North London Waste Authority North London Heat and Power Project

Interim Code of Construction Practice

The Planning Act 2008 The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5 (2)(q)

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Arup

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Appendices

Appendix A – Example Section 61 application consent form

Abbreviations

Term	Definition	Term	Definition
BAT	BAT Conservation Trust	HGV	Heavy Goods Vehicle
BPM	Best Practicable Means	IBA	Incinerator Bottom Ash
BS	British Standard	IVC	In-vessel compositing
BWRF	Bulky Waste Recycling Facility	LB Enfield	London Borough of Enfield
CCTV	Closed Circuit Television	LWL	London Waste Limited
CDM	Construction Design Management	NE	Natural England
CEMP	Construction Environmental Management Plan	NLWA	North London Waste Authority
CIRIA	Construction Industry Research and Information Association	NPPF	National Planning Policy Framework
СоРА	Control of Pollution Act	NRMM	Non-Road Mobile machinery
CoSHH	Control of Substances Hazardous to Health	PPG	Pollution Prevention Guidelines
DCO	Development Consent Order	RPZ	Root Protection Zone
DEFRA	Department for Environment, Food and Rural Affairs	SMINC	Site of Metropolitan Importance for Nature Conservation
EA	Environment Agency	SSSI	Site of Scientific Specialist Interest
EfW	Energy from Waste	STN	Strategic Road Network
EMS	Environmental Management System	SUDS	Sustainable Drainage Systems
ERF	Energy Recovery Facility	SWMP	Site Waste Management Plan
ES	Environmental Statement	TfL	Transport for London
FORS	Fleet Operator Recognition Scheme	TMP	Traffic Management Plan
FPP	Fuel Preparation Plant	TLRN	Transport for London Route Network
FRA	Flood Risk Assessment	WRAP	Waste and Resources Action Programme
HSE	Health and Safety Executive		

Glossary

Term	Definition
BPM	Best practicable means - defined in the Control of Pollution Act 1974 and Environmental Protection Act 1990 as measures which are 'reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications'.
CDM	Construction design and management in relation with Construction (Design and Management) Regulations 2007.
CL:AIRE	Contaminated land: applications in real environments – an organisation dedicated to raise awareness of practical sustainable remediation technologies.
Considerate Constructors Scheme	A UK national scheme which promotes good practice on construction sites through its codes of considerate practice, which commit registered sites to be considerate and good neighbours, as well as being respectful, environmentally conscious, responsible and accountable. For more information see: www.ccscheme.org.uk
Contractor	Refers to the main Contractor and their sub-contractors carrying out works associated with construction.
Construction	Contractor activities related to site preparation, demolition, materials delivery and removal and all related engineering and construction activities.
Luminosity	The relative quantity of light.
Section 61	Section 61 of the Control of Pollution Act 1974 (which sets out procedures seeking and obtaining local authority consent to measures for the control of noise and vibration on construction sites).

1 Introduction

1.1 Purpose of this Document

- 1.1.1 The North London Waste Authority (NLWA) is preparing an application for a Development Consent Order (DCO) pursuant to the Planning Act 2008 (as amended). The Application will be for the North London Heat and Power Project (the Project) comprising construction, operation and maintenance of an Energy Recovery Facility (ERF) of around 70 megawatts (MW_e) and associated development, including a Resource Recovery Facility (RRC) at the Edmonton EcoPark site in north London. The proposed ERF will replace the existing Energy from Waste (EfW) facility and other facilities at the Edmonton EcoPark.
- 1.1.2 This Interim Code of Construction Practice (CoCP) has been prepared to support the Phase Two Consultation for the Project. The final CoCP that will support the DCO submission for the Project will reflect this Interim CoCP.
- 1.1.3 The purpose of the Interim CoCP is to outline minimum standards of construction practice required of the Contractor and the Applicant as they affect the environment, amenity and safety of local residents, businesses, the general public and the surroundings in the vicinity of the Application Site. This Interim CoCP sets out a series of proposed control measures and standards of work that will be applied by the Applicant and the Contractor throughout the construction period to control potential impacts and provide a mechanism to engage with stakeholders.
- 1.1.4 This Interim CoCP has been developed to facilitate the identification of suitable mitigation for use as part of the Environmental Impact Assessment process.
- 1.1.5 The CoCP contains control measures and the standards to be implemented throughout construction of the Project. The CoCP will provide a consistent approach to the management of construction activities during the Project.
- 1.1.6 In this Interim CoCP "construction" includes all Contractor activities related to site preparation, demolition, materials delivery and removal and all related engineering and construction activities. The "Contractor" refers to the main Contractor and their sub-contractors carrying out works associated with construction.

1.2 The North London Waste Authority

- 1.2.1 Established in 1986, the NLWA is a statutory authority whose principal statutory responsibility is the disposal of waste collected by the seven north London boroughs of Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest (the Constituent Boroughs).
- 1.2.2 The NLWA is the UK's second largest waste disposal authority handling approximately 3% of the total national municipal waste stream. Since 1994 the Authority has managed its waste arisings predominantly through its waste management contract with LondonWaste Limited (LWL) and the use of the EfW facility at the Edmonton EcoPark and landfill outside of London.

1.3 Application Site

- 1.3.1 The Application Site, as shown on the Site Location Plan (0001), extends to 22.2 hectares and is located wholly within the London Borough of Enfield (LB Enfield). The Application Site comprises the existing waste management site known as the Edmonton EcoPark where the permanent facilities will be located, part of Ardra Road, land around the existing water pumping station at Ardra Road, Deephams Farm Road, part of Lee Park Way and land to the west of the River Lee Navigation and land to the north of Advent Way and east of the River Lee Navigation (part of which will form the Laydown Area and new Lee Park Way access road). The post code for the site is N18 3AG and the grid reference for the proposed development is TQ 35750 92860.
- 1.3.2 The Application Site includes all land required to deliver the Project. This includes land that would be required temporarily to facilitate development.

Edmonton EcoPark

- 1.3.3 The Edmonton EcoPark is an existing waste management complex of around 16 hectares.
- 1.3.4 Current use of the Edmonton EcoPark comprises:
 - an EfW facility which treats circa 540,000 tonnes per annum (tpa) of municipal waste and generates around 40MW_e (gross) of power;
 - an In-Vessel Compositing (IVC) facility which processes food, landscaping and other green waste from kerbside collections and RRCs as well as local parks departments. The facility currently manages around 30,000tpa;
 - a Bulky Waste Recycling Facility (BWRF) and Fuel Preparation Plant (FPP) which receive bulky waste from RRCs and direct deliveries. These facilities respectively recycle wood, metal, plastic, paper, card and construction waste; and separate oversized items and shred waste suitable for combustion. These integrated facilities manage over 200,000tpa;
 - an Incinerator Bottom Ash (IBA) Recycling Facility which processes ash from the existing EfW facility;
 - a fleet management and maintenance facility which provides parking and maintenance facilities for the Edmonton EcoPark fleet of operational vehicles; and
 - associated offices, car parking and plant required to operate the facility.
- 1.3.5 In order to construct the proposed ERF, the existing IVC, BWRF, FPP, and IBA recycling operations will be decommissioned and/or relocated.

Laydown Area

1.3.6 The proposed temporary Laydown Area is an area of open scrubland located to the east of the River Lee Navigation and north of Advent Way.

1.3.7 In addition to the Laydown Area the Application Site includes land to the east of the existing Edmonton EcoPark which will be used for the new Lee Park Way access and landscaping along the eastern boundary.

1.4 Surrounding Area

- 1.4.1 The Application Site is located to the north of the A406 North Circular Road in an area that is predominantly industrial. The Lee Valley Regional Park (LVRP) is located to the east of the Application Site.
- 1.4.2 Land to the north and west of the Application Site is predominantly industrial in nature. Immediately to the north of the Edmonton EcoPark is an existing Materials Recycling Facility (MRF) which is operated by a commercial waste management company, alongside other industrial buildings. Further north is Deephams Sewage Treatment Works. Beyond the industrial area to the north-west is a residential area with Badma Close being the nearest street, approximately 600m from the Edmonton EcoPark and 60 m from the nearest part of the Application Site boundary.
- 1.4.3 Eley Industrial Estate located to the west of the Application Site comprises a mixture of retail units, industrial and warehousing uses.
- 1.4.4 Advent Way is located to the south of the Application Site adjacent to the A406 North Circular Road (Angel Road). Beyond the A406 North Circular Road are retail and trading estates; this area is identified for future redevelopment to provide a housing led mixed use development known as Meridian Water.
- 1.4.5 The LVRP and River Lee Navigation are immediately adjacent to the eastern boundary of the Edmonton EcoPark, and the Lee Park Way, a private road which also forms National Cycle Route no. 1, runs alongside the Navigation. The LVRP is located to the east of the River Lee Navigation where the William Girling Reservoir is located along with an area currently occupied by Camden Aggregates which is used for the crushing, screening and stockpiling of concrete, soil and other recyclable materials. The nearest residential areas to the east of the Application Site and LVRP are located at Lower Hall Lane, approximately 550m from the Edmonton EcoPark and 150m from the eastern edge of the Application Site.

