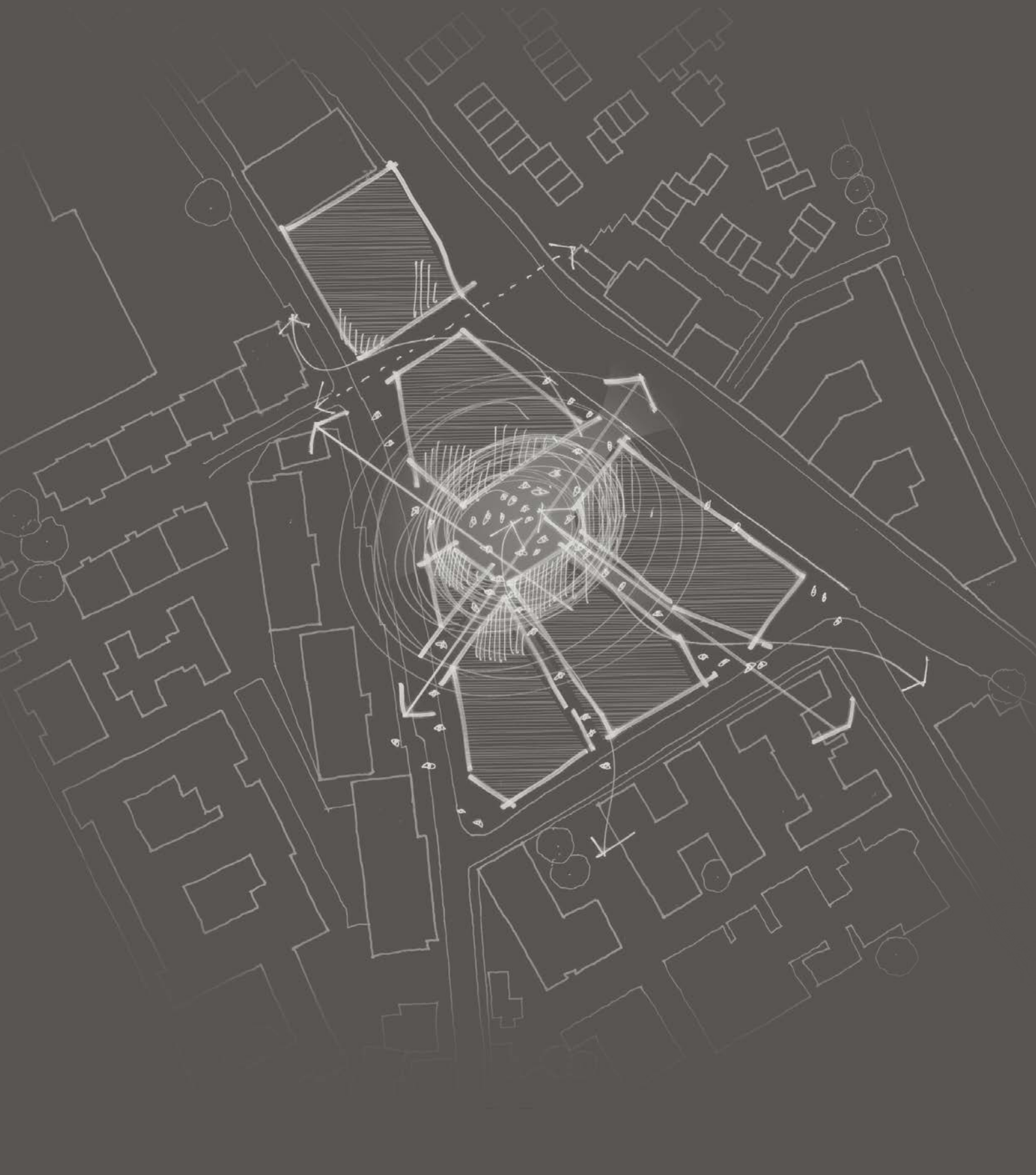
Transformation of the Ugly Brown Building

Waterman Infrastructure & Environment Ltd
Outline Construction Management Plan

September 2017



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This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

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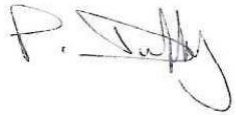

Comments

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We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

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1. Introduction

1.1 Background

Waterman Infrastructure & Environment Limited (Waterman) has been instructed by Reef Estates Limited (hereafter referred to as the 'Applicant') to prepare this Construction Management Plan (CMP) for the redevelopment of the Site known as The Ugly Brown Building.

The Applicant is seeking to obtain full planning permission for a scheme covering an area of approximately 1.14 hectares (ha), located to the northwest of Kings Cross rail station in London (hereafter referred to as the 'Site'). The Site falls within the administrative boundary of the London Borough of Camden (LBC).

The proposals (hereafter referred to as the 'Proposed Development') have been designed by Bennetts Associates. The Proposed Development would comprise the construction of six new buildings comprising business floorspace, gym, residential (69 units), flexible retail, hotel and storage space with associated landscaping work.

This document comprises a bespoke CMP accompanying a planning application for the above Proposed Development. The purpose of the CMP is to help the developer minimise construction impacts, and relates to both on Site activity and the transport arrangements for vehicles servicing the Site.

The overall construction strategy is not known at this stage and is dependent upon how the appointed Principal Contractor intends to undertake the construction activities at the Site. Once appointed, the Principal Contractor will be required to amend this CMP with the details of the construction activities.

It is understood that the Principal Contractor will be appointed once planning permission has been granted. It is assumed that a final CMP will be required to be submitted under a planning condition in due course.

1.2 Development Proposal

The proposals are for a full planning application to demolish the existing buildings and construct 6 new buildings to provide a mix of uses. The Proposed Development would be divided into three plots, hereafter referred to as Plots A, B and C, which would comprise the following mix of uses:

- Plot A would comprise one building of business floorspace and flexible retail uses;
- Plot B would comprise one building of business floorspace and hotel uses; and
- Plot C would comprise three buildings of business floorspace, gym, flexible retail and residential uses (69 units, including affordable homes).

The new buildings will range from 2 to 12 storeys, including upper / lower ground floor and a basement. It is currently proposed that the basement would comprise car and cycle parking, refuse areas and plant rooms as well as space for a gym and storage space (Use Class B8). It is currently proposed that the Proposed Development would provide 32 car parking spaces, including 3 for disabled residents.

In addition, public realm space would be provided across the Site to allow access to the canal-side.

The Applicant is committed to undertaking the redevelopment of the Site in an environmentally responsible manner in order to minimise disruption to the surrounding area.

This CMP is designed to set out the standards of construction logistics and practices that will minimise (if not eliminate) the impacts of the project upon the local environment and local community surrounding the

Site. It is based on LBC's guidance for construction management plans (for full details refer to Section 1.3.2 below), but also includes additional environmental considerations such as waste management and pollution incident control procedures.

The environmental issues relating to the works are considered systematically and procedures are outlined for dealing with issues as they arise during the works. The aim of the CMP is to ensure that potential impacts to the environment and sensitive local receptors resulting from the works are avoided or minimised, as far as reasonably practicable.

The CMP is designed to ensure compliance within the requirements of relevant environmental legislation. In due course, it will be amended to ensure compliance with the planning permission and associated environmental conditions.

The CMP is intended to be a live document whereby different stages will be completed and submitted for approval as the Proposed Development progresses.

The Principal Contractor will have overall responsibility for the construction works at the Site.

1.3 Applicable Code and Standards

1.3.1 Transport for London Guidelines

Transport for London's (TfL's) Construction Logistics and Cyclist Safety (CLOCS) scheme aims to change the way the construction industry manages work related road risk whilst providing an opportunity for clients and developers to look out for the wider community. This is being achieved in the following three ways:

- Improving the safety of vehicles;
- Addressing the imbalance between on-site health and safety and work related road safety; and
- Encouraging wider adoption of best practice across the logistics industry.

The *CLOCS Standard for construction logistics: Managing work related road risk*[1] has been developed as a common national standard for use by the construction logistics industry. It aims to ensure that construction companies follow effective practice in the management of their operations, vehicles, drivers and construction sites.

This CMP follows the best practice guidance as described in the CLOCS standard.

1.3.2 Local Authority Guidelines

Construction Management Plans

LBC provides guidance for developers to inform the preparation of Construction Management Plans in Camden,[2] which includes Camden's Minimum Requirements for Building Construction guidelines. These guidelines include the following:

- Mitigation measures to be incorporated during the works to prevent noise and vibration, disturbances, creation of dust nuisance and prevention of rodents spreading out from the Site;
- Monitoring of noise, vibration and dust levels;

[1] CLOCS Standard for construction logistics: Managing work related work risk, available from http://www.clocs.org.uk/standard-for-clocs/ (accessed 29/03/2017)
[2] London Borough of Camden Construction Management Plans, available from http://www.camden.gov.uk/ccm/content/environment/planning-and-built-environment/two/planning-applications/making-an-application/supporting-documentation/construction-management-plans.en (accessed 28/03/2017)

- Abatement techniques to prevent noise, vibration and dust nuisances; and
- Community liaison.

Developers and contractors of major projects within LBC are expected to ensure that timescales for Construction Management Plans (including consultation submission, revisions and approval) are fully built into construction programmes and contracts.

As far as practicable, this CMP follows best practice guidelines as described in Camden's Minimum Requirements for Building Construction.

Camden's Considerate Contractors Manual

The Principal Contractor will work under the standards set out in the Guide for Contractors Working in Camden[3] (also referred to as Camden's Considerate Contractors Manual). The purpose of this guide is to ensure disturbances due to noise, vibration, dust and smoke arising from demolition and construction work on all buildings sites within the borough are kept to an acceptable minimum level without restricting contractors unnecessarily. It is also intended to provide information on good environmental practice for those involved in construction works, as well as people who are affected by this work.

1.3.3 Considerate Constructors Scheme

The Principal Contractor will work under the guidelines of the Considerate Constructors Scheme (CCS). The aim of the CCS is to improve the image of construction by encouraging good communications with site neighbours and the general public, improved welfare facilities and greater environmental awareness.

The details of the Principal Contractor's CCS registration will be confirmed in due course.

1.3.4 Contractor Management System

The Principal Contractor shall have an Environmental Management System in place that is accredited to ISO 14001, the International standard for such systems. Once appointed, the Principal Contractor's own policies, procedures, targets and objectives shall be considered and this CMP may need to be updated accordingly. The Principal Contractor will also comply with all relevant legislation.

1.3.5 Building Research Establishment Environmental Assessment Method

The Principal Contractor will work under the guidelines of BREEAM during all stages of the Proposed Development.

The Proposed Development is targeting BREEAM Excellent for non-residential areas.

[3] Guide for Contractors Working in Camden, available from http://www.camden.gov.uk/ccm/content/environment/air-quality-and-pollution/air-quality/smoke-and-dust/ (accessed 29/03/2017)

2. Contacts

2.1 Site Address and Planning Reference

Address: 2-6 St Pancras Way, London, NW1 0TB

Planning reference number to which the CMP applies: 2017/1032/P (request for screening opinion)

2.2 Construction Management Plan

Contact details for the person responsible for submitting the final CMP.

Name: To be confirmed

Address: To be confirmed

Email: To be confirmed

Phone: To be confirmed

2.3 Project Manager

Contact details of the Site project manager responsible for day-to-day management of the works and dealing with any complaints from local residents and businesses.

Name: To be confirmed by the Principal Contractor

Address: To be confirmed by the Principal Contractor

Email: To be confirmed by the Principal Contractor

Phone: To be confirmed by the Principal Contractor

2.4 Community Liaison

Contact details of person responsible for community liaison and dealing with any complaints from local residents and businesses.

Name: LCA (Public Relations Consultant)

Address: 8th Floor, Berkshire House, 168-173 High Holborn, London, WC1V 7AA

Email: DH@londoncommunications.co.uk / NL@londoncommunications.co.uk

Phone: 0207 612 8480

2.5 The Principal Contractor

Contact details of where the tPrincipal Contractor accepts receipt of legal documents for the person responsible for the implementation of the CMP.

