King's Cross Central

Code of Construction Practice

RPS Planning Transport and Environment

Prepared by RPS
for Argent St George, London and Continental Railways and Exel

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Summary

S.1 The King's Cross Central Code of Construction Practice (CoCP) explains how Argent St George, London and Continental Railways (LCR) and Exel, the applicants for the proposed King's Cross Central development ("the Applicants"), intend to implement the construction activities throughout the phased implementation of the scheme.

S.2 The CoCP applies to the King's Cross Central development, as defined in the Main Site and Triangle Site Development Specifications and associated Parameter Plans. It has been submitted as a supporting document to the Planning Application, to explain the Applicants intended approach to construction management.

S.3 The CoCP sets out the strategy, standards, control measures and monitoring procedures that the Applicants intend to observe to manage any adverse environmental effects of the construction process, to meet the Applicants own commitments to high standards and address the requirements and aspirations of the local authorities.

S.4 The CoCP defines the specific commitments made by the Applicants, both for general site management (including working hours, site layout and appearance, security and health and safety), and specific environmental topics (including Public Access and Traffic Management, Noise and Vibration, Air Quality, Contaminated Land, Waste Management, Protection of Surface and Groundwater Resources, Landscape and Visual Impact, Ecology, Cultural Heritage, Workforce/Local Employment Opportunities and Health).

S.5 The CoCP also defines how these commitments would be implemented through the Contractors' Construction Environmental Management Plans, and how all the stakeholders would be consulted during the construction process, through a robust liaison/consultation strategy. This includes continuation of the King's Cross Construction Impacts Group who will play a strategic role in monitoring the construction activities, and a King's Cross Central Community Relations Team that would provide the day to day interface between the local authorities and the Contractors. In addition, the Applicants would identify a Focal Point for dissemination of information, via a Helpline, Website, Information Boards and Exhibitions.

1 Introduction

Purpose

1.1 The King's Cross Central Code of Construction Practice (CoCP) explains how Argent St George, London and Continental Railways (LCR) and Exel, the applicants for the proposed King's Cross Central development ("the Applicants"), intend to implement the construction[1] activities throughout the phased implementation of the scheme.

1.2 Most of the proposed King's Cross Central site is currently within the site of the Channel Tunnel Rail Link (CTRL) works, which is a large scale Civil Engineering Project. The CTRL project team has adopted a robust construction management process to manage the impacts that arise from this project. Specific to this site, the CTRL project has also linked into the Camden-formed King's Cross Construction Impact Group, which is tasked with ensuring that the CTRL, London Underground, Regent's Quarter and other projects in the area are coordinated.

1.3 The Applicants have learnt much from these management processes, and this CoCP sets out the intentions to adopt a similar approach. It is however important to recognise that the nature of the King's Cross Central proposals are somewhat different to CTRL. While the King's Cross Central proposals do include civil and infrastructure enabling works, the vast majority of construction would comprise buildings using well established techniques for controlling disruption in high density urban settings.

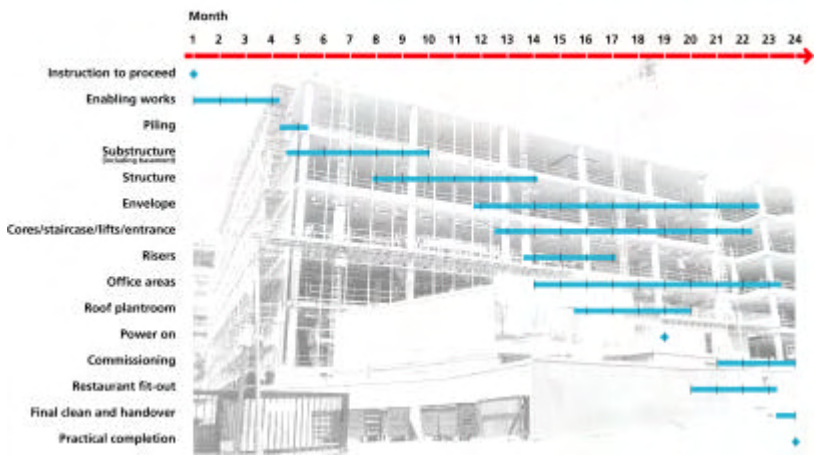

Figure 1: Construction programme for a typical concrete framed office building

[1] The term 'construction' is used to refer to all those works, activities and processes that would be involved in carrying out the proposed development, including excavation and other earthworks, the erection and dismantling of buildings and structures, demolition and other works.

1.4 The CoCP does not form part of any planning application. Rather, it has been submitted as a supporting document, to explain the Applicants intended approach to construction management.

1.5 The Applicants are committed to the use of best practice in the management of the environmental impacts of construction. Both the London Boroughs of Camden and Islington have policies to control environmental impacts during construction, as set out in their Unitary Development Plans. The London Borough of Camden's approach is further defined in their Supplementary Planning Guidance (2002) and the Considerate Contractor Manual (1996), and the London Borough of Islington set out details of their approach in their "Environmental code of practice for construction sites".

1.6 The CoCP sets out the strategy, standards, control measures and monitoring procedures that the Applicants intend to observe to manage any adverse environmental effects of the construction process, to meet the Applicants own commitments to high standards and address the requirements and aspirations of the local authorities.

1.7 The CoCP would aim to ensure that the Best Available Techniques Not Exceeding Excessive Costs (BATNEEC), as introduced in the Environmental Protection Act 1990 to cover both technologies and management techniques, are used, where appropriate, for the control of the environmental impacts and construction. It would also aim to ensure that, where appropriate, the Best Practical Environmental Option (BPEO), ensuring least impact to the environment as a whole, and/or Best Practical Means (BPM), in terms of controlling emissions and potential nuisance, are implemented and achieved.