1.5 The Project

- 1.5.1 The Project would replace the existing EfW facility at Edmonton EcoPark, which is expected to cease operations in 2025, with a new and more efficient ERF which will produce energy from municipal waste, and associated development, including temporary works required to facilitate construction, demolition and commissioning. The proposed ERF would surpass the requirement under the Waste Framework Directive (Directive 2008/98/EC) to achieve an efficiency rating in excess of the prescribed level, and would therefore be classified as a recovery operation rather than disposal.
- 1.5.2 The main features of the Project once the proposed ERF and permanent associated works are constructed and the existing EfW facility is demolished comprise:

- a. a northern area of the Edmonton EcoPark accommodating the proposed ERF;
- b. a southern area of the Edmonton EcoPark accommodating the RRF, a visitor and education centre with offices, and a base for the Edmonton Sea Cadets ('EcoPark House');
- c. a central space, where the existing EfW facility is currently located that would be cleared; and
- d. a new landscape area along the edge with the River Lee Navigation.
- 1.5.3 The proposed development works for which consent will be sought are set out on drawings in the Draft Book of Plans. The description below refers to the works numbers (e.g. 'ERF1') identified on the drawings.

Principal Development

- 1.5.4 The principal development comprises development of an ERF generating electricity using residual waste as a fuel and capable of an electrical output of around 70 MW_e (gross). The principal development consists of the following development located within the Building Envelopes shown in Works Zone 1A and 1B on Drawings 00_0011 and 00_0012:
 - tipping hall (ERF1) and one way access and exit ramps (ERF9);
 - a waste bunker with two overhead cranes (ERF2 and ERF2a) and space to hold the equivalent of around seven days of processing capacity to provide sufficient space for mixing;
 - two process lines (with each line having a capacity of 350ktpa) (ERF3), consisting of a moving grate, furnace, boiler and a flue gas treatment plant, stack (ERF6) and facilities for the recovery of incinerator bottom ash for recycling;
 - a steam turbine for electricity generation (ERF3);
 - heat off-take equipment within the ERF capable of supplying heat through a connection to a separate district heating energy centre (DHEC). This separate DHEC is not part of the Project and will be developed by LB Enfield;
 - air or water cooled condenser(s) (ERF5); and
 - plant control and monitoring systems and offices (ERF4).

Associated Development

- 1.5.5 Associated development is shown in the Book of Plans and comprises the following elements:
 - construction and operation of plant and structures to support the operation of the proposed ERF;
 - installation of a green roof and a brown roof over parts of the proposed ERF;
 - observation platform at roof level above the tipping hall;
 - replacement waste water treatment facility;

- the decommissioning and demolition of the existing EfW facility and installation of temporary hard landscaping in this area;
- construction and operation of a Resource Recovery Facility;
- construction of EcoPark House accommodating a visitor and education centre with offices, and a base for the Edmonton Sea Cadets;
- construction of a boat canopy alongside the River Lee Navigation to service the requirements of the Edmonton Sea Cadets;
- utility works;
- construction of surface water pumps, pipework and water attenuation tanks;
- permanent hard and soft landscaping;
- site circulation and parking works;
- artificial lighting, site security and means of enclosure works;
- creation of a temporary Laydown Area:
- works to reinstate the current landscaping in the area used for the temporary Laydown Area; and
- site access and highways improvements.

1.6 Stages of the Project

- 1.6.1 The proposed ERF is intended to be in place before the end of 2025, but with the precise timing of the replacement to be determined. In order to do this, the following key steps are required:
 - obtain a DCO for the new facility and associated developments;
 - obtain relevant environmental permit(s);
 - identify a suitable technology supplier;
 - agree and arrange source(s) of funding;
 - enter into contract(s) for design, build and operation of new facility and associated development;
 - move to operation of new facility; and
 - decommissioning and demolition of the existing EfW facility.
- 1.6.2 Site preparation and construction will be phased over a number of years and it is expected that the earliest construction would commence is 2019/20, although this may be later. Construction will be implemented in a phased manner to ensure that essential waste management operations remain functioning throughout. This is especially relevant for the existing EfW facility and associated support facilities.
- 1.6.3 The stages of the Project are as follows:
 - Phase 1a site preparation and enabling works;
 - Phase 1b construction of RRF, EcoPark House and commence use of Laydown Area;

- Phase 1c operation of RRF, EcoPark House and demolition/ clearance of northern area;
- Phase 1d construction of ERF;
- Phase 2: commissioning of ERF alongside operation of EfW facility, i.e. transition period;
- Phase 3: operation of ERF, RRF and EcoPark House, demolition of EfW facility; and
- Phase 4: operation of ERF, RRF and EcoPark House, i.e. final operational situation.

1.7 Structure of this Document

- 1.7.1 This document comprises the following sections:
 - Section 1 Introduction;
 - Section 2 Environmental Management Principles and Implementation outlines how environmental requirements are to be managed;
 - Section 3 Community Relations outlines the approach to managing community relations; and
 - Section 4-13 Requirements by environmental topic sets out the measures that will be implemented to limit the disturbance from construction activities, as far as reasonably practicable, on a topic by topic basis, including:
 - General requirements
 - Air quality and odour
 - Archaeology and cultural heritage
 - Ecology
 - Ground conditions and contamination
 - Noise and vibration
 - Townscape and visual
 - Transport
 - Water resources
 - Waste.

1.8 Status of the CoCP

- 1.8.1 Development of this Interim CoCP will be progressed by the Applicant through discussions with the London Borough of Enfield (LB Enfield) and other relevant statutory bodies e.g. Natural England (NE), Environment Agency (EA). The Interim CoCP will be amended, as necessary, as the project design, assessment and consenting processes develop and feedback has been sought from stakeholders through formal consultation.
- 1.8.2 Prior to construction works commencing this Interim CoCP will be reviewed and updated by the Applicant where appropriate, with the aim of ensuring that any new relevant guidance is considered.

2 Environmental Management Principles and Implementation

2.1 Compliance with applicable codes, standards and legal requirements

2.1.1 The Applicant will require the Contractor to comply as a minimum with applicable environmental legislation, code of practices, good industry practice, standards and guidance e.g. British Standards relevant to the various construction activities in which they are engaged at the time of construction. The references to applicable statutory requirements and guidance documents within this document are not intended to be exhaustive.

2.2 Considerate Constructors Scheme

2.2.1 The Contractor will be required to sign up to and adhere to the Considerate Constructors Scheme (<u>www.ccscheme.org.uk</u>) and will aim to attain a Certificate of Performance Beyond Compliance.

2.3 Contractor's Environmental Management System

- 2.3.1 The Contractor will be required to develop and implement an Environmental Management System (EMS) that follows the principles of BS EN ISO 14001 and will include the Contractor's environmental policy, operational, monitoring and auditing procedures. The contractor's EMS will ensure compliance with environmental requirements [of the contract] as well as ensuring relevant legislation, standards, regulations and consents are being met including commitments from the ES and requirements of the DCO are complied with.
- 2.3.2 The EMS will be set out in the Construction Environmental Management Plan (CEMP). The CEMP will document roles and responsibilities, together with appropriate risk assessments and control measures, operational procedures, training and competency of site personnel and stakeholder engagement and monitoring systems to be implemented for all relevant topic areas.

2.4 Enforcement of the CoCP

2.4.1 The provisions of the CoCP will be enforceable through the works contract. The Contractor will have primary responsibility for ensuring that construction works are carried out in compliance with the CoCP and will be responsible for monitoring compliance.

2.5 Site monitoring

- 2.5.1 The Contractor will undertake the necessary monitoring as outlined for each environmental topic (see Sections 4 to 13). This will include energy use, water use and transport emissions relating to major construction and waste materials.
- 2.5.2 Monitoring will assess the effectiveness of mitigation measures and the impact of construction works. Additional actions that may be necessary to enable compliance will also be considered.

2.6 The Applicant's representative supervision of construction

2.6.1 The Applicant's representative will establish a process to monitor the Contractor's implementation of the provisions of the measures within the CoCP.

2.7 Training and competence

- 2.7.1 The Applicant will require the Contractor to employ an appropriately qualified and suitably experienced workforce. Where appropriate, this will include holding a registration with relevant recognised competence schemes.
- 2.7.2 The Contractor will be responsible for identifying the training needs of their personnel to enable appropriate training to be provided and engaging suitably qualified and experienced professionals for this purpose. The Contractor's staff training will include site briefings and toolbox talks to equip relevant staff with the necessary level of knowledge on health, safety, community relations and environmental topics, and an ability to follow environmental control measures and to advise the construction workforce of changing circumstances as work progresses.

