Horniman Museum and Gardens

Nature + Love Project

Construction Environmental Management Plan

21st March 2024

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1.0 Introduction

Focus Consultants has been appointed by the Horniman Museum and Gardens to identify best practice procedures for managing the construction activities associated with the following works:

Contract 01: The refurbishment of The Natural History Gallery (NHG).
Contract 02: The creation of a Sustainable Gardening Zone (SGZ) and associated greenhouses with covered community space and an accessible toilet facility.
Contract 02: The creation of a Café and Ancillary Pavilion with toilet facilities and storage and Nature Explorers Adventure Zone (NEAZ).
Contract 02: The Nature Trail (NT).

These procedures will ensure that the interests of neighbouring residents, businesses, general public and the visitors are given special attention by the Contractor during the duration of the works.

This report identifies how the critical activities will be approached, and specifically covers the environmental, public health and safety aspects of the proposed development.

The baseline for our analysis is the Lewisham Good Practice Guide Control of Pollution and Noise from Demolition and Construction Sites (GPG). We have viewed those requirements as the minimum standards to be achieved.

This document details the specific obligations on the Contractors when undertaking the works and the control measures to be employed for each environmental issue.

2.0 Nature of the Project/Scope of Works

2.1 The Natural History Gallery

- Careful removal of a few exhibition cases and upgrading of the remaining majority.
- Removal of existing ventilation, heating plant and equipment, replacing current ventilation with high level ventilation duct runs, and the creation of low-profile discreet ventilation louvre on underside of beam.
- Renovation of existing timber window and incorporation of new bespoke ventilation louvre.
- New handrail extension and associated structural support to first floor balustrade.
- Refurbishment, repair, and redecoration of all surface finishes.
- Removal of all roof coverings and reinstating with a lightweight insulated system, including the removal, renovation and re-installing the existing lanterns.
- The lowering of the external ground level along the external wall to be at least 150mm lower than any DPC that might be present.

2.2 Sustainable Gardening Zone

- Provide propagation facilities that are modern and fit for purpose - automatic venting and heating using either a sustainable biomass boiler or air source heat pump and rain harvesting technology.
- The removal of existing poly tunnels and glasshouses and replacing with one single glasshouse freeing up more room for an uncovered hard standing area for plants.
- A glasshouse with water and heating, to be maintained with different climatic conditions when required including a potting area where staff can pot-on plants, store tools and materials safely. It can also be used to overwinter bulbs and tubers.
- Construction outdoor learning area focusing on sustainable gardening techniques. This covered space must also be used for community activities, with an accessible toilet and washing area.
- Major landscaping works to incorporate viewing area, improve accessibility to the South Downs, improve the horticultural offer, provide a community growing area, create winter plant interest using coloured stems, winter flowers, structural evergreen shrubs and trees and winter bulb display and the community growing area.

- Improving the water supply system. Only having one water point outside the zone, it is necessary to have at least two water points in different locations within the area. Capture rainwater from the roof of at least one of the buildings in the zone.

2.3 Nature Explorers Adventure Zone

- The construction of a cafe within the footprint of the Old Boating Pond to provide a food and drink offering that will only be open during daylight hours, with outside in-situ seating that will not be required to be stored away every evening.

- There will also be picnic tables around the café and the play space that families can use to eat at with bark/ wood chippings/Breedon gravel underneath.

- The existing path will be upgraded to enable vehicles to reach the café for deliveries and maintenance.

- There will also be an Ancillary Block to provide toilet and baby change facilities.

- Major landscaping to provide a new Nature Explorers Adventure Zone.

2.4 The Nature Trail

- Construction of new access from the gardens across the “Night Walk” to a new accessible ramped access to the Nature Trail. It should be noted that the Night Walk is a public footpath outside the curtilage of the Horniman Gardens.

- Construction of retaining walls.

- Changes to the route of the pathway, localised path widening.

- Additional bench seating and interpretation.

- Erection of a new storage shed.

3.0 Methodology for New Construction

This section identifies the specific methodology that we have identified for the whole project and each specific zone. We anticipate that the works within these zones will be carried out concurrently:

- Enabling and lead-in works
- Site Establishments
- Natural History Gallery (NHG)
- Sustainable Gardening Zone (SGZ)
- Nature Explorers Adventure Zone (NEAZ)
- The Nature Trail (NT)

Works are expected to start in Summer/Autumn 2024 with a total duration of 18-24 months.

3.1 Enabling/Lead-in Works

The following schedules the activities to be carried out by the Main Contractor(s) to ensure works can be undertaken efficiently. Certain elements of these works will require third party approvals and should be prepared in sufficient time to avoid any delays to programme.

- Mobilisation of selected sub-contractors.
- Production of a project Health and Safety Plan and risk assessments.
- Formulation of Site waste management plans and environmental plans.
- Production of project specific construction phase method statements for each individual area.
- Production of detailed works programmes and sequencing for each individual area.
- Surveys of existing services and structures to confirm methodology and load capabilities sequencing for each individual area.
- Highways condition surveys to be carried out prior to commencement on site.
- Building fabric condition surveys of areas adjoining the SGZ are to be carried out prior to commencement on site.
- Services investigations/surveys for decommissioning purposes.
- CCTV surveys of existing drainage.
- Hazmat and asbestos demolition and refurbishment (R&D) surveys, testing and ASB5 notifications to the HSE.

- Lewisham licence applications and approvals for hoardings and scaffolding.
- Baseline movement monitoring to areas adjoining the NHG.
- Baseline environmental monitoring.
- Neighbour liaison before the commencement on site to explain the nature of works and methods of communication with the contractor.
- Temporary works design.
- Take over liaison with UKPN regarding upgrade to power supply and build of cabinet.

3.2 Site Establishment, Security Management and Logistics

Site establishment can occur concurrently or prior to the enabling works. This activity can only begin when full possession of site areas has been given. The following activities will comprise the site establishment programme:

- Securing the external boundaries of each individual project area as appropriate.
- Establishing the internal demise within the NHG, isolating the site and the occupied parts of the building with fire rated and secure partition walls.
- Erection of a scaffold temporary roof over roof of the NHG.
- Establishing the vehicle and pedestrian access to the works. Routing of temporary vehicular to the NEAZ to be agreed and constructed. All routes are to be controlled by fully trained gatemen and traffic marshals.
- Installation of site temporary electrics, lighting, water and fire alarms.
- Establishment of a 24/7 site security provision with CCTV perimeter support to ensure that all individual sites are protected against unauthorised or unlawful entry and potential theft from site. This will be supported by the Horniman 24/7 Security Officer.
- All existing services and systems within the NHG and SGZ are to be traced and isolated. Diversions of existing utilities, if required, will be carried out at an appropriate point in liaison with the statutory service providers.
- Site offices will be established on the first floor of the NHG for Contract 1 (NHG).
- Site offices for Contract 2 will be located as per Appendix A.
- Initial site welfare arrangements will be established in appropriate locations for all individual sites.

- Emergency routes on site specified and clearly signposted.
- Early site investigations for location and safeguarding of historic fabric.
- Instigation of a full Refurbishment and Demolition Asbestos Survey.
- Structural investigation surveys and trial holes.

3.3 Natural History Gallery (NHG)

The NHG work will be let as an individual contract and treated as an individual site as it is easily defined with a distinct separate site boundary, site access, and space for separate welfare facilities. The following activities will comprise the works:

- A refurbishment and demolition (R&D) asbestos survey will be undertaken after vacant possession.
- Live services to be isolated. An advance desk top study of all existing services will have been carried out in the pre-construction phase.
- All operatives and site staff will be directed to remain vigilant regarding the heritage features and structural integrity of the building during the soft stripping works, which include the removal of existing ventilation and heating plant and equipment.
- The works will be carried out using hand tools/hand-held plant, with materials removed via the rear entrance point as bagged material or in wheelie bins. The material will then be deposited into skips within the site compound in the rear car park area for removal from site.
- Regularly removing the accumulated debris will minimise the potential fire risk that loose combustible material poses.
- A scaffold temporary roof is under consideration to allow roof works to be undertaken without risk of damage to existing building fabric.
- Materials will be removed and delivered to the roof via a scaffold hoist system.
- Plantrooms and core distribution will take early priority, followed by distribution of services across floors.
- Refurbishment, repair, and redecoration of the internal spaces will be undertaken as soon as the new works are complete, and the area is watertight.