1.8 The likely environmental effects of construction are addressed in the Environmental Statement (ES) submitted in support of the proposals. This CoCP does not form part of the ES, but rather sits alongside. Where the ES takes proposed measures within the CoCP into account, in arriving at its judgements, this is clearly stated within the ES document.

Scope

1.9 The CoCP applies to the King's Cross Central development, as defined in the Main Site and Triangle Site Development Specifications and associated Parameter Plans.

1.10 The management of the construction activities for the proposed scheme would need to take account of any other projects in close proximity as they come forward, and therefore the need for liaison/communication etc.

Structure

1.11 The CoCP sets out a series of objectives and measures to be applied throughout the construction period by the nominated contractors. It comprises four sections:-

- **Part A Construction Environmental Management Strategy** This section defines the overall strategy for managing environmental impacts that arise during the construction phase. It outlines how the CoCP would be implemented, including the liaison/consultation strategy.
- **Part B: General Site Specific Requirements** This section sets out the requirements for managing the construction impacts of all site operations.
- **Part C: Environmental Topic Specific Requirements** This section sets out the requirements for environmental topic specific requirements. This covers the following topic areas:-
    - Public Access and Traffic Management
    - Noise and Vibration
    - Air Quality
    - Contaminated Land
    - Waste Management
    - Protection of Surface and Groundwater Resources
    - Landscape and Visual Impact
    - Ecology
    - Cultural Heritage
    - Workforce/Local Employment Opportunities
    - Health
- **Part D: Monitoring** This section sets out the specific requirements for monitoring the construction activities.

Part A - Construction Environmental Management Strategy

A1 Implementation

Responsibilities

A1.1 The Applicants would retain overall responsibility for the development during all stages of construction. An individual would be identified who would have overall responsibility to ensure that all construction activities are in compliance with the CoCP and statutory and consent obligations.

A1.2 The CoCP would be a contract requirement and therefore form part of each Contractor's contract documents. It would be updated as the design progresses and as new information becomes available. Each Contractor would be responsible for implementing the requirements of the CoCP through the development of a Construction Environmental Management Plan (see below). All site staff would have a duty to minimise the risk of impacts to the environment from the activities on the site, and therefore, environmental responsibilities would be required to be put in place at all levels within the Contractor's team.

A1.3 Each Contractor would also be responsible for managing their sub-contractors and for ensuring they understand and comply with the environmental obligations of the CoCP.

A1.4 Each main contractor would nominate a community relations representative, which would collectively form the liaison team (see A2 – Liaison/Consultation). Each representative would be empowered within each contract to take action where necessary.

Construction Environmental Management Plans

A1.5 Within the suite of contract documents, the Contractor would be required to produce a Construction Environmental Management Plan (CEMP), which would explain how the Contractor would comply with all the requirements set out in the CoCP. This would function as the Contractor's Environmental Management System (EMS). Appendix 1 defines the minimum environmental requirements of the CEMP, which would be developed in consultation with the Local Authorities, and subject to approval by the Applicants. The Applicants would make available the approved CEMPs, to the London Boroughs of Camden and Islington and relevant statutory bodies.

Method Statements

A1.6 Prior to commencement of relevant site activities, Contractors would be required to produce Method Statements. These would include measures to implement the CEMP and CoCP in respect of particular tasks and locations. Where appropriate, an application would be made to the London Boroughs of Camden or Islington for a Section 61 consent (as defined under the Control of Pollution Act 1974).

A2 Liaison/Consultation

A2.1 The King's Cross Construction Impacts Group has a strategic role, and currently monitors the CTRL, London Underground Limited (LUL) and P&O Developments construction works. The Applicants would support the continuation of the King's Cross Construction Impacts Group, with its role becoming increasingly active as the project approaches implementation. The group, currently chaired independently by Sir Bob Reid, would include participants in other major developments in the King's Cross Area and representatives from the local authorities and other major agencies. It would continue to contribute significantly to achieving early and effective consultation with relevant agencies and keeping all interested parties appraised of progress and issues. The terms of reference for the Construction Impact Group, as currently constituted, is included at Appendix 2.

A2.2 The Applicants envisage that the Construction Impacts Group would continue to meet quarterly, as a minimum, or as required, according to events or issues of particular concern. The Construction Impact Group is and would be retained by Camden under Camden control.

A2.3 In addition to the high level, strategic role played by the Construction Impact Group, there would also be a King's Cross Central Community Relations Team that would provide the day to day interface between Camden's King's Cross team and the Contractors. Meetings of this Team would be organised by Camden, and the community relations representative from each main contractor would attend.

A2.4 The Applicants would identify a Focal Point for the dissemination of information and handling of any complaints for King's Cross Central. This Focal Point would be responsible for developing and administering a Helpline to respond to inquiries, concerns or complaints raised and a Website to provide information on the development, its progress and forthcoming works. The website would include options to send comments and feedback to the Focal Point. All calls to the Helpline and feedback from the Website would be logged, together with the response given. Each concern/comment would be responded to rapidly and actioned in an appropriate manner. A summary of the calls/comments received and actions taken would be produced as a monitoring report for the quarterly Construction Impacts Group.

A2.5 The Helpline number and website address would be clearly advertised on prominent displays of information around the site (on hoardings) and at exhibitions.