2.8 Method statements

- 2.8.1 The Contractor will set out the procedures to be followed for construction operations in method statements that will address health, safety, site security and the environmental issues associated with construction operations.
- 2.8.2 Method statements will define any specific environmental control measures, including environmental protection works, to be implemented to meet the requirements of this CoCP.

2.9 Contact person

2.9.1 The Contractor will identify a point of contact for the regulatory authorities during the constriction works. The Contractor will provide the regulatory authorities with the relevant contact details prior to commencement of construction.

3 Community Relations

- 3.1.1 Maintaining good community relations will be a key aspect of the Project as it progresses. The community relations plan will also need to take account of the fact that London Waste Ltd will continue to operate onsite during construction of the replacement facility and demolition of the old plant.
- 3.1.2 The Applicant and the Contractor shall take reasonable steps to engage with stakeholders in the local community, particularly those who may be affected by construction impacts including residents, businesses and community resources.
- 3.1.3 The Applicant and / or the Contractor will develop and implement a stakeholder engagement strategy and will provide stakeholder relations personnel who will implement the strategy, provide relevant construction information and shall be the point of contact to resolve issues of concern and complaints.

Community engagement

- 3.1.4 The Applicant will establish a dedicated section of the Project website (www.northlondonheatandpower.london) for Project updates as construction progresses. Local stakeholders will be able to sign up to receive a regular (two-monthly) newsletter about the Project and/or follow us on social media. LondonWaste Ltd will also produce a printed stakeholder newsletter in which updates will be provided.
- 3.1.5 Regular briefings will be offered to existing local area forums, but the offer will also be made to local stakeholders of establishing a new community liaison forum specifically for the Project. In particular the tenants of the Eley estate and the 5,000 new home owners on the Meridian Water development nearby may wish to have a dedicated forum in which their points can be discussed.
- 3.1.6 Prior to and during construction, a programme of effective and communications will be provided to the local community as detailed in the stakeholder engagement strategy.
- 3.1.7 The Applicant will ensure that local residents, businesses, occupiers, general users of the area and the LB Enfield are informed in advance of construction activities that may affect them. Notifications will detail the nature, estimated duration and working hours of the construction works. All notifications will include the community helpline number to which any enquires can be directed. The Contractor will be responsible for preparing and issuing the notifications subject to the Applicant's approval.

Enquiries and complaints

- 3.1.8 A dedicated email address will be provided, and enquiries logged by the Data Controller and answered by the appropriate officer.
- 3.1.9 The Applicant and /or the Contractor will establish an email address and telephone helpline staffed at all times during working hours to manage enquiries or complaints on construction activities. Such communication means will also be used as the first point of contact in the event of an

emergency or incident. Contact details will be promoted and displayed at appropriate locations around the site hoarding.

3.1.10 The Applicant and/or the Contractor will establish a system and procedure for handling all enquires including complaints. All enquires will be recorded and a log will maintained that will include details of the response and action taken. This will be available upon request by LB Enfield. All enquires whether a query or a complaint will be dealt with in a timely manner.

4 General Site Requirements

4.1 Good housekeeping and site layout

- 4.1.1 To reduce the likelihood of either an environmental incident or nuisance occurring the following measures will be used, where relevant:
 - prohibition of open fires, and a requirement to take measures to reduce the likelihood of fires;
 - maintenance of wheel washing facilities or other containment measures.
 - removal or stopping and sealing of drains and sewers taken out of use as well as no discharge of site runoff to ditches, watercourses, drains, sewers or soakaways without agreement of the appropriate authority;
 - location of storage, machinery, equipment and temporary buildings to reduce environmental effects e.g. plant machinery such as generators or compressors to positioned as far from sensitive locations as possible and ideally in naturally screened positions and where practicable, outside flood risk areas;
 - provision of site layout map showing key areas such as material storage, spill kits, material and waste storage and drains etc;
 - the use of modern specification noise alarms that meet the particular safety requirements of the site, such as broadband / white noise reversing warnings, or proximity sensors to reduce the requirement for traditional tonal reversing alarms;
 - appropriate lighting and security such as controls on lighting/illumination to reduce visual intrusion or any adverse effect on sensitive ecology;
 - security measures, including, closed circuit television (CCTV);
 - maintenance of public rights of way (PRoW) (including diversions) for pedestrians and cyclists affected by the scheme, including reasonable adjustments within the approved zones of diversion under the DCO to maintain or achieve inclusive access;
 - containing and limiting visual intrusion of construction sites, as far as reasonably practicable;
 - effective preventative pest and vermin control and prompt treatment of any pest and vermin infestation, including arrangements for disposing of food waste or other attractive material. If infestation occurs the contractor will take action to eliminate the infestation and prevent further occurrence;
 - adequate welfare facilities for staff; and designated smoking areas and containers for waste;
 - all loading and unloading of vehicles will take place off the public highway wherever this is practicable; and
 - on-site vehicle routes and pedestrian/cycle pathways will be marked out as required with traffic and/or directional signs and appropriate traffic control provided where necessary.

4.2 Hours of working

- 4.2.1 The Contractor will seek to obtain Section 61 consents from the LB Enfield under the Control of Pollution Act (COPA) 1974 for the proposed construction works (see Section 9) including proposed working hours.
- 4.2.2 Core working hours are planned to be from 0800 to 1800 on weekdays (Monday Friday excluding Bank Holidays) and 0800 to 1300 on Saturdays. Where practicable, activities likely to cause disturbance will be limited to these hours or unless permitted under Section 61 of the COPA.
- 4.2.3 The Contractor may require a period of up to one hour before and one hour after core working hours for start-up and close down activities such as
 - arrival and departure of workforce and staff on site;
 - deliveries and unloading;
 - checks and examinations of plant and machinery (including test running) and the carrying out of essential repairs/maintenance to plant and machinery;
 - re fuelling of plant and machinery engines;
 - site inspections and safety checks prior to commencing work ;
 - site meetings; and
 - site clean-up.
- 4.2.4 Certain specific construction activities will require extended working hours for reasons of engineering practicability and safety such as major concrete pours and piling, surveys and lifting/fitting of infrastructure and abnormal deliveries. The nature and timing of these works and the associated extended working hours will be discussed with LB Enfield and approval sought through the Section 61 consent process. The Contractor will be required to liaise and consult with the LB Enfield prior to applying for a Section 61 consent and will be required to maintain regular consultation with LB Enfield throughout the duration of the construction works to help facilitate the Section 61 process with regards to additional working hours.
- 4.2.5 In the case of work required in an emergency or which if not completed would be unsafe or harmful to workers, the public or local environment, LB Enfield will be informed as soon as reasonably practicable of the reasons and likely duration. Examples may include: where the ground needs stabilising if unexpected ground conditions are encountered, concrete pouring taking longer than anticipated due to delayed delivers or equipment failure.

4.3 Hoarding, fencing and screening

4.3.1 Hoardings and fencing will be provided and maintained by the Contractor. The worksite will be fenced from public ingress, with controlled access. All fencing and hoarding should be fit for purpose taking into consideration location, construction activities and the surrounding landscape. Where hoarding is required, it will be 2.4m minimum height. Hoarding height and type may be altered to enhance acoustic performance for specific locations.

- 4.3.2 The following measures will be applied, as appropriate:
 - maintenance of adequate fencing and hoardings to an acceptable condition to prevent unwanted access to the construction site, to provide noise attenuation, screening and site security where required;
 - use of different types of fencing and hoarding (e.g. mesh fence of solid hoarding including hoardings used for noise control);
 - painting the side of hoardings facing away from the site, consideration of artwork or other decoration and to keep them free of graffiti or posters;
 - providing site information boards with out of hours contact details, telephone helpline number (for comments/complaints) and information on the works;
 - displaying notices on site boundaries to warn of hazards on site such as deep excavations, construction access, etc.;
 - installing adequate lighting near hoardings; and
 - positioning and constructing gates in the fencing or hoarding to minimise the noise transmitted to nearby noise sensitive buildings from the site direct or from plant entering or leaving the site.

4.4 Worksite security

- 4.4.1 The following measures may be used by the Contractor to prevent unauthorised access to the site:
 - site lighting around site perimeter;
 - CCTV and alarm systems where required;
 - adequate security guards and patrols;
 - when there is no site activity, site gates will be closed and locked and site security provisions will be set in motion;
 - consultation with neighbouring properties on site security matters;
 - on-going consultation with local crime prevention officers on security proposals; and
 - preventing access to restricted areas and neighbouring properties by securing site equipment such as scaffolding and ladders.

4.5 Site lighting

4.5.1 Site lighting and signage will be provided to enable the safety and security of the construction site. It will be at the minimum luminosity necessary and use low energy consumption fittings. Where appropriate, lighting to site boundaries will be provided and illumination will be sufficient to provide a safe route for the passing public. Where appropriate, lighting will be activated by motion sensors to prevent unnecessary usage. It will comply with the Institute of *Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light GN01:2011.*

4.5.2 Site welfare cabins, equipment and lighting will be sited so as to minimise visual intrusion insofar as is consistent with the safe and efficient operation of the work site. Site lighting will be designed, positioned and directed so as not to unnecessarily intrude on adjacent buildings, ecological receptors, structures used by protected species and other land uses to prevent unnecessary disturbance, interference with local residents or passing motorists.