3.4 Sustainable Gardening Zone (SGZ)

The SGZ work will be let as a joint contract with the NEAZ and NT. The following activities will comprise the works:

- Refurbishment and demolition asbestos surveys will be undertaken on the two greenhouses, the boiler shed and the polytunnel prior to demolition.
- Live services to be isolated. An advance desk top study of all existing services will have been carried out in the pre-construction phase.
- All operatives and site staff will be directed to remain vigilant regarding the existing flora and fauna that will remain within the site boundary, this will include, but not be limited to tree root, soil and grass protection.
- All existing structures to be demolished and any foundations grubbed up. The materials arising will then be deposited into skips within the site boundary for removal from site.
- The substructure works for the buildings and the hard and soft landscaping will be carried out using mechanical plant and equipment, with materials arising deposited into skips within the site boundary for removal from site.
- The construction of the new glasshouse and associated hard and soft landscaping will be carried out using hand tools, hand-held plant, mechanical plant and equipment. Due to the proximity of visitor to the garden, use of hand-held tools will ensure noise and vibration are kept to the minimum.
- Planting is preferable to be carried out in the relevant planting seasons.
- All works are to be carried out with reference to and in line with the Arboricultural Impact Assessment.

3.5 Nature Explorers Adventure Zone (NEAZ)

The NEAZ work will be let as a joint contract with the SGZ and NT. The following activities will comprise the works:

- Live services to be isolated. An advance desk top study of all existing services will be carried out in the pre-construction phase.
- All operatives and site staff will be directed to remain vigilant regarding the existing flora and fauna that will remain within the site boundary.
- All existing structure to be demolished and any foundations grubbed up. The materials arising will then be deposited into skips within site boundary for removal from site.
- The substructure works for the buildings, hard and soft landscaping will be carried out using mechanical plant and equipment, with materials arising deposited into skips within site boundary for removal from site.

- The construction of the new Cafe, Ancillary Block, and associated hard and soft landscaping will be carried out using hand tools, hand-held plant, mechanical plant and equipment. Due to the proximity of visitor to the garden, use of hand-held tools will ensure noise and vibration are kept to the minimum.

- Planting is preferable to be carried out in the relevant planting seasons.

- All works are to be carried out with reference to and in line with the Arboricultural Impact Assessment.

3.6 The Nature Trail (NT)

The work NT will be let as a joint contract with the SGZ and NEAZ. The following activities will comprise the works:

- Live services to be isolated. An advance desk top study of all existing services will be carried out in the pre-construction phase.

- All operatives and site staff will be directed to remain vigilant regarding the existing flora and fauna that will remain within the site boundary.

- The hard and soft landscaping will be carried out using mechanical plant and equipment, with materials arising deposited into skips within site boundary for removal from site.

- The work to the trail will be carried out prior to the construction of the NT gate, bridge and access ramp.

- Planting is preferable to be carried out in the relevant planting seasons.

- All works are to be carried out with reference to and in line with the Arboricultural Impact Assessment.

4.0 The Construction Site

This section sets out procedures that should be implemented during site operations relating to site management practices.

4.1 Working Hours

- Lewisham's GPG states Site Working Hours will be:
  - Monday to Friday: 8am – 6pm
  - Saturday: 8am to 1pm but not significantly noisy work which will impact on neighbouring properties
  - Sunday and Bank Holidays: No work where noise audible at site boundary.

- The Horniman's Gardens are open to the public as follows:
  - Monday to Saturday gates open at 7:15 am.
  - Sunday and Bank Holidays gates open at 8:00 am

- The Gardens close at the following times in 2023:
  - Monday 5 February – Sunday 3 March: 5.30pm
  - Monday 4 March – Sunday 31 March: 6.30pm (British Summer Time starts)
  - Monday 1 April – Sunday 5 May: 7.30pm
  - Monday 6 May – Sunday 25 August: 8.30pm
  - Monday 26 August – Sunday 29 September: 7.30pm
  - Monday 30 September – Saturday 26 October: 6.30pm (British Summer Time ends)
  - Sunday 27 October – Sunday 2 February 2024: 4.20pm

- Public opening hours are expected to be similar in 2024.

All vehicles and plant arriving at and leaving the site should comply with the same restrictions on hours. The main contractor should be held responsible for ensuring these instructions are given to all drivers, including those delivering site materials.

Any deviation from these hours will require prior approval from the Lewisham Environmental Protection Team.

4.2 Good Housekeeping

The Contractor will follow a 'good housekeeping' policy at all times. This will include, but not necessarily be limited to the following. The Contractor will:

- Ensure considerate site behaviour of the Contractor's staff.

- Ensure the noise from lorry reversing alarms and the like are kept to minimum levels.

- Prohibit open fires.

- Ensure that appropriate provisions for dust control and road cleanliness are implemented, to both the adjoining residential roads on the Horniman's Gardens estate roads.

- Remove rubbish at frequent intervals, leaving the site clean and tidy.

- Frequently inspect, repair and re-paint as necessary all site hoardings to comply with the conditions of the Lewisham's GPG section 9.11 and any relevant Licence – all flyposting and graffiti are to be removed as soon as reasonably practicable and within 24 hours of its appearance.

- Maintain toilet facilities and other welfare facilities for its staff.

- Remove food waste.

- Prevent vermin and other infestations; and undertake all loading and unloading of vehicles as identified on the logistics drawings.

4.3 Community Liaison

Lewisham Council considers that liaison with local residents who may be affected by construction works is essential and this is set out with GPG section 2.2 Community Liaison and Complaint Resolution. The Contractor will arrange a public meeting to provide information about the further coming works prior to starting on site. This will include information about traffic management, pedestrian movement, waste management, dust management etc. We are not anticipating any flood lighting or drive piling to be required but if they are, the Contractor should notify local residents in advance of these items being carried out. If flood lighting is required it must be set up so as not to be directed into the windows of residential properties.

Communication to local residents should include publicity, including the name and telephone number of a main contact which should also be displayed on the site hoardings. This contact person should be able to give further information to the caller and deal with any complaints or emergencies that may arise at any time. A copy of the letter to be sent to residents along with the planned distribution list should be included with the return form in Appendix 1 of the GPG and sent to Lewisham's Environmental Protection Team at least 28 days before the start of works.

Complaints should be reported to Lewisham's Environmental Protection Team within 24 hours by telephone and/or email, investigated and where appropriate measurements taken and where necessary mitigation methods implemented, or work practices modified.

The results of the investigation, along with details of any mitigation methods implemented or work practice that has been modified and how complainants have been kept informed should also be sent to Lewisham's Environmental Protection Team as soon as possible.

All site staff are to be regularly briefed regarding the complaint's procedure.

4.4 Security

- The Contractor is to ensure that each individual site, the site compound and any satellite storage compounds are secure and prevent unauthorised entry to all areas.
- Site gates will be closed and locked when there is no site presence. Alarms will incorporate an appropriate cut-out period.
- Access and egress will be via manned security gates.

4.5 Hoardings, Site Layout and Facilities

- Each individual site will be completely secure to deter public access.
- The proposed hoarding line and gates, all of which will be in accordance with the GPG, are shown on the enclosed plans.
- Site welfare arrangements are expected to be located within easy reach of each individual site area.

4.6 Emergency Planning and Response

The Contractor will develop a plan for emergencies to incorporate:

- Site specific risk assessment.
- Ensure appropriate site induction for all contractor teams to include information around pollution control and reporting procedure.
- Emergency procedures including emergency pollution control to enable a quick response.
- Emergency phone numbers and the method of notifying Lewisham and statutory authorities. Contact numbers for the key staff of the Contractor will also be included.
- The Contractor will display a 'contact board' on the hoarding identifying key personnel with contact addresses and telephone numbers, so that members of the public know who to contact in the event of a report or query.
- London Fire and Emergency Planning Authority (LFEPA) requirements for the provision of site access points.
- Site Fire plan and management controls to prevent fires.

- A plan to reduce fire risk and potential fire load during construction, operation and subsequently during maintenance or repair. The project will comply with any third-party requirements as may be appropriate at specific sites.