Name: To be confirmed

Address: To be confirmed

Email: To be confirmed

Phone: To be confirmed

3. The Site

3.1 Site Description

A Site location plan and a plan showing the pre-works Site layout are present in **Appendix A**.

The Site currently comprises a single building of up to four storeys (plus lower ground floor and roof plant) which provides 30,836 square meters (sqm) Gross External Area (GEA) of office and data centre floorspace. The existing building is split into three entities, occupied by Ted Baker Plc, Verzion Data Centre and a mixed-office building. On-site car parking is currently limited to circa 52 spaces, which have access to and from St Pancras Way.

The Site is bound to the south by Granary Street, to the west by St Pancras Way (A5202), and to the east by the Regent's Canal. A five-storey building (Canal Side Studios) comprising office accommodation is located to the immediate north of the Site.

3.2 Construction Works

The area of the proposed Development is approximately 1.14 ha. It would comprise the demolition of the existing buildings on the Site and construction of new floorspace in the follow use classes: B1 (business floorspace), B8 (storage), D2 (gym), A1 to A4 (general and food retail and professional services), C1 (hotel) and C3 (residential) within the three Plots, providing a total area of 84,358 sqm GEA.

The construction works would be split into three phases. The first phase would be the demolition and construction of Plot A, followed by Plot B and Plot C. The sequence and timescales of the works are presented in Table 1 below.

The construction works may be affected by the restricted conditions of the Site. For instance, as the Site is occupied by a building split into three parts, demolition materials may have to be removed off Site to be crushed. Construction traffic may be restricted by the one-way nature of St Pancras Way to the west of the Site. Furthermore, consideration will need to be given to the nearby potential sensitive receptors presented in Table 1 below, which include residential dwellings, St Pancras Hospital and the Regent's Canal.

3.2.1 Timescales

An outline construction programme is included in **Appendix B**.

The proposed start and completion dates for each phase of construction are outlined in Table 1 below.

Table 1: Timescales for each phase of construction

Phase of works	Start Date	Completion Date
Plot A	Q1 2018	Q4 2019
Plot B	Q1 2020	Q2 2022
Plot C	Q1 2023	Q4 2025

LBC will be notified when the construction works are approximately three months from completion.

3.2.2 Plot A

It is understood that the works on Site will start with the demolition of Plot A, including the removal of the existing reinforced concrete ground floor slab as well as any ground beams and pile caps. The ground will then be prepared for the installation of a piling mat. Prior to any piling, the exact position of the existing Thames Water sewer will need to be confirmed.

Depending on the ground conditions and ground water level on Site, 600mm diameter secant or combination of secant and contiguous piled wall will be installed around the perimeter of Plot A to form the basement walls. The depth of the new secant / contiguous piled walls will be between 20m to 25m below ground level. Shorter secant / contiguous piled walls will be required over the existing Thames Water sewer.

Owing to the removal of over burden and the possible presence of groundwater beneath the Site, the new proposed basement slab construction will consist of suspended reinforced concrete slab spanning between ground beams supported on piles and pile caps. Transfer structures will be required to bridge over the existing Thames Water sewer.

The ground floor and upper levels of the new buildings will consist of reinforced concrete flat slab construction supported by reinforced concrete columns.

3.2.3 Plot B

Once the construction of Plot A has been completed and the building has been fitted out, it is understood that Ted Baker will relocate from Plot B to Plot A, after which Plot B will be demolished. Ted Baker will then move back into Plot B once it is complete. This approach means that Ted Baker can retain their presence at the Site for the duration of construction.

Basement construction at Plot B will be similar to that of Plot A above, although as the Thames Water sewer does not pass under this part of the Site there will be no requirement for transfer structures.

The super-structures of the new Ted Baker building will be of composite floor construction and will comprise 150mm/175mm thick reinforced concrete slab spanning onto steel beams supported by steel columns.

3.2.4 Plot C

Basement construction of Plot C will be similar to that of Plot B above, except there will be a two-level basement underneath the buildings in this area.

The ground floor and upper levels of the new buildings at Plot C will consist of reinforced concrete slab construction supported by reinforced concrete columns.

3.3 Sensitive Receptors

A review of the land uses surrounding the Site has been undertaken to ensure that appropriate mitigation measures are implemented to minimise disruption to potentially sensitive receptors.

Table 2 lists the identified potential sensitive receptors around the Site.

Table 2: Potential Sensitive Receptors

Category	Sensitive Receptor	Description
Residential	Existing and Future Residents	Residential properties in close proximity to the Site including student accommodation approximately 10m west and residential houses with gardens approximately 30m northeast.
Commercial	Existing and Future Businesses	Local businesses surrounding the Site, notably the Canal Side Studios building to the immediate north and the Travis Perkins store approximately 10m west. Existing and future businesses located within the Proposed Development.
Community	Existing and Future Users	St Pancras Hospital is located approximately 20m south of the Site. The Royal Veterinary College is located approximately 75m southwest of the Site.
Leisure / Amenity	Existing and Future Users	Users of the Regent's Canal towpath approximately 25m east (beyond the Regent's Canal). Users of the Jubilee Outdoor Education Centre approximately 85m northeast. Visitors to surrounding parks / open areas including St Pancras Gardens approximately 145m south, St Martin's Gardens approximately 345m northeast and Regent's Park approximately 1km east.
Landscape	Designations	The Site is not subject to any statutory or current non-statutory ecological designations. The Regent's Canal immediately to the east of the Site has been identified as a Site of Interest for Nature Conservation (SINC) of metropolitan importance. St Pancras Gardens, located approximately 145m southeast of the Site is designated as a Site of Borough Importance for Nature Conservation Grade 2 (SBINC2). The closet statutory ecological designation is Camley Street Natural Park Local Nature Reserve (LNR) approximately 275m southeast. In addition, the Barnsbury Wood Local Nature Reserve is located approximately 1.2km east.
	Landscape features	The Site is predominantly covered by building footprint and hardstanding cover. There are small areas of soft landscaping present in three of the four corners of the Site. Nearby areas of landscaping include St Pancras Gardens approximately 145m south.
Heritage Assets	Built Heritage (above ground)	The Site is located within the Regent's Canal Conservation Area and within close proximity to King's Cross St Pancras Conservation Area. There are no listed buildings on the Site. A Grade II listed structure 'Penfold Pillar Box Outside Royal Mail North West District Office (Office Not Included)' is located to the northwest of the Site along St Pancras Way. Further listed buildings are located along Royal College Street approximately 130m east of the Site. St Pancras Gardens approximately 145m south is a Grade II listed Registered Park and Gardens and comprises a number of listed structures include the Grade I listed Soane tomb.
	Archaeology (below ground)	The Site does not support any designated heritage assets (e.g. scheduled monuments) and is not located within an Archaeological Priority Area. One non-designated Greater London Historic

Category	Sensitive Receptor	Description
		Environment Record is noted within the Site, and relates to the Site of a tramway system (1875 to 1916). It is possible that unknown buried archaeology exists beneath the Site.
Ground Conditions and Contamination	Site Users and Construction Workers	A Phase I Environmental Report undertaken by DTS Raeburn in March 2016 concluded that any contamination at the Site is likely to be localised and can be addressed during redevelopment. However, the risk of exposure to any localised ground contamination during construction cannot be entirely discounted.
Ecology	Flora	Soft landscaping currently present at the Site, which comprises grass and a few trees.
	Fauna	No faunal species have been identified on the Site; however, minor potential exists for common nesting birds.
	Nearby Designated Sites	Nearby designated sites include the Regent's Canal SINC adjacent to the east and the Camley Street LNR approximately 275m southeast.
Controlled Waters	Groundwater	The Site is immediately underlain by the London Clay Formation which overlies the Lambeth Group, Thanet Formation and Chalk Formation. Significant thicknesses of Made Ground have not been identified on or adjacent to the Site. The Site is not located within a groundwater Source Protection Zone.
	Sensitive Surface Water Features	Regent's Canal adjacent to the east. According to the Environment Agency's London Borough Environmental Fact Sheet for Camden,[4] the ecological status of the Regent's Canal was 'moderate' in 2012.
Transport	Pedestrians, Cyclists, Vehicle Users	Existing and future vehicle, pedestrians, cyclists and other road users on and surrounding the Site. Users of the Regent's Canal towpath approximately 25m east.
	Transport Infrastructure	Nearby transport infrastructure includes King's Cross train station approximately 695m southeast. The closest bus terminus to the Site is located approximately 120m southwest of the Site which provides one regular service (46). The closest Santander cycle hire docking station is located approximately 120m southwest of the Site on Royal College Street.
Air Quality	Air Quality Management Area	The Site is located within the LBC Air Quality Management Area. Existing and future local residents.
Noise	Existing and Future Residents	Occupants of existing and future residential and commercial properties surrounding the Site.

[4] Environment Agency London Borough Environmental Fact Sheet, Camden, August 2013

3.4 Local Development Sites

A plan of permitted development sites in the local area is presented in **Appendix C.** It is likely that some of these will have been built out before the Proposed Development construction is started, others will be under development and there may be additional schemes to be added to this by the time the application for the Proposed Development is permitted. Therefore, a final list of cumulative schemes and likely future baseline schemes to be assessed will be agreed with LBC in due course.

3.5 Local Highway Network

The Site is located on the east side of St Pancras Way (A5202), a one-way strategic road which operates in a broadly north-south orientation. It is a single carriageway road with two southbound lanes of traffic.

Granary Street is located adjacent to the south of the Site. It is a single carriageway road with a lane of traffic in each direction, and provides restricted pedestrian access to the south of the Site. It joins St Pancras Way to the west and Camley Street to the east.

Camley Street is located to the east of the Site, beyond Regent's Canal. It connects St Pancras Road to the south with a cul-de-sac to the north.

A plan of the local highway network is included in the Transport Assessment (prepared by Caneparo Associates), presented elsewhere in the application documentation.

4. Key Responsibilities

To ensure that environmental standards are maintained, it is necessary that every person working on the Site is aware of their responsibilities. The Principal Contractor will have overall responsibility for implementation of the CMP. The Principal Contractor will also detail roles and responsibilities in method statements and Plans of Work for each activity. It should be noted that individuals or companies can be responsible for more than one role.

Table 3: Key Responsibilities

Person / Organisation	Responsibility
The Applicant and / or developer for each phase	Undertaking formal communication with neighbours and LBC in relation to key stages of the works.
Project Manager	Key person involved in the management of the project on behalf of the Applicant and / or developer, issuing instructions to the Principal Contractor as necessary. Policing non-conformances reported during independent verification audits.
Principal Contractor (Contractor)	Ensuring that the requirements of this CMP are adhered to at all times and liaising with LBC and local residents where necessary. Attend meetings at the request of LBC with representatives of local residents' groups where necessary and addressing complaints / queries as soon as practicable. Ensuring that all Site staff and subcontractors undertake their activities in accordance with best practice the requirements of the CMP. Ensuring that the appropriate monitoring is being undertaken by the nominated Environmental Monitoring Co-ordinator. Ensuring that unacceptable levels of environmental pollution including fuel spillages, odour, noise, dust or vibration do not arise from their activities on the Site. This includes ensuring that: - Statutory environmental requirements are met; - Environmental best practice and control is used; - Relevant procedures are followed; - Resources (personnel and financial) are available to meet the environmental management requirements; - Corrective actions are implemented; and - Records and other relevant documentation are maintained.
Transport Co-ordinator (nominated by, and reporting to, the Principal Contractor)	Co-ordinating deliveries and controlling vehicles accessing and leaving the Site, along routes to be agreed with LBC. Recording distances travelled by each vehicle.
Environmental Consultant / Co-ordinator (nominated by, and reporting to, the Principal Contractor)	Monitoring air, noise and, if necessary, vibration on and immediately adjacent to the Site and ensuring that complaints regarding air, noise or vibration are appropriately investigated and responded to. An independent Environmental Consultant shall conduct regular environmental audits including Site inspections, monitoring and review of site documentation to identify and report any non-conformances to the Principal Contractor and the Project Manager.
Liaison Manager (nominated by, and reporting to, the Principal Contractor)	Liaison with neighbours and LBC regarding site-specific issues. Producing a regular newsletter to inform stakeholders of progress, issues and upcoming work. Keeping the Site notice board(s) up to date, including with appropriate contact information.

