuelling will only take place within designated Refuelling Areas which will be agreed with the Environmental Manager. These areas will be suitable bunded to prevent spills, and spill kits will be available.

Generators / pumps

1. All generators and pumps will be integrally bunded and compliant with PPG2
2. When refuelling is taking place, drip trays or plant nappies will be placed under the point where the hose meets the refuelling point on the plant to contain any possible spillages.
3. Any spillages will be cleared up immediately, as per the spill response plan
4. Used spill kits will be stored in the hazardous waste bin before being removed from site by a specialist contractor.

Small Plant

1. Small plant will be filled with either 25L green metal jerry cans if diesel, or 5L red metal cans if petrol
2. All small plant refuelling will take place within the designated refuelling area
3. 25L green metal jerry cans will be filled next to the fuel bowser. The jerry cans will be filled on a spill tray.
4. Refuelling of the small item will also take place on the spill tray within the refuelling area.
5. Once refuelling is complete the petrol or diesel jerry cans will be returned to the COSHH store
6. Any spillages will be cleared up immediately, as per the spill response plan
7. Used spill kits will be stored in the hazardous waste bin before removed from site by a specialist contractor.

Appendix E – Aspects and Impacts Register

The Aspects and Impacts Register can be viewed here: Link to be added here once approved. Currently this is saved as a separate document.

Appendix F – Environmental Emergency Response Plan

The Environmental Incident Control Plan can be viewed here: Link to be added here once approved. Currently this is saved as a separate document.

Appendix G – Permits and Consents Register

The Permits and Consents Register can be viewed here: Link to be added here once approved. Currently this is saved as a separate document.

Appendix H – Site Waste Management Plan

The Site Waste Management Plan can be viewed here: Link to be added here once approved. Currently this is saved as a separate document.

Appendix I – Sampling and Analysis Plan

The Sampling and Analysis Plan can be viewed here: Link to be added here once approved. Currently this is saved as a separate document.