- A plan to respond to a pollution incident on site, including details of reporting to client and relevant authorities.

4.7 Hoists

- To deliver materials to the roof of NHG will be via an external hoist positioned on a pavement gantry.

- A small mobile hydraulic crane is expected to be in operation at the site of the Boating Pond (café and play area).

4.8 Considerate Constructors Scheme

- The site is to be registered with the 'Considerate Constructors Scheme' and the 'Freight Operator Recognition Scheme'.

- These schemes ensures that contractors carry out their operations in a safe and considerate manner with due regard to neighbours, passing pedestrians and road users.

- Traffic Marshalls/Banksmen will monitor incoming vehicles and will marshal construction vehicles and materials as they move around the site.

- Safe pedestrian routes will be clearly marked, and construction vehicles and materials will be escorted to avoid obstructing these routes.

- The local community will be engaged with and access to information relating to the construction will be made available.

- Carbon will be minimised throughout the supply chain.

- The Code of Considerate Practice will be adhered to: The Code of Considerate Practice - Considerate Constructors Scheme (ccscheme.org.uk)

5.0 Site Logistics

The Traffic Management Plan (TMP) is included at Appendix C of this document. Please note that as there will be two contractors on site at the same time, this TMP will apply to each of them. The Natural History Gallery Contractor will take overall responsibility for managing and coordinating site deliveries and providing related facilities such as vehicle wash.

Feilden Fowles' draft drawings *NLP-FF-00-XX-DR-A-00119 - Proposed Construction Management Site Plan* illustrate the proposed overall logistics plan for the site, which incorporates the following key features:

- All construction and delivery vehicles shall be required to enter and leave the site via the London Road (A205) main entrance gate.
- All deliveries in relation to the project via London Road between 6:00am – 9:00am and 2:00pm – 3:00pm.
- Occasional overnight deliveries may be required to avoid visitors and heavy traffic, to be discussed and agreed with the Horniman and Local Authority in advance. Overnight deliveries would have to be made via the London Road entrance.
- Vehicle access to Michael Horniman Building to be retained throughout.
- Grass bank area behind the Michael Horniman Building's (MHB) North Hall fire exit is earmarked for Contractor's compound for Contract 1.
- Various areas are identified as Contractor's compound for Contract 2.
- Location of temporary footpath for Horniman and Contractor staff identified.
- Location of MHB existing fire escape route identified and must be retained throughout.
- Tree Route Protection areas will be reviewed and, where necessary and possible, the widening of paths will be considered to ensure ecology is protected.
- Access for event hires in the Conservatory Building are to be maintained, including areas for temporary marquees and deliveries.
- Blue Badge Parking Spaces will be maintained, and the Contractor will ensure access to the three spaces is not hindered by works on site.

The Contractor is to take onboard the draft Proposed Construction Management Site Plan and all other relevant information to develop their own site logistics.

6.0 Traffic Management

This section highlights the measures the Contractor may adopt to avoid nuisance to the public that may arise from increases in traffic flows.

All construction and delivery vehicles related to the construction works for Nature + Love shall be required to enter and leave the site via the London Road (A205) main entrance gate. There are expected to be up to twenty deliveries per week in relation to the construction works (approx. 10 per Contract).

The GPG states that all vehicles and plant arriving at and leaving the site should comply with the same restrictions on hours. The main contractor will be held responsible for ensuring these instructions are given to all drivers, including those delivering site materials and coordinating between different suppliers when there are multiple deliveries in the same time period. There will be wheel/ chassis wash facilities at the entrance to the site suitable for the size and type of vehicles. The Natural History Gallery Contractor will be responsible for the provision of these facilities along with Traffic Marshalls and overall management of the deliveries.

Prior to commencement of works, a meeting will be held with the Horniman site management team (including Security and Estates) to agree delivery arrangements. This will ensure priority access is given to the Horniman deliveries (estimates of 10 per day).

Arrangements for delivery, unloading, disposal of waste etc. requires careful planning and programming, deliveries must be arranged with the Site Manager (NHG Contractor) or their nominee to enable co-ordination. Traffic Marshalls will be provided to control site deliveries for both arrival and departure of all delivery vehicles, plant and materials being moved around site. Strict controls will be enforced; Contractors must give 48 hrs /2 working days' notice of deliveries and/or collections. Vehicles arriving out of sequence will be turned away. Special loads will possibly require several weeks' notice pending Horniman and Local Authority approvals.

The Contractor will endeavour to ensure that all heavy vehicle traffic is limited to times outside of rush hour, Monday to Friday. Construction vehicle movement will also be carefully planned and coordinated to avoid the AM and PM school drop off and collections. This will reduce congestion and safeguard pedestrians.

Safety of cyclists is of paramount importance and all vehicles entering and exiting the site will fully comply with CLOCS, the requirement for vehicular safety equipment. Deliveries will abide by London standards recommended by the Construction Industry Cycling commissioning manifesto. (To note, as per the Horniman policy, no cycling is permitted around the grounds and cyclists must dismount and use the cycle parking provided.)

As the London Road entrance is also used by some pedestrians, there will be pedestrian management at this point and Traffic Marshalls will direct any vehicles or materials moving through the Gardens. A traffic management system will be put in place to ensure the safe turning of vehicles into and out of the London Road entrance.

There may be specific need to work outside of the hours set out in 4.1 to manage certain noisy works and deliveries to limit impact on the calendar of public events. In these circumstances the contractor will liaise with all parties, including Lewisham and TfL as applicable.

Indicative types of on-road vehicles arriving and departing the site are as follows:

- 9.11m (6) wheeled rigid "muck-away lorry
- 8.73m (6) wheeled rigid ready mix concrete lorry
- 7.90m (4) wheeled skip lorry
- 6.65m (4) wheeled rigid small Flat bed with Hiab delivery lorry
- 5.2 m (4) wheeled general delivery van.

All on-road vehicles will comply with the Ultra Low Emission Zone (ULEZ) vehicle emission standards as a minimum. Evidence that contractors and suppliers have been contacted and their responses to the applicant in respect to the use of ULEZ compliant vehicle a ULEZ vehicle compliance form for the construction works will be issued to the London Borough of Lewisham Council monthly by e-mail. The use of Ultra-Low Emission Vehicles (ULEV) (e.g., Electric, Hybrid (Electric-Petrol) where possible will be encouraged at the procurement stage of the tender for these services.

The Contractor will actively work with suppliers that can provide electric or hybrid vehicles. Subcontractors will be required to comply with the emission hierarchy where practicable. A software platform will be used to monitor the carbon footprint of deliveries, tracking the start, finish location and means of transportation. The ULEZ vehicle emissions compliance will be monitored monthly log sheet.

Indicative Non-Road mobile machinery (NRMM) types for site use as follows:

- Telehandler-Material distribution
- Mini Excavator-Earthworks
- Dumper-Earthworks
- Spider crane-Lifting

All deliveries to site will be undertaken with full regard paid to:

- Reduction and control of plant movements
- All vehicles to be directed by a competent person
- Pedestrian and vehicle directional signage – suitable barriers will be erected to prevent pedestrian crossing the site entrances when deliveries are taking place
- Mobile plant will only be operated by a competent person with a bank's person in attendance to any movements.

All non-road mobile machinery (NRMM) will comply with Stage IV Emission Standards (or the latest standard if the GLA requirements change) as a minimum if equal to or over 37kW. Where compliance with Stage IV requirements is not achievable or practical, an exemption will be sought from the GLA prior to arrival of the equipment on site.

There is no parking available on site for contractor vehicles and parking in local streets is very limited, all contractors and sub-contractors' operatives should be encouraged to use public transport wherever possible.

7.0 Site Waste Management

The Contractor will carry out the works in such a way that, as far as is reasonably practicable, the amount of spoil and waste (including groundwater, production water and run-off) to be disposed of is minimised, and that any waste arising from the site is properly categorised and dealt with in accordance with the appropriate legislation and guidance. Opportunities for re-using or recycling construction or demolition waste should be explored and implemented.

A formal and detailed Waste Management Plan will be prepared by both Contractors. The disposal of all waste or other materials removed from the Site will be in accordance with the requirements of the Environment Agency, Control of Pollution Act (COPA), 1974, Environment Act 1995, Special Waste Regulations 1996, Duty of Care Regulations 1991 and the Waste Management Regulations 2006.