Person / Organisation	Responsibility
Subcontractor Site Managers	Ensuring that all staff adhere to statutory environmental requirements and the CMP. Ensuring that resources (personnel and financial) are available to meet the environmental management requirements. Reporting incidents to the Principal Contractor. Ensuring that corrective actions are implemented. Ensuring that records and other relevant documentation are maintained and reported to the Principal Contractor, including energy use and water consumption.
Site personnel	All Site staff are responsible for adhering to the requirements of the procedures outlined in this CMP, ensuring that legislative requirements and good environmental practice are met within their job function. As part of the Site induction, all Site staff will be made aware of the importance of maintaining good relations with the local community and neighbours.

5. General Site Management

5.1 Introduction

This procedure addresses the general Site management practices that should be employed to ensure the safe and compliant operation of the Site and gives consideration of surrounding receptors in the general operation of the Site.

5.2 Procedure

5.2.1 Site Working Hours

The hours of operations and ancillary works which are audible at the Site boundary shall be restricted to the following periods:

- Between 08:00 and 18:00 Monday to Friday; and
- Between 08:00 and 13:00 on Saturdays.

No work may be carried out on Sundays, Bank Holidays or Pubic Holidays, and no noisy work will be undertaken out of hours without prior written agreement with LBC.

It is recognised that there may be circumstances where the restriction on hours of work cannot be adhered to and where works cannot be completed within the hours of a single working day, but that also cannot be carried over to the following day. The Principal Contractor will endeavour to minimise the frequency and duration of such works. However, where unavoidable, the Principal Contractor will be required to fully justify any proposed deviation from these operating periods, provide written justification to LBC, and notify neighbours before works outside normal hours commence.

It is noted that workers may be present on Site outside of the above hours from 07:00 to 19:00.

5.2.2 Site Security

Access into the Site for traffic associated with the works will be via St Pancras Way and Granary Street. During working hours, access to the Site will be kept closed except when vehicles are entering or leaving. The Site access / egress points will operate a security pass system, and access to the Site will only be granted after a Site induction has been undertaken. All staff will be required to sign in and out of the Site. Site entrances and exits will be clearly marked with fixed warning signs at the entrance / exit and around work perimeters detailing the potential hazards of the area.

Operational areas will be separated from publicly accessible areas using hoardings, barriers, fences or other appropriate equipment.

Segregated access for pedestrian and vehicle entrances will be provided.

Out of working hours, the Principal Contractor should ensure that Site access points are securely locked and appropriate security provisions set in motion to prevent unauthorised access. The provision of alarms will follow Health and Safety Executive (HSE) requirements.

5.2.3 Pedestrian Management and Safety

Hoarding will be maintained around the Site at all times. This will be provided in accordance with HSE standards and the Conditions of Licence issued by LBC, and will be maintained by the Principal

Contractor during the works. Hoardings will be fitted with bulkhead lights and will be well lit during hours of darkness. In addition, the Principal Contractor will ensure that all hoardings are painted on both faces.

The public highway adjoining the Site will be kept clean and free from obstructions throughout the works.

It is possible that portions of the pavement along St Pancras Way to the immediate west of the Site and Granary Street to the immediate south will be closed during the construction works and that the hoarding will follow the kerb line in order to provide working room. The positioning of this hoarding must be agreed in writing with LBC and all relevant licenses obtained prior to its installation. Pedestrians must be redirected safely to alternative pedestrian routes.

If diversions are put in place, the safety of pedestrians and / or cyclists will be maintained. Vulnerable footway users (including wheelchair users, the elderly and young children) will also be considered. Appropriate ramping will be used if cables, hoses, etc. are run across the footway.

5.2.4 Site Facilities

On-site changing and canteen facilities for site employees will be provided by the Principal Contractor. A Site office will be installed for the Principal Contractor Site Manager who will hold all the documentation required by this CMP. All documentation will be subject to independent audit as outlined in Section 15 of this CMP, Site Environmental Auditing. A summary of the documentation required can also be found in Section 15.

Employees will not congregate on the pavement outside the Site boundary, unless required to do so as part of their work. A Site dress code will be specified in the induction and details of inappropriate behaviour, including the use of radios, will be highlighted during the Site induction. The Site will run a staggered break system to prevent large groups of site employees visiting local shops together.

Food waste will be disposed of regularly to minimise the potential for vermin. Adequate waste and rubbish disposal facilities shall be provided to minimise littering.

Designated smoking areas will be provided at the Site, with no smoking allowed to occur outside this area. All site facilities will be contained within the curtilage of the Site area. Locations will be agreed with LBC prior to activities commencing.

5.2.5 Site Floodlighting

Floodlighting in areas adjacent to sensitive receptors shall generally be limited to the working hours identified in Section 5.2.1, and when seasonal changes in natural daylight require it. Where light glare may cause a nuisance, light shielding will be considered. Site lighting will be kept to a minimum, whenever possible, taking into account the needs for Health and Safety and security. Hoarding will be lit during the hours of darkness.

Where required, lighting shall be sensitively placed, taking due account of ecological sensitive areas (namely the Regent's Canal) and nearby residential properties. Where possible, lighting shall be directed away from the Regent's Canal to the east of the Site as it is understood that this area may provide commuting and foraging habitats for bats.

5.2.6 Utility Services

A high-level summary of the likely utility works required to facilitate the Proposed Development is provided below.

Electricity

- Plot B currently has a HV substation facing onto St Pancras Way, this is to be retained in position while Plot B is constructed around it.
- Plot A and Plot C will be provided with new HV substations.
- Single or Three phase metered utility power supplies to each demise will be provided as LV from the substations.

Gas

- All existing mains gas supplies will be removed.
- New metered gas connections will be provided to the district heating plants in both Plot A and Plot C.
- It is not clear yet if any commercial facilities will require a gas connection, this has not yet been allowed for.

Water

- All existing water mains connections will be removed.
- New mains water connections will be provided to each plot where a booster will lift water to each floor.
- Prior to the construction works (e.g. piling), the exact position of the existing Thames Water sewer will be confirmed including its depth, size and construction.

6. Neighbour and Local Community Liaison and Management and of Complaints

6.1 Introduction

This procedure addresses neighbour and community liaison during the works. The Principal Contractor is responsible for ensuring compliance with the procedure. In addition, all staff are responsible for adhering to its requirements.

6.2 Relevant Legislation

- Clean Neighbourhoods and Environment Act 2005;
- Environmental Protection Act 1990, Part III: Statutory Nuisance; and
- Control of Pollution Act 1974.

6.3 Procedure

6.3.1 Liaison

All neighbouring occupiers will be contacted by the Principal Contractor to explain the activities to be undertaken, the duration of the works and the working hours. The consultation process (relating specifically to construction impacts) will take place following the granting of planning permission, regardless of any prior consultations relating to planning matters.

The consultation process will include all individuals and groups that stand to be affected by the proposed construction works. These individuals and groups will be provided with a copy of the draft CMP and / or a link to an online document, and will be given adequate time with which to respond to the draft CMP.

Prior to the commencement of the works, a contact telephone number will be provided. The Principal Contractor will maintain a full-time site contact for the public and LBC for them to be able to obtain information, register a complaint or request action.

The Principal Contractor will also liaise with LBC to discuss working methods and measures to be used to minimise disruption.

During the works, communication with neighbours and the community liaison groups will be maintained via a dedicated phone line for complaints, notice boards on hoardings (displaying contact details for key personnel), emails, meetings, and a regular newsletter with updates on the progress of the Proposed Development and details of key upcoming activities. Neighbours will also be specifically informed about any abnormal work or road closures proposed.

All licenses issued must be displayed prominently on hoardings, scaffolds, gantries or fences.

6.3.2 Complaints

In the event of a complaint from a neighbour, a member of the public or LBC in relation to any site activity, it will be recorded in a designated logbook, stating the nature of the complaint, the cause and, where appropriate, the remedial action taken. Sub-contractors shall immediately notify the Principal Contractor should they receive any complaints.

Should complaints about odour, noise, dust or vibration be received, they will be addressed directly by the Principal Contractor to enable results at the time of the complaint to be reviewed, and where appropriate immediate actions employed to rectify the problem.

All complainants will be contacted by the Principal Contractor or their representative for further discussion and identification of a mutually acceptable resolution if the problem persists. Where a valid grievance is raised, measures will be put in place where practicable to avoid recurrence of the complaint.

The Principal Contractor will provide regular updates to the Project Manager with regard to complaints received and subsequent resolutions.

6.4 Documentation

All complaints will be recorded in a complaints log with details of remedial action taken. The log will be available for inspection at any time during working hours.

7. Transport Management

7.1 Introduction

This procedure applies to the management of vehicles accessing the Site during the works and vehicle circulation within the Site. The Principal Contractor is responsible for managing traffic and ensuring that drivers adhere to both onsite and offsite transport protocols. Detail of transport management during the Proposed Development will be confirmed by the Principal Contractor once appointed.

All staff are responsible for complying with this procedure.

All vehicles and drivers servicing the Site will comply with the conditions laid out in the CLOCS Standard (refer to Section 1.3.2 for more information). The Principal Contractor is responsible for ensuring compliance with the CLOCS Standard.

A Transport Assessment for the Site has been prepared by Caneparo Associates, and is presented elsewhere in the planning application documentation.

7.2 Potential Impacts

The potential impacts as a result of demolition and construction traffic are:

- Congestion on the local road network resulting from vehicle routing and / or queuing to access the Site;
- Pollution as a result of queuing vehicles;
- Pedestrian and cyclist safety; and
- Dust and noise and vibration of vehicles visiting and operating on site.

7.3 Relevant Legislation and Guidance

- The Highways Act 1980;
- Environmental Protection Act 1990;
- Road Vehicles (Construction and Use) Regulations 1986, as amended;
- The Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999, as amended;
- Road Vehicles (Construction and Use) Regulations 1986;
- The Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002;
- EC Directive 98/69/EC;
- Traffic Management Act 2004;
- Sulphur Content of Liquid Fuels (England and Wales) Regulations 2007, as amended;
- Transport for London Travel Plan Guidance – Travel Planning for New Development in London 2011;
- Mayor of London's London Plan 2011;
- CLOCS Standard for construction logistics: Managing work related road risk 2015; and
- Camden's Considerate Contractors Manual 2008.

7.4 Procedure

7.4.1 Liaison with LBC

The Principal Contractor will carry out an initial consultation with LBC concerning the stopping-up of roads and footpaths, and the posting of notices informing local residents, businesses and organisations.

There will be no obstruction of the public footway or public carriageway during demolition or construction, unless otherwise agreed in writing by LBC in consultation with the Local Highway Authority and Transport for London. Agreement with LBC will be reached on the proposed commencement date of such works, the area of the carriageway or footway to be occupied and duration, and the proposed methods of construction in order to minimise inconvenience to the public.

No development shall commence until details of the facilities for buses, including interim arrangements, are submitted to and approved in writing with LBC in conjunction with Transport for London.

An up-to-date Transport Logistics Plan will be produced ahead of the commencement of Site works. This shall include details of road closures, pavement closures and controls on waiting vehicles. The plan will be agreed with LBC and implemented on commencement of such works.

7.4.2 Public Safety

Operational areas will be separated from publicly accessible areas using hoardings, barriers, fences or other appropriate equipment. High quality hoardings will be used where the general public could be in close proximity to operational activity.

Where site works require the public footpath to be diverted, appropriate signage will be erected to show safe alternative routes. Similarly, if partial road closure is required at any time, appropriate safety measures will be installed and signs and barriers erected. All necessary consents and licences will be obtained from LBC before any works that will involve interference with a carriageway or footway commence.

All HGV drivers will have attended a HGV Cycle Awareness sessions to ensure they are aware of and understand (and look-out for) cyclists on the roads.

All access to and egress from the Site will be made in a forward direction.