4.6 Welfare facilities

4.6.1 Welfare facilities will be provided, as appropriate, for site personnel such as mess rooms, locker rooms, toilets and showers etc. The location of these will be confirmed once Contractor has been appointed.

4.7 Pollution incident control and emergency preparedness

Pollution Incident Control

- 4.7.1 The Contractor will prepare and implement appropriate measures to control the risk of pollution due to construction activities, materials and extreme weather events and document in an incident control plan as part of the Contractor's CEMP.
- 4.7.2 The Contractor will be required to investigate and provide a report in the event a pollution incident does occur, including the following:
- 4.7.3 The Contractor will consult with the relevant organisations statutory bodies and other relevant parties such as the Health and Safety Executive (HSE) (Construction), the Fire Authority, the Ambulance Service, EA, NE, utilities companies and the LB Enfield (emergency planning and pollution control functions) when preparing response measures. Reference should also be made to the EA Pollution Prevention Guidelines (PPG) 6 (*Working at construction and demolition sites*) and 21 (*Incident Response Planning*).

Emergency preparedness

- 4.7.4 The Contractor will develop an emergency procedure in consultation with the emergency services for potential risks during construction and will be required to follow the procedure in any site emergency.
- 4.7.5 The procedures will contain emergency phone numbers and the method of notifying Local Authorities / and all other relevant statutory authorities including emergency services for action by the Contractor and or the Applicant. Contact numbers of the Contractors and the Applicant key personnel will also be included.

Emergency access

4.7.6 The Contractor will ensure that the requirements of the relevant fire authority will be followed for the provision of site access points (and suitable for emergency services). Emergency access points will be included in the emergency procedures and updated as required.

4.8 Fire protection

4.8.1 All construction sites and welfare facilities will have in place appropriate plans and management controls to prevent fires.

4.9 Unexploded ordnance

4.9.1 The Contractor will prepare procedures to deal with unexploded ordnance encountered on site and ensure that all operatives are aware of them. Should unexploded ordnance be discovered on site the site emergency procedures will be implemented to evacuate the work area and the emergency services contacted.

4.10 Extreme weather events

- 4.10.1 The Contractor will consider the impacts of extreme weather events and related conditions during construction. The Contractor will use a short to medium range weather forecasting service from the Met Office or other approved meteorological data and weather forecast provider to inform short to medium term programme management, environmental control and impact mitigation measures.
- 4.10.2 The Contractor's CEMP should consider all measures deemed necessary and appropriate to manage extreme weather events and should specifically cover training of personnel and prevention and monitoring arrangements. As appropriate, method statements should also consider extreme weather events where risks have been identified.

5 Air Quality and Odour

5.1 General

- 5.1.1 The Contractor will manage dust, air pollution, odour and exhaust emission during the construction works in accordance with best practicable means (BPM). This will include the following as appropriate:
 - reference to the general site requirements and good housekeeping procedures (relevant to limiting dust and air pollution);
 - controls and measures to control or mitigate the effect of potential adverse effects caused by the construction works; and
 - dust and air pollution controls and monitoring measures to be employed during construction of the Project.

5.2 Vehicles, plant and equipment

- 5.2.1 Measures to be implemented for limiting emissions and avoiding nuisance will include the following, as appropriate:
 - ensuring that the engines of all vehicles and plant on site are not left running unnecessarily;
 - siting plant away from site boundaries and potential sensitive receptors and enclosures, using shielding and filters where appropriate;
 - dust suppression measures will be deployed for cutting and grinding operations as well as general damping down of dust generating vehicles, equipment and roads;
 - movement of construction traffic will be kept to a minimum;
 - plant, vehicles and equipment will be operated and maintained in accordance with manufacturer's guidance and will be regularly maintained and checked, with records kept on site;
 - use of mains electric / battery powered equipment and low emission vehicles where practicable;
 - using low emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices;
 - use of non-road mobile machinery (NRMM) listed on the Energy Saving Trust's NRMM Register, where reasonably available; and
 - all commercial road vehicles used in construction must meet the European Emission Standards pursuant to the EC Directive 98/69/EC (commonly known as Euro standards) of Euro VI during any works. This will also be in compliance with the London Low Emissions Zone.

5.3 Transport storage and handling

5.3.1 Dust and air quality management measures will be implemented to limit pollution arising from the transportation and storage of materials, including the following, as appropriate:

- vehicles entering and the leaving the site transporting dusty materials and deliveries will be fully covered by sheeting;
- dry, dusty materials will be stored inside or enclosed to ensure no escape;
- for certain dust generating activities such as mixing grout or cement based materials; appropriate techniques to prevent dust emission will be used;
- the number of handling operations for materials will be kept to the minimum reasonably practicable;
- materials handling areas will be maintained to minimise dust emissions using watering facilities to reduce or prevent escape of dust from the site boundaries; and
- stockpiles will be located away from sensitive receptors, watercourses and surface drains, will take into account the predominant wind direction relative to sensitive receptors where reasonable practicable and will be enclosed / sheeted and sprayed with water as appropriate.

5.4 Conveyors

- 5.4.1 To control dust pollution associated with conveying material the Contractor will adopt the following measures, as appropriate:
 - drop heights from conveyors to stockpiles will be kept to the minimum reasonably practicable; and
 - conveyer transfer points will be enclosed, and damping of conveyor loads will be undertaken.

5.5 Demolition

- 5.5.1 To control dust pollution from demolition activities the Contractor will adopt the following measures, as appropriate:
 - screening / wrapping of buildings or structures to be demolished;
 - use water as dust suppressant to spray any buildings or structures to be demolished prior to and during demolition;
 - use of enclosed waste chutes and covered skips;
 - use of water as dust suppressant or suitable local extract ventilation for cutting equipment; and
 - where reasonable, the Contractor will avoid prolonged storage of waste materials on site.

5.6 Excavations and earthworks

- 5.6.1 Dust pollution from excavations will be managed through the use of the following measures, as appropriate:
 - drop heights from excavators to vehicles involved in the transport of excavated material will be kept to the reasonably practicable minimum;

- compacting deposited materials, with the exception of topsoil, as soon as possible after deposition; and
- suppressing dust emissions by spraying with water or using other appropriate measures.

5.7 **Processing, crushing, cutting and grinding activities**

5.7.1 Appropriate measures will be used by the Contractor for any processing, crushing, cutting and grinding activities as required to limit dust pollution. Permits will be sought for concrete crushing as required.

5.8 Monitoring

- 5.8.1 The Contractor will develop and implement inspection and monitoring procedures to assess the effectiveness of measures to prevent dust and air pollutant emissions. The monitoring procedure will include the following measures, as appropriate, based on the level of risk as set out in the EIA:
 - inspection procedures for inspections within the site and adjacent to the site to visually assess any dust and air pollution which may be generated on a daily basis;
 - record any results of visual inspections in a daily dust log;
 - identification of dust sensitive premises to be used as the location for any dust monitoring as well as the frequency of monitoring and reporting arrangements;
 - continuous dust monitoring to be carried out up and downwind of construction and demolition activities on or near the site boundary, the monitors should be an Osiris or similar and monitor for PM₁₀, PM_{2.5} and total suspended particulates;
 - monitoring results to be available for inspection by the local authority upon request; and
 - reference to inspection and maintenance records for construction vehicles, plant and machinery.

5.9 Odour

5.9.1 The contractor will adopt appropriate measures to avoid creating a statutory nuisance or significant loss of amenity due to odours. The Contractor's CEMP will include measures to minimise odour.

6 Archaeology and Cultural Heritage

6.1 General

6.1.1 During the works the Contractor will seek to minimise any impact on heritage assets, their setting and the wider historic environment. The Contractor will manage the impact of construction works in accordance with accepted industry practice, taking into account the relevant sections of the National Planning Policy Framework (NPPF) (2012) and local development plans.

6.2 General management measures will include:

- the Contractor will identify locations and descriptions of all known cultural heritage assets within and adjacent to, construction works, including restrictions to construction methods to protect cultural heritage assets;
- the Contractor will consider the location of heritage assets and their setting in determining access routes to the site, in accordance with English Heritage (EH) guidance Transport and the Historic Environment (2004);
- the Applicant will ensure that any cultural heritage survey and mitigation works prior to and during construction including archaeological watching briefs and heritage recording are programmed;
- the Contractor will use a suitably qualified organisation or person to undertake all archaeological / cultural heritage works; and
- the Applicant and / or the Contractor will consult EH and the LB Enfield as appropriate through all stages of the implementation of any programme of cultural heritage works.