A2.6 It is envisaged that the Construction Impacts Group, the King's Cross Central Community Relations Team and the Helpline would be of most benefit during the early, infrastructure-heavy, stages of the proposed development, when there is potential for other developments being constructed in the area at the same time. The continuing need for the Construction Impacts Group, the frequency of meetings, and the benefits of running the Helpline will be reviewed as the development progresses, to ensure it is adding value to the management of environmental impacts of construction.

A2.7 The applicants would develop a public relations strategy with the aim of keeping residents, businesses and other local community informed about the impacts of the works. As part of the strategy, a regular newsletter could be produced and flyers would be distributed to provide targeted information about particular impacts.

Part B – General Site Specific Requirements

B1 Introduction

B1.1 The general management of the site is important in controlling environmental impacts from all construction activities. The following sets out the requirements for all major phases of the development with respect to working hours, general site layout and appearance, and security. The controls related to specific environmental topics are set out in Part C.

B2 Working Hours

B2.1 In normal circumstances, works would be undertaken during normal hours, i.e. 0800 to 1800 on weekdays and 0800 to 1300 on Saturdays. Where this is not practicable, preference would be given to undertaking works during the evening rather than at night, and consideration would be given to additional weekend (day) working.

B2.2 For internal fit-out work, where there is demonstrably no disturbance, out of hours working would be allowed.

Internal Fit-Out

This is the element of construction where the internal walls, fixtures and finishes are installed into the building shell. This process typically begins once the building envelope is weather-tight and will probably occur a number of times over the life of the building. For example, a shop or restaurant may change its branding and internal layout every couple of years.

Figure 2: Example of internal fit out

B2.3 Activities likely to generate noise that would affect sensitive areas would occur during normal working hours other than in exceptional circumstances (as defined in Appendix 4). Where such activities have to occur outside normal hours, occupiers of nearby residential or other properties would be given adequate notification in advance of the time of the works and the likely duration where practicable.

B2.4 In the case of work required in response to an emergency, the local authority and local residents would be advised as soon as is reasonably practicable that the works are taking place and their likely duration.

B3 Layout and Site Appearance

B3.1 All phases of the construction would be carried out following a general 'good housekeeping' policy, including: -

- All work areas would be kept clean and tidy. Rubbish would be removed at frequent intervals. Burning of materials on site would be prohibited.
- Hoardings and security fences would be inspected frequently, and repaired and re-painted as necessary (see below for further details on security).
- Reinstatement/good upkeep of street surfaces, even where temporary
- Street cleaning (avoidance of mud on the road)
- Site entrances/gates positioned to minimise traffic congestion and noise transmitted from site activities and deliveries.

B3.2 Storage sites, fixed plant and machinery, equipment and temporary buildings etc, would be located to limit adverse environmental effects. All reasonable precautions would be taken for the operation of plant and equipment, to avoid nuisance and excessive noise impact on surrounding residents. The environmental effects to be considered are not just the proximity of operations to sensitive properties or ecologically sensitive locations, but also to the risks of pollution.

B3.3 Lighting of the site boundary and associated areas would be provided to ensure sufficient illumination for safety of the passing public/personnel, and positioned such that it does not intrude unnecessarily on adjacent buildings and land uses, cause distraction or confusion to passing drivers, constitute a road hazard and would be chosen to minimise light pollution effects or encourage crime/anti-social behaviour.

B3.4 The visual intrusion of construction sites on nearby residents and users of local facilities and amenities would be contained and limited.

B3.5 For pest control, the following measures would be adopted: -

- Removal or stopping and sealing of drains and sewers brought into disuse;
- Prompt treatment of any pest infestation and arrangements for effective preventative pest control; and
- Appropriate storage and regular collection of putrescible waste

B3.6 Any instances of pest infestation on the construction sites would be notified to the relevant local authority as soon as practicable.

Figure 3:

Organised and tidy sites cause less disruption and are safer to work on

B4 Security

B4.1 Site security is of the utmost importance. The following security measures would be adopted from the beginning of the works, in liaison with the London Boroughs of Camden and Islington and police experts:-

- Complete site hoardings with vision panels would be installed around each construction site. The layout of hoardings would be designed to ensure that no blind corners, recesses, 'dead' zones of footway and loitering places, are created.
- Each construction site would be security patrolled 24 hours/7days week.
- Informal surveillance through presence of workers on site.
- Links forged with the Police for liaison regarding general traffic, co-ordination of construction activities and major public events, personal safety, and crime displacement.
- CCTV and lighting (lighting designed not to create shadowing of footpaths and roads by the site hoarding).
- Lighting levels in all public street areas would be a minimum of 30 lux.
- Where appropriate, undeveloped areas of the site would continue in their existing uses, or temporary uses may be found. The continuation of active use would enhance security on the site.
- Where buildings are unused, they would be effectively secured and subject to the same requirements for security patrols as construction sites.

Figure 4:

Well designed site hoarding with good visibility contributes to public safety around the site

B5 Health and Safety

B5.1 The safety of construction workers would be dealt with in the Contractor's Health and Safety Plan, which would set out how all health and safety risks are identified and managed in accordance with current best practice and legal requirements. The Contractor would also be responsible for ensuring the safety of the general public and any visitors to the site.

Part C - Environmental Topic Specific Requirements

C1 Public Access and Traffic Management

Objectives

C1.1 To carry out works in such a way that inconvenience to the public arising from increases in traffic flows and disruptive effects of construction traffic on local and main roads is limited.

C1.2 Where necessary, ensure that temporary diversion routes are established, signposted and notified in advance, and take into account King's Cross Station evacuation routes/procedures and other such requirements.

