



Code of Construction Practice



2005-2006
Promoting Racial Equality
Getting Closer to Communities
2004-2005
Supporting Social Care Workers
2003-2004
Community Cohesion



TOWER HAMLETS

CONTENTS

1	INTRODUCTION	
	1.1 Aims of the Code of Construction Practice	1
	1.2 Purpose and Scope	1
	1.3 Compliance with the CoCP	2
2	APPLICABLE CODES, STANDARDS AND ACTS OF PARLIAMENT	
	2.1 Relevant Legislation	3
	2.2 Planning Conditions	3
	2.3 Licences	3
	2.4 Construction Environmental Management Plans	4
	2.5 Incident Reporting procedures	4
	2.6 Review Timetables	5
3	ROADS AND FOOTPATHS	
	3.1 Regulatory Overview	6
	3.2 Temporary & Permanent Closures & Diversions	7
	3.3 Work Affecting Carriageways & Footways	7
	3.4 Maintenance and Repair of the Highway	10
	3.5 Street Furniture	10
	3.6 Lorry Movements	10
	3.7 Mud on Roads	11
	3.8 Avoidance of Fly-tipping: Ticket System	12
	3.9 Marking of Lorries- Site Identification	12
	3.10 Responsibility for Enforcement	12
4	PROTECTION OF THE WATER ENVIRONMENT	
	4.1 Regulatory Overview	13
	4.2 Waste Water & Ground Water	13
	4.3 Protection of Aquifers	15
	4.4 Drainage Routes to Canals	16
	4.5 Spill & Leak Protection	16
	4.6 Drainage of Waterways	16
	4.7 Water Transport/Barging	16
5	NOISE AND HOURS OF WORKING	
	5.1 Regulatory Overview	17
	5.2 Noise control- General	17
	5.3 Noise Control – detailed Provisions	18
	5.4 Hours of Working	20



6	VIBRATION	
6.1	General	22
6.2	On-Site Monitoring	22
6.3	Vibration Standard	22
7	DUST AND AIR QUALITY	
7.1	Regulatory Overview	23
7.2	Dust	23
7.3	Air Quality	25
7.4	Special Precautions for Asbestos	27
8	DISPOSAL OF WASTE AND CONTAMINATED MATERIALS	
8.1	Regulatory Overview	28
8.2	Waste	29
8.3	Contaminated Land	30
8.4	Excavation Materials	32
8.5	Demolition Materials	32
8.6	Re-use of Construction Materials	34
9	URBAN ECOLOGY	
9.1	Regulatory Overview	36
9.2	Protection of Habitats	37
9.3	Protection of Mature Trees	38
9.4	Protection of Breeding Birds	38
10	ARCHAEOLOGY	
10.1	Regulatory Overview	39
10.2	Archaeological features	40
11	BUILT HERITAGE	
11.1	Built Heritage	41



12	SITE BOUNDARIES/HOARDINGS	
	12.1 Fencing & Hoardings	42
	12.2 Painting & Hoardings	43
	12.3 Fire Brigade Access	43
	12.4 Temporary Structures on the Public Highway	43
	12.5 Visual Intrusion	43
13	SITE ACTIVITIES	
	13.1 Good Housekeeping	44
	13.2 Site Inspection	44
	13.3 Living Accommodation	44
	13.4 Information Boards	44
	13.5 Clearance of Site on Completion	45
	13.6 Pest Control	45
	13.7 Considerate Contractors Scheme	45
14	SAFETY	
	14.1 General	46
	14.2 Emergency Contacts Procedures	46
	14.3 Health and safety at Work Act 1974	46
	14.4 Contaminated Materials (<i>Special Precautions</i>)	46
	14.5 Crane Arcs	47
	14.6 Unexploded Bombs	47
	14.7 Lighting	47
15	Review and Update	
	15.1 Review and Update	48
	Appendix A- Council Policy on Noise and Vibration	
	Appendix B- Useful Contacts	



London Borough of Tower Hamlets

Code of Construction Practice



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London Borough of Tower Hamlets

Code of Construction Practice



1. INTRODUCTION

1.1 Aims of the Code of Construction Practice

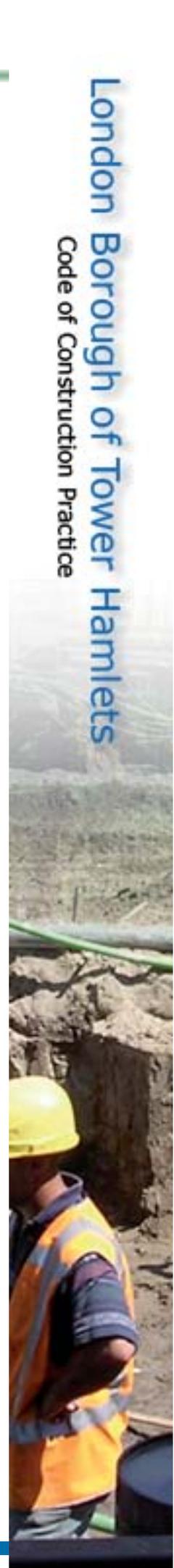
This Code of Construction Practice (*CoCP*) sets out standards and procedures for managing the environmental impacts of constructing major projects and small scale construction alike within the London Borough of Tower Hamlets (*LBTH*). The CoCP applies to the complete range of development including large-scale developments and major infrastructure projects, especially for which an Environmental Impact Assessment (*EIA*) has been undertaken. It covers the environmental, public health and safety aspects of the project that may affect the interests of local residents, businesses, the general public and the surroundings in the vicinity of the proposed construction site.

The CoCP identifies the main legal responsibilities and requirements of developers and contractors in constructing their projects. The CoCP also aims to assure residents and other affected parties that the mitigation of impacts to the environment are being taken into account according to best practice. Overall, it aims to minimise nuisance and disturbance to the public and to safeguard the environment.

1.2 Purpose and Scope

The purpose of the CoCP is to guide developers and contractors through the process of dealing with the assessment and management of the identified significant construction phase and the environmental impacts associated with their development within the London Borough of Tower Hamlets. One of the main tools for controlling any environmental impacts during the construction or demolition phase of the developments are the consents granted or to be granted under the Control of Pollution Act 1974 (*COPA*) *Section (60/61)*. This CoCP, supported by project specific construction environmental management plan (*CEMP*), shall supplement that and provide a framework for managing environmental impacts of construction in the London Borough of Tower Hamlets.

Compliance with this CoCP will not absolve the Contractor or its subcontractors from compliance with all legislation relating to their construction activities. In particular, the Contractor shall apply for section 61 consents to LBTH, in accordance with the provisions of COPA.



The CoCP sets out:

- * the general principles to be applied during construction and the context within which mitigation measures will operate and be developed;
- * the general provisions for construction site operations; and the particular environmental issues that need to be considered throughout the period of construction work.

1.3 Compliance with the CoCP

Current LBTH practice is that the CoCP *Section (60/61)* is a condition of development during the planning process. At the very least the developers of major projects within LBTH must comply with the CoCP, and must ensure that their contractors and sub-contractors comply with it.