6.3 Measures in the event of unexpected discoveries

- 6.3.1 Should unexpected assets be discovered or revealed during construction, the Contractor will consult with EH and the LB Enfield (where appropriate) to enable appropriate measures to be implemented to mitigate potential impacts. Measures to be implemented may include the following, as appropriate:
 - investigation and assessment of discoveries to determine their significance;
 - assessment of potential Project impacts to inform design of appropriate mitigation measures;
 - preparation of a written scheme of investigation for any stage of archaeological work required;
 - excavation, recording and reporting on any discoveries; and
 - recording and implementing measures to preserve any discoveries in situ, if required or if appropriate; and
 - the requirements to implement appropriate watching briefs and archaeological monitoring.

6.4 Monitoring

6.4.1 The Contractor will implement watching briefs and archaeological monitoring during construction works as required.

7 Ecology

7.1 General

- 7.1.1 The Contractor will adopt appropriate measures to protect biodiversity and limit losses to areas of conservation interest and impacts to legally-protected and notable species in the area of the Application Site, in accordance with the measures set out below and relevant legislation and / or policy guidance.
- 7.1.2 The following general principles will be applied where practicable:
 - habitat loss will be minimised, where appropriate, and the removal of habitats and enhancement works will be undertaken as appropriate, in consultation with NE and the EA;
 - preparation of individual species / habitat management plans as appropriate;
 - procedures to be developed in the event of an unexpected protected species or important habitat being encountered;
 - undertaking ecological surveys prior to and during construction where appropriate;
 - an ecological clerk of works will oversee the implementation of any ecological mitigation and sensitive activities, such as clearance of vegetation. Ecological watching briefs will be undertaken as appropriate;
 - standards of dust and air pollution control, as set out in Section 5 will be applied to protect adjacent wildlife habitats;
 - minimise night-time working, where practicable, to limit impacts on sensitive species (such as bats) and habitats, for example, near watercourses; and
 - minimise the use of lighting, generators (and other noisy equipment) at night where practicable, particularly in the vicinity of sensitive habitats. If lighting is necessary it should aim to comply with best practice guidance to reduce its impact on wildlife e.g. restricted duration/intensity and increased directionality.

7.2 Statutory and non-statutory designated sites

7.2.1 There are two designated sites located within 500m of the site, the closest of which is Lee Valley Site of Metropolitan Importance for Nature Conservation (SMINC), which falls within and beyond the eastern site boundary. Chingford Reservoirs Site of Special Scientific Interest (SSSI) is a statutory site located approximately 270 north east of the site. These sites support sensitive wetland habitats and a range of protected and notable species. The Contractor will not direct site lighting towards Chingford Reservoirs SSSI and Lee Valley SMINC. The only exception relates to part of Lee Valley SMINC that falls within the site, which will be subject to clearance and landscaping works. This lighting design should aim to minimise disturbance to commuting and foraging bats along the River Lee.

7.3 Habitats and species

- 7.3.1 The Contractor will manage impacts on statutory and non-statutory sites of ecological interest and notable habitats and species where relevant. This will be achieved through the production of method statements specific to species and habitats and the presence of an ecological clerk of works at appropriate stages of clearance and construction.
- 7.3.2 Pre-construction surveys will be undertaken by an ecologist to determine the current status and distribution of protected and notable species and to inform requirements for any mitigation. This would include a bat and badger scoping survey within the fenced off area in the north-eastern part of the site. The timing of construction works will be undertaken with due regard to seasonal constraints for a range of species and their habitats (including breeding birds and roosting bats).
- 7.3.3 In particular, to mitigate potential impacts on breeding birds, no removal of hedgerows, trees or shrubs will take place between 1st March and 31st August inclusive, unless a competent ecologist has first undertaken an appropriate and timely inspection of vegetation for active birds' nests prior to the vegetation clearance and the ecologist confirmed that no birds will be harmed and/or that there are appropriate measures in place to protect nesting bird interest on site.
- 7.3.4 Consideration should also be given to impacts on nesting birds outside of, but adjacent to, the site in terms of potential disturbance, for example, along the adjacent Lee Park Way. The Contractor will prepare a method statement detailing the inspection methodology and the use of exclusion zones, where necessary, to prevent disturbance to nesting birds.
- 7.3.5 Two white willow *Salix alba* trees located along the Lee Navigation were assessed as having a potential to support roosting bats (Category 1¹). The Contractor will be required to:
 - retain and protect the trees during the course of the proposed development, including to avoid any potential for disturbance; or
 - undertake further survey work to assess the presence or likely absence of roosting bats and measures implemented as recommended.
- 7.3.6 The Contractor will comply with the requirements of any wildlife licences, including all protected species licences as necessary.
- 7.3.7 The Contractor will aim to maintain dark areas around the site, where practicable and safe. Lighting across the site will be minimised, in accordance with guidelines set out by the Bat Conservation Trust (BCT)².
- 7.3.8 The Contractor will have regard to the requirements of Sections 4.5 Site Lighting, Section 5 Air Quality and Odour and Section 9 Noise and Vibration.

¹ Bat Conservation Trust (BCT), (2012); 'Bat Surveys; Good Practice Guidelines. Second Edition'. Category 1 trees are those with definite bat potential, supporting fewer suitable features than category 1* trees or with potential for use by single bats.

² http://www.bats.org.uk/pages/bats_and_lighting.html

7.4 Control of invasive and non- native species

- 7.4.1 The Contractor will implement appropriate treatment and control of any invasive non-native species in order to comply with the legislation and prevent their further spread, including, as appropriate:
 - Japanese knotweed (Fallopia japonica);
 - Himalayan balsam (Impatiens glandulifera); and
 - Giant hogweed (Heracleum mantegazzianum).
- 7.4.2 The strategy adopted will comply with appropriate, control, treatment and disposal procedures in relation to these and any other species listed in Schedule 9, Part II of the Wildlife and Countryside Act 1981, as amended, or the Weeds Act 1959 to prevent the spread of such species. Appropriate measures will also be set out to control other invasive species, such as Russian vine (*Fallopia baldschuanica*), in line with recognised best practice.

7.5 Monitoring

- 7.5.1 The Contractor will consult with NE, EA, LB Enfield and any local wildlife trusts, as appropriate, prior to and during construction.
- 7.5.2 The Contractor will undertake appropriate monitoring during construction to enable the effectiveness of construction methods and mitigation measures to be identified.

8 Ground Conditions and Contamination

8.1 General

- 8.1.1 The Applicant will require the Contractor to adopt appropriate measures to protect, assess, mitigate and remediate land where appropriate.
- 8.1.2 Measures will be implemented to assess and control risks to humans (construction workers, site visitors and nearby residents) including risks from encountering contaminated dust, soils and groundwater and where the presence of ground gas and/or vapours.

8.2 Site investigation and remediation

- 8.2.1 The Contractor will carry out site assessments, investigations and/or risk assessments wherever construction work is planned in order to assess the potential for contamination in both soil and groundwater. The necessary measures will be consulted on with the EA and the LB Enfield as part of the construction planning process. Where required, this investigation will be undertaken in accordance with UK best practice (*BS 10175 Investigation of potentially contaminated sites. Code of practice and BS5930 the code of practice for site investigations*). Where significant contamination is encountered, a risk based approach will be applied in line with the Defra/EA's Model Procedures for the Management of Land Contamination (CLR11).
- 8.2.2 Where site investigations reveal the presence of contamination, an appropriate remedial strategy will be developed to identify the most appropriate option for dealing with the presence of contamination. The Contractor will produce the remediation strategy for approval by the LB Enfield and where applicable, produce a verification plan providing details of the data that will be collected in order to demonstrate that the remedial works are complete, identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements. The verification plan will be issued to the Applicant for review prior to submitting to the LB Enfield.
- 8.2.3 Any material used for the works will be proven 'suitable for use' by adoption of acceptance criteria and will be deposited under either environmental permitting regulations or the Definition of Waste. Development Industry Code of Practice (CL:AIRE, 2011).
- 8.2.4 Where appropriate, the risk to ground water resources (see also Section 12), processes and abstractions will be assessed. In addition to the excavation and treatment of contaminated soils, it may also be necessary to install gas and leachate control systems at the site, on a temporary or permanent basis, in order to ensure that gas and leachate migration pathways are controlled.
- 8.2.5 Any contaminated material encountered will be dealt with in compliance with best practice and statutory guidance; for example the Control of Substances Hazardous to Health (COSHH) Regulations and through the Construction Design and Management (CDM) Regulations.

8.3 Monitoring

- 8.3.1 The Contractor will develop and implement appropriate monitoring during construction to enable the effectiveness of construction methods and mitigation measures to be identified.
- 8.3.2 The Contractor will undertake gas monitoring at the required frequency for any works which ground gas may be encountered. Appropriate gas protection measures will be implemented where necessary. Gas monitoring criteria for each construction task will be detailed within the Contractor's method statements.