7.4.3 Traffic Routing

Demolition and construction traffic routes will be agreed with LBC. It is anticipated that all vehicles will access the Site from either St Pancras Way (adjacent to the west) or Granary Street (adjacent to the south). Construction vehicles will use other routes across the wider highway network such as Pancras Road (A5202) before joining Euston Road (A501).

The Principal Contractor will adhere to all local traffic management regulations when determining the access strategy to the Site.

Vehicles entering and leaving the Site will be carefully managed, using gates that are clearly marked and free from obstacles. Traffic marshals will ensure the safe passage of all traffic on the public highway, in particular pedestrian and cyclists, when vehicles are entering and leaving the Site.

7.4.4 Construction Materials by Canal

Given the proximity of a canal to the Site consideration will be given to the use of the canal network to transport construction materials and waste.

However, as a Principal Contractor has not been appointed at this stage, it cannot be easily determined where materials for construction and export will be coming from / going to. This will have a major bearing on the appropriateness of using canal barges to move materials i.e. if a lorry needs to divert 20 miles to move material by barge this may be less efficient than driving directly to the Site. Double handling of materials will also need to be considered as materials are moving from lorry to barge and visa-versa.

Therefore, as part of the subsequent more detailed version of this CMP, when a Principal Contractor has been appointed, a study will be undertaken to establish the appropriateness of using the canal to move materials. It is initially considered that there is potential for materials to be moved by canal.

7.4.5 Anticipated Vehicles

The largest vehicles anticipated on a regular basis are tipper lorries, concrete mixers, low loaders and general HGVs with a maximum legal length (16.5m). Other smaller vehicles such as contractor vans and skip lorries may also be prevalent. It is not known at this stage if any abnormal loads will be required; however, such vehicle trips will be kept to a minimum and prior authorisation, times and routes will be agreed with LBC.

At this early stage of the scheme (application stage), the extent of recyclable materials and other materials which need to exported has not been fully established. Therefore, it is not possible to estimate the number of HGV movements generated by the Construction Period. This volume of material will be better known once a Contractor is appointed and subsequently a more definitive CMP has been produced and submitted to LBC for approval. Some trips may be undertaken by canal barge which may alleviate the number of HGVs.

7.4.6 Deliveries

A delivery plan will be put in place prior to the commencement of the works, which will ensure that deliveries arrive at the correct part of the Site and at the correct time. Instructions explaining the plan will be sent to all suppliers and contractors.

All deliveries will be limited to the working hours set out in Section 6.2.1 and, where possible, will not arrive during peak hours. Deliveries will be phased and controlled on a 'just in time' basis to limit travel time around the Site, stockpiling of materials and any associated noise and dust impacts.

Whilst deliveries will be given set times to arrive, dwell and depart, no undue time pressures should be placed upon the driver at any time.

Consideration will be given to the use of a vehicle booking and management system in order to minimise peaks and increase opportunities for consolidated deliveries. As necessary, peak hour restrictions will be applied and enforced.

Banksmen will be present at all times to ensure the safe movement of any vehicles arriving at and leaving the Site and to ensure material and equipment are delivered and removed with as little disruption to local road users and traffic in the immediate vicinity of the Site. The banksmen and Site Foreman will also ensure that the correct vehicle attends the correct part of the Site at the correct time.

Wheel washing and road cleaning facilities will be provided at a sufficient level to ensure the surrounding road network is kept clear of spoil and debris. Vehicles will not wait or circulate on the public highway.

7.4.7 Cumulative Construction Impact

A plan of development sites in the local area is presented in **Appendix C**. It is likely that some of these will have been built out before the Proposed Development construction is started, others will be under development and there may be additional schemes to be added to this by the time the application for the Proposed Development is permitted. Therefore, a final list of cumulative schemes to be considered during the construction works will be agreed with LBC in due course.

7.4.8 Vehicle Maintenance and Emissions

All vehicles should be regularly maintained in accordance with the manufacturer's specifications. All commercial road vehicles used must meet European Emission Standards pursuant to EC Directive 98/69/EC (commonly known as Euro standards) of Euro 4.

All non-road mobile vehicles with compression ignition engines used within the Site must comply with emission standards set in EC directive 98/69/EC. Vehicles must meet Stage III limits from commencements of works.

Exemptions to the standards set out above for road and non-road vehicles may be granted for specialist equipment with alternative emission reduction equipment or run on alternative fuels. Such exemptions shall be applied for in writing to Local Planning Authority in advance of use.

Vehicles or equipment not complying with these standards must not be used on the Site without prior written approval from the Local Planning Authority.

Any diesel-powered machines used on Site must be run on low sulphur diesel, which is a fuel meeting the specification within BS EN 90.

7.4.9 Highway Interventions

Transport for London Road Network[5]

The Site is not located on or adjacent to the TfL London Road Network (TLRN). The closest TLRN road is the A400 (Camden High Street) approximately 520m east, which is part of the TfL North Central area.

Parking Bay Suspensions and Temporary Traffic Orders

Parking bay suspensions should only be requested where absolutely necessary. The Principal Contractor will be required to obtain a Temporary Traffic Order (TTO) where exclusive access to a parking bay is required for longer than six months.

Details of any proposed parking bay suspensions and TTOs will be confirmed by the Principal Contractor in due course.

Highway Works

The construction works will not involve the use of the public highway for storage, Site accommodation or welfare facilities. Space for such uses will be allocated within the Site boundary.

It is not expected that hoarding will encroach onto the public highway or pedestrian routes.

[5] Transport for London Road Network map, available from http://content.tfl.gov.uk/tfl-base-map-master.pdf (accessed 29/03/2017)

Vulnerable Road Users and Pedestrian Diversions, Scaffolding and Hoarding

If diversions are put in place, the safety of pedestrians and / or cyclists will be maintained through appropriate signage and protection measures. Vulnerable footway users (including wheelchair users, the elderly and young children) will also be considered. Appropriate ramping will be used if cables, hoses, etc. are run across the footway.

Secure hoarding with a lockable access will be maintained around the Site at all times in accordance with HSE standards and the Conditions of Licence issued by LBC. Hoardings will be fitted with bulkhead lights and will be well lit during hours of darkness.

Lighting and signage will be used on temporary structures, skips, etc.

7.5 Documentation

- Copies of vehicle maintenance records;
- Transport Logistics Plan;
- Travel Route and Contractor Welfare / Parking Location Plans;
- Employee Work Travel Plans; and
- A log of correspondence with LBC regarding non-conformance.

8. Noise and Vibration

8.1 Introduction

This procedure applies to the management of noise and vibration during the construction works. All staff are responsible for complying with the requirements of the procedure.

During demolition and construction, there would likely be a short-term, temporary increase in noise and vibration levels as a result of construction plant, equipment and delivery vehicles. Potential impacts from noise and vibration include disturbance to nearby residential / commercial properties and people, potentially leading to loss of productivity and potential damage to structures in the event of significantly elevated vibration levels.

The DoE leaflet 72 (Construction)[6], provides guidance for noise control on buildings sites. It states noise limits for construction sites in urban areas as 75dB L_{AEQ} at the façade of a noise-sensitive property between 0700 and 1900. The construction works would adhere to these noise limits and any noisy works would be undertaken within the Site working hours identified within Section 6.2.1.

A Noise Assessment Report for the Site has been prepared by Waterman, and is presented elsewhere in this application bundle. The assessment considers the Site's suitability for the nature of the proposed Development through measurement of existing noise affecting the Site.

A complete noise and vibration assessment will be undertaken during the detailed design phase of the Proposed Development.

Procedures for controlling the impacts of noise are described below.

8.2 Relevant Legislation and Guidance

- Environmental Protection Act 1990 Part III Statutory Nuisance;
- Control of Pollution Act 1974 Part IV (Sections 60 and 61);
- The Control of Noise (Codes of Practice for Construction and Open Sites) (England) Order 2002;
- Noise Emission in the Environment by Equipment for Use Outdoors Regulations 2001;
- The Noise and Statutory Nuisance Act 1993;
- The Noise Act 1996, as amended;
- Control of Noise at Work Regulations 2005, as amended;
- Environmental Noise (England) Regulations 2006;
- The Environmental Noise (Identification of Noise Sources) (England) Regulations 2007, as amended;
- BS 5228: Control of Noise on Construction and Open Sites, Parts 1 and 4;
- BS 7385: Part 2 Guide to Damage Levels from Ground Borne Vibration;
- BS 6472: Guide to Evaluation of Human Exposure to Vibration in Buildings (1-80Hz);
- BS EN 61672-1:2013: Electroacoustics, Sound level meters, Specifications December 2013;
- BRE "Controlling particles, vapour and noise pollution from construction sites" 2003; and
- Camden's Considerate Contractors Manual 2008.

[6] DoE. (1976). Advisory Leaflet (AL) 72 Noise Control on Building Sites.

8.3 Baseline Noise Monitoring

Short-term attended noise monitoring was carried out as part of the Waterman Noise Assessment Report over a seven-day period in December 2016 at three locations at the Site. Details of the three monitoring locations are summarised in Table 4 below.

Table 4: Noise Monitoring Locations

Monitoring Location (Figure 1)	**Description**	**Observations and Predominant Noise Sources**
LT1	Façade measurement at roof level on the south-eastern Site boundary overlooking Granary Street. Microphone located 12m AGL.	Noise climate dominated by vehicle traffic on Granary Street and St Pancras Way (A5202) along with Kings Cross construction works. Contributory noise from human activities, distant road noise, distant railway noise, HVAC services and distant aircraft also influence the noise climate to some extent.
LT2	Façade measurement at roof level on the eastern site boundary overlooking Regent's Canal. Microphone located 12m AGL.	Noise climate dominated by Kings Cross construction works along with distant railway and road traffic noise. Contributory noise from human activities, distant aircraft and HVAC services also influence the noise climate to some extent.
LT3	Façade measurement at roof level on western Site boundary overlooking St Pancras Way (A5202). Microphone located 12m AGL.	Noise climate dominated by vehicle traffic on St Pancras Way (A5202) and HVAC services. Contributory noise from human activities and distant aircraft also influence the noise climate to some extent.

Notes: LT (long-term); * Comparative free-field measurement at ground level.

A summary of the measured daytime (07:00 to 19:00), evening (19:00 to 23:00) and night-time (23:00 to 07:00) noise levels are presented in Table 5 below. Full details and results of the noise monitoring can be found in Section 4 of the Waterman Noise Assessment Report.

Table 5: Summary of Attended Baseline Noise Monitoring Results *(Façade Measurement)*

Monitoring Location (Figure 1)	**Period**	**Duration**	**$L_{Aeq,T}$ dB**		**$L_{A10,T}$ dB**		**$L_{A90,T}$ dB**		**$L_{AFmax,5min}$ dB**	
			Range	**Ave[1]**	**Range**	**Ave[2]**	**Range**	**Ave[2]**	**Range**	**90th Percentile[3]**
LT1	Day	12hr	55 - 71	62	55 - 73	64	52 – 68	57	57 – 92	78
	Evening	4hr	55 – 70	60	56 - 68	61	52 – 57	55	61 – 90	74
	Night	8hr	51 - 64	57	53 - 69	58	49 – 57	53	55 – 86	73
LT2	Day	12hr	49 - 71	55	50 - 76	55	47 – 57	51	53 - 84	72
	Evening	4hr	48 - 58	51	49 - 62	52	46 – 56	49	51 - 77	66
	Night	8hr	46 - 57	49	46 - 60	50	44 – 56	47	49 - 81	61
LT3	Day	12hr	61 - 80	68	66 - 78	70	50 – 68	60	72 - 105	85
	Evening	4hr	59 - 77	67	64 - 81	70	50 - 67	56	71 - 100	83
	Night	8hr	50 - 83	65	51 - 84	67	48 - 82	52	61 - 100	81

Notes: [1] Logarithmic average over the daytime survey periods; [2] Arithmetic average over the daytime survey periods; [3] The 90th percentile L_{AFmax} value is presented and considered representative of typical L_{AFmax} levels experienced. All figures rounded to nearest whole decibel.