Waste should be stored away from boundaries where possible, and carefully managed not to cause harm or nuisance to neighbouring properties.

This approach complies with the waste hierarchy whereby the intention is first to minimise, then to treat at source or compact and, finally, to dispose of off-site as necessary. All relevant Contractors will be required to investigate opportunities to minimise and reduce waste generation, such as:

- Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme.

- Implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste.

- Attention to material quantity requirements to avoid over-ordering and generation of waste materials.

- Re-use of materials wherever feasible (e.g. re-use of crushed concrete from demolition process for fill; re-use of excavated soil for landscaping; re-use of internal equipment and plant from existing buildings). Concrete will be taken off the site for crushing and re-use.

- The Government has set broad targets of the use of reclaimed aggregate, and in keeping with best practice, Contractors will be required to maximise the proportion of materials recycled.

- Segregation of waste at source where practical. Where on site waste segregation is not practical it will be segregated off site by the Contractor.

- Re-use and recycling of materials off-site where re-use on-site is not practical (e.g., through use of an off-site waste segregation facility and re-sale for direct re-use or re-processing). Our expectations in this regard are shown in the following table.

Material	Target	Probable Location
Architectural salvage	100% re-used	Several architectural salvage companies in London.
Structural steel for re-use	100% re-used	Any complete sections salvaged during the demolition works will be retained by the Contractor for re use in temporary works or recycled as scrap metal.
Metals	100% recycled	Every effort will be made to recycle these materials on site with any surplus being taken to waste transfer station.
Hardcore (brick/block/ concrete etc.)	100% recycled	Taken off-site to be crushed and reused.
Excavated material/ clay etc.	100% recycled	Clay – 100% processed for re-use as fill material (subject to analysis).
Timber	Up to 80% re-used. The amount re-used will depend on the material	We will attempt to salvage any re-useable timber for hoardings, battening, shuttering etc. for possible for use on site with the balance being retained by the Contractor.
Glass (non-tempered, non-laminated and non-bomb proofing film etc.)	100% recycled	Processing facility in Greenwich & Park Royal.
Mixed waste	The amount recycled will depend on the material	An absolute minimum will remain for transport to landfill.
Asbestos	100% landfill	Taken to a licensed site.

Overall, the waste management for the site is likely to comprise of the following:

- Waste arising from stripping out, demolition and minor excavations will be removed from site by wheelie bin to waste lorries and taken to an off-site waste management centre for segregation and recycling.

- Packaging will be minimised and where possible removed from site on the same delivery vehicle that brought it to site.

- General waste will be removed from site by wheelie bin to a waste lorry daily. Waste material will not be allowed to be retained on site. Ideally the contractor will operate an evening back shift for removal of rubbish each day.

8.0 Noise and Vibration

The Horniman and the Contractors will agree a baseline for which the Contractors will monitor and control levels of noise and vibration from the site.

Lewisham's GPG section 3 set out their requirements for the control of Noise and Vibration.

8.1 Noise Control

The Contractors' environmental teams will undertake a noise assessment using noise predicting software which projects noise levels at adjoining properties based on the emissions made by specific plant. This noise assessment will be carried out in accordance with BS5228-1 2009 'Code of Practice for noise and vibration on construction and open sites and is above the requirements of the GPG.

This assessment allows the Contractors to select the most appropriate plant, methodology and controls to minimise disruptions of buildings at close proximity of the adjacent structures (sensitive receptors) and in particular live and occupied premises during the demolition and alteration phases.

Noise levels will be monitored by the Contractors during the course of the demolition and construction works. Lewisham shall be given access to all noise readings if required as soon as they become available.

Although the noise levels to be included in a formal agreement between the Contractors and Lewisham are the maximum to be allowed, at sensitive locations the Contractors will be requested to achieve, where practicable, noise levels lower than the specified limits.

Site operatives must be conscious of raised voices when arrive, leaving and whilst on site to minimise impact on local amenity.

8.2 Noise Control Provisions – Screens and Scaffolds

The Site Managers will notify the Client of any planned noisy works in the regular logistics meeting.

Where hard demolition occurs inside the Natural History Gallery, breaking out will be undertaken by handheld tools. Working hours will be managed to suit the operations of the Horniman and the working operations of neighbours as far as possible. This might mean undertaking noisy works between 8.00 and 10.00am, prior to opening, followed by a quiet period of clearing away.

Physical barriers will be deployed where possible to contain noisy operations within the working area as far as possible. Structural born noise will be monitored, and times of work managed to limit disruption to others.

8.3 Vibration Control

The Site Managers will notify the Client of any planned works that may result in vibration in the regular logistics meeting.

Vibration is a particular risk during structural breaking out in close proximity to heritage finishes. The measures taken to reduce the acoustics of these operations will also assist in mitigating the effects of vibration on the existing building and neighbours.

The Contractors will comply with the vibration levels established by agreement with Lewisham.

Equipment is to be selected giving consideration to noise and vibration. Where noise is unavoidable noise assessments are to be made and, if necessary, hearing protection zones established. Consideration will be given to the neighbours with consultations.

Operatives who are required to use vibrating equipment must be made aware of the health risks associated and their exposure must be monitored and recorded.

In areas where vibration is a risk to Museum objects, vibration sensors will be utilised to monitor vibration and alert the Contractor if maximum levels are exceeded so that works can ceased.

Works which may course high levels of vibration near residential properties e.g. construction of foundations for the café, should not take place on Saturday mornings but be restricted to Monday-Friday, 8am – 6pm.

9.0 Air Quality and Dust Minimisation.

The Contractors will, as far as reasonably practical, seek to control and limit emissions to the atmosphere in terms of gaseous and particulate pollutants from vehicles and plant used on site and dust from construction activities.

Lewisham's GPG section 4 set out their requirements for the control of Dust and Air Pollution.

Throughout the project the Contractors will ensure the following:

- There is no burning of waste materials on site.
- There is an adequate water supply on the site.
- Disposal of run-off water from dust suppression activities and is in accordance with the appropriate legal requirements.
- A Dust Management Strategy will be implemented.
- All dust control equipment is maintained in good condition and record maintenance activities.
- Where creation of dust is unavoidable personnel must use appropriate RPE. N.B. RPE will often be required when wet cutting stone or concrete. Stringent control measures must eliminate, minimise nuisance factor to the general public in accordance with environmental requirements.
- Consideration must be given to the use of vacuum attachments to tools used in operations that will produce dust e.g. circular saw on insulation/plasterboard. The decision not to use such attachments must be justified within the risk assessment. Damping down is an alternative control method if dust capture/containment is not reasonable.
- Site hoarding, barriers and scaffolding are kept clean.
- Loading of material into lorries within designated loading areas.
- If necessary, clean public roads and access routes using wet sweeping methods.
- Vehicles held on site for any reason have exhausts positioned such that the risk of re-suspension of ground dust is minimised.
- All vehicles carrying loose or potentially dusty material to or from the site are fully sheeted.
- Minimise the amount of waste material held on site.

- Sheet, seal or damp down unavoidable stockpiles and skips of excavated material held on site, where required.
- Avoid double handling of material wherever reasonably practicable.
- Ensure water suppression is used during demolition operations.
- Use enclosed rubble chutes and conveyors where reasonably practicable or use water to suppress dust emissions from such equipment.
- Sheet or otherwise enclose loaded bins and skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Use prefabrication of goods and materials to reduce the need for grinding, sawing and cutting on site wherever reasonably practicable.
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction.
- The engines of all vehicles and plant on site are not left running unnecessarily to prevent exhaust.
- Use low emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices.
- Use ultra-low sulphur fuels in plant and vehicles.
- That plant will be well maintained, with routine servicing of plant and vehicles. On site servicing and maintenance to be carried out where possible.
- That all project vehicles, including off-road vehicles, hold current MOT certificates where required.
- Carry out site inspections regularly to monitor compliance with dust control procedures set out above and record the results of the inspections, including nil returns, in the log book detailed.
- Increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Record any exceptional incidents causing dust episodes on or off the site and the action taken to resolve the situation in the log book detailed in above.