2 APPLICABLE CODES, STANDARDS AND ACTS OF PARLIAMENT

There are many Codes, Standards and Acts of Parliament that cover environmental and related matters and these are referred to as applicable in this CoCP. Notwithstanding those references, compliance with them shall not discharge the Contractor from complying with any other legislative requirements applicable at the time of construction activities.

2.1 Relevant Legislation

Each section of this document sets out the main statutory provisions, regulations, and codes of practice and standards relevant to each environmental topic. However, the legislative requirements, standards, etc. in this document are not exhaustive. It is the responsibility of the contractor to monitor the development and implementation of new environmental legislation and regulation and to use the appropriate standards prevailing at the time of awarding contracts. The contractor must comply with all prevailing legislation at the time of construction, including any requirements under Health and Safety legislation.

2.2 Planning Conditions

Certain aspects of construction such as working hours and construction methodology may be controlled by conditions contained in the planning permission imposed under the Town and Country Planning Act 1990 (*as amended*). It is the responsibility of the developer / contractor to demonstrate via their Construction Environmental Management Plan how they will comply with these conditions.

2.3 Licences

In addition to environmental permits, other aspects of construction are also subject to licences. For example, the developer/contractor will be required to obtain licences from the Local Authority before:

- (i) erecting any scaffolding, hoardings, gantry, temporary crossing or fence on the highway;
- (ii) depositing a skip; or
- (iii) operating a mobile crane, aerial platform, concrete pump lorry or any such equipment.



The contractor has a duty to inform local residents likely to be affected by such activities at least 14 days prior to undertaking the works, as well as applying for the appropriate permits and licences. The most suitable method of informing residents is through newsletters. Such newsletters should also update neighbours on site progress and projected activities that might cause loss of amenity, e.g. road closures for delivery or use of mobile cranes or abnormal deliveries to the site.

2.4 Construction Environmental Management Plans

The Developer or Contractor shall be responsible for preparing a project specific Construction Environmental Management Plan (*CEMP*) demonstrating how the requirements of this CoCP will be met. The plan will clarify environmental management responsibilities and activities, monitoring and auditing processes, complaints response procedures, and community and stakeholder liaison processes. The CEMP shall make reference to, and provide for compliance with, all legislation relevant to the construction phase. This shall be updated as new legislation is introduced.

The CEMP shall be developed in liaison with the Environmental Health Department of the LBTH, and for the approval of LBTH.

2.5 Incident Reporting Procedures

The contractor's nominated agent must advise LBTH within 24 hours of any incidents of non-compliance with the CoCP and CEMP and will respond to any reports referred by the LBTH within 24 hours, or as soon as reasonably practicable. In the event of working practices being deemed dangerous either by LBTH or the Health and Safety Executive (*HSE*), immediate remedial action must be taken.

The contractor will maintain on site, and collate in a timely manner, a system for recording any incidents and any ameliorative action taken for inspection by the Local Authority's representatives. This will be forwarded to the Local Authority on a regular basis.

Any reports forwarded by the LBTH, Police or other agencies will be dealt with by the contractors (*following instruction from the contractor's nominated representative, where appropriate*) as soon as practicable, preferably within one hour but always within 24 hours of receipt by the contractor. The contractor will monitor and ensure that the appropriate action has been taken. Where appropriate, remedial action shall be agreed with LBTH. Procedures should be put in place to ensure, as far as is reasonably practical, that necessary action has been taken and steps to avoid recurrence have been implemented.

2.6 Review Timetables

The contractor's nominated personnel shall attend monthly reviews with the LBTH, or as requested, to discuss their own responsibilities under the CoCP and those of their contractors.

The contractor shall permit and facilitate where necessary LBTH's officers to undertake regular planned inspections of the site to check compliance with the CoCP and associated records.



3 ROADS AND FOOTPATHS

3.1 Regulatory Overview

The Highways Act 1980 (*particularly Part IX*) sets out requirements relating to construction work on or near the highway. The meaning of 'highway' for the purposes of the 1980 Act is defined as the whole or part of a highway, other than a ferry or waterway. The actual definition of a highway is set in common law, to be a way over which the public have the right to pass and repass. In practice, highways are classified as Special Roads, Trunk Roads, Classified Roads, Unclassified Roads, Public Footpaths and Bridleways.

Key requirements of the 1980 Act include:

- * Permission by formal agreement from the Highway Authority (*LBTH*) is required for any works to highways.
- * Licences are required for permission to place temporary obstructions on the highway (*e.g. hoardings, fenced storage areas, temporary cross-overs, scaffolding, gantries and skips*).
- * Prior notification to the Highway Authority is required for construction of a vehicle cross-over on a highway.
- * Deposition of mud or other such materials on the highway is prohibited. Measures to prevent this (*e.g. wheel washing*) can be required by order.
- * Surface drainage from a construction site must not be allowed to run across the footway part of a public highway.

The New Roads and Street Works Act 1991 amends earlier legislation and contains updated provisions for carrying out works to highways and construction of new roads. In conjunction with the Highways Act 1980, the 1991 Act also contains requirements for prior notification to the Highway Authority before commencing construction of a new highway crossing. A Street Works licence issued by the local authority is required for excavation of the highway (*New Roads and Street Works Act 1991 (s.50)*) only for accessing installation, repair, or removal of apparatus, e.g. not for trial pits, which is under the provision of the Highways Act 1980.

The 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. In addition, the Highways Act 1980 also makes it an offence to obstruct a highway (*including a Public Right of Way*) e.g. with building material that results in a public danger/nuisance. The 1990 Act also provides for a planning permission to be subject to planning conditions which relate to off-site activity, such as parking or loading on the highway.

In addition to the above statute law, common law requires that contractors working on or over a highway owe a duty of care to other users of the highway. Contractors are liable for any personal injuries or property damage that may arise from a breach of that duty. Construction professionals, (*e.g. engineers, surveyors*), owe a duty of care to the employer when preparing design work and offering advice related to it. The professional has a duty 'to act diligently'.

The Highways Act 1980 (*ss.148- 151*) makes it an offence to deposit on a highway anything that is a nuisance (*s.148*). There is a statutory duty on the Highway Authority to clear soil which is washed onto, or falls onto, the highway (*s.150*) and the Highway Authority has powers to serve a notice on the occupier of a land adjoining a street which is a highway maintainable at the public expense to instigate works to prevent soil being deposited on the highway (*s.151*). In addition, the Environmental Protection Act 1990 (*ss.79-82*) provides for the control of 'statutory nuisance'. Where a situation arises that is considered to be a nuisance or injurious or dangerous to health, a local authority can serve a notice requiring the nuisance to be stopped.

3.2 Temporary and Permanent Closures and Diversions

The Contractor will carry out initial consultation with the London Borough of Tower Hamlets (*LBTH*) concerning the stopping up of roads and footpaths and the posting of notices informing local residents, business and organisations.

3.3 Work Affecting Carriageways and Footways

Before commencing construction at any part of the borough which will involve interference with a carriageway or footway, LBTH will be consulted and agreement reached on the proposed commencement date of these works, the area of the carriageway or footway to be occupied and duration, and the proposed methods of construction in order to minimise inconvenience to the public (*Highways Act 1980*). All necessary consents and licenses must be obtained in advance.