8.4 Baseline Vibration Monitoring

From a review of the immediate vicinity, there does not appear to be any significant vibration generating sources (e.g. London Underground or Mainline Rail Lines) in close proximity to the Site (<120m) that would give rise to the need for formal assessment. As such, baseline vibration monitoring has not been carried out.

8.5 Procedures

8.5.1 Liaison with LBC

Discussions will take place with LBC prior to and / or (as the case may require) during construction works on relevant areas of the Site regarding the following:

- Noise Action Levels;
- Noise monitoring regime; and
- Proposed mitigation measures.

Discussion shall relate to the specific works and operations on such relevant plots or parts of the Site and the relevant context in which such works and operations shall be carried out. In addition, a Noise Management Plan will be submitted to LBC prior to the commencement of the Proposed Development.

8.5.2 General Mitigation Measures

Noise and vibration shall be managed according to best practicable means. The following mitigation measures should be implemented by contractors at all times to minimise noise and vibration generated from Site activities and disruption to any sensitive receptors. Particular attention will be paid to implementing the measures outlined below when operations are undertaken in close proximity to the adjoining residential properties.

- Hoarding and sheeting to public boundaries, potentially with increased height along boundaries with sensitive receptors;
- Any damaging to the hoarding surrounding the Site will be immediately repaired by the Principal Contractor;
- Lorry movements limited as far as possible;
- Use of modern plant with inherent noise suppression where available;
- Use of screens around static plant, and other temporary acoustic barriers where appropriate;
- Switching off plant which is not in use;
- Appropriate handling of storage materials;
- Restrictions on working hours and staff to be appropriately trained, particularly for noisy activities;
- With larger impact breakers, screens, sheeting and retention of enclosure facades would be utilised to reduce noise levels at potentially affected receptors;
- Regular maintenance of plant in accordance with manufactures' instructions;
- Regular communications held between contractors, local authority officers and neighbours
- Adopting quiet periods during the day to enable the occupants of surrounding commercial premises to carry out their work normally;

- Noise and vibration monitoring on Site, where necessary, which would assist in controlling levels at sensitive receptors;
- Periodically monitoring noise and vibration levels around the perimeter of the Site;
- Where noise Trigger Levels are exceeded, appropriate action should be taken to prevent exceedance of Action Levels; and
- Reviewing techniques, especially in response to exceedances of the Action Level and / or complaints.

8.6 Noise and Vibration Monitoring

Monitoring shall be the responsibility of the Principal Contractor. The requirement for noise and vibration monitoring, and the monitoring locations and frequency, will be agreed with LBC. This will be determined by the nature of the demolition works being undertaken at the Site at a particular time. During phases that have the potential to generate excessive noise and / or vibration, continuous monitoring is likely to be required. However, during quieter periods, monitoring may be undertaken once or twice per day. This frequency will be defined following liaison with LBC.

Noise and vibration monitoring record sheets, an example of which is presented in **Appendix D**, or similar, will be completed as necessary.

The results of monitoring will be recorded and retained on Site. Should monitoring identify any exceedance of the noise or vibration Action Levels, or should any complaints regarding noise and vibration be received, additional sample noise and vibration monitoring should be undertaken by the Environmental Monitoring Co-ordinator nominated by the Principal Contractor.

Where the results of the monitoring exercises indicate that the Action Levels have been exceeded, the following actions should be undertaken:

- The activity or activities causing the Action Levels to be exceeded will be identified through discussions with the Environmental Monitoring Co-ordinator;
- Investigations will be made to determine whether the activities could be easily changed or other simple actions taken to substantially reduce noise or vibration levels;
- If simple and effective remedial measures are not identified, consideration will be given to the implementation of alternative techniques and/or additional mitigation measures;
- Log the incidents of exceedances along with the identified source and the action taken to mitigate the issue. This log shall be available for review by LBC at all times; and
- In all cases where Action Levels are likely to be exceeded, neighbours shall be advised in writing to the degree that is appropriate for the levels likely to be reached and their estimated duration.

8.6.1 Equipment

Noise monitors will comply with BS EN 61672-1:2013 and conform to a Class 1 integrating sound level meter that simultaneously records L_{Aeq}, L_{MAX}, L_{90} and L_{10} noise levels. The vibration monitors must continuously sample the vibration levels and record the maximum vertical Peak Particle Velocity (PPV) every second for sample vibration monitoring and every 15-minute period for continuous vibration monitoring. The vibration monitors will be capable of measuring 3-dimensional levels of vibration.

8.7 Documentation

The following documentation must be held on file onsite:

- Noise and vibration monitoring data;
- Details of all complaints received;
- Details of corrective action taken if complaints are received or excessive noise is identified; and
- Information regarding maintenance.

9. Control of Emissions to Air

9.1 Introduction

The major influences on air quality throughout the construction works are likely to be dust-generating activities and vehicle emissions from plant and vehicles both on and accessing the Site. Potentially, nuisance can be caused by the deposition of construction dust.

Typical emissions arising from plant operating during the demolition works and from vehicles going to and from the Site would have the potential to contribute to local levels of air pollution, particularly Nitrogen Dioxide (NO_2), Carbon Dioxide (CO_2) and particulate measuring 10µm or less (PM_{10}). Dust nuisance occurs more readily during prolonged dry weather and especially in strong winds, and dust becomes more difficult to suppress once it is made airborne. Consequently, good site management includes the ability to respond quickly to such conditions.

LBC declared the whole Borough as an Air Quality Management Area (AQMA) in 2000 for exceedances of the annual mean NO_2 objective and daily mean PM_{10} objective, attributed to vehicle emissions.

An Air Quality Assessment has been prepared by Waterman, and is presented elsewhere in this application documentation. It includes a detailed assessment of the likely dust effects during the construction phase of the Proposed Development, as recommended by the Institute of Air Quality Management (IAQM) guidance on construction dust. This assessment identifies the need for four real time dust monitors to be used throughout the construction of the proposed development.

The procedures outlined below apply to the management of emissions to the atmosphere during the works. All staff are responsible for complying with the requirements of the procedure.

9.2 Potential Impacts

The construction works in relation to the Proposed Development have the potential to affect local air quality conditions, as follows:

- Nuisance from dust deposition onto surfaces such as clothes, cars or windows; and
- Impact on sensitive individuals from dust inhalation and air pollution.

9.3 Relevant Legislation and Guidance

- Environmental Protection Act 1990; Part III Statutory Nuisance;
- Control of Substances Hazardous to Health Regulations 1994;
- Control of Pollution Act 1974;
- Clean Air Act 1993;
- The Health and Safety at Work Act 1974;
- Clean Neighbourhoods and Environment Act 1995;
- Air Quality Regulations 2010;
- London Low Emission Zone;
- British Research Institute (BRE) “Controlling particles, vapour and noise pollution from construction sites” 2003;
- Environmental Permitting (England and Wales) Regulations 2010, as amended;

- Mayor of London's Supplementary Planning Guidance: Sustainable Design and Construction 2014;
- Mayor of London's Supplementary Planning Guidance: The Control of Dust and Emissions During Construction and Demolition 2014;
- Code of Practice for Works Affecting the Canal & River Trust, April 2016; and
- Camden's Considerate Contractors Manual 2008.

Guidance from the BRE states that the most effective mitigation technique for dust control is to prevent dust from becoming airborne, since it is difficult to suppress after this stage. Good site management would include the ability to respond quickly to such conditions by employing such techniques as damping down (i.e. using a spray hose to deliver a fine spray) of stockpiles and sheeting of lorries. Specific mitigation measures to be employed on Site are set out below.

9.4 Baseline Air Quality

Baseline air quality monitoring has not been undertaken as part of this CMP. However, LBC currently undertakes air quality monitoring at four automatic monitors within the Borough. The nearest monitor is located on Euston Road approximately 1.1km south of the centre of the Site and is classified at a roadside location. The monitoring results for NO_2 and PM_{10} at the Euston Road automatic monitor are presented in **Table 5** for the latest years available.

Table 6: Monitored Annual Mean Concentrations (µg/m3) at the Euston Road Automatic Monitoring operated by LBC

Pollutant	Averaging Period	AQS Objective	Year		
			2014	2015	2016
NO_2	Annual Mean	40µg/m^3	**104**	**91**	**86**
	Hourly Mean	200µg/m^3 not to be exceeded more than 18 times per year	**220**	**54**	**26**
PM_{10}	Annual Mean	40µg/m^3	32	28	24
	No. of Days	50µg/m^3 not to be exceeded more than 3 times per year	3	18	10

Notes: Data obtained from London Air (www.londonair.org.uk)
Exceedances of the AQS Objectives shown in **bold** text

It is currently considered suitable to adopt the guidance level suggested by the Greater London Authority and London Council's Best Practice Guidance. This states that a PM_{10} **Action Level of 250µg/m^3** averaged over a 15-minute period should be adopted. If levels exceed this threshold, further investigation / mitigation should be undertaken (see Section 9.5.3 below).

It is further recommended that an early warning level of 200µg/m^3, as a 15 minute mean, be adopted at which site management will be alerted. This will allow investigations to be undertaken prior to particulate levels reaching the 250µg/m^3 Action Level.

9.5 Procedures

9.5.1 Liaison with LBC

Prior to the commencement of construction, the Principal Contractor will confirm with LBC:

- Particulate (PM_{10}) Action Levels;
- Monitoring regime, sampling locations and frequency; and
- Proposed mitigation measures.

9.5.2 General Mitigation Measures

The following mitigation measures will be adopted by the Principal Contractor to reduce and manage dust and other emissions from Site activities and minimise disruption or nuisance to nearby sensitive receptors. Particular attention will be paid to implementing the measures outlined below when operations are undertaken close to the adjoining residential properties, and once parts of the Site are occupied.

A) Pre-project planning and effective management

- Carry out an environmental risk assessment and monitoring of dust during Site enabling works;
- Method Statements to include processes for controlling dust;
- Setting of on-site speed limit at 15mph; and
- Discussions with LBC at an early stage of the project to confirm what monitoring is required to meet national and local aims.

B) Site works

- Visual assessment of dust levels will be undertaken by all site personnel at all times to identify where excess dust levels are being generated;
- Solid barriers will be erected and maintained around the area under development; and
- Keeping fencing, barriers, scaffolding and screening clean.

C) Haulage routes, vehicles and plant

- Unnecessary vehicle movements and manoeuvring will be avoided;
- Locate plant and vehicles away from sensitive areas, or housed in closed environments where possible;
- Use of vehicles and plant with low emission levels;
- Switching off plant when not in use;
- Provision of easy-to-clean hardstanding for vehicles;
- Restriction of drop heights onto lorries;
- Use of gas powered generators rather than diesel if possible;
- Regular maintenance of engines, plant, maintenance of pumps and bowser jets;
- Use of wheel-washes or other similar facilities;
- Regular use of brushes and water sprays on vehicles in heavily used areas;
- Use of enclosed and sheeted vehicles;
- Use of specialist vehicle to remove dust (by vacuuming) before damping down where a large amount of dust has been produced and is laying on the ground;
- Ensure a road sweeper is available to clean mud and other debris from hardstanding, roads and footpaths;
- Prevention of unnecessary engine idling;

- Avoid heating with open flame burners;
- Using water sprays, sand or Hessian to reduce vapour emissions e.g. at major haul routes on Site; and
- Use of particle control measures on all machinery which can generate dust e.g. vacuums.

D) Materials handling, storage, stockpiles, spillage and disposal

- Provision of screening during dust generating activities near to commercial and residential properties adjoining the Site;
- Keeping handling areas clean and free of dust;
- Employ best available dust suppression techniques to control particle emissions;
- Control the cutting and grinding of materials on Site;
- Damping down with water when loading materials onto vehicles, onto conveyors and skips;
- Storage of fine dry materials in enclosures at all times, or given adequate protection from wind by sheeting;
- Ensure that skips are securely covered;
- Ensure methods and equipment are in place for immediate clean-up of accidental spillages of dusty or potentially dusty materials, using wet handling methods where appropriate; and
- No burning of waste wood or other materials on Site.