The Contractors will ensure that dust monitoring will be carried out during potential dust producing activities. The assessment will look at the dust raising potential of demolition and construction activities proximity to potential receptors and the duration of construction activities at each location.

Further information about this is provided in Appendix D.

10.0 Protection of Historic Fabric

The Contractors will properly safeguard all buildings, structures, works, services or installations from harm, disturbance or deterioration during the construction period.

This will be achieved by providing the necessary support and protection that the existing fabric requires.

Prior to commencing any demolition and alterations works, the Contractors will prepare a schedule of buildings, structures and services within the zone of influence of the proposed works.

To comply with the above requirements, it will be necessary to ensure the following procedures are established:

- Existing fabric must be accurately surveyed and assessed to ensure that the proposed works are technically feasible.
- Works to be undertaken by suitably qualified specialist Contractors using skilled and experienced operatives.
- Careful monitoring of fabric as works proceeds.
- Ensure any retained structure is fully protected during the construction process to prevent environmental or accidental damage.
- Specialist Contractor to prepare detailed method statement for agreement with all third parties prior to works commencing.
- Submit permit to work procedure to be established between all interested parties.

11.0 Managing the Environmental Impact of Construction

This section sets out the requirements on the Contractors for managing the environmental impacts of constructing the development.

The Contractors must demonstrate in detail how the requirements of the GPG will be met.

The Contractors will need to demonstrate the management, monitoring, auditing and training procedures that are in place to ensure compliance with the GPG. The contractor will set out the specific roles and responsibilities of their personnel in managing, monitoring all of the works, including any sub-contractors.

The specific measures to be implemented by the Contractors will include:

- The Contractors will liaise with Lewisham's Environmental Protection Team on a regular basis, agreeing routine arrangements for each site's activities and ensuring compliance with the GPG.

- The Contractors will provide toolbox talks on environmental topics such as Tree Protection Zones, slow-worm Anguis fragilis, common lizard Zootoca vivipara etc.

- The Contractors will ensure any holes or openings are appropriately closed up at night to prevent harm to people or ecology.

- The Contractors will be responsible for establishing and maintaining contact with Lewisham and local residents, and keeping them informed of construction matters likely to affect them.

- This liaison will include the regular and frequent distribution of Newsletters and attendance at meetings at the request of Lewisham and or representatives of local residents' groups.

- The Contractors will advise Lewisham within 24 hours of any incidents of non-compliance with the GPG and health and safety issues. The Contractor will respond to any reports referred by Lewisham, Police or other agencies within 24 hours, or as soon as reasonably practicable.

- The Contractors will maintain on site, a system for recording any incidents and any corrective action taken for inspection by Lewisham's representatives. This will be forwarded to Lewisham on a regular basis. The Contractor will ensure as far as is reasonably practical, that necessary action has been taken and steps to avoid recurrence have been implemented.

- The Contractors will provide an information and reporting telephone 'Hot Line' staffed at all times during working hours. Information on this facility shall be prominently displayed on site hoardings. The Contractors' nominated person will attend monthly reviews with Lewisham's Environmental Protection Team, or otherwise as requested.

- The Contractors will facilitate Lewisham's Environmental Protection Team to undertake regular planned inspections of the site to check compliance with the GPG and associated records.

- The Contractors will maintain regular liaison with the Horniman and the project team.

11.1 Training In Relation To This Plan

Contractors will abide by the Horniman's 'Rule for Visiting Contractors'.

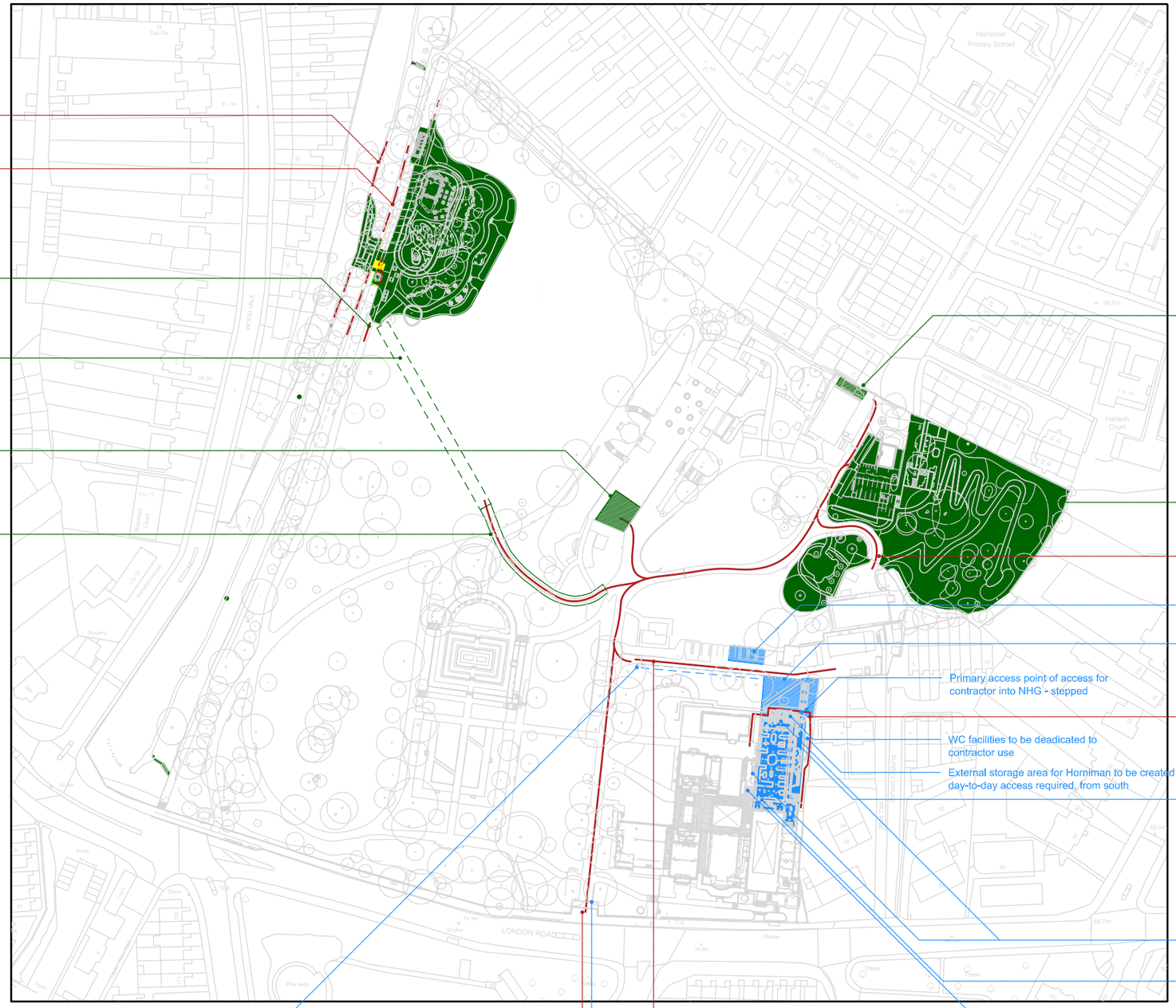
The Contractors will provide training to all site operatives as part of their induction programme to ensure that the requirements set out in this plan are followed. They will also provide daily briefings and regular toolbox talks on specific topics.

The Contractors will ensure all site operatives hold the relevant CSCS card demonstrating proof of qualification and experience.

The Contractors will where necessary attend toolbox talks with specialist consultants (e.g. Ecology, UXO).