Excavation of basements can generate large volumes of material that need to be moved around or off the site. Good management needs to be in place to limit the disruptive effects of construction traffic on local and main roads.

Figure 5: Illustration of Basement Excavation

Control Measures

C1.3 A Traffic Management Plan would be developed, taking into account the advice of the highway authority, other relevant local planning authorities, the police and other emergency services. It would be reviewed and updated regularly, in line with the construction programme, and would typically include details of the following:

- Traffic control measures
- Access to the works – for personnel/vehicles
- Traffic management procedures for waste disposal vehicles

Traffic control measures

C1.4 An on-site speed limit of 10mph would be set.

C1.5 Routes to and from the site would be agreed with the appropriate highway authority(ies). Routes through residential areas, or close to other sensitive receptors, would be avoided where practicable.

C1.6 Where practicable, all existing public access routes and rights of way would be maintained during construction and properly signposted. Where this cannot be achieved, suitable alternative routing would be provided and would be signposted, and the alternative route would be illustrated on maps displayed at appropriate locations. All alterations to routes would be notified in advance with suitable signage.

C1.7 The Contractor would be required to ensure that public notices are issued to provide information on the dates and duration of any closure of routes. These would be appropriately distributed and would display the Helpline telephone number and web address of the development as well as a plan showing the alternative route.

C1.8 All pedestrian routes would be clearly defined utilising temporary fencing and pedestrian route signage where necessary. Pedestrian crossover routes would have appropriate warning signs displayed e.g. giveway signs, vehicle crossings etc.

C1.9 In the case of temporary footways, reasonable access would be provided for all people, including those with disabilities, wheelchairs and pushchairs.

Access to the works – for personnel/vehicles

C1.10 Vehicle access to the site would primarily be a) via the A5200 York Way, the A503 Seven Sisters Road and Pentonville Road for areas to the north and east and b) via the A501 Euston Road for western access to the site. During the early stages of development vehicle circulation through the site would be on existing highways; haul roads left in place following the CTRL development; and new routes created within the site. Construction traffic would shift to completed primary roads within the site as these become available for use.

C1.11 Site personnel access to construction sites would be via security-manned posts/gates and segregated from construction traffic, by means of vehicular barriers/fencing/hoardings etc.

C1.12 Good public transport links are available for all construction workers to site, and they would be encouraged to use them. All operatives would be given a specific site induction, and briefed with reference to the use of designated pedestrian access ways and crossover points.

Traffic management procedures for waste disposal vehicles

C1.13 Options would be considered for reducing the quantities of construction materials requiring transport by public roads as far as reasonably practicable.

C1.14 Delivery vehicles would be used to take materials away from site where practicable.

C2 Noise and Vibration

Objectives

C2.1 Control and limit noise and vibration levels, so far as is reasonably practicable, so that residential properties and other sensitive receptors are protected from excessive or unnecessary noise and vibration levels arising from the construction activities.

Control Measures

C2.2 Details of construction activities, prediction levels/assessments would be discussed with the relevant authority, both prior to and during construction. The definition of excessive or unnecessary noise levels would be agreed following completion of the baseline noise monitoring and discussions with the relevant authorities. Construction programmes would be available in advance of work starting on site for each development phase. Prediction, evaluation and assessment of noise and vibration would be a continuous activity throughout the development of the site.

C2.3 Where the potential for significant noise or vibration exists, e.g. during piling/demolition etc, "Best Practicable Means" would be used to reduce noise to achieve compliance consistent with the recommendations in BS 5228, and may include: -

- Careful selection of plant items, construction methods, programming, implementing a 'noise and vibration protocol' which outlines quiet periods/monitoring frequency/action levels etc.
- Design and use of site hoardings and screens/noise barriers, to provide acoustic screening at the earliest opportunity.
- Informing local residents if any particularly noisy operations are planned, and addressing any complaints that may arise (see Part A, Section B2).
- Choice of routes and programming of transport of construction materials.
- Drivers of construction vehicles to avoid reversing into or out of the site wherever possible.

- Percussive piling would generally be avoided. Where there is no alternative to percussive piling (for example where sleeved piles are needed to avoid unacceptable ground movements in nearby sensitive structures) all practical means would be employed to reduce noise, such as erecting an enclosure around the piling rig.

The ground conditions at King's Cross generally suit piled foundations. It is important to choose appropriate methods of piling within an urban environment to avoid excessive noise spilling out into the surroundings. Bored methods of installation (as illustrated) would generally be favoured over driven techniques.

Figure 6: Illustration of piling

C2.4 The actions agreed to be taken for each 'noisy activity' would be defined in the relevant Method Statement and where appropriate, an application would be made to the London Boroughs of Camden or Islington for a Section 61 consent. The application would include a description of the proposed works, the likely noise impacts from the activities, the equipment to be used and the measures that would be taken to minimise disturbance.

C3 Air Quality

Objectives

C3.1 To minimise the emissions to air of pollutants (particularly dust, fine particles (PM_{10}) and nitrogen dioxide) and ensure that best practicable means are employed.

Control Measures

C3.2 Where the potential for an impact on air quality exists, "Best Practicable Means" would be used to reduce the impact, including the following control measures as appropriate: -

Materials Storage and Handling

- Materials handling and storage areas would be sited as far away as reasonably practicable from public/residential areas. These areas would be actively managed, dry material would be stored inside enclosed shields/buildings or within a central storage area. Any storage areas that are not enclosed would be covered/sheeted. Prolonged storage of debris on site would be avoided.
- Handling areas would be kept as clean as practicable to avoid nuisance from dust.
- Should a concrete batching plant be operated during the construction period, to allow concrete to be manufactured on site, the cement and other powdered cementitious materials would be delivered by road and transferred through a closed system of heavy duty hoses to storage silos, or delivered to inline covered bin storage areas. Alarms or sensors would also be installed to prevent overfilling or system failure.
- Monoflex sheeting would generally be added to the side of scaffolding to prevent dust blowing off completed floorplates.