In approving the timetable for the works, the Council will need to bear in mind its network management responsibilities under the Traffic Management Act 2004 to secure the expeditious movement of traffic (*including pedestrians and cyclists*) on its road network and neighbouring authorities.

All temporary and diverted footways shall be designed for access for wheelchairs and pushchairs where reasonably practicable, reasonable pedestrian routes should be provided throughout the construction period and will meet the following requirements:

- (i) Any temporary footways and carriageways will be constructed to the reasonable requirements of LBTH and should have uniform surfaces; there should be no steps and any gradients should be no greater than 1 in 20. In the event where steps are unavoidable, an alternative route must be identified for people with mobility impairments or disabilities.
- (ii) Pavement ramps will be provided at all junctions of footways with carriages. Gradients must not exceed 1 in 20 and the base of the ramp must be flush with the carriageway.
- (iii) All temporary footways and ramps must be surfaced in non-slip materials to the satisfaction of LBTH and kept free of mud and debris.
- (iv) So far as is reasonably practicable, all footways and carriageways will be kept free from mud and other loose materials arising from the works.
- (v) Existing pavement widths around work sites will be maintained except where this exceeds 2 metres when LBTH may accept a reduction to a clear width of not less than 2 metres or to a minimum clearance between street furniture, obstructions and temporary measures of 1.5 metres.
- (vi) Clear signing will be provided at all times for each pedestrian route with the minimum number of changes to all temporary layouts in order to reduce confusion. Advance warning should, if possible, indicate alternative existing wheelchair-accessible routes.

- (vii) All openings or obstructions on the carriageway and footway will be barricaded with a continuous rail (*lit at night*) strong enough to offer necessary resistance should a blind person walk into it; a tapping rail will be provided.
- (viii) Headroom clearance over footways will be minimum of 2.3m. A preferred clearance of 2.5m to soffit should be provided if possible. A horizontal clearance of 0.6m will be provided from kerb-line, where practicable, for any hoarding projection under 5.1m high, to avoid fouling by vehicles. If any projection is over the highway, the clearance will be more than 5.41m. For permanent structures the clearance will be more than 6.45m.
- (ix) All pedestrian routes diverted onto the carriageway will be clearly defined by continuous barriers, constructed to the reasonable requirements of the Highway Authority.
- (x) Where a temporary footway is provided, it will conform to all reasonable requirements of the Highway Authority.
- (xi) Lorries entering or leaving the site will only be allowed to cross footways under the control of competent banksman.
- (xii) Roll-on-roll-off containers are not allowed on the highway and LBTH will not grant consent for them
- (xiii) After completion of the works all material arising from the works will be cleared from the highway leaving the same in clean and tidy condition to the reasonable requirements of the Highway Authority.
- (xiv) All vehicles must enter and leave the site in a forward direction except where space restrictions do not allow this. In such cases, the contractor will appoint a competent banksman to provide assistance.



3.4 Maintenance and Repair of the Highway

Where works traffic has to use public highways the Contractor shall take necessary precautions to prevent damage to roads and footpaths. The Contractor will comply with relevant legislation with regard to vehicle licensing and operation.

The Contractor will be responsible for any damage caused by his activities to roads, kerbs or footpaths in the vicinity of the work site (*Highways Act 1980 (ss. 148-151)*) and will carry out the temporary or permanent reinstatement as may be required, of such roads, kerbs or footpaths and in a manner approved by LBTH to their specification and reasonable satisfaction. Permanent reinstatement will be carried out by LBTH or by the Contractor in accordance with LBTHs' specification and reasonable requirements.

3.5 Street Furniture

Any street furniture (*electrical or non-electrical*) cannot be removed or relocated by the developer or any of its contractors. This work may only be carried out by LBTH or its appointed contractor. If the street furniture is electrical, allowances of up to eight weeks must be given to allow for any electrical works that may be required.

No street furniture may be relocated or removed by the developer or any of its contractors; these works will be carried out on a recharge basis by LBTH or its approved contractor.

3.6 Lorry Movements

LBTH will normally seek the use of a "planned route" for lorries travelling to and from each work site as agreed by LBTH and the Police.

Vehicles arriving or leaving the site shall do so during normal working hours as specified in section 5.

LBTH will require the Contractor to abide by the London Boroughs' Transport Scheme.

Access to the site shall be located to ensure the minimum of disturbance from vehicles entering or leaving the site to persons in nearby noise sensitive buildings. The number of lorry movements, hours of operation and any lorry holding areas will be agreed in advance with LBTH and the Police.

The contractor must apply to LBTH for approval for all temporary road signs on the public highway that indicate routes to the site, in accordance with the New Roads and Street Works Act 1991. The application for approval must be submitted at least six weeks in advance of the requirement for signage.

All access from the site onto the highway shall be of sufficient width to accommodate two-way traffic wherever practicable.

Traffic signs in accordance with the "Traffic Signs Regulations and General Directions 1994" shall be provided for each access as follows:

- (i) As advance warning of the approach the signs shall be as diagram 506.1, 1200mm high with an additional plate as diagram 579.
- (ii) For control of traffic leaving the Site, "Give Way" signs as diagram 602, 1200mm high, and road markings, where practicable, as diagrams 1003 and 1023. A variant of diagram 565.2 station "Works Traffic Only" shall be mounted on the reverse side of the "Give Way" sign assemblies.

The precise location of each sign shall be determined by the Contractor to the satisfaction of the LBTH.

Traffic signs and temporary road works signs shall comply with the Traffic Signs Regulations & General Directions 2002 and with BS873.

Lorries waiting to enter or leave the site must switch off their engines.

3.7 Mud on Roads

This is regarded as one of the main environmental nuisance problems arising from construction sites. LBTH will expect the Contractor to take strict measures to minimise this problem.

These will include, but not necessarily be limited to:

- (i) The provision of easily cleaned hardstandings for vehicles entering, parking and leaving the site.
- (ii) The provision of wheel washing facilities including, where practicable, mechanical wheel spinners.



- (iii) The use of an approved mechanical road sweeper to clean the site hardstanding and any mud or debris deposited by site vehicles on roads or footpaths in the vicinity of the site. The road sweeper is to be readily available whenever the need for cleaning arises and will be properly used and maintained.
- (iv) The complete sheeting of each lorry load of spoil removed to prevent spoil falling off during its journey to the tip or barge concerned.

The contractor will also comply with the requirements regarding dust outlined in Section 7 below.

3.8 Avoidance of Fly-tipping: Ticket System

Fly tipping will not be permitted. Loads must only be deposited at authorised landfill sites or onto designated barges. Deposition will be in accordance with the requirements of the Environment Agency (EA) and the 'Duty of Care' provisions of the Environmental Protection Act 1990 and any other relevant Regulations.

'Duty of Care' Documentation must be kept and provided to LBTH upon request.

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 to LBTH's satisfaction a sequentially numbered system for each of the Contractor's work sites to confirm that each lorry load of spoil is deposited at an approved site.