In addition to the above, The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance, produced by the Mayor of London in 2014, also requires the Principal Contractor to take into account the impact of air quality and dust on occupational exposure standards to minimise worker exposure, and breaches of air quality objectives that may occur outside the Site boundary, such as by visual assessment.

The Principal Contractor must ensure that all plant and vehicles are in good state of repair and conform to the manufacturers' specification or legislative / British Standard Emission Standards. Plant maintenance and defect reports shall be held on Site in a designated file. Wherever possible, plant shall not be left running for long periods when not directly in use. Where appropriate, electrically-powered plants shall be used in place of petrol or diesel.

Care should be taken that damping down and wheel washing activities do not create excess mud that could cause excessive run-off into water courses and drainage.

Particular attention will be paid to operations which must unavoidably take place in close proximity to sensitive surrounding properties.

9.5.3 Monitoring

Monitoring shall be the responsibility of the Principal Contractor. Final details of dust monitoring are to be agreed with LBC.

The Principal Contractor will determine the prevailing wind direction across the Site using data from a nearby weather station and identify which location(s) need to be monitored. A total of four continuous automatic particulate monitors will be set up to measure representative PM_{10} levels. These instruments should provide data that can be downloaded in real-time by the Local Authority. The dust monitor should also provide an alert to Site Management, such as in the form of an alarm or text message when the

Action Level has been exceeded. If required, supplementary monitoring with hand-held monitors will be implemented to get on-the-spot readings at selected points, such as close to sensitive receptors.

It is also recommended that an alert level below the Action Level should be incorporated into the alarm system, to allow issues surrounding elevated dust levels to be dealt with prior to the Action Level being reached.

Where the results of monitoring exercises indicate that the Action Levels have been exceeded, work should stop immediately and the following steps will be undertaken by the Principal Contractor:

- Identify the activity or activities causing the Action Level to be exceeded;
- Investigate whether the activities could be easily changed or other simple actions taken to substantially reduce dust levels;
- If simple and effective remedial measures are not identified, adopt alternative techniques and / or additional mitigation measures, until the problem is rectified;
- In all cases where Action Levels are likely to be exceeded, undertake liaison with neighbours and LBC to the degree that is appropriate for the levels likely to be reached and their estimated duration; and
- Log the incidents of exceedances along with the identified source and the action taken to mitigate the issue. This log should be available for review by LBC at all times.

The local community will be informed in writing of proposed Site operations, and potentially disturbing operations will be programmed for times that would minimise any impacts.

On-going visual inspection of the Site will be undertaken at all times by the Principal Contractor. If dust clouds are observed, action should be taken immediately, notwithstanding dust monitoring measurements.

9.6 Energy Management

Monthly measurements of energy use arising from Site activities must be recorded and displayed on site. Appropriate targets must be set for monthly energy usage and displayed on site. Monthly measurements of energy use arising from Site activities must be displayed as a graph in the Site office and show consumption over the project duration and compare actual consumption against target consumption.

9.7 Documentation

The following documentation must be held on file onsite:

- Dust monitoring sheets;
- Records of targets and progress against these targets for onsite energy use;
- A log of exceedances / complaints with source and details of corrective action taken;
- Method Statements;
- Risk Assessments;
- Plant maintenance and defect reports; and
- Complaints procedure.

10. Waste Minimisation and Management

10.1 Introduction

This procedure applies to the minimisation, storage and disposal of all waste generated during the construction works. It is also concerned with the establishment of procedures for complying with statutory and good practice requirements for waste management. The Principal Contractor is responsible for ensuring that the relevant documentation is completed and held on Site. In addition, all staff are responsible for adhering to the requirements of the procedure.

The Mayor of London's Supplementary Planning Guidance on Sustainable Design and Construction states that reducing waste should be the developers' preferred option, and that developers should focus on opportunities for waste reduction from the outset.

This section represents an outline Site Waste Management Plan (SWMP). A detailed SWMP shall be developed by the Principal Contractor and in advance of Site works commencing.

10.2 Relevant Legislation and Guidance

- Environmental Protection Act 1990, Part II;
- Environmental Protection (Duty of Care) Regulations 1991;
- Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991;
- Waste (England and Wales) Regulations 2011, as amended;
- List of Wastes (England) Regulations 2005;
- Hazardous Waste (England and Wales) Regulations 2005, as amended;
- Environmental Permitting (England and Wales) Regulations 2010, as amended;
- Clean Neighbourhoods and Environment Act 2005; and
- Institute of Civil Engineers (ICE) Demolition Protocol 2008.

To assist in achieving best practice, the Principal Contractor will consider the following initiatives:

- Waste Change, an online notice board where local recyclers advertise the availability of various types of waste and companies can search for required materials[7];
- BRE and Construction Industry Research and Information Association (CIRIA) current initiatives and publications relating to construction; and
- National Industrial Symbiosis Programme.

10.3 Procedure

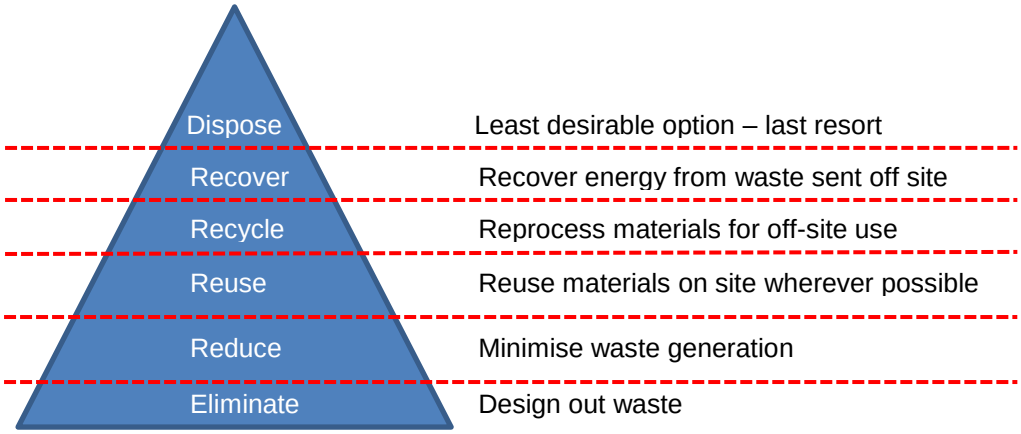
All potentially hazardous materials, such as contaminated arisings, require additional handling, storage and disposal precautions. They will be clearly labelled and removed by a specialist, licensed Waste Contractor and appropriate measures made for their disposal in accordance with all applicable environmental and health and safety legislation.

Waste management priorities and practical actions that can be undertaken on site should follow the principles of the waste hierarchy, as outlined below. Some waste types with potential to be reused or

[7] http://www.wastechange.com/cgi-bin/freexchange.cgi?gid=100273&search=london, accessed 08/08/2016

recycled on site include: soils, concrete, masonry, blacktop, excavation spoil, topsoil, timber, metals, architectural features, clay, concrete pipes, tiles, blocks and bricks, packaging and plastics. Prior to the demolition works of a specific area of the Site, the Principal Contractor shall undertake an audit of the Site to identify materials and opportunities for maximising salvage, reuse and recycling rates of building structures and materials. This will be guided by the ICE Demolition Protocol and / or BRE's SMARTwaste toolkit and the Waste and Resources Action Programme (WRAP) Facilities Management Procurement toolkit.

Figure 1: Waste Hierarchy



Stockpiling of potentially contaminated material will be avoided. Where stockpiling is unavoidable, the material will be located on hardstanding and covered with sheeting. Stockpiles will be physically separated to avoid cross contamination and temporary road access provided for placement and loading. Any stockpiles will be positioned on impervious surfaces to collected drainage and prevent loss of entrained water and leachate to ground.

Copies of all relevant licences for the waste disposal / treatment site will be provided prior to the waste being disposed off-site.

Waste material from the works will be segregated into individual waste streams retained in clearly labelled stockpiles, skips or drums in designated areas. The detailed SWMP will include detail on the types and volumes of wastes anticipated to be produced, details of a dedicated refuse / recycling enclosure, along with specific plans for how each will be stored and disposed of.

The Site will be left in a clean and tidy condition at the end of each day. Welfare facilities and skips will be clean and tidy, and food waste will be collected regularly to avoid attracting vermin to the Site.

All roads, pavements, demolition equipment, temporary structures, materials and machines will be kept clean and tidy at all times with litter and rubbish removed promptly.

When leaving the Site, appropriate measures will be taken to prevent waste escaping onto the public highways, for example containers must be secured and open skips must be covered by sheeting.

10.4 Documentation

The following documentation must be completed and held on Site by the Principal Contractor:

- Details of any targets for waste minimisation and recycling;
- Details regarding the quantities of waste produced, reused, recycled and sent to landfill;
- Waste Transfer Notes (Controlled Waste);
- Hazardous Waste Consignment Notes;
- Waste carrier's registration licences;
- Environmental Permits and licences for disposal sites; and
- Copy of hazardous waste producer registration (where required).

Transfer notes for controlled waste and consignment notes for hazardous waste must include an accurate description of the type, quantity and containment of waste; the European Waste Catalogue Number; and details of the waste carrier, who must be licensed. Sufficient information must be provided to ensure that the waste disposal operator is aware of the potential hazards of the substance. The Principal Contractor should also ensure that returns for consignment notes are collected and retained. All documentation must be retained for a minimum of two years for transfer notes and three years for consignment notes and be available for inspection.

It should be noted that from 1 April 2016, premises in England are no longer required to register as hazardous waste producers.

11. Pest Control

11.1 Introduction

This procedure applies to the prevention of pests, including rodents, harbouring at and spreading out from the Site during the construction works.

All staff are responsible for complying with the requirements of this procedure.

11.2 Procedure

For effective pest control, the following preventative measures will be taken during the construction works:

- All disused drains and sewers will be sealed correctly;
- Any pest infestation will be treated efficiently and effectively, and LBC will be informed as soon as possible;
- Regular Site inspections to ensure that no waste or rotting materials are left to build up;
- Welfare facilities and skips will be kept clean and tidy, and food waste will be collected regularly; and
- Ensure any caterers at the Site pay careful attention to manging food and associated material (i.e. deliveries, handling, storage and disposal).

If there are any pest issues at the Site during construction works, necessary arrangements will be made with a pest management contractor and LBC's Pest Control Team will be contacted.

11.3 Documentation

The following documents will be held on Site;

- Records of preventative action taken and approval received;
- Records of correspondence with LBC regarding any pest infestation;
- Copies of Site inspections undertaken for pest control purposes; and
- Copies of receipts (if any pest control works are undertaken).

12. Water Management and Pollution Control

12.1 Introduction

This procedure applies to discharges of trade effluent and other waters from the Site and control of ground and water pollution during the construction works. All staff are responsible for complying with the requirements of the procedure.

The Site is directly underlain by the London Clay Formation, overlying in turn the Lambeth Group, the Thanet Sand Formation and the Chalk Group. The London Clay Formation is classified as an Unproductive Strata. The Lambeth Group and the Thanet Sand Formation are both classified as Secondary A Aquifers and the Chalk Group is classified as a Principle Aquifer. The Site is not located within a groundwater Source Protection Zone.

The depth of groundwater beneath the Site has not been determined. As such, the potential for ground works associated with the Proposed Development to encounter groundwater cannot be discounted.

The closest surface water feature to the Site is the Regent's Canal adjacent to the east.

12.2 Potential Impacts

The potential impacts from construction activities to the current hydrological conditions are as follows:

- Incorrect disposal of Site effluent;
- Pollution of groundwater or surface water runoff through chemical, oil and fuel spills;
- Introduction of other pollutants (e.g. drilling runoff) into the surface water drainage system;
- Pollution of the groundwater or surface water run-off due to unforeseen contamination; and
- Increased vertical contamination percolation following removal of hardstanding.