Figure 7: Building wrapped in monoflex sheeting to prevent escape of dust during construction

- Other dusty materials would dampened down using water sprays in dry weather.

Construction Plant

- Site plant and equipment would be kept in good repair and maintained in accordance with the manufacturer's specifications.
- Where practicable, low emission fuels would be employed for construction plant. No plant would be left running when not in use.
- Any fixed plant and equipment would be located away from sensitive receptors and residential areas near the site.
- Fencing/enclosures would be erected around major construction plant items, including any onsite concrete batching plant.
- Plant with dust arrestment equipment (such as particle traps) would be used where practicable.

Vehicle Movements

- All-weather surfaces would be provided on heavily used haul roads and at access points onto the public highway and regularly cleaned.
- Effective wheel cleaning would be undertaken of traffic leaving the construction sites onto site haul/public highway roads by the use of wheel washes. Road sweepers and vacuum sweepers would be used to maintain such roads in a clean condition.

Wheel washing on exit from site reduces nuisance from dust and mud on surrounding roads.

Figure 8: Illustration of wheel washing

- During prolonged dry periods or as directed by the site manager, haul roads would be dampened down.
- Speeds would be restricted to 10 mph on haul roads across the site.
- All site vehicles would be kept in a good state of repair and maintenance.
- The use of low emission vehicles would be specified in construction contracts where practicable (e.g. specified EURO standard – EURO IV).
- All vehicles carrying dusty materials into or out of the site would be sheeted to prevent escape of materials.

Operational Control

- Site operations would be planned to take into account local topography, prevailing wind patterns and local sensitive receptors.
- Burning of materials on site would be prohibited.
- Loading and unloading would only be permitted on designated areas.
- Appropriate dust controls would be employed for the demolition work, including sheeting, use of enclosed rubble shutes, etc.
- Dust controls for 'special operations' would be specified, e.g. cutting or grinding of stone or metalwork, sandblasting or other similar cleaning, and crushing.
- Where mobile concrete crushers are used during demolition, these would be sited as far away as possible from sensitive receptors, and authorisation would be required prior to use from the Local Authority in whose area the operating company's registered office is situated.
- Immediate clean up of spillage would be employed.
- Completed earthworks would be sealed or planted as early as practicable.
- Where parts of the site have been identified as potentially contaminated, any necessary precautions indicated by risk assessments would be specified for dust control, spoil removal and disposal.

C4 Contaminated Land

Objectives

C4.1 Carry out the works in such a way as to prevent, contain or limit, as far as reasonably practicable, any adverse impacts arising from the presence of contaminated material encountered during the construction activities.

Control Measures

C4.2 The measures would be consistent with current industry good practice for construction on brownfield sites, and would include the following as appropriate:

- Identification of the potential for residual ground contamination within any construction site would be completed prior to the start of any piling or excavation work, with the consideration of potential sources, pathways and receptors.
- Sampling and testing of excavated spoil and piling arisings, in order to assess the suitability of materials for reuse on site against site specific criteria.
- Stockpiling of contaminated materials would be avoided where practicable. Where it is necessary (e.g. for bioremediation), stockpiles would be located on areas of hardstanding or plastic sheeting to prevent contaminants infiltrating into the underlying ground.
- Where remediation is required, on-site treatment, including bioremediation, would be carried out wherever practicable.
- Any necessary licences would be obtained for the storage, treatment and disposal of waste.
- Where significant unforeseen contamination is identified during the course of the work, the Construction Manager would instruct specific investigations in the areas in question. The construction manager would advise the Local Authority and liaise on the appropriate remediation methodology.

C4.3 Special precautions would be taken if materials containing asbestos are encountered (see waste management below).

C5 Waste Management

Objectives

C5.1 The disposal of waste, including surplus spoil, would be managed to maximise the environmental and development benefits from the use of surplus material and to minimise any

adverse effects of disposal. In general, the principles of the waste management hierarchy, reduce-reuse-recycle, would be applied.

Control Measures

Waste Minimisation

C5.2 Raw material waste would be reduced through analysing design and construction techniques (e.g. pre-fabrication) where possible. (Refer to the Environmental Sustainability Strategy for further details on waste minimisation).

Reuse

C5.3 It is anticipated that concrete and masonry would be crushed for reuse for backfilling and other purposes.

Demolition material is crushed on site for reuse as concrete aggregate or sub-base material, reducing the amount of aggregate to be imported and waste to be exported.

Figure 9: Illustration of a concrete crusher

C5.4 The Contractor(s) would liase with suppliers to enable packaging material to be sent back for reuse.

Segregation and Recycling

C5.5 Opportunities would be investigated to maximise the recycling potential of demolition and construction materials e.g. structural steelwork would be removed from site for recycling, plasterboard offcuts would be recycled where practicable.

C5.6 Recyclable materials such as metals, timber, cardboard and office paper, would be put in colour coded bins, ready for collection by the appropriate contractor.

Disposal of residual waste

C5.7 All wastes would be subject to controlled collection and storage on-site, to keep the construction site tidy, avoid unsightly accumulations of waste and minimise dust, pest infestation, odour and litter. Wastes would not be stored in areas of the site adjacent to sensitive environmental features or receptors.