The Contractor must also ensure that fly tipping by others does not take place on the site by ensuring adequate site security.

3.9 Marking of Lorries - Site Identification

The contractor will provide to LBTH's approval, lorry stickers uniquely identifying the worksite. For identification purposes the contractor will fix these in a prominent position on all lorries frequently serving the worksite. The identification needs to be sufficiently large to be easily read from a distance of 20 metres.

3.10 Responsibility for Enforcement

The Contractor will be responsible for all the lorries delivering to or exiting from a worksite and will be required to ensure that the requirements of Clause 3.6 above are met.

4 PROTECTION OF THE WATER ENVIRONMENT

4.1 Regulatory Overview

The Water Resources Act 1991 (*s.85*) establishes that it is an offence to knowingly discharge any poisonous, noxious or polluting matter (*liquid or solid*) or solid waste matter to any controlled waters (*including either surface or groundwater*) without a discharge consent issued by the Environment Agency (*under Part III Ch. II of the Water Resources Act 1991*). In addition, general good site management practice is essential to protect surface water and groundwater from accidental contamination.

Where discharge of polluting matter to controlled waters has occurred or the Environment Agency considers that such discharge is likely to occur, it can either carry out works to clean-up the pollution and recover its costs from the polluter (*s. 161 of the Water Resources Act 1991*) or can serve a works notice on the polluter requiring them to clean-up the pollution at their own expense (*Anti-Pollution Works Regulations 1999 (SI 1999/1006)*).

The Control of Pollution (*Oil Storage*) Regulations 2001 came into force in March 2003 with the objective of minimising the pollution of controlled waters that results from spillage or leaking of oil. The regulations impose a requirement on anyone storing more than 200 litres of oil based liquids outdoors to have in place storage facilities that comply with a comprehensive range of requirements, including but not limited to:

- * The oil container must be of sufficient strength to ensure it is unlikely to leak.
- * The container must be situated within a secondary containment system (*SCS*), which will prevent the release of any leaked oil.

For further detail on the requirements of the regulations it is advised that guidance is sought from the Environment Agency.

4.2 Waste Water and Ground Water

Whenever possible, the contractor must seek to minimise the amounts of wastewater that need to be discharged and find alternative means of disposal. Such alternatives might be discharge to foul sewer subject to trade effluent obligations or disposal through a licensed waste management contractor in accordance with duty of care obligations.



All waste water and site discharges shall only be permitted where the effluent quality and discharge location is acceptable to the Environment Agency or Thames Water (*as appropriate*). Effluent will pass through treatment facilities such as sediment traps and/or settlement lagoons, as appropriate, before being discharged. The Contractor will ensure that all treatment facilities are regularly inspected and maintained and that a full record is kept of inspection, maintenance and measures to sustain equipment performance.

Any seepage and wastewater arising from the works must be collected and discharged via a settlement tank. The standards for treatment, prior to discharge, will be agreed in advance with LBTH and, where applicable, satisfy the Environment Agency requirements.

Soakaway discharge will only be permitted where the effluent is proved to be acceptable to the Environment Agency. With the consent of Thames Water Utilities Ltd, contaminated water or water of a dubious quality can be discharged into sewers by tankers or by other approved means.

Prior to any excavation below the water table, including any site de-watering, the Contractor will inform the Environment Agency, Thames Region, of the works to be conducted. Cut-off ditches may be used to prevent water from entering excavations. The de-watering and disposal measures will be agreed with the Environment Agency and an Abstraction Licence shall be obtained.

The Contractor will also comply with BS 6031: 1981 Code of Practice for Earthworks, regarding the general control of site drainage.

The Contractor will ensure that any water that has come into contact with contaminated materials will be appropriately disposed of in accordance with the Water Industries Act 1991 (*if discharged to sewer*) and the Water Resources Act 1991 (*if discharged to controlled waters*) and all other related regulations and to the satisfaction of the Environment Agency – Thames Region .

The contractor will prepare a full management plan where contaminated land is identified within a construction site in order to comply with all relevant handling and disposal legislation (*including dewatering discharge from piling operations*). Where earthworks or piling operations are planned , a detailed site investigation will be carried out, in order that appropriate mitigation measures can be implemented.

The Contractor will have to apply for consents and approvals as follows:

- (i) A consignment note system will be applied to all discharges.
- (ii) For any discharge into a watercourse or river, approval will be required from the Environment Agency.
- (iii) For any discharge into a sewer, a Trade Effluent Consent will be required from Thames Water Utilities PLC.

The Contractor will make provisions to ensure that all hazardous substances including oil drums and containers or other potential contaminants stored on site are controlled in accordance with Control of Substances Hazardous to Health (*COSHH*) Regulations 2002 and are properly isolated and bunded so that no oil or other contaminants are allowed to reach watercourses or ground water, including aquifers. Storage locations for such materials should be positioned away from watercourses and agreed with the Environment Agency. All surface water or other contaminated water, which accumulates in the bund, will be removed by manually controlled positive lift pumps and not by means of a gravity drain. This water will be removed from site and discharged in a public sewer in consultation with the relevant water companies.

Foul water and sewage effluents produced by the construction workforce on-site must be contained in temporary foul drainage facilities that are to be installed and subsequently disposed of off-site by a licensed waste contractor.

The contractor must ensure continuous compliance with all the above conditions under the monitoring of the site project management staff (*in compliance with Environment Agency regulations*).

4.3 Protection of Aquifers

The Contractor will have due regard for underlying aquifers and adhere to the Environment Agency's Groundwater Protection Policy. In all instances, appropriate protection of aquifers will be undertaken, following liaison with the Environment Agency regarding the piling and construction techniques to be employed. Details of appropriate measures to prevent groundwater contamination (*including monitoring*) will be agreed with the Environment Agency, in writing, prior to commencement of the relevant works.



4.4 Drainage Routes to Canals

Drainage to canals or other waterways will not be permitted without prior agreement with British Waterways. British Waterways will require identification of the source and quality of the water, and will liaise with the Environment Agency.

4.5 Spill and Leak Protection

Where development sites are adjacent to canals or other waterways, suitable precautions must be taken to prevent the entry of pollutants into the waterway to the satisfaction of LBTH in liaison with British Waterways. Specific measures, such as placing oil stores at a distance from the canal and putting in place additional secondary containment system (*SCS*) measures, must be considered on a site by site basis. On sites adjacent to the canal, where there is a potential risk to the canal, emergency procedures to ensure containment and treatment in the event of a spill must be agreed in advance of any works with the Council and BritishWaterways.

4.6 Drainage of Waterways

Where it is proposed that canals or other waterways be drained in connection with construction, the contractor shall agree with LBTH and British Waterways in advance, details of the methodology to be employed, prior to commencement of the development. Particular attention must be given to regular pest control treatment (*particularly rats and flies*); removal of sludge and other debris after drainage; prevention of leakage and ingress of surface water to minimise risk from legionella organisms; minimising smell nuisance from sludge and algae by measures including deodorising, hosing down etc. Safety measures must also be taken to protect both the general public and employees and to prevent flytipping and illegal access during the development works.