Appendix A

NLP-FF-00-XX-DR-A-00119 - Proposed Construction Management Site Plan FINAL



Nature Trail footpath to remain open throughout construction works

Public footpath to remain open throughout construction works

Horniman footpath must remain open as mich as possible - if unavoidable, alternative route and site signage to be provided

Veichle access to NEAZ across meadow, with appropiate ground protection and public safety measures, to be agreed by Contractor and Horniman

Temporary staging area to be agreed with Horniman - area must be removed during weekends and for special events

Existing path to be temporarily widened, with appropiate tree and root protection provided

Area earmarked for Contractor's compound

Site area to be used part of Contractor's compound - note there are no level areas within area

Veichle access to Michael Horniman Building to be retained throughout construction

Car Parking area earmarked for Contractor's compound

Grass banks area earmarked for Contractor's compound - note this area is steeply sloped and any temporary works to create level areas will require prior approval

Primary access point of access for contractor into NHG - stepped

Existing level access fire escape route must be retained throughout construction - require special proceedures to be agreed and in place in the event of an alarm

WC facilities to be deadicated to contractor use

External storage area for Horniman to be created - day-to-day access required, from south

First Floor offices to be made available to contractor for site offices

Plant areas requiring client access during construction

Site hoarding to seperate NHG from publically accessable areas (at ground and first floors). Doors to be provided strictly for out of hours deliveries

Lift to be programmed to stop first floor access

Temporary deadicated footpath to be provided for Horniman staff and contractors

Access from London Road required by planning condition: "*All construction and delivery vehicles be restricted to use A205, Honor Oak Road and Westwood Park*"

Wheel and chassis washing facilities at site entrance (requirement of planning permission)

Vehicle access to BoH area to be retained throughout construction period

0 20 50 100m

General Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. All levels and spot heights are in metes unless noted otherwise.
2. All dimensions shall be verified on site before proceeding with the work.
3. Feilden Fowles shall be notified in writing of any discrepancies.

Rev	Date	
01	17.03.23	
02	26.09.23	

Architect:

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Client:
Horniman Museum and Gardens

Site Address:
100 London Road, London, SE23 3PQ

Project:
Nature + Love Project

Drawing Title:
Proposed Construction Management Site Plan

Project Status:
RIBA Stage 3

Scale @ A3:	Scale @A1:	Drawn:	Check:
1:2000	1:1000	EH	FF

Drawing Number:	Status-Revision
NLP-FF-00-XX-DR-A-00119	P02

Appendix B

Lewisham Good Practice Guide Control of Pollution and Noise from Demolition and Construction Sites

GOOD PRACTICE GUIDE

Control of pollution and noise from demolition and construction sites

Issued by the Environmental Protection Team, Directorate of Customer Services

Table of contents

1. Introduction

1.1 This good practice guide is intended to be used as a guidance by developers, their contractors and any sub contractors working on construction/demolition sites within the London Borough of Lewisham in controlling the environmental impacts of their work.

1.2 Development has the potential to cause significant environmental impacts and neighbourhood nuisance. These effects however, can be reduced by implementing good practice.

1.3 The Council has specific powers under the Control of Pollution Act 1974 and the Environmental Protection Act 1990 to deal with noise and environmental nuisance. The contractor should also always comply with all other relevant legislation including the provisions of The Clean Air Act 1993, The Environment Act 1995, the Pollution Prevention and Control Act 1999 and The Health and Safety at Work Act 1974.

1.4 The Council seeks to ensure that all contractors demonstrate good practice in their work programming, design, techniques and methods of working. Adherence to this guide will assist contractors in demonstrating their commitment to good practice and will minimise the environmental impacts and effects on the local community.

1.5 Developers and their contractors should also have regard to any London Best/Good Practice guidance available for managing environmental effects from demolition and construction sites.

1.6 Where local residents are likely to be affected, all relevant and appropriate working methods that minimise noise, dust and air pollution, in particular, are to be employed at all times. Measures included in this guide are not exhaustive and additional measures can be used which will reduce environmental impacts further. Adherence to this Guide therefore does not invoke the defence of Best Practicable Means.

1.7 The Council welcomes innovative approaches that are successful in reducing environmental impacts, and developers are recommended to contact Lewisham"s Environmental Protection Team at the earliest opportunity to discuss any new methods that they may wish to trial.

1.8 In order to demonstrate commitment to good practice, the contractor is encouraged to complete and return the form found in Appendix 1 as well as referring to the documents listed in the References section.

1.9 The London Borough of Lewisham does not have a specific „Considerate Contractors" scheme but does encourage contractors to participate in the national scheme, and/or Freight Operator Recognition Scheme and also to consider producing a Construction Logistic Plan, guidance of which is available from TfL, the contact details of which are in Appendix 3.

1.10 Should a contractor wish to apply to the Council for a Section 61 consent, under the Control of Pollution Act 1974, then guidance can be found on Lewisham"s website or by contacting the London Borough of Lewisham"s Environmental Protection Team. It should be noted that an application must be submitted to the Council at least 28 days before the start of works.

2. General Principles

The contractor should designate the person(s) who will have responsibility for ensuring adherence to good practice measures. A designated person should be on site at all times that operations are taking place and have the necessary authority to initiate changes to work practices and/or mitigation as appropriate.

2.1 Hours of work

2.1.1 Where residential occupiers are likely to be affected by noise, the hours of work will normally be restricted to:-

Monday – Friday:	8am – 6pm
Saturday:	8am – 1pm
Sunday and Bank Holidays:	No work where noise audible at site boundary

2.1.2 All vehicles and plant arriving at and leaving the site should comply with the same restrictions on hours. The main contractor should be held responsible for ensuring these instructions are given to all drivers, including those delivering site materials.

2.1.3 The working hours may also be restricted through Planning condition. Any deviation from these hours will require prior approval from the Lewisham Environmental Protection Team (see Appendix 3 for the form return) and, if conditioned, the Development Control Team. It should be noted that approval will only be granted under exceptional circumstances and will always be conditional on the contractor informing local residents in advance of the proposed activity.

2.2 Community Liaison and Complaint Resolution

2.2.1 The Council considers that liaison with local residents who may be affected by construction works is essential. The local residents should be informed of the nature of the works, proposed hours of work and their expected duration.

2.2.2 Communication to local residents should include publicity, including the name and telephone number of a main contact which should also be displayed on the site hoardings. This contact person should be able to give further information to the caller and deal with any complaints or emergencies that may arise at any time. A copy of the letter to be sent to residents along with the planned distribution list should be included with the return form in Appendix 1 and sent to London Borough of Lewisham"s Environmental Protection Team at least 28 days before the start of works.

2.2.3 Complaints should be reported to the London Borough of Lewisham"s Environmental Protection Team within 24 hours by telephone and/or email, investigated and where appropriate measurements taken and where necessary mitigation methods implemented or work practices modified.

2.2.4 The results of the investigation, along with details of any mitigation methods implemented or work practice that has been modified and how complainants have been kept informed should also be sent to the London Borough of Lewisham"s Environmental Protection Team as soon as possible.

2.2.5 All site staff are to be regularly briefed regarding the complaints procedure.

3. Noise and Vibration

3.1 Site Preparation, design and layout

3.1.1 It is important to know the area where the construction site will be based. This will include understanding where the nearest sensitive resource or residential receptor is, the general ambient noise level in the area and having an understanding of what the impacts will be, given the duration, scale and type of construction and demolition required.

3.1.2 Where practicable:

- locate the site access and the material storage away from sensitive receptors
- the standard hoarding height of 2.44m (surface density of not less than 7kg/$m^{2)}$ should be increased to break the line of sight to any residential window.
- position site huts to provide additional screening of works.
- maximise the screening effect of buildings through programming/phasing of works. Planning the demolition sequence to utilise screening afforded by buildings to be demolished.
- provide turning space within the site, avoiding the need to reverse and reducing the associated noise from reverse warning systems.
- delivery routes and vehicle holding areas should be chosen to avoid diverting traffic.
- establish an electricity supply to the site. This will reduce the need for diesel generators which can have a localised noise and air quality impact.
- ensure adequate planning within the project to prevent noise generating from double handing of materials and overlapping of high noise activities.

3.2 Operations

3.2.1 All plant and equipment, including any on hire, is checked to ensure it is in good working order and conforms to the manufacturers‟ standards. Equipment is to be properly silenced and meet statutory emission standards. Defective items are not to be used.

3.2.2 All large concrete pours are started as early as possible, within normal hours, to avoid overruns.

3.2.3 When working within a building, wherever possible ensure all openings (i.e. windows and doors) are sealed.

3.2.4 Before works commence, the site workforce should be fully briefed on the need to keep all noise generated to a minimum. Shouting and raised voices are not permitted other than in cases where warnings of danger must be given. Radios should not be played at a volume that is likely to disturb local residents.