C5.8 All residual waste would be removed from site by licensed carriers to suitable licensed disposal sites. Suitable disposal sites would be identified in consultation with the local authorities and the Environment Agency.

C5.9 Waste transfer notes would be held by the Construction Manager and would fully describe the waste in terms of type, quantity and containment in accordance with the relevant regulations.

Asbestos and Contaminated materials

C5.10 Buildings and materials potentially containing asbestos would be fully assessed in advance of demolition works commencing. In accordance with the relevant legislation, a licensed contractor would remove any identified asbestos.

C5.11 The contractors would obtain any necessary licences for the storage, treatment and disposal of waste and use registered waste carries or seek registration as a waste carrier for the handling of contaminated materials.

C5.12 Any arisings from areas containing remnants of invasive/noxious weeds would be treated as controlled waste and disposed of off-site at a landfill site that is licensed to receive such material. The disposal recommendations referred to within the relevant Environment Agency best practice guidance would be followed.

C6 Protection of Surface and Groundwater Resources

Objectives

C6.1 Implement working methods to protect surface and groundwater from pollution and other adverse impacts including changes to water levels, flows and quality.

Control Measures

C6.2 All works would be carried out taking full account of the requirements of the Environment Agency “General Guide to the Prevention of Pollution of Controlled Waters” and other Environment Agency Pollution Prevention Guidance.

C6.3 The handling and storage of potentially hazardous liquids on site, e.g. fuels and chemicals, would be controlled and best practice guidance from the Environment Agency would be applied.

Storage tank/container facilities would be appropriately bunded within designated areas and sited as far as practicable from any watercourse or surface drain.

C6.4 A Spillage Response Plan would be developed and implemented by the Contractor, in consultation with the appropriate statutory bodies (including the HSE and local Fire/Civil Defence Authority, as well as the Environment Agency and the Local Authority Environmental Health Department). It would set out systems to ensure that pollution impacts upon people, flora, fauna, land, air and water are contained and minimised and that clean-up procedures and spill kits are in place to respond effectively once an incident is discovered.

C6.5 Adequate temporary site drainage would be designed, in association with the Local Authorities and, if appropriate, the Environment Agency, and installed during construction works. Levels would be modified where necessary to minimise overland flow. Cut off trenches, dewatering measures, settlement tanks and interceptors would be used across the site to manage surface water run off and prevent any contaminated water from entering the Regent's Canal, either directly as surface run-off, or indirectly via the surface water drainage systems.

C6.6 All oil interceptors and sediment settlement or other treatment facilities would be regularly inspected and maintained.

C6.7 Any water from the localised dewatering of perched water within the made ground or clay during basement construction would be discharged to the combined sewers (after agreement with Thames Water) because of its potential to be of poor quality due to the sediment loading or localised contamination.

C7 Landscape and Visual Impact

Objectives

C7.1 Construction works would be carried out to ensure that, as far as reasonably practicable, disturbance to landscape and townscape is contained.

Control Measures

C7.2 The following measures would be adopted as appropriate:

- Erect hoardings to minimise as far as reasonably practicable the visual intrusion of the worksites.
- Site specific measures for the planting of trees and shrubs and the protection of trees and landscaping would be defined in within the landscaping proposals.

- Appropriate protection of any trees within or in the vicinity of the Works, particularly those subject to Tree Preservation Orders (TPOs) or located in Conservation Areas as required by the local authority. Where a consent is required for tree works, this would be sought and obtained by the Contractor.

C8 Ecology

Objectives

C8.1 Construction works would be carried out in such a way as to ensure that disturbance to Camley Street Natural Park and the Regent's Canal are controlled and that appropriate measures are adopted to protect the ecology of these areas and avoid impacts on protected species, in accordance with relevant good practice and statutory provisions/legislative requirements.

Control Measures

C8.2 Where species are protected by specific legislation, approved guidance would be followed in order to comply with the relevant requirements and sufficient time would be allowed for any licences or consents to be obtained.

C8.3 The following control measures would be employed as appropriate:

- Where necessary, working sites would be fenced with a standard design hoarding or other appropriate screening to protect adjacent areas of conservation interest.
- To prevent disturbance to nests of breeding birds, areas for construction would be cleared outside the bird breeding season (March-August inclusive) wherever practicable. If clearance during the breeding season cannot be avoided, birds would be deterred from breeding from March onwards in the areas to be affected. Where such deterrence was employed, the absence of breeding black redstarts would be confirmed by survey prior to work commencing. If found, measures would be undertaken to protect the nest until the end of the breeding season.

C9 Cultural Heritage

Objectives

C9.1 Construction works to be carried out in such a way to ensure that any adverse impact on historic structures and features and Conservation Areas, or to areas of archaeological interest are controlled and limited.

Control Measures

C9.2 The Listed Building and Conservation Area Consent processes would cover all identified works to relevant buildings and structures. In addition, the following control measures would be implemented to meet the above objective, achieved with 'Watching Briefs'[2].

- There would be an archaeological consultant responsible to the developer for programming and integrating archaeological site works and ensuring engineering contractors conform to the CoCP for archaeological matters. There would be an archaeological presence (Archaeological Watching Briefs) at the times when temporary and permanent ground works encounter made ground from the 19th century or earlier, and Fleet River Alluvium. There would be no archaeological attendance where ground works are within gravel and London Clay formations, or made ground that is demonstrably from the 20th century or later.