12.3 Relevant Legislation and Guidance

- Environmental Protection Act 1990;
- Water Industry Act 1991, as amended;
- Environmental Permitting (England and Wales) Regulations 2010, as amended;
- Control of Pollution (Oil Storage) (England) Regulations 2001, as amended;
- Environment Agency Pollution Prevention Guidelines – General Guidance to the Prevention of Water Pollution (PPG01) 2013;
- Code of Practice for Works Affecting the Canal & River Trust, April 2016;
- BS 6031:2009 Code of Practice for Earthworks; and
- Environmental Damage (Prevention and Remediation) Regulations 2009.

12.4 Procedure

12.4.1 Management of Shallow Groundwater

Shallow groundwater should be managed in a controlled manner, and the Principal Contractor will have due regard for underlying aquifers and adhere to the Environment Agency's Groundwater Protection Policy.

Where any groundwater contamination is identified, the Site will be provided with a water treatment plant during the earthworks phase and any shallow groundwater that requires pumping from excavations will be directed to the treatment plant. The water treatment plant will discharge the treated effluent to foul sewer, subject to approval from the sewerage statutory undertaker.

There will be no infiltration of surface water drainage into the ground other than with the express written consent of LBC, which may be given for those parts of the Site where it has been demonstrated that there is no resultant unacceptable risk to controlled waters.

12.4.2 Site Drainage

The Principal Contractor will hold a foul and surface water drainage plan on Site which shows the location of all known drains and outfalls, and will implement working practices to ensure that contaminated water does not impact upon controlled waters. The Principal Contractor will make relevant staff aware of the existing drainage network.

Site drainage will be managed to prevent sediment laden or contaminated runoff from entering watercourses or drains without consent. Under no circumstances will waste chemicals, fuels, silt or sediments be discharged to the drainage system, surface water or groundwater. In the event of a blockage, a specialist trade contractor will clear out the drains and the waste material disposed of accordingly.

Trade effluent from the Site, including dewatering effluent, shall not be discharged to surface or foul water drains without obtaining consent from the Environment Agency or Thames Water respectively. The Principal Contractor is responsible for obtaining necessary consents and ensuring compliance with any conditions relating to, for example, the quantity and quality of effluent.

Water use will be monitored through meters or similar monitoring equipment and reported against targets set out by the Principal Contractor, which will be agreed with LBC.

12.4.3 Hazardous Substances

Significant quantities of hazardous substances are not anticipated to be used during the construction works. However, some fuels and oils may be required to be present on the Site.

In accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001, hazardous substance stores (including fuel and chemical stores) and stockpiles at risk of spillage / leakage of polluting materials will be provided with above ground secondary containment. Bunded compounds will have an impervious base, which can hold at least 110% of the capacity of the tank or drum it contains to minimise the risk of hazardous substances entering the drainage system or the underlying soils and / or groundwater.

All pipelines and fuelling points will be protected from vandalism and unauthorised interference, and will be turned off and locked when not in use. Drip trays will be used when filling smaller containers from tanks or drums to avoid drips and spills from entering the ground or drainage system.

Labels will be used to clearly indicate the contents of containers. There should be no storage of hazardous substances near open drains. All fuel storage and associated pipework will be above ground and located on hardstanding.

Deliveries will be supervised and spill kits will be available in areas where hazardous materials are used or stored. Areas used for vehicle washing and / or parked vehicles shall include oil interceptors.

On Site vehicle routing will take into consideration the location of any storage areas to ensure that accidental impact does not occur;

In case of accidental spillage, the pollution incident control procedure set out in Section 14 of this CMP will be followed.

12.5 Documentation

The following documents will be held on Site:

- Copies of Environmental Permits / discharge consents and records of any effluent monitoring, which will be held in a designated file by Contractor and will be available for inspection at any time;
- Copies of effluent monitoring records (if required by any discharge consent);
- A drainage plan for the Site, kept up to date as work on Site progresses; and
- An Environmental Incident Logbook for use in the event of a pollution incident.

13. Management of Soil Contamination

13.1 Introduction

A Phase I Environmental Report for the Site was prepared by DTS Raeburn in March 2016. The Phase 1 Environmental Report considered that there are low to moderate risks associated with land quality and ground gas at the Site associated with potential Made Ground from the current and previous buildings at the Site.

Before the commencement of construction works, it is likely that further investigations will be undertaken at the Site to delineate the presence of any ground contamination and the need for remediation. If required, a remediation strategy will be prepared, which will reflect the specific methodologies and works needed to effectively remediate any areas of contamination.

Copies of Site investigations, remediation proposals and risk assessments will be submitted to LBC's Environmental Health Team for approval before any works start. The Environmental Health Team will also be informed should any unexpected contamination be encountered.

All staff are responsible for complying with the requirements of the procedure below.

13.2 Relevant Legislation and Guidance

- Environmental Protection Act 1990 Part IIA;
- Environmental Damage (Prevention and Remediation) Regulations 2009, as amended;
- Contaminated Land (England) Regulations 2006, as amended;
- Contaminated Land Statutory Guidance 2012;
- Building Regulations 2000;
- Environmental Permitting (England and Wales) Regulations 2010, as amended;
- Control of Substances Hazardous to Health Regulations 2002;
- Health and Safety Executive Guidance Note EH40/2005 Workplace Exposure Limits;
- National Planning Policy Framework 2012;
- The London Plan: Spatial Development Strategy of Greater London 2011; and
- Camden's Considerate Contractors Manual 2008.

13.3 Procedure

Procedures to be adhered to during the construction works shall accord with any subsequent remediation strategies and method statements developed after further Site Investigations and the detailed design stages. Any such procedures will be agreed and implemented in accordance with the requirements of LBC. The Principal Contractor will be required to comply with these procedures throughout the Proposed Development of the Site.

All reasonable procedures will be taken during the construction works to prevent contamination. As a minimum, these procedures should include the following:

- Use of personal protective equipment (PPE) at all times during the demolition works;
- The establishment of pollution incident control procedures, as per Section 13;
- Provision of adequate hygiene facilities for washing and changing;
- Use of dust suppression techniques, including water spraying in dry weather, wheel washing facilities for vehicles leaving the Site and covering stockpiled material;
- Exposure of demolition workers to ground gas and vapours will be monitored where workers enter confined spaces such as excavations. Where necessary, adequate respiratory protective equipment (RPE) and ventilation should be provided;
- The removal and disposal of contaminated material will be conducted under a strict consignment system;
- Generation of stockpiles of excavated material will be minimised as far as is reasonably practical;
- Any soils that are stockpiled on Site will be identified according to assumed or confirmed categorisation, source, type and deposition date, and details of any chemical analyses. Stockpiles will be physically separated to avoid cross contamination and temporary road access provided for placement and loading;
- Stockpiles will be positioned on impervious surfaces to collect drainage and prevent loss of entrained water and leachate to ground; and
- Mitigation measures will be employed to minimise wind whip from stockpiled material.

13.4 Documentation

The following documentation shall be held on the Site:

- A log of environmental incidents and remedial actions;
- Relevant approvals from SDC; and
- Copies of waste transfer and consignment notes of any contaminated soil that is removed from the Site.

14. Pollution Incident Control Procedure

14.1 General

This procedure applies to public safety, emergency and other unplanned activities during the construction works. All staff are responsible for complying with the requirements of the procedure.

14.2 Relevant Legislation and Guidance

- Environmental Protection Act 1990;
- Environmental Permitting (England and Wales) Regulations 2010, as amended;
- Water Industry Act 1991, as amended;
- Environmental Damage (Prevention and Remediation) Regulations 2009: Guidance for England and Wales, as amended; and
- Mayor of London's Supplementary Planning Guidance: The Control of Dust and Emissions During Construction and Demolition 2014.

14.3 Procedure

The Principal Contractor will establish a spill control procedure as part of their operating procedures, which will be adhered to in the event of a spill.

Incidents that shall be reported to the Principal Contractor include:

- Spills of chemicals, oils, fuels, unplanned or non-consented discharges;
- Release of fumes and gases; and
- Any incident that could lead to enforcement action from LBC or any other regulatory body, public complaint or media attention.

In the event of a spillage or other pollution incident, the Principal Contractor will be notified immediately and will take immediate steps to prevent environmental pollution, for example:

- Protection of drains following a spillage of oil or other chemical;
- Use of spill kits following a spillage of oil or other chemical; and
- Turning off equipment or other source of fumes, noise or dust.

A suitable number of spill kits will be kept on Site in the vicinity of the work in progress and areas of hazardous material storage, which as a minimum should contain absorbent granules, sand bags and drain covers. Where possible, absorbent pads and booms shall be used instead of granules and sand bags. Used spill kits must be disposed of appropriately, for example as hazardous waste, where relevant.

If it is considered that a fugitive release to air, water or ground may have occurred, the following action will be taken:

- Ensure that it is safe to remain in the area;
- Locate and switch any isolation switches, valves or pumps if possible;
- Contact the following bodies where appropriate and follow their instructions:
    - Environment Agency (Tel: 0800 80 70 60);
    - London Fire Brigade – 999 (emergencies) 020 8555 1200 (non-emergencies); and

- LBC Environmental Protection Department (020 7364 5008).

Where possible, damage control measures should be undertaken to prevent dispersion of gases or pollution from entering drains or water courses. For example, create containment sumps, pump liquid to temporary storage areas (such as lined skips) and block or clear drains as appropriate.

14.4 Documentation

A log of environmental incidents and remedial actions taken will be maintained on the Site and held by the Principal Contractor.

15. Independent Site Environmental Auditing & Verification Monitoring

15.1 Introduction

Regular independent environmental audits will be carried out by an appropriate external party to ensure that the requirements of this CMP are being implemented. The frequency of the audits will be dependent upon the potential for the works being carried out to give rise to environmental impacts, but are generally once every month during the main phases of construction.

The audits will include a Site inspection and review of documentation, and will be recorded on the Site Record Sheet, or similar, an example Site Record Sheet is presented in **Appendix E**. This will include a review of the in-house auditing.

Non-conformances will be reported to the Principal Contractor's Environmental Manager with a deadline for remedial action, where necessary. Non-conformances will also be reported to the Project Manager, who will ensure that the remedial action is undertaken by the Principal Contractor.

Independent dust and noise monitoring will also be undertaken, in addition to that outlined in Sections 8 and 9 above.

15.2 Environmental Reviews

Environmental issues will be included as an item on the agenda at Progress Meetings, attended by the Principal Contractor, Sub Contractors, relevant Trade Contractors and other members of the Project Team where appropriate. Where relevant, the following should be discussed:

- Results of the monitoring;
- Complaints, including cause and remedial action;
- Neighbourhood liaison;
- Communications with LBC and other statutory bodies; and
- Incidents that have taken place.

15.3 Documentation

The following documentation shall be retained on the Site for inspection, as indicated in the previous sections of this CMP:

- Complaints log book with details of the response made to complaints received;
- Noise and vibration monitoring record sheets with details of corrective actions taken where the action levels are exceeded;
- Dust monitoring records;
- Plant maintenance and defect records;
- Details of waste recycling targets and records;
- Records of quantities of waste produced, reused, recycled and disposed of to landfill;
- Waste transfer notes, hazardous waste consignment notes and waste carriers registrations;
- Copies of discharge consents and licences;
- Results of discharge water quality testing; and

- Environmental incident logbook containing details of environmental incidents and corrective action taken.