9 Noise and Vibration

9.1 Measures to reduce potential noise and vibration impacts

- 9.1.1 The Contractor will assess, consider and implement best practicable means (BPM) at all times to control noise and vibration from the construction works.
- 9.1.2 BPM is defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990 as those measures which are 'reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications'.
 - 9.1.3 The Contractor will consider BPM, including:
 - **noise and vibration control at source** for example the selection of quiet and low vibration equipment, review of construction programme and methodology to consider quieter methods (including non-vibratory compaction plant, where required), location of equipment on site, control of working hours (see Section 4.2), the provision of acoustic enclosures and the use of less intrusive alarms, such as broadband vehicle reversing warnings; and
 - **screening** for example local screening of equipment, perimeter hoarding or the use of temporary stockpiles.
- 9.1.4 The recommendations of *BS 5228-1:2009+A1:2014 Code of practice for* noise and vibration control on construction and open sites – Noise³, and *BS* 5228-2:2009+A1:2014 - Code of practice for noise and vibration control on construction and open sites – Vibration⁴, will be implemented, together with the specific requirements of this CoCP.

9.2 Noise and vibration management

- 9.2.1 The effects of noise and vibration from construction sites will be controlled by introducing management and monitoring processes to ensure that BPM are planned and employed during construction. As part of the Contractor's CEMP, a noise and vibration management plan will be prepared and will set out these processes. The plan will include management and monitoring processes to ensure as a minimum:
 - integration of noise control into the method statements;
 - proactive links between noise management activities and community relations activities (see Section 3);
 - preparing details of site hoardings and screens that will be put in place to provide acoustic screening during construction, together with an inspection and maintenance schedule for such features;
 - preparing risk assessments to inform structural surveys of buildings and structures which may be affected by vibration from construction;

³ Hereafter referred to as BS 5228-1

⁴ Hereafter referred to as BS 5228-2

- developing a noise and vibration monitoring protocol including noise and vibration monitoring locations as well as publishing all monitoring required to ensure compliance with all acoustic commitments and consents;
- preparing and submitting Section 61 consent applications; and
- implementing management processes to ensure ongoing compliance, improvement and corrective actions to avoid any potential noncompliance.

9.3 Section 61

- 9.3.1 The Contractor will seek to obtain Section 61 consent from the LB Enfield under the *Control of Pollution Act 1974*. Section 61 applications will be made to the LB Enfield at least 28 days before the relevant work is due to start or earlier if reasonably practicable.
- 9.3.2 The Contractor will submit the application to the Applicant for review, prior to submission to the LB Enfield.
- 9.3.3 Details of construction activities, prediction methods and levels, location of sensitive receptors and noise and vibration levels will be discussed with the LB Enfield, prior to and during construction work. Dialogue between the Applicant, the Contractor and the LB Enfield will continue for the duration of the construction period.
- 9.3.4 An example Section 61 application template is included in Appendix A. The Applicant and / or the Contractor will seek to agree a common format for the Section 61 application, consent conditions or any dispensations, variations and over-runs.

9.4 Dispensation / variation / overrun

- 9.4.1 In the event that works for which Section 61 consent has been applied have to be rescheduled or modified (e.g., method or working hours) for reasons not envisaged at the time of submitting the Section 61 consent application, the Contractor will apply for a dispensation or variation from the LB Enfield. The Contractor will apply for and obtain the dispensation or variation before commencing those works, at the time specified within the Control of Pollution Act 1974.
- 9.4.2 In the event that planned works extend beyond the approved working hours and continue due to unforeseen circumstances that would affect safety or engineering practicability, the Contractor shall notify the LB Enfield as soon as reasonably practicable of the overrun using a pre-agreed approach with the LB Enfield.

9.5 Monitoring

9.5.1 The Contractor will undertake regular noise monitoring including physical measurements and visual checks / audits at the site in line with the Section 61 consent to highlight any potential noise impacts arising from the Project.

9.5.2 The Section 61 application will include a detailed description of the monitoring and monitoring locations proposed for the particular works covered by the consent application.

10 Townscape and Visual

10.1 General

- 10.1.1 The Contractor will employ appropriate measures to protect the landscape from construction activities and to protect visual amenity.
- 10.1.2 Appropriate controls will be put in place to protect landscape and visual amenity from construction activities and will include, as appropriate:
 - locating construction buildings and equipment such as to reduce visual intrusion consistent with the efficient operation of the site. The Contractor will mitigate against the visual intrusion of the site with hoardings and lighting measures as described in Section 4 of this CoCP;
 - a plan showing areas of existing trees and vegetation within the construction site to be retained (and protected), and those to be removed;
 - the involvement of an arboricultural and/or ecological specialist as required, in relation to vegetation clearance, tree works and the creation of new habitats; and
 - protection of on-site landscape features to be retained, including the existing Salmon's Brook, and Enfield Ditch.

10.2 Protection of trees

- 10.2.1 With the exception of the trees planned to be removed, the Contractor will avoid the loss of trees, where practicable, and will employ a suitably qualified arboricultural consultant to oversee works relating to the protection of trees.
- 10.2.2 The Contractor will protect trees in line with the recommendations in *BS5837: Trees in relation to design, demolition and construction.*
- 10.2.3 Measures will be implemented to protect trees, including the following, as appropriate:
 - installation of appropriate protective fencing to reduce the risks associated with vehicles trafficking over root systems or beneath canopies;
 - measures to prevent compression of soils;
 - maintenance of vegetation buffer strips, where practicable;
 - selective removal of lower branches to reduce the risk of damage by construction plant and vehicles; and
 - following guidance for working within root protection zones (RPZ).
- 10.2.4 Any tree surgery operations will comply with the recommendations in *BS 3998; Tree work. Recommendations*, as appropriate and will need to consider the legal protection given to roosting bats and breeding birds.

10.3 Tree replacement

- 10.3.1 Any tree that is damaged or cut down without approval or dies as a consequence of the construction will be treated or be replaced by a suitably sized transplant to the approval of the Applicant and the LB Enfield.
- 10.3.2 The supply, storage, handling, planting and maintenance of new planting will be undertaken in accordance with appropriate British Standards, *including BS 4428 Code of practice for general landscape operations (excluding hard surfaces), BS 3936 Nursery stock, BS 4043 Transplanting semi-mature trees, BS 5236 Cultivation and planting of trees in the advanced nursery stock category* and other appropriate guidance including the UK.

10.4 Monitoring

10.4.1 The Contractor will undertake appropriate inspection, monitoring and maintenance of any trees that will be protected during the construction works.

11 Transport

11.1 General

- 11.1.1 During construction the Applicant will require, as far as reasonably practicable, that impacts on the local community from construction traffic are minimised by the Contractor and that public access to the Site and the surrounding area is maintained. Impacts on road based construction traffic will be reduced by identifying clear controls, hours of site operation and routes for large goods vehicles. To reduce construction workforce and visitor car trips alternative modes of travel, including public transport, will be encouraged through the Construction Travel Plan.
- 11.1.2 Prior to the commencement of the works, the Applicant will ensure that a Traffic Management Plan (TMP) is produced and agreed in consultation with the LB Enfield, Transport for London (TfL) and the emergency services. The TMP will include the proposed traffic management strategy, temporary diversions of highways or other public rights of way and the site boundaries access points.

11.2 Works within the highway or on a Public Right of Way

- 11.2.1 Where diversions are required the Contractor will maintain the temporary road or access to adequately for the traffic using the route. The Contractor will apply for any consents and prepare any orders or regulations required for temporary traffic management schemes or road closures and comply with the requirements of the LB Enfield in this regard and to ensure that temporary or substitute roads have the appropriate legal status. As any orders or regulations will have to be promoted by the highway authority, the Contractor will provide the necessary supporting information if the relevant authority assumes responsibility for the preparation of the orders or regulations.
- 11.2.2 In addition, the duration of any temporary closure of highways and Public Rights of Way should be as short as practicable. Pedestrian access to premises will be maintained.
- 11.2.3 Local residents and businesses will be informed in advance (as far as is reasonably practicable) of the dates and durations of closures and provided with details of diversion routes.
- 11.2.4 The design and operation of the works will take account of people with reduced mobility.

11.3 Measure to reduce construction traffic impacts

- 11.3.1 A new site entrance will be provided at the north of the site, connecting with Ardra Road and Deephams Farm Road. This will ensure that the effect of construction traffic will be kept separate from operational traffic at the southern access to the site.
- 11.3.2 Where appropriate, the Contractor will provide a haul route(s) through the site for use by construction vehicles to reduce the potential conflict between construction vehicles and operation vehicles.