- Site works would be carried out by a firm of archaeological contractors approved by Institute of Field Archaeologists (IFA) and English Heritage (EH) for undertakings in Greater London. The archaeological contractor may be appointed to the developer or to the main contractor.

- Pre development archaeological works would conform to 'good practice' required by IFA and EH.

- A strategy shall be agreed with the engineering contractors to minimise the chance of accidental damage to known and predicted archaeological resources, and including for the protection of resources to be documented during construction, excavated prior to construction, or retained *in situ* for the foreseeable future. This CoCP strategy also requires the engineering contractors to notify the developer or his site representative of any encounter of heritage assets found in the made-ground and in the underlying alluvium/other superficial natural soils.

- The archaeological site programme shall be designed to be safely carried out, and carried out in a fashion that minimises the potential for construction delays.

- There would be 'structural' archaeological watching briefs at times when new interventions and conservation were occurring to listed buildings and other notable historic buildings.

[2] An archaeological watching brief is defined by the Institute of Field Archaeologists as "A formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons within a specified area or site on land or underwater where there is the possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive."

C10 Workforce/Local Employment Opportunities

Objectives

C10.1 Implement methods to enhance the opportunities for the employment of a local workforce for the construction of King's Cross Central, with associated educational initiatives.

Control Measures

C10.2 The Applicants would facilitate the development of local labour and trade contractor initiatives with London Boroughs of Camden and Islington. The Applicants would also sponsor construction industry graduates during the project.

C10.3 Contractors would be encouraged to undertake onsite training and apprenticeship schemes and to advertise for jobs locally.

C10.4 The Applicants would work with London Boroughs of Camden and Islington to encourage the involvement of the local community, sponsoring local events and organising educational visits, including both visits to schools and schools visiting the site.

C11 Health

Objectives

C11.1 Construction works to be carried out in such a way in order to minimise any detrimental effects to the health of local residents, visitors to the area and construction workers.

Control Measures

C11.2 The measures described throughout this document are consistent with achieving the objective of minimising the health impact of the construction of the development on the surrounding receptors.

C11.3 The safety of construction workers would be dealt with in the Contractor's Health and Safety Plan, which would set out how all health and safety risks are identified and managed in accordance with current best practice and legal requirements. The Contractor would also be responsible for ensuring the safety of the general public and any visitors to the site. Each site would have first aid facilities for their workers and visitors to site, as required by normal practice.

Part D – Monitoring

D1 General

D1.1 The Applicants would take an active role in monitoring and reviewing the delivery of all requirements defined in this CoCP.

D1.2 In addition, the monitoring of the Helpline/web site would be used as a tool to assist in informing all interested parties on the success of the CoCP and so advise whether methods should be changed.

D1.3 Specific environmental monitoring requirements that would be required to be undertaken through the construction phase are identified below. The design of such monitoring would be discussed by the Contractor(s) and the relevant consultees as agreed by the Construction Impacts Group.

D2 Specific Monitoring Requirements

Noise Monitoring

D2.1 Baseline noise monitoring survey would be carried out prior to commencement of work on the site.

D2.2 Monitoring would be carried out from time to time during construction, for established and agreed monitoring stations around the development. This would be reviewed periodically to ensure that there have been no exceedances of any action levels set and agreed.

D2.3 The results of any noise monitoring would be made available to the Construction Impacts Group.

Air Quality Monitoring

D2.4 Monitoring would be undertaken throughout the construction period to enable proactive management of dust and PM_{10} levels. Wind speed and direction would be included in the monitoring.

D2.5 Dust complaints to be investigated at the earliest opportunity and appropriate action taken to control the source or remedy the effect as appropriate.

D2.6 The Construction Impact Group would be given access to all records of dust monitoring undertaken as they become available.

D3 Reporting

D3.1 The results of the monitoring would be reviewed by the Construction Impacts Group at the quarterly meetings or as agreed to be appropriate.

Appendices

Appendix 1

Minimum Requirements of

Construction Environmental Management Plan

- An implementation schedule, which is consistent with the overall Contract work programme.
- A Management Structure, which includes an organisation chart encompassing all staff (including sub-contractors) responsible for the work. This would set out the respective roles and responsibilities with regard to the environment. This would show the nominated Environmental Site Manager.
- Procedures for meeting the requirements of the Code of Construction Practice, including the General Site Specific Requirements at Part B and the Environmental Topics Specific Requirements at Part C.
- Procedures for environmental training of site staff.
- Procedure(s) setting out how internal communication would be programmed, managed and documented in respect of all environmental matters.
- Procedures for handling external communications, liaison and complaints including the development and maintenance of a clear audit trail.
- An Environmental Risk Register (which may be a discrete part of the project risk register) and associated procedures which show how environmental risks would be addressed.
- A register of permissions and consents required with responsibilities allocated and a programme for obtaining them.
- Procedures for dealing with unexpected occurrences or finds during construction.
- Procedures for monitoring, recording and disseminating environmental performance throughout the Contract.
- An internal environmental audit programme (which may be part of an overall project audit programme).
- Procedures for addressing non-compliance and corrective actions.

Appendix 2

Construction Impact Group

Terms of Reference

King's Cross Construction Impact Group – Terms of Reference

1. The particular and combined effects of major construction activities in the King's Cross area will continue to have significant and sometimes severe implications for local communities over many years, and the purpose of the Group is to:

   a. to ensure that the problems and opportunities arising from the prolonged period of major construction in the King's Cross area are anticipated and considered at senior levels across the range of agencies involved.

   b. to ensure that the responses to problems and issues are delivered effectively by the agencies and organisations concerned.

   c. to ensure that the various opportunities arising from construction activity are fully taken, such as employment and training, enhanced community safety and cultural activities.

   d. to ensure that the necessary co-ordination between stakeholders is maintained, at the appropriate levels.