APPENDICES

A. Site Plan

waterman

Site Boundary

N

Project Details	WIE11701-100: Ugly Brown Buildings, London
Figure Title	Figure 2: Site Boundary Plan
Figure Ref	WIE11701-100_GR_SL_2B
Date	August 2017
File Location	\\s-lncs\wiel\projects\wie11701\100\graphics\sl\issued figures

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B. Outline Construction Programme

The Ugly Brown Building
Outline Construction Programme

GARDINER &THEOBALD

Line	Activity Name	Start	Finish	Duration	Notes
1	**Demolition & Construction**	**08 Jan 18**	**31 Oct 25**	**386w**	
2	**Block A**	**08 Jan 18**	**29 Nov 19**	**95w**	
3	Site Establishment	08 Jan 18	02 Feb 18	4w	
4	Demolition Existing Block A	05 Feb 18	04 May 18	12w	
5	Piling & Basement	07 May 18	21 Sep 18	20w	
6	Superstructure	20 Aug 18	25 Jan 19	21w	
7	External Cladding & Roofing Works	03 Dec 18	05 Apr 19	16w	
8	Internal Fitting out	11 Mar 19	11 Oct 19	30w	
9	Commissioning & Handover	09 Sep 19	29 Nov 19	12w	
10	**Block B**	**02 Dec 19**	**29 Apr 22**	**117w**	
11	Ted Baker relocate to Block A	02 Dec 19	24 Jan 20	6w	
12	Site Establishment	27 Jan 20	21 Feb 20	4w	
13	Demolition Block B	24 Feb 20	19 Jun 20	16w	
14	Piling & Basement	22 Jun 20	18 Dec 20	26w	
15	Superstructure	12 Oct 20	28 May 21	30w	
16	External Cladding & Roofing Works	08 Feb 21	10 Sep 21	30w	
17	Internal Fitting out	14 Jun 21	25 Feb 22	35w	
18	Commissioning & Handover	20 Dec 21	29 Apr 22 *	16w	
19	**Block C**	**09 Jan 23**	**31 Oct 25**	**140w**	
20	Site Establishment	09 Jan 23 *	03 Feb 23	4w	
21	Demolition Block C	06 Feb 23	02 Jun 23	16w	
22	Piling & Basement	05 Jun 23	23 Feb 24	36w	
23	Superstructure	04 Dec 23	30 Aug 24	36w	
24	External Cladding & Roofing Works	13 May 24	31 Jan 25	36w	
25	Internal Fitting out	11 Nov 24	05 Sep 25	40w	
26	Commissioning & Handover	14 Jul 25	31 Oct 25	16w	

Programme no : UBB/OCP001

Prepared by : S.O'L Issue Date: 20/04/2017

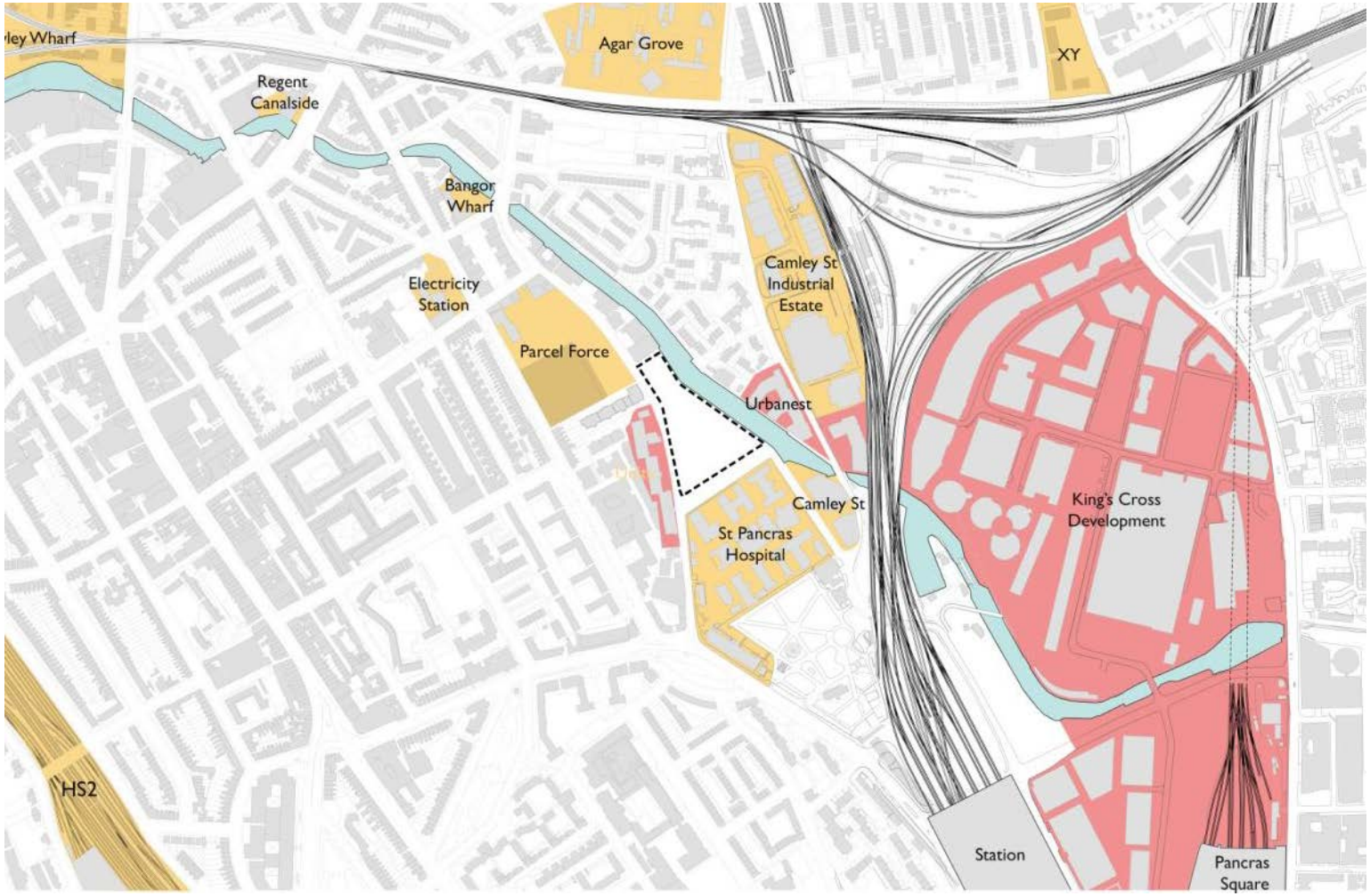
Rev no :

Date Revised:

Status: For Information & Comment

C. Local Development Sites

Development Sites



BENNETTS
ASSOCIATES

D. Example Dust, Noise and Vibration Monitoring Sheets

DUST MONITORING RECORD SHEET

Date of monitoring:
Weather:
Name of person undertaking monitoring:

Monitoring position	PM_{10} level recorded			TSP level recorded			Start Time	Thresholds exceeded?	Source and/or Activities
	Min	Peak	Av. (15 min)	Min	Peak	Av. (15 min)			
1.									
2.									

The action level is 250µg/m^3

EVALUATION (to be completed during every monitoring visit)	
Have any complaints been received? Comments:	Y / N
Is action needed to mitigate dust? If not, why not? Comments:	Y / N

REMEDIAL ACTION (to be completed if action is required)	
Discussion Details of action to be undertaken:	
Has action been satisfactorily implemented? Comments:	Y / N

NOISE MONITORING RECORD SHEET

Date of monitoring:

Name of person undertaking monitoring:

Monitoring position	Noise level recorded, dB	Time	Action Level	Level exceeded?	Source / Observations
1.					
2.					

The Action Level of 75dB LAEQ is set for the façade of the nearest receptor.

EVALUATION (to be completed during every monitoring visit)	
Have any complaints been received? Comments:	Y / N
Is action needed to mitigate noise? If not, why not? Comments on action required:	Y / N

REMEDIAL ACTION (to be completed if action is required)	
Discussion Details of action to be undertaken:	
Has action been satisfactorily implemented? Comments:	Y / N

VIBRATION MONITORING RECORD SHEET

Date of monitoring:
Name of person undertaking monitoring:

Monitoring position	Vibration level recorded, ppv	Time	Action level exceeded?	Source / Observations
1.				
2.				

Note: Action Level is 3 mm/s PPV.

EVALUATION (to be completed during every monitoring visit)	
Have any complaints been received? Comments:	Y / N
Is action needed to mitigate vibration? If not, why not? Comments on action required:	Y / N

REMEDIAL ACTION (to be completed if action is required)	
Discussion Details of action to be undertaken:	
Has action been satisfactorily implemented? Comments:	Y / N

E. Site Review Record Sheet

FORM A: SITE REVIEW RECORD SHEET

(To be completed in conjunction with Form B)

Date of site visit: **Time:** **Name of person undertaking visit:**

Checklist:

Issue	Observation	Required Action (numbered)
General		
What activities are currently being undertaken at the Site?		
Does the Site appear clean and tidy from the outside? Including hoarding, viewing apertures, entry points, pedestrian signs, pavement ramps etc.		
Can all road signs/names be seen?		
Is the reception clearly signed and does the receptionist know how to deal with unexpected		

Issue	Observation	Required Action (numbered)
visitors? Were you escorted to the person you are visiting?		
Is the Site clean and tidy internally?		
Are all site facilities within the Site boundary?		
Are site operatives using the correct rest facilities (i.e. not congregating in public areas?)		
Are site operatives aware of the Site Environmental Policy and how it relates to them?		
Are site operatives appropriately dressed and is the radio ban being enforced?		

Issue	Observation	Required Action (numbered)
Does the Principal Contractor operate an Environmental Management System?		
Has the Site registered with the Considerate Constructors Scheme? If yes, has a minimum score of 24 been achieved?		
Does the Principal Contractor have an environmental materials policy, used for sourcing of construction materials to be utilised on site?		
Is floodlighting limited to working hours and shielding in place where light may cause a nuisance?		
Energy / CO_2		
Are there any energy saving measures in place on the Site?		

Issue	Observation	Required Action (numbered)
Is onsite energy use / CO2 produced from onsite energy use being monitored, recorded and reported monthly. Who is the named individual responsible for this?		
Is the distance travelled by transport to and from the Site being monitored to enable CO2 emissions to be calculated? Is this recorded and reported monthly?		
Public Relations and Community Liaison		
Have any complaints been received from the public or neighbours? If so, give details.		
Are gates kept closed and entry points manned?		
Are pedestrian walkways signed and clear of obstructions and allow access for mobility impaired people or people with sight/hearing difficulties?		

Issue	Observation	Required Action (numbered)
Is the vehicle routing both on and off site being followed?		
Are vehicles queuing to access the Site and are vehicles waiting to enter or leave the Site switched off?		
Is wheel washing and street sweeping being undertaken and is it effective at reducing mud on the roads?		
Water and Wastewater Management		
Is a drainage plan held on site and methods of preventing silt and oils from entering the drainage system in use?		
Are there any unauthorised discharges?		
Is water use being minimised and monthly water consumption figures being recorded?		

Issue	Observation	Required Action (numbered)
Bulk Chemical / Fuel Storage		
Are liquids stored appropriately i.e. bunded and labelled?		
Is there any evidence of spillages? Are spill kits available?		
Are drip trays being used to fill small containers?		
Are deliveries of fuel and oil supervised and fuelling points protected from vandalism?		
Are there stockpiles of material on the Site? If so, where and are they appropriately stored to prevent damage/theft etc?		
Waste Management		

Issue	Observation	Required Action (numbered)
What types and quantities of waste are collected on site?		
Are records being kept to show the amount of waste collected and how much is being reused or recycled?		
Are waste certificates and other documents in order (Hazardous Waste Consignment Notes / Waste Transfer Notes)?		
Air Quality		
Are lorries sheeted when leaving the Site?		
Are any dust clouds observed? If so, where?		
Have dust action levels been exceeded? If so, give details.		

Issue	Observation	Required Action (numbered)
Noise and Vibration		
Can noise be heard as the Site is approached? If so, where is it coming from?		
Is a sign displayed prominently detailing the Principal Contractor, contact details for complaints etc?		
Have noise action levels been exceeded? If so, give details		
Have vibration action levels been exceeded? If so, give details		
Have any statutory bodies visited the Site? Council (EHO), Environment Agency etc.		
Are there any incidents recorded in the environmental incidents logbook?		

Issue	Observation	Required Action (numbered)
Other		
Other observations:		

FORM B: ENVIRONMENTAL ACTIONS SHEET

(To be completed in conjunction with Form A)

For the attention of **(Name of Contractor)**

All **actions** arising from the Site visit on are numbered below and should be rectified immediately. Confirmation should be forwarded to the Project Manager **within the time specified** using this form

Required Action number	**Description of how Action has been rectified**	**To be auctioned within the following timescale**

Signed: Print name:

Date:

Please forward to the Project Manager

UK and Ireland Office Locations