- 11.3.3 The Contractor will implement the following traffic management measures during construction of the Project:
 - where reasonable and practicable, construction vehicles will avoid travelling in convoys on public roads;
 - maintain and restore the highway to its existing condition, where necessary, to the approval of the LB Enfield and TfL;
 - adhere to standard procedures under the Highways Act 1980 for the temporary diversions of highways or other public rights of way or accesses;
 - measures to reduce the impact on existing parking;
 - take all reasonable precautions to prevent or reduce any disturbance or inconvenience to the owners, tenants or occupiers of adjacent properties, and to the public generally and ensure access is maintained at all times; and
 - procedures to address any highway incidents or vehicle breakdown of construction traffic especially at peak times.
- 11.3.4 The Contractor will seek to reduce the duration of any works affecting traffic lanes in consultation with LB Enfield and TfL and/or through measures in the TMPs.

11.4 Lorry movements, management and control

- 11.4.1 Deliveries will be arranged to minimise the impact on the road network.
- 11.4.2 Deliveries and all vehicle movements will be restricted to standard core working hours, unless agreed with LB Enfield and TfL.
- 11.4.3 Abnormal and special loads (as defined in the Road Vehicles (Authorisation of Special Types) (General) Order 2003 (Statutory Instrument (SI) 2003/1998) may be delivered outside standard working hours, subject to the requirements of the LB Enfield, TfL and the Metropolitan Police.
- 11.4.4 Lorry movements outside of core working hours must relate to the activity that requires extended working hours (e.g. concrete pouring).
- 11.4.5 The Contractor will consult and agree with the LB Enfield and TfL the access routes that may be used to access the construction sites, including consultation regarding any particular timing restrictions on the use of roads. The routes will be specified as part of the TMP a produced by the Contractor. The Contractor will agree Heavy Goods Vehicle (HGV) routes with LB Enfield prior to commencing work on the site. These routes will be restricted to the Transport for London Route Network (TLRN) and the Strategic Road Network (SRN), as far as reasonably practical. The routes between the Site and the TLRN will be selected to reduce effects on local sensitive receptors where practicable
- 11.4.6 As far as reasonably practicable, there will be no parking of HGV's on the public highway in the vicinity of the site except in specified holding areas (to be agreed with the LB Enfield, TfL and other stakeholders) for delivery or removal of materials from the site.

- 11.4.7 The Contractor shall communicate to all suppliers the access requirements for the site to ensure that lorries do not arrive before core working hours or wait in non-agreed areas.
- 11.4.8 Deliveries will be scheduled and will require authorisation to enter the site. Where a delivery vehicle arrives at a time other than its scheduled time slot, it will be turned away and if this occurs, it will preferably not reverse onto the highway. An appropriate control system will be implemented for the dispatch of all vehicles containing excavated material, demolition materials or other waste materials to prevent congestion around the worksite and its access routes. Only vehicles notified in advance will be allowed to enter the site.
- 11.4.9 All loading and unloading of vehicles will take place off the public highway wherever this is practicable with vehicles entering and leaving the public highway in forward gear unless otherwise agreed with LB Enfield. Vehicle movements at site entrances will be managed and marshalled where required.

11.5 Worker access

- 11.5.1 Given the location of the site and the limited access to public transport services, some employee parking will be required on the Site. However the number of parking spaces required will vary during the different stages of the construction programme but will not exceed XX spaces during the peak or any other period of construction. The Contractor will put measures in place to monitor and aim to eliminate 'fly-parking' by workers in the vicinity of the Site.
- 11.5.2 To reduce construction workforce and visitor car trips alternative modes of travel, including public transport, will be will be encouraged. The Contractor will prepare a Construction Travel Plan to be agreed with LB Enfield and TfL prior to the commencement of the construction work. This will be based on the Framework Construction Travel Plan submitted as part of the DCO and will include a range of measures to reduce the number of employee vehicle trips, in particular single occupancy vehicle trips, to the site. The measures will include the promotion of car sharing, the promotion of sustainable travel and the potential provision of a shuttle bus between the site and local National Rail / Underground stations (e.g. Tottenham Hale or Walthamstow Central).

11.6 Road cleanliness

- 11.6.1 All reasonable measures shall be put in place to avoid/limit and mitigate the deposition of mud and other debris on the highway, which will also minimise dust generation. These will include, but not necessarily be limited to:
 - the provision of easily-cleaned hard-standings at access and egress points;
 - vehicle wash-down points to clean wheels at each exit point on to the highway;
 - appropriate loading of vehicles and sheeting of loads where necessary to avoid spillage on the journey; and

• use of mechanical road sweepers combined with water sprays to suppress dust and clean site hard-standing, roads and footpaths in the vicinity of the site.

11.7 Traffic safety

- 11.7.1 The Contractor will consider the risk of incidents when transporting materials (including hazardous materials) and include measures to reduce the likelihood of impact of any incident. Preventative containment measures will also be considered in advance.
- 11.7.2 The Contractor will provide, erect and maintain such traffic signs, road markings, lamps, barriers and traffic control signals and such other measures as may be necessitated by the construction of the scheme and to the approval of the LB Enfield (and TfL, if required).
- 11.7.3 The Contractor will not commence any work that affects the public highway until all traffic safety measures necessitated by the work are fully operational.
- 11.7.4 The traffic signs, road markings, lamps, barriers and traffic control signals will be in accordance with the requirements of the Traffic Signs Regulations.
- 11.7.5 All traffic signals including temporary signals used at road works must be type approved before they can legally be installed on public roads. Portable traffic signals must also comply with the current requirements of Regulation 31(2) of The Traffic Signs Regulations, which lays down the size, colour and type of prescribed traffic signals.
- 11.7.6 The Contractor will keep clean and legible at all times all traffic signs, road markings, lamps, barriers and traffic control signals and they will position, reposition, cover or remove them as required by the progress of the works and to the approval of the LB Enfield (and TfL, if required).
- 11.7.7 The Contractor shall undertake the following activities in relation to Work Related Road Risk:
 - liaise with the LB Enfield and TfL in relation any requirement to temporarily restrict car parking on construction access routes to facilitate access to the site by large vehicles;
 - register for membership of TfL's Fleet Operator Recognition Scheme (FORS) or equivalent;
 - ensure that all construction vehicles bear prominent signage and have an external warning device to warn cyclists of the dangers of passing the vehicle on the inside;
 - ensure that all HGV's are fitted with appropriate 'active' equipment to warn the driver of the presence of cyclists passing the vehicle on the inside. This could include, but is not limited to, side safety bars, a close proximity warning system comprising a front-mounted, rear-facing closed circuit television camera or Fresnel lens, a close proximity sensor, an incab warning device (visual or audible) or an external warning device to make nearby road users aware of the driver's planned movements;

- ensure that all HGV;'s display prominent signage on the rear of the vehicle to warn cyclists of the dangers of passing the vehicle on the inside;
- ensure that all drivers have a driving licence check before commencing work and undertake appropriate driver training or a TfL-recommended lorry drivers awareness course for travelling in and around London;
- in the event of a collision investigate the collision and provide a Collision Report to LB Enfield, TfL and any other interested parties (e.g. the Health and Safety Executive);
- liaise with the LB Enfield / TfL to determine any need for route signage for construction vehicles and provide such signage as agreed;
- ensure that adequate signage to warn cyclists and pedestrians of the presence of large construction vehicles is prominently located at site access points and on construction vehicle routes between the site and the TLRN and SRN;
- ensure that pedestrian crossing points at site access points are laid out in a safe manner and that where necessary the movement of large construction vehicles is supervised to minimise the risk of accident;
- maximise the use of any other appropriate safety measures; and
- ensure that any subcontractors are advised of and comply with the same requirements as appropriate.

11.8 Monitoring

11.8.1 The Contractor will monitor traffic management schemes to maintain their effectiveness and condition and to provide for the safety of traffic, the public and construction staff during traffic management works and temporary traffic control measures.

12 Water Resources

12.1 General

- 12.1.1 The Contractor will undertake the works and implement working methods that will be developed to protect surface and groundwater from pollution and other adverse impacts including change to flow volume, water levels and quality. This will be completed in accordance with relevant legislative requirements and appropriate industry guidance.
- 12.1.2 Measures to deal with pollution incidents at the site will be included within the overall emergency planning and will be detailed in the incident control plan as detailed in Section 4.7. EA guidance on pollution incident response planning will be reflected in the emergency plans.