3.2.5 Minimise the opening and closing of the site access through good coordination of deliveries and vehicle movements

3.3 Monitoring

3.3.1 As a minimum attended noise monitoring should be undertaken at the start of each new activity as identified in the Method Statement/Works Schedule and during out of hours work (if this has been agreed). The Contractor should maintain a record of these noise monitoring results.

3.3.2 Monitoring locations should be chosen to accurately measure the worse affected locations on/off site and be subject to agreement with the Environmental Protection Team.

3.3.3 Noise and vibration monitoring should be used by the Contractor as a proactive tool to: improve work processes; identify and address issues as they arise; investigate complaints and check compliance with any noise predicted levels.

For development of over 15,000 square metres of land, or over 150 properties, the following additional monitoring requirements should be considered:

Continuous noise monitoring should be undertaken at one or more permanent monitoring station(s), being capable of sending text and/or e-mail alerts when trigger levels are exceeded and compatible with the Council"s web based facility for presenting real time noise data. Trigger levels are to be set in agreement with the Environmental Protection Team and reflecting the predicted noise levels.

Upon receiving a text/e-mail alert, the nominated person should investigate as soon as reasonably practicable to ensure that Best Practicable Means are being implemented and all noise is minimised as far as reasonably practicable

3.3.4 The effectiveness of all measures should be monitored frequently by the main contractor, reviewed at least weekly and may be subject to inspection by officers of the London Borough of Lewisham.

3.4 Plant and Equipment

3.4.1 Noisy plant or equipment should be sited as far away as is practicable from sensitive buildings. The use of barriers, such as soil mounds, site huts, acoustic sheds or partitions to deflect noise away from noise sensitive areas, is to be employed wherever practicable.

3.4.2 Wherever practicable all plant and equipment should be powered by mains electricity in preference to locally powered sources such as diesel generators. Hand tools should also be electrically powered rather than petrol or diesel driven.

3.4.3 Vehicles and mechanical plant used for the purpose of the works should be fitted with effective exhaust silencers, maintained in good and efficient working order and operated to minimise noise emissions. The contractor should ensure that all plant complies with the relevant statutory and manufacturers" requirements.

3.4.4 For works consented to occur outside of normal working hours, where practicable, a broad-band reverse warning system should be used on all vehicles and at any time where it is safe to do so, all sirens and alarms should be disengaged.

3.4.5 Machines in intermittent use should be shut down in the intervening periods between work or throttled down to a minimum. Noise emitting equipment that is required to run continuously may have to be housed in suitable enclosures.

3.4.6 Compressors should be "sound reduced" models fitted with properly lined and sealed acoustic covers that should be kept closed whenever the machines are in use.

3.4.7 Equipment which breaks concrete, brickwork or masonry by bending or by bursting should be used in preference to percussive tools as far as practicable.

3.4.8 Pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers.

3.4.9 During backfilling and ground compaction work, dead rollers should be used in preference to vibrating rollers where practicable.

3.4.10 Where practicable rotary drills and bursters actuated by hydraulic, chemical or electrical power should be used for excavating hard or extrusive material.

3.4.11 Plant should be maintained in good workmanlike condition so that extraneous noise from mechanical vibration, creaking and squeaking is kept to a minimum.

3.4.12 Care should be taken when loading or unloading vehicles, dismantling scaffolding or moving materials etc to reduce impact noise. 2.10 2.10

3.5 Piling

3.5.1 In assessing the impact of any piling operations, the contractor will comply with the recommendations set out in the relevant current British Standard BS5228 Part 1 “Code of practice for noise and vibration control on construction and open sites”.

3.5.2 The use of conventional impact hammers should, wherever possible, be avoided. Any pile driving is to be carried out by plant equipped with a recognised noise reducing system.

3.5.3 Where there is a potential for disturbance the hours of piling should, where reasonably practicable, be limited to accommodate local circumstances thereby ensuring disturbances are minimised.

4. Dust and Air Pollution

4.1 Introduction

4.1.1 A development may include all or some of the following phases which have the potential to generate dust:

- Demolition
- Earthworks
- Construction
- Vehicle Movements and Trackout

The Institute of Air Quality Management (IAQM) has produced guidance[1] on assessing the risks of dust arising from each of these activities and it is recommended that this guidance and risk assessment methodology be followed.

4.1.2 Once the risk of dust and air pollution from each of the phases has been assessed, these risks need to be managed and appropriate mitigation measures put in place which may go beyond the general principles outlined in Chapter 2.

4.1.3 The London Council"s Best Practice Guidance[2] provides detailed methods to mitigate emissions of dust and other pollutants and follows a risk assessment approach as to the level of monitoring and mitigation required.

4.1.4 This guide is not intended to duplicate the contents of the London Council"s BPG and developers are directed to refer to the latter document in order to identify the mitigation measures appropriate to the site. However, this guide provides supplementary information that relates specifically to the London Borough of Lewisham.

4.2 Site-Specific Measures

The following points are intended to provide information and requirements that are specific to the London Borough of Lewisham:

4.2.1 There are 6 Air Quality Management Areas within the borough which cover all the areas north of the A205 (South Circular) together with major roads in the south. Developments within an Air Quality Management Area will be expected to implement stricter control measures so as to ensure that work towards meeting Air Quality Objectives are not impeded.

4.2.2 The whole of the borough of Lewisham lies within the London Low Emission Zone. Compliance with the relevant emissions standards is required for all affected vehicles associated with the site. It is good practice for contractors to aim to meet the highest Euro standards for emissions for all HGVs and LGVs accessing the site.

4.2.3 Monitoring of dust is expected at all demolition/construction sites. This ranges from regular visual observations and record-keeping for smaller, low-risk sites to the installation of multiple real-time automatic particulate monitors at higher risk sites. Where two or more real-time monitors are employed, the Council should set both relative and absolute trigger action levels. If these levels are reached, the developer should investigate the cause of the elevated concentrations and take appropriate remedial action. This may involve the temporary cessation of dust-generating activities on site.

4.2.4 The developer should comply with all regulations introduced under The Clean Air Act 1993. As best practice, the burning of any materials on the site will **NOT** be permitted**.** Suitable provisions will, therefore, need to be in place for the removal of all waste from site.

4.2.5 Where a development will give rise to several HGV movements per hour during either of the phases, it is recommended that a Construction Logistics Plan is prepared and submitted.

4.2.6 The contractor should ensure that the area around the site, including the public highway, is regularly and adequately swept using wet sweeping methods only to prevent any accumulation of dust and mud. Depending on the assessed risk, the use of wheel cleaning facilities may be required.

4.2.7 The application of dust suppressants to the hard surfaces on and around the site can help reduce the re-suspension of dust. Developers should consider whether it is appropriate to implement a programme of application and can seek advice on the application from the Council.

4.2.8 Any plant used for the crushing of materials must be authorised by a local authority under the Environmental Protection Act 1990 Part 1 (Prescribed Processes). All works should be carried out in accordance with the conditions of such an authorisation. Where plant is used to recycle materials, the appropriate licence from the Environment Agency should be obtained. The process operator should notify the local authority prior to the movement of the plant on to the site.

4.2.9 The contractor should take all necessary precautions to prevent the occurrence of smoke emissions or fumes from the site plant or stored fuel oils for safety reasons and to prevent such emissions or fumes drifting into residential areas. In particular, plant should be well maintained and measures taken to ensure that it is shut down in the intervening periods between work or throttled down to a minimum.

4.2.10 All Non-Road Mobile Machinery should use Ultra Low Sulphur Diesel (ULSD).

4.2.11 Effective methods of work are adopted to prevent dust from becoming airborne at source, including enclosure of fixed plant, addition of moisture, or provision of effective exhaust ventilation and filtering.

5. Sandblasting

5.1 The work area should be close-sheeted to reduce dust nuisance from grit. Routine checking is required to ensure that the sheeting remains sound or sealed during the operation. Particular attention should also be given to the working platform to ensure that it is properly sheeted or sealed to contain dust.

5.2 Non-siliceous grit should be used to avoid long term irreversible lung damage from silica dust.

5.3 Proper protection should be provided for any structure painted with lead based paint.

5.4 In cases where water is used for large scale cleaning and blasting the requirements of the Environment Agency should be followed.