2. The Group is to receive briefings and updates from across the range of activities and remits and to make key, strategic decisions to act on and resolve issues as and where necessary, before they arise.

3. The matters for the Group to consider include pollution and environmental impacts, wider health issues, traffic management, community safety and policing arrangements, effective communication, and local employment and training.

4. The construction projects on which the Group will focus include:

   a. Channel Tunnel Rail Link

   b. London Underground works at King's Cross

   c. Thameslink 2000 works

   d. Railtrack works at King's Cross Station

   e. Major works at development sites such as the P&O blocks

   f. Other developments which may be connected in terms of impacts, best practice, resources, and including congestion charging

   g. The King's Cross Central development

The Group will also consider other relevant activities in the area arising from regeneration programmes, private development etc.

5. Members of the Group are expected to provide information as required, and to be able to take the required, decisions and progress the work of the Group within their own organisation, recognising that many issues will need prompt action.

6. The Group is expected to look ahead at significant construction events and plan for them accordingly.

7. The Group will meet at approximately six-week intervals unless it determines otherwise.

8. The Group will invite local councillors and community representatives to their meetings, who will be asked to report on their constituents' experience of the works and offer advice and information to help in the Group's work.

9. The membership of the Group can vary according to need, with additional members co-opted as required. Substitute representatives will need to be able to progress the work of the Group with equal effectiveness.

10. The Group would be supported by the King's Cross Team in Camden.

Appendix 3

Regulatory Framework

General

Town and Country Planning Act 1990 (as amended)

Environmental Protection Act 1990

Environment Act 1995

Public Access and Traffic Management

Transport Act 1968

Highways Act 1980 – particularly Part IX. Includes it is an offence to obstruct a highway, for example with builders materials, which results in a public danger/nuisance.

Road Traffic Regulation Act 1988

Town and Country Planning Act 1990 (Part X) requires that a Public Right of Way may not be obstructed or diverted without an Order permitting it.

New Roads and Street Works Act 1991

The Traffic Signs Regulations and General Directions, 1994.

Noise and Vibration

Principal controls contain within Part III, of the Control of Pollution Act (COPA) 1974. In addition, statutory nuisance provisions contained within Environmental Protection Act 1990 (ss.79-82) also apply to noise.

Prior permission to be sought from Local Authority relating to noise from construction activities (s.61 of COPA 1974).

Best Practicable Means (BPM) as defined in Section 72, Part III, of the Control of Pollution Act (COPA) 1974.

British Standards Institution (1997) BS 5228: *Part 1: 1997 Noise and vibration control on construction sites and open sites: Code of practice for basic information and procedures for noise and vibration control.*

British Standards Institution, (1992) *BS 5228: Part 4: 1992, Noise and vibration control on construction and open sites: Code of practice for noise and vibration control applicable to piling operations*

Air Quality

Environment Protection Act 1990. Dust can give rise to a statutory nuisance if it is considered to be ‘prejudicial to health or a nuisance’.

Smoke, e.g. from burning waste on site, controlled by Clean Air Act 1993.

Ambient air quality standards and objectives set for PM10 and a number of other substances in the - Air Quality (England) Regulations 2000 and Air Quality (England) (Amendment) Regulations 2002.

Vehicle Emissions – Road Vehicles (Construction and Use) Regulations as amended, and the Motor Vehicle (Type Approval) (Great Britain) Regulations made under the Road Traffic Act 1988. Emissions controlled through MOT Test.

Contaminated Land

Environmental Protection Act 1990

Environment Act 1995

Contaminated Land Regulations 2000

Waste Management

The management of waste would be undertaken in accordance with Part II of the Environmental Protection Act 1990 and the Environment Act 1995.

Special Waste Regulations 1996.

Environmental Protection (Duty of Care) Regulations 1991

Protection of Surface and Groundwater Resources

Water Resources Act 1991 – It is an offence to cause or knowingly permit pollution of controlled water, either deliberately or accidentally. In addition, formal consent of the Agency is required for many discharges to controlled waters, including both direct and indirect discharges to soakaway. Such consents are granted subject to conditions.

Landscape and Visual

Environmental Protection Act 1990

BS 5837:1991 Trees in Relation to Construction

Ecology

Wildlife and Countryside Act 1981 (and amendments),

The Conservation (Natural Habitats &c) Regulations 1994 (as amended) – implements the EC Habitats Directive.

Countryside and Rights of Way Act 2000

Cultural Heritage

Ancient Monuments and Archaeological Areas Act 1979

Planning (Listed Buildings and Conservation Areas) Act 1990

Appendix 4

Definition of Exceptional Circumstances

In relation to activities that are likely to generate noise that would affect sensitive areas (see B2.3), the following are examples of exceptional circumstances under which it could be possible that the activities would need to occur outside of normal working hours. This list is not intended to be exhaustive, but illustrative of the type of circumstance that may lead to this situation.

- Works in close proximity to operational railway that could only safely take place during railway possessions;
- Deliveries of abnormal loads that require the use of non-standard vehicles;
- Use of large mobile cranes to install heavy plant or remove tower cranes, that would require adjacent highways to be partially or fully blocked;
- Works within public highways;
- Situations where a continuous concrete pour is required to achieve structural integrity;
- Certain commissioning activities, e.g. load bank testing of end user's uninterrupted power supply.

Each instance where such works might be required would be considered on a case by case basis.