12.2 Surface water, groundwater and waste water

- 12.2.1 The Contractor will apply for the necessary consents and approvals from the relevant authorities to enable discharge of dewatering, surface water run-off and waste water from the construction site to soakaway or filtration systems, watercourses, foul sewers or disposal off-site.
- 12.2.2 The Contractor will adhere to the following control measures that will be applicable during construction:
 - storage of potentially polluting materials, plant and equipment will be more than ten metres from any water body. The Contractor will seek the required permits from the EA if there are any necessary work within 8m of a controlled water course;
 - fuel stores will be located away from surface water drainage, and would be within bunds with sealed bases;
 - refuelling will always be undertaken remote from drainage and surface water features and using automatic shut-off fuel delivery systems, where practicable;
 - pumps, generators and small plant will have drip trays to collect any fuel or oil spills;
 - oil drums and containers or other potential contaminants stored on the site to be controlled in accordance with the Control of Substances Hazardous to Health (COSHH) Regulations 2002;
 - provision of a suitable construction site drainage system including cut-off valves, ditches or drains and sustainable drainage systems, or equivalent, with suitably sized treatment facilities such as settlement or detention basins;
 - implementation of a site drainage plan;
 - spill kits will be available in the event of a fuel spillage and personnel will be trained in their use;
 - procedures for monitoring groundwater levels and quality at abstraction boreholes where appropriate;

- emergency response procedures would be developed and implemented that covered any incidents that might lead to release of pollutants to the aquatic environment; and
- adopting measures to comply with relevant EA Pollution Prevention Guidelines (PPG): temporary construction methods and CIRIA publications (including *Control of water pollution from construction sites*. *Site guide* (C649) and *Site handbook for construction of SUDS (C698)*.
- 12.2.3 Where contaminated land is identified at the site, measures will be includes in the Contractor's CEMP to comply with all relevant handling and disposal legislation (including dewatering discharge from piling operations). Detailed site investigations at all sites where excavations and piling are planned will be carried out, prior to works commencing, in order that appropriate mitigation can be implemented.

12.3 **Protection of aquifers**

12.3.1 The Contractor will have due regard for underlying aquifers and adhere to the EA's Groundwater Protection Policy as set out in the *EA GP3 Groundwater protection: Principles and Practice.* Appropriate protection of aquifers will be undertaken, following liaison with the EA regarding piling and construction techniques to be employed. Details of appropriate measures to prevent groundwater contamination (including monitoring) will be agreed with the EA prior to commencement of the relevant work.

12.4 Control and management of foul drainage

12.4.1 The Contractor will dispose of foul water and sewage effluents from site facilities complying with *Pollution Prevention Guideline No.4 Treatment and disposal of sewage where no foul sewer is available.* The Contractor will ensure connection to the local foul sewer system as agreed with the relevant authorities or containment by temporary foul drainage facilities and disposal off-site by a licensed contractor.

12.5 Flood Management

- 12.5.1 The Contractor will, as far as reasonably practicable, ensure that flood risk is managed throughout the construction and implementation period and that all designs are compliant with the Flood Risk Assessment submitted as part of the DCO application.
- 12.5.2 The contractor will implement necessary measures, e.g. temporary drainage, to protect the ongoing construction from flood risk from the existing surface water drainage system, while this still operates, as noted in the Flood Risk Assessment.
- 12.5.3 The Contractor will consult with the relevant regulatory bodies and other relevant risk management authorities on areas at risk of flooding and make appropriate use of the EA's Floodline flood warning service for works within areas at risk of flooding. An Emergency Flood Plan will be drawn up for the construction period, if required by the EA.

12.6 Monitoring

- 12.6.1 Consultation with the EA will be required by the Contractor with respect to requirements for water quality monitoring of discharges to surface or groundwater.
- 12.6.2 The Contractor will carry out monitoring as appropriate to identify pollution risks and pollution incidents including spillages and leakages.

13 Waste

13.1 General

- 13.1.1 The Contractor will maintain a duty of care at all times to ensure that waste generated during excavation, demolition and construction is handled in accordance with all relevant legislation (including requirements in the DCO and documents approved pursuant to the DCO application) governing its storage, transfer, treatment and disposal.
- 13.1.2 Excavated materials, demolition, and construction wastes generated at the site will be managed, so far as reasonably practicable, in accordance with the waste hierarchy. The waste hierarchy aims to use material resources more efficiently, reduce waste at source and reduce the quantity of waste that requires final disposal to landfill.

13.2 Waste management

- 13.2.1 The Contractor will implement the waste hierarchy (i.e. prevention, preparing for re-use, recycling, other recovery and disposal) as set out in the Waste (England and Wales) Regulations 2011 (as amended) to ensure that material resources are used to maximum efficiency.
- 13.2.2 The Contractor will minimise the waste generated from their activities where reasonably practicable. This will include processes such as just-in-time deliveries, consolidation centres for the storage of materials on-site, use of packaging take-back schemes, and the use of pre-fabricated construction components.
- 13.2.3 Where prevention of waste is not possible, the Contractor will reduce the quantity of waste sent to landfill by maximising re-use, recycling and recovery.

Site Waste Management Plan (SWMP)

- 13.2.4 A SWMP will be prepared for the Project by the Contractor, in accordance with the *Waste and Resources Action Programme (WRAP) guidance*.
- 13.2.5 The SWMP will include information regarding the classification, type and quantities of waste to be produced, measures for reducing waste generation and for recycling and / or re-use, any permitting arrangements and waste carrier and off-site treatment and disposal sites to be used.
- 13.2.6 The SWMP will include an audit programme to be undertaken by the Contractor.
- 13.2.7 Opportunities will be considered and measures will be implemented in the design and construction of the scheme to reuse waste or surplus materials, as appropriate. The Contractor will need to demonstrate that where practicable reuse has been maximised and where this is not practicable this needs to be recorded. The Contractor will also be expected to investigate, secure and record where the reuse of materials and waste has been used elsewhere off site.

13.3 Identification and classification

- 13.3.1 The SWMP will be used to identify the specific types and quantities of waste likely to arise during demolition and construction. Waste will be classified in accordance with the statutory controls governing the management of inert, non-hazardous and hazardous wastes. The options for managing waste will be determined in accordance with the waste hierarchy.
- 13.3.2 The Contractor will undertake a pre-demolition survey, to facilitate the early identification of materials potentially suitable for on-site reuse.

13.4 Segregation and storage

- 13.4.1 The Contractor will make provision for a waste storage area on the site that will include appropriately sized containers for the collection and segregation of waste types generated and will be clearly labelled and colour coded as per the scheme developed by the Institution of Civil Engineers (ICE). This is to facilitate re-use, recycling and recovery of waste. Containers will be covered with sheeting or lids as will any stockpiles/excavated materials.
- 13.4.2 Hazardous waste and materials will be stored separately to other waste streams and materials and will be removed and managed in accordance with legislative requirements.
- 13.4.3 The Contractor will comply with approved guidance and procedures in the identification, handling, storage, and management of waste and any waste leaving the site will be accompanied by appropriate duty of care documentation.
- 13.4.4 The Contractor will ensure that staff are given appropriate training both as part of site induction and at intervals throughout the life of the Project, to ensure that they are familiar with the waste and recyclable segregation strategy, and pollution prevention systems in place.

13.5 Duty of care

- 13.5.1 The Contractor will be required to comply with the 'duty of care' regulations to protect the interests and safety of others from the potential effects of handling, storing, transporting and depositing of excavated materials and demolition / construction wastes arising under the Project. Duty of Care documentation will be retained by the contractors in line with statutory requirements.
- 13.5.2 The SWMP will include detailed procedures for compliance with the requirements for waste transfer notes, in accordance with the Waste (England and Wales) Regulations 2011, and arrangements for auditing the actions of other parties in the waste handling chain.
- 13.5.3 The arrangements for registering the site, consigning, handling and transporting hazardous wastes will be followed in the context of duty of care and the specific consignment note procedures applicable under the Hazardous Waste (England and Wales) Regulations 2005 (SI 2005 No.894) or any succeeding relevant legislation.

13.5.4 The Contractor will also ensure that any required environmental waste management permits or registered exemptions are in place prior to any off-site transfer, treatment or disposal of waste being undertaken.

13.6 Monitoring

- 13.6.1 Details of the waste generated included waste type, quantity and end use will be monitored and recorded in the SWMP.
- 13.6.2 The Contractor will be required to undertake audits and inspections of waste management controls on site as well as third party audits of waste contractors and facilities.

Appendix A

Appendix A - Example section 61 application consent form

CONTROL OF POLLUTION ACT 1974

EXAMPLE APPLICATION FORM FOR SECTION 61 CONSENT

To be developed further (with explanatory notes) in consultation with the relevant local authorities

Submission No:	
Local Authority Reference:	

To the¹

I/WE HEREBY MAKE APPLICATION for prior consent in respect of works to be carried out on the [construction] site(s) specified below, under Section 61 of the Control of Pollution Act 1974.

Signed	ዮ
Date	

Name and address of applicant 🕆

(in block letters please)

Telephone No:

email:

¹ Insert name of Local Authority.

 ✤ Where application made by a Company the signature should be of a Director or the Company Secretary and the address should be the Company's registered office.

(Note: Supplementary sheets should be used for fuller descriptions and additional information as required)

1.	Address or location of proposed works	
2.	Name and address of main contractor	
	Telephone No.	
3.	Particulars of works to be carried out	
4.	Methods to be used in each stage of development	

5.	Hours of Work	
6.	Number, type and make of plant and machinery (including heavy vehicles) stating Sound Power Levels	
7.	Proposed steps to manage noise and vibration	

8.	Predicted Noise Levels	
9.	Approximate duration of works	
10.	Site Plan (Attached, yes/no)	

11.	Other Information	
12.	List of Plans and documents attached	