4.7 Water Transport/Barging

Certain worksites should be provided with jetty access to the River Thames, River Lea and the canals to enable spoil removal and construction material deliveries to be made by barge.

The Contractor will ensure that construction materials and spoil or other waste materials are not deposited in surface watercourses.

The Contractor may have to provide on the request of the Port of London Authority (*PLA*) an adequate, sequentially numbered ticket system for use with all barges travelling to authorised tipping sites to prevent the occurrence of unauthorised tipping into the river. The system will be subject to the approval of London Borough of Tower Hamlets.

5 NOISE AND HOURS OF WORKING

5.1 Regulatory Overview

The principal legislative controls on noise which includes vibration are contained within the Control of Pollution Act 1974 (*COPA 1974*). In addition, statutory nuisance provisions contained within the Environmental Protection Act 1990 (*ss.79-82*) also apply to noise.

Key issues relating to noise from construction sites include:

- (i) Prior consent may be sought from the council relating to noise from construction activities (*s.61 of COPA 1974*).
- (ii) If no prior consent is sought, the authority may serve a notice on the site/works, setting conditions of permitted work (*s.60 of COPA 1974*).
- (iii) An action in statutory nuisance can be brought by a member of the public even if the works are being carried out in accordance with a prior approval or a notice (*s.82 of Environmental Protection Act 1990*).

Circular 2/76- Control of Pollution Act 1974: Implementation of Part III-Noise provides useful background to COPA. Also British Standard 5228: Noise control on construction sites and open sites (*BSI 1997*) has been recognised by Statutory Order as the accepted guidance for noise control during construction work.

5.2 Noise Control – General

Baseline noise surveys should be carried out prior to any works commencing in order to provide a basis for determining acceptable noise levels for each specific site. These noise levels will be included in any formal agreement between LBTH and the Contractor. A programme of on-site noise monitoring is required to demonstrate compliance with agreed standards. Survey procedures and locations are to be agreed with LBTH in advance.

The noise criteria will be utilised by the Contractor in determining his method of work, type of plant to be used and noise mitigation measures for each construction site. Prior to commencement of work at any site, the Contractor will be required by LBTH to demonstrate the efficacy of the proposals.



The Contractor will apply to LBTH for formal consent in accordance with Section 61 of the Control of Pollution Act 1974. The application under Section 61 of the Act will contain particulars of the works, noise predictions for the various phases of work, methods by which the works are to be carried out and details of the measures proposed to minimise noise resulting from the works. The Contractor will also be required to comply with the other provisions of the Control of Pollution Act 1974, Part III Noise.

The Contractor will comply with the recommendations set out in BS 5228: 1997, Code of Practice for Noise and Vibration Control on Construction and Open Sites; Part 1 - Code of Practice for Basic Information and Procedures for Noise and Vibration Control and Part 2 - Guide to Noise and Vibration Control Legislation for Construction and Demolition, including Road Construction and Maintenance.

In assessing the impact of any piling operations, the Contractor will comply with the recommendations set out in BS 5228: (*Noise and Vibration Control on Construction and Open Sites*), Part 1, 1997 and Part 4, 1992 – (*Code of Practice for Noise and Vibration Control Applicable to Piling Operations*).

The Contractor must also fulfil all obligations under the relevant Noise and Vibration at Work Regulations in order to protect on-site personnel.

While it is recognised that BS 4142: 1997 'Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas', is not applicable to construction works, the philosophy of this document may be referred to in assessing degrees of disturbance.

Sound levels will be monitored according to the methods set out in Annex "E" of BS 5228: Part 1. All measurements shall be made on a sound level meter complying with BS 7580: 1997 Part 1 (*Type 1*). Noise levels will be monitored by LBTH during the course of the works.

5.3 Noise Control – Detailed Provisions

In achieving the specific noise criteria, the Contractor will be required to consider the following detailed provisions:

All sites shall be totally surrounded by fencing or hoarding to the required height and density appropriate to the noise sensitivity of the location concerned (*see requirements of Clause 12.1*).

Any damage to the fencing or hoarding surrounding a worksite will be immediately repaired by the Contractor.

All worksite gates will be controlled to give the minimum amount of time open for passage of vehicles, in order to minimise stray noise to the external surrounding area – see Clause 12 for position of gates in site boundaries.

Fixed items of construction plant may have to be electrically powered and not diesel or petrol driven. Where this is not practicable, suitable attenuation measures will be provided.

Vehicles and mechanical plant used for the purpose of the works shall be fitted with effective exhaust silencers, will be maintained in good and efficient working order and operated in such a manner as to minimise noise emissions. The contractor will use plant that complies with the relevant EU/UK noise limits applicable to that equipment or is no noisier than would be expected from the noise levels quoted in BS 5228:1997.

Plant shrouding should be in accordance with the recommendations set out in BS 5228.

On sites where environmental disturbance may arise, compressors must be “sound reduced” models fitted with properly lined and sealed acoustic covers which must be kept closed whenever the machines are in use, and pneumatic percussive tools must be fitted with shrouding or silencers of the type recommended by the manufacturers.

Machines in intermittent use should be shut down in the intervening periods between work or throttled down to a minimum. Noise emitting equipment, which is required to run continuously, may have to be housed in a suitable acoustic enclosure (*see BS5228 Part 1:1997, figures B.1, B.2 and B.3*).

Equipment that breaks concrete by munching or similar, rather than by percussion, should be used as far as is practicable.

The installation of sheet piling with a diesel or air driven impact or drop hammer may not be acceptable on certain sites. Use of hydraulically operated or vibratory hammers may be necessary in these circumstances to drive and extract sheet piling, provided the soil strata are suitable for such equipment.

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

Noisy plant or equipment will be sited as far away as is practicable from noise sensitive buildings. The use of barriers, e.g. soil mounds, site huts, acoustic sheds or partitions to deflect noise away from Noise Sensitive Areas will be employed wherever practicable.



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

Prior to commencement of works at any site, the Contractor will be required to submit to LBTH for approval the following information:

- (i) A method statement (*in accordance with the principles described in BS 5228*) stating precisely the type of plant to be used and the proposed noise control methods.
- (ii) A programme of works indicating the sound power level and location for each activity on the programme.
- (iii) Documentation from manufacturer's literature establishing the sound power level of plant.
- (iv) Calculations of LAeq and maximum levels at specified buildings as requested by LBTH, displayed, where practicable as a "Noise Map" for the various phases of the works.

If the Contractor wishes to change the type of plant or programme of work, he shall submit to LBTH for prior consent the proposed alteration and information required in Section 5.3 (i), (ii), (iii) and (iv).

The use of any plant or equipment required for any emergency situation which causes a departure from Section 5.3 shall be notified to LBTH as soon as is practicable. The Contractor will accordingly advise if previously agreed noise levels are likely to be exceeded due to the adoption of alternative working methods.