5.5 All grit should be prevented from falling into water courses.

6. Asbestos

6.1 Special precautions and surveys should be taken if materials containing asbestos are encountered. The contractor should comply with the Control of Asbestos at Work Regulations. The contractor should observe the exposure limits and measurement methods for asbestos that are set out in the relevant and current Health and Safety Executive Guidance Notes. The contractor should consult with the Health and Safety Executive concerning precautions required when removing asbestos material.

6.2 Please note that all asbestos removal **SHOULD** be carried out by Registered Contractors and documented; and status of site attaining to asbestos confirmed.

7. Contaminated Land

7.1 If during site works contamination is encountered on site, which has not previously been identified, no further development should take place until a site investigation has been carried out to characterise and risk assess the contamination. The investigation will survey and assess the nature and extent of contamination. Recommendations for remediation should be submitted to and approved in writing by the Council"s Environmental Protection Team before further works can proceed.

7.2 If nuisance issues emanate from newly found contamination, or remedial activity; contingency measures must be built in to abate nuisance occurring – via method statement provisions, contingencies for abatement and monitoring – e.g. dealing with odour issues emanating from hydrocarbon sources.

7.3 The contractor should consult with the Health and Safety Executive when working on land which is contaminated.

7.4 The contractor should consult with the Environment Agency; and other pertinent stakeholders; and the Council"s Environmental Protection Team regarding proposed measures to prevent the contamination of water courses and aquifers.

8. Urban Ecology

8.1 The contractor should comply with the provisions of the current Wildlife and Countryside Act, with the requirements of the Unitary Development Plan and any conditions attached to planning permissions. The first priority is to maintain habitats intact and undisturbed and, if possible, to make improvements to enhance natural habitats.

8.2 No mature trees should be interfered with without written consent and prior consultation with the Council"s Planning Group.

8.3 When Japanese Knotweed is encountered the contractor should comply with the Environment Agency"s current code of practice for its management, destruction and disposal.

8.4 All wild birds are protected under law when they are nesting under the Wildlife and Countryside Act 1981 (as amended). Please be aware that bird nesting season is between April-September and any works that will involve the demolition or development (including conversions) of buildings may affect species such as House Sparrows, Swallows and House Martins.

8.5 The removal and cutting of vegetation, including hedges, trees and scrub should ideally be undertaken outside of nesting season or only after a survey inspection carried out by a suitably qualified person has determined that there are no nesting birds.

9. Ancillary Site Activities

9.1 Access to the site should be located to ensure the minimum of disturbance from vehicles entering or leaving the site to persons in nearby noise sensitive buildings.

9.2 The contractor will be responsible for all lorries delivering to or exiting from the work site and should comply with the time restrictions in 2.1.1.

9.3 Wherever practicable waiting or queuing on the public highway should be avoided. Where lorries cannot immediately enter or leave the site, engines should be switched off while waiting. It is good practice for a banksman to be employed to control and direct vehicle movements to and from the site where these are likely to overlap.

9.4 Lorries should enter and exit the site in a forward direction except where space restrictions do not allow this. These conditions will be subject to prior discussions with the Highway Authority and the Police before implementation.

9.5 Wherever practicable all loading and unloading of vehicles will take place on site.

9.6 Details of measures to reduce the impact of construction traffic movements through the management and rationalisation of travel and traffic routes and safe pedestrian movements should be submitted to the London Borough of Lewisham, Highways Team for their approval.

9.7 Rubbish should be removed at frequent intervals and the site kept clean and tidy.

9.8 Fly-tipping will not be permitted. Loads should only be deposited at authorised tips or into designated barges. Deposition should be in accordance with the requirements of the Environment Agency, the current Environmental Legislation and Special Waste Regulations.

9.9 To prove the correct depositing of excavated material and to prevent the occurrence of fly-tipping a ticket system will be operated at all sites. The contractor will provide a sequentially numbered ticket system for each work site to confirm that each lorry load of spoil is deposited at an approved site.

9.10 Where safe from contamination, spoil should be re-used on site reducing the vehicle movements.

9.11 Hoardings should be frequently inspected, repaired and repainted as necessary.

9.12 Unless agreed by the Council, police and third party land and property owners, crane arcs should be confined within the site. A licence should be made to Lewisham Highways, if the jib at any point extends over the public highway.

9.12 Site lighting should be positioned and directed so as not to intrude unnecessarily on adjacent buildings and land uses. It should not cause distraction or confusion to passing drivers on adjoining public highways.

9.13 Toilet and washing facilities will be provided, be kept clean and properly maintained.

Appendix 1

Good Practice Measures - A statement of intent

When completed please send and/or e-mail to London Borough of Lewisham, Environmental Protection Team, Wearside Service Centre, Wearside Road, London SE13 7EZ; environmentalprotection@lewisham.gov.uk, together with any supporting documents. *Use separate sheets if required.*

Company Name……..

Registered Office ……

Telephone …… Fax ……

Address for
Correspondence ……..

E-mail ……

On Site Contact

Name …… Tel ……

Location and Outlined description of works:

Proposed start date …….

Estimated duration of works ……..

Programme of works, giving details of method of demolition and construction, plant and equipment:

Detail measures being used to demonstrate the use of Good Practice when choosing machinery and methods of demolition and construction:

Detail of publicity proposed and procedure for dealing with complaints:

Appendix 2

London Borough of Lewisham Environmental Protection Team.

Application for works not conforming with this good practice guide.

When completed please send and/or e-mail, together with any supporting documents.

Applicant……

Registered Office…….....

Telephone…….. Mobile……..

E-mail…….

Contact Name/s…….

……..

Address for correspondence (if different from above)

.....

.....

Telephone…… Mobile……

E-mail…….

Contact Name/s……

……..

Location of works ……...

……

Proposed start date.....

Estimated duration of works.....

Proposed hours of works – (where not in accordance with Good Practice Guide)

.....

.....

Full details of proposed works – Please give full details of plant and machinery to be used an any other proposed deviations from the Good Practice Guide

.....

.....

Reasons for not adhering to Good Practice Guide

.....

.....

.....

Details of advance publicity, consultation and measures taken/proposed to minimise noise, dust and pollution

.....

.....

Signed..... Date.....

Designation .....

For use by Environmental Protection Team

Comments:……

……

……

……

……..

Signed ..... Date .....

Appendix 3

List of Contacts

London Borough of Lewisham		
Environmental Protection Wearside Service Centre Wearside Road, London SE13 7EZ	Tel:	020 8314 6789
	E-mail: environmentaprotection@lewisham.gov.uk	
Building Control	Tel:	020 8314 8233
	Fax:	020 8314 3138
Traffic and Transport	Tel:	020 8314 2235
	Fax:	020 8314 2577
	E-mail: highways@lewisham.gov.uk	
Development Control	Tel:	020 8314 7400
	Fax:	020 8314 3127
Health and Safety Executive	Tel:	020 7556 2100
Environment Agency	Tel:	0800 807060 (Emergency)
	Tel:	01932 789833 (South East)
	Fax:	01932 786463
Considerate Contractor Scheme	Tel:	0800 783 1423
	E-mail: enquiries@ccscheme.org.uk	
Freight Operator Recognition Scheme	Tel:	08448 09 09 44
	E-mail: fors@tfl.gov.uk	

References

[1] Institute of Air Quality Management, Guidance on Construction Impacts v.1.1 (Jan 2012)
[2] London Council"s Best Practice Guidance: The Control of Dust and Emissions from Construction and Demolition (Nov 2006)

Appendix 4

Definitions

“Best Practicable Means” (BPM) – refers to the efficient and realistic approach to the control of emissions from scheduled processes and is defined in statute within Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990. BPM is defined by reference to the following provisions in Section 79(9) of the Environmental Protection Act 1990:

a) “„practicable" means reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to the financial implications;

b) the means to be employed include the design, installation, maintenance and manner and periods of operation of plant and machinery, and the design, construction and maintenance of buildings and structures;

c) the test is to apply only so far as compatible with any duty imposed by law;

d) the test is to apply only so far as compatible with safety and safe working conditions, and with the exigencies of any emergency or unforeseeable circumstances.”

"Construction", in this document includes all site preparation, demolition, material delivery, materials and waste removal, on-site fabrication, piling, boring, context works and all related engineering and construction activities.