5.4 Hours Of Working

The hours of working will be established by LBTH on a site by site basis. In general, for any construction and demolition site, the normal hours of working will be:

Monday-Friday 0800 - 1800
Saturdays 0800 - 1300
not on Sundays, Bank or Public Holidays

No work and ancillary operations, which are audible at the site boundary, will be permitted outside these hours unless fully justified to the LBTH on the grounds of engineering necessity or for reasons of health and safety. Any such works will be kept to an absolute minimum.

During normal working hours, as defined above, the maximum LAeq, period noise levels measured 1 metre from the façade of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movement of vehicles to and from the site should not exceed the following limits:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday to Friday	0800 – 1800	75 dB(A)	65 dB(A)
Saturday	0800 – 1300	75 dB(A)	65 dB(A)

Noise levels in terms of LAeq,T where T = 10 hours for Monday to Friday and 5 hours for Saturday.

Local circumstances may prevent these limits from being used. The contractor shall liaise with the Local Authority to ascertain whether any unusual circumstances exist.

Should the Contractor propose any additional or alternative working hours for constructional reasons, they should obtain the prior agreement of LBTH. A minimum of 14 days notification is required by LBTH except in case of emergency, safety reasons, unforeseen circumstances or occasional major construction operations. Regarding the latter, as much notice should be given as possible.

Additional or alternative working hours needed for emergency reasons must be advised to LBTH as soon as reasonably practicable that the works are taking place and their likely duration.



6 VIBRATION

6.1 General

The Contractor will ensure that measures are taken to:

- (i) protect the residents, users of buildings close by and passers-by from nuisance or harm and
- (ii) protect buildings from physical damage.

The Contractor will be obliged to comply with the vibration levels established by LBTH.

The following factors will be considered:

- (i) Human Exposure

The Contractor should refer to with BS 5228: 1992, Part 4: 'Code of practice for noise and vibration control applicable to piling operations' for guidance.

- (ii) Protection of Structures

Demolition and construction activities will be carried out in such a way that vibrations arising will not cause significant damage to adjacent structures. Further guidance may be obtained from BS7385- Evaluation and Measurement of Vibration in Building- Part 2: Guide to damage levels from groundborne vibration.

6.2 On-Site Monitoring

A programme of on-site vibration monitoring is required to demonstrate compliance with agreed standards with LBTH.

6.3 Vibration Standard

The Contractor shall select and utilise methods of working and items of plant so that the maximum measured ground vibrations do not exceed a peak particle velocity of 1mm per second at any occupied residential property and 3mm per second at any other property in any orthogonal direction.

Compliance with these limits shall not absolve the Contractor from a duty of care and wider responsibilities under the Contract.

7 DUST AND AIR QUALITY

7.1 Regulatory Overview

The main regulatory controls over dust are the 'statutory nuisance' provisions contained in the Environmental Protection Act 1990. Dust can give rise to a statutory nuisance if it is considered to be 'prejudicial to health or a nuisance'.

Smoke, for example from burning waste on site, can also result in a statutory nuisance and is also controlled by the Clean Air Act 1993.

The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (AQS)¹ (along with its addendum²) contains national air quality standards and objectives established by the Government to protect human health. The objectives for seven pollutants have been prescribed within the Air Quality (England) Regulations 2000³ and the Air Quality (England) (Amendment) Regulations 2002⁴ (benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide and particulates).

7.2 Dust

The Contractor shall take all necessary measures to avoid creating a dust nuisance during both construction and demolition works, and should submit a statement to LBTH identifying proposed dust control measures before any work starts. Dust levels within enclosed areas must be measured with appropriate equipment to compare to the relevant Occupational Exposure Limits (made under the Control of Substances Hazardous to Health COSHH) Regulations 2002 (SI 2002/2677) and published annually in EH40) and any other relevant guidelines.

Measures to prevent dust shall include the following practices:

- (i) The provision of easily-cleaned hardstandings for vehicles.
- (ii) The enclosure of material stockpiles at all times and damping down of dusty materials using water sprays during dry weather.
- (iii) The hard surfacing of heavily-used areas which will be kept clean by brushing and water spraying regularly.

1 DETR (2000) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Working together for Clean Air, The Stationery Office

2 Defra (2002) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland: Addendum, The Stationery Office

3 DETR (2000) The Air Quality Regulations 2000, The Stationery Office

4 Defra (2002) The Air Quality Regulations 2002, The Stationery Office

5 Guidance on the Control of Dust from Construction and Demolition Activities, BRE, 2003. www.bre.co.uk



- (iv) Control of cutting or grinding of materials on site. Dust-generating machinery e.g. disk cutters must be fitted with vacuums.
- (v) The complete sheeting of the sides and top of all vehicles carrying waste and other dusty materials.

During demolition operations, watering at rubble chutes, covering skips and screening of buildings with debris screen/sheets, as appropriate. Materials should be stored away from the site boundary wherever possible

Unsurfaced haul routes and verges to receive regular damping down and cleaning where located close to sensitive locations. In certain cases, permanent surfacing should be considered.

Establishment and enforcement of appropriate speed limits over all unmade surfaces.

Completed earthworks to be sealed and/or revegetated as soon as reasonably possible.

Mixing of large quantities of concrete or Bentonite slurries to be carried out in enclosed/shielded areas where necessary.

Stockpiles of material shall be damped down or otherwise suitably treated to prevent the emission of dust from the site. Stockpiles should be planned and sited to minimise the potential for dust generation (*as far from site boundaries where practicable*). The handling of material should be kept to a minimum and when deposited onto a stockpile it should be from the minimum possible height.

Skips and removal vehicles shall be properly covered when leaving the site. Materials should be handled in such a way so that it does not give rise to excessive dust. Watering of rubble chutes shall be undertaken where necessary to prevent dust emission.

The contractor shall ensure that the area around the site, including the public highway, is regularly and adequately swept to prevent any accumulation of dust and dirt. The use of wheel cleaning facilities and road sweeping equipment may be required.

Where dust generating works (*e.g. excavation, piling, demolition*) are undertaken particularly close to buildings such that there is a potential for soiling of windows and ledges with dust, the Contractor shall clean the windows and ledges during periods of dust generating work activity or activities, as appropriate and on completion of works.

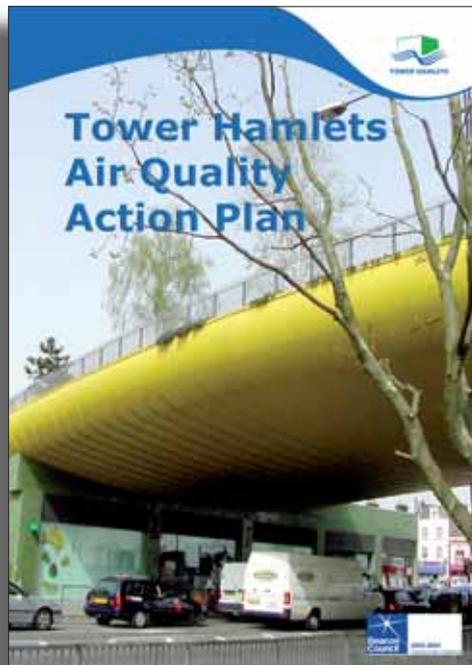
The contractor should refer to the Buildings Research Establishment's Guidance on the Control of Dust from Construction and Demolition Activities⁵.

The Contractor should also refer to the 'Draft London Code of Practice, Part 1: The Control of dust from Construction'. This document can be downloaded at www.alg.gov.uk.

The effectiveness of these measures will be monitored and reported to LBTH.

7.3 Air Quality

The London Borough of Tower Hamlets has been declared an Air Quality Management Area (AQMA) under part 5 of the Environment Act 1995 in 2001. This declaration required that an Air Quality Action Plan (AQAP) be produced detailing how LBTH proposes to meet specified objectives. The AQAP therefore details the efforts that are being made and the future efforts by the borough and all stakeholders to deliver measurable sustainable improvements in air quality.



The Contractor shall comply with the provisions of the Environment Act 1995, Clean Air Act 1993, the Health and Safety at Work Act 1974 etc, the Environmental Protection Act 1990 and the UK Air Quality Strategy.

The Contractor shall comply with the Control of Substances Hazardous to Health Regulations (*COSHH*) 2002. The Contractor will comply with Health and Safety Executive (*HSE*) Guidance Notes EH 40/2002 on Occupational Exposure Limits.

The Contractor shall comply with the Control of Lead at Work Regulations 1998.

The burning of materials on the site will not be permitted. The contractor shall 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.

Off-road mobile vehicles e.g. bulldozers, excavators, tractors and loaders, with compression ignition engines must comply with emission standards set in EC Directive 97/68/EC, meeting Stage II limits where possible. Off-road mobile vehicles should be run on low sulphur diesel.

On-road vehicle emissions are regulated through the Road Vehicles (*Construction and Use*) Regulations (*as amended*), and the Motor Vehicles (*Type Approval*) (*Great Britain*) Regulations made under the Road Traffic Act 1988. Further amendments implement the European Directives on vehicle emissions known as the EURO standards. The EURO standards set emission limits for several pollutants from different types of vehicles. Construction vehicles will be required to comply with relevant EURO standards. Drivers will be required to switch off their vehicle's engine when stationary to prevent exhaust emissions (*and noise*); and as required under The Road Traffic (*Vehicle Emissions*) (*Fixed Penalty*) (*England*) Regulations 2002.

Drivers will also be required to:

- * Keep their engines in tune and their catalysts working efficiently.
- * In practice, emissions are controlled through the MOT. All vehicles used by contractors must comply with MOT emission standards at all times.

7.4 Special Precautions for Asbestos

Special precautions shall be taken if materials containing asbestos are encountered. The contractor will comply with the Control of Asbestos at Work Regulations 2002 (*as amended*). A new Approved Code of Practice providing guidance on the new duty to manage the risks from asbestos and on implementation of the chemical agents Directive accompanies the Regulations. The contractor must adhere to the exposure limits and measurement methods for asbestos, which are set out in the Health and Safety Executive (*HSE*) Guidance Note EH10 Asbestos Exposure Limits and Measurements of Airborne Dust Concentrations 2001. The contractor must comply with:

- (i) HSE Guideline Note MS13 Asbestos: Medical Guidance Notes 1999.
- (ii) The Health and Safety Commission Approved Codes of Practice on: Work with Asbestos Which Does Not Normally Require a License (*L27*), Work with Asbestos Insulation, Asbestos Coating and Asbestos Insulating Board (*L28*) and The Management of Asbestos in Non-domestic Premises (*L127*).
- (iii) The COSHH Regulations 2002 (*SI 2002/2677*).



8 DISPOSAL OF WASTE AND CONTAMINATED MATERIALS

8.1 Regulatory Overview

The Environmental Protection Act 1990 (s.34) imposes a duty of care on any person who produces, imports, carries, keeps, treats or disposes of controlled waste. Details of how to comply with this duty are set out in the Waste Management; the Duty of Care - Code of Practice March 1996 and includes the use of registered waste carriers to transport the waste and the use of waste transfer notes. The Waste Regulation section of the Environment Agency can provide further guidance if required.

The identification and clean up of contaminated land is governed by the Environmental Protection Act 1990 (*Part IIA*) which was enacted by Section 57 of the Environment Act 1995. The regime provides an explicit statutory definition of contaminated land.

The Contaminated Land Regulations (2000) allow developers or contractors carrying out construction and associated activities, to be shown to have caused, or knowingly permitted, substances to be in, on or under the land, so that the land is classified as contaminated land (*defined in Part IIA of the Environmental Protection Act 1990*). If this is the case, the regulator may seek to take action against those responsible, whether that is the design engineer, contractors or the owner/occupier or developer of the land, depending on the particular circumstances.

Definitions contained within the Contaminated Land (*England*) Regulations 2000, indicate conditions which are deemed to be contaminated and which must be developed in accordance with the Environmental Protection Act (*Part IIA*) 1990.

The Pollution Prevention and Control Regulations 2000 are designed to prevent, reduce and eliminate pollution at source through the efficient use of natural resources. Implementation is intended to help operators move towards greater environmental sustainability and the regulations contain guidelines for the storage and transfer of contaminated material under a system designed to minimise the impact of contamination.

8.2 Waste

The Contractor will be required to carry out the works in such a way that as far as is reasonably practicable the amount of spoil and waste (*including groundwaters, production waters and run-off*) to be disposed of is minimised, and that any waste arising from the site is classified, transported and disposed in accordance with the Controlled Waste (*Regulation of Carriers and Seizure of Vehicles*) Regulations 1998 and any amendments, also the European Waste Catalogue (*EWG*), Environmental Protection (*Duty of Care*) Regulations 1991, and the Hazardous Waste (*England and Wales*) Regulations 2005.

The waste stream will be managed so far as is reasonably practicable to maximise the re-use of surplus materials and, in circumstances where off-site disposal to licensed landfill is unavoidable, minimise any adverse environmental effects resulting from disposal. Materials requiring treatment or recycling, such as scrap metal or crushed concrete, are likely to be classified as waste and will be subject to the waste management legislation and any other statutory guidance referred to above.

Disposal sites and routes will be identified by the Contractor in consultation with LBTH and the Environment Agency. When assessing the most suitable option for landfill disposal, the operator should consider the mode of waste transportation and alternatives to reduce adverse environmental impacts, transport times, landfill capacity and license conditions (*including hours of operation etc.*).

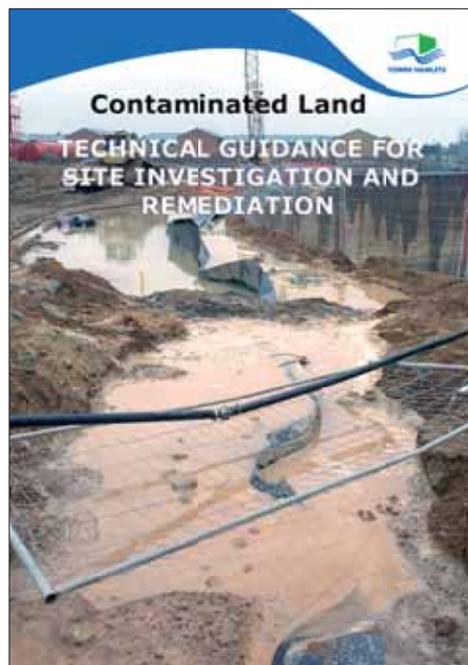
The Contractor will comply with relevant legislation, technical guidance and regulations in the identification, handling, storage, recovery and disposal of waste. The Contractor will also comply with the measures set out in Section 4 regarding discharges to controlled waters and wastewater.

The Contractor must make provision for a suitably qualified and experienced environmental consultant to identify any "hazardous waste" as defined in the Hazardous Waste (*England and Wales*) Regulations 2005, Special Waste Regulations 1996 and EWG and subsequent amendments so that the materials can be appropriately managed and disposed of during works.



8.3 Contaminated Land

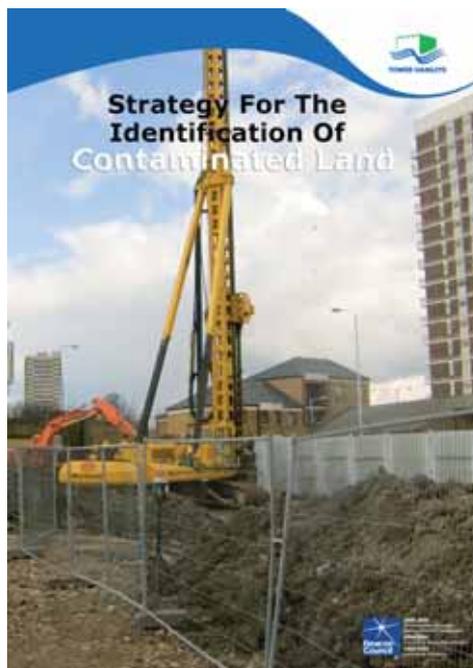
A desk study of any site to be developed should be carried out in order to identify the history of the site and surrounding land and potential contaminants of concern (*COC's*). A walkover survey should also be undertaken to identify any potential on-site or off-site sources of contamination (*i.e. underground storage tanks*). The results of the desk study and walkover survey will determine the necessity for any intrusive site investigation works and the scope of such works. Additional guidance is contained in the Technical Guidance for Site Investigation and Remediation (*LBTH, September 2004*).



The scope of any intrusive site investigation to be undertaken at the site must be sufficient to determine as far as is reasonably practicable the ground conditions at the site and the nature and extent of any contamination within the substrate and must be agreed with LBTH before the commencement of the works. The results of the investigation will then form the basis of a Remediation Method Statement (*RMS*), which will outline the proposals for mitigating the risks posed by any contamination identified at the site. The RMS must be agreed with LBTH before the proposed remedial works are commenced at the site. Additional guidance is contained in the Technical Guidance for Site Investigation and Remediation (*LBTH, September 2004*).

A validation report must be submitted to LBTH following completion of the remedial works at the site. The validation report will confirm that the remedial works undertaken at the site have been completed as agreed with LBTH.

Prior to and during construction operations at certain sites it may be necessary to monitor emission of carbon dioxide and methane gas. Should this be the case, the contractor will be required to establish a programme of testing for carbon dioxide, methane, oxygen levels and gas flow rates by a suitably qualified and experienced environmental consultant.



Where contamination is identified at a site during ground works, a procedure for the handling and disposal of the material must be agreed by LBTH. The contractor will be required to comply with these procedures during the development of the site.

The contractor will not be permitted to transport contaminated materials on canals, unless appropriate handling facilities and infrastructure are agreed with British Waterways and provided by the developer.

Empty containers, that originally contained Hazardous Waste, must be treated as Hazardous Waste unless they hold less than 0.1% of their original contents. If the contents are of a very toxic or carcinogenic nature, that limit is further reduced to 0.01%.



A Waste Management Licence or Pollution Prevention Control must be obtained to burn waste on site. An exemption is available under Schedule 3, Paragraph 30 to the Waste Management Licensing Regulations 1994, under which it is permitted to burn up to 10 tonnes of waste wood or plant matter in a 24 hour period on land in the open, where it was produced as a result of demolition work. Even if an exemption is registered, the overriding relevant objectives must be met, which include not using processes or methods that could harm the environment or endanger human health.

8.4 Excavation Materials

The contractor will comply with the provisions of the Environmental Protection Act 1990 and, if applicable, the Special Waste Regulations 1996 (*as amended*) Hazardous Waste (*England and Wales*) Regulations 2005. The removal and disposal of contaminated materials must be conducted under a strict consignment system. Disposal sites must be agreed with the Environment Agency.

The contractor will comply with the COSHH Regulations 2002 and HSE Guidance Note EH/02, Occupational Exposure Limits 2002, to ensure that contaminated excavated materials are handled and disposed of safely and properly. The Contractor will take measures to prevent the contamination of watercourses and aquifers during excavation works.

Safety measures concerning the work force are outside the scope of this Code.

8.5 Demolition Materials

The Contractor will comply with the provisions of the Environmental Protection Act 1990 and, if applicable, the Special Waste Regulations 1996 (*as amended*) and the Hazardous Waste (*England and Wales*) Regulations 2005.

The Contractor will comply with the Control of Substances Hazardous to Health Regulations (*COSHH*) 2002 and HSE Guidance Note EH 40/02, Occupational Exposure Limits 2002 to ensure that contaminated materials are handled and disposed of safely and properly.

The Contractor will comply with HSE Guidance Note GS 29/1 Health and Safety in Demolition Work:

- Part 1. Preparation and Planning,
- Part 2. Legislation,
- Part 3. Techniques,
- Part 4. Health Hazards

and shall ensure that contaminated materials are handled and disposed of safely and properly.

If the works involve the removal of asbestos or the demolition of premises containing asbestos, the contractor will comply with the Control of Asbestos at Work Regulations 2002 (*SI 2002/2675*), and the HSE Approved Code of Practice and Guidance Note L28 "Work with Asbestos Insulation, Asbestos Coating and Asbestos Insulating Board".

Asbestos waste will be double sealed in receptacles, which prevent the escape of dust. In the case of crocidolite the receptacles shall be marked in bold "Blue Asbestos – Do Not Inhale Dust".

The disposal of waste materials containing asbestos will be arranged in advance, to a licensed disposal site. Disposal sites shall be agreed by the Contractor with LBTH and the Environment Agency. The Contractor will obtain a licence from HSE to remove asbestos insulation or coating.

If materials containing lead are encountered, the Contractor will comply with the Control of Lead at Work Regulations 2002 (*SI 2002/2676*) and the Health and Safety Commission (*HSC*) Approved Code of Practice 2002 "Control of Lead at Work" to ensure that contaminated materials are handled and disposed of safely and properly.



8.6 Re-use of Construction Materials

Contractors should endeavour to reuse and recycle construction and demolition waste from their sites. Section 54 of the Clean Neighbourhoods and Environment Act 2005 gives the Secretary of State in England (*and the National Assembly for Wales in Wales*) the power to make regulations to require developers and contractors to produce a written site waste management plan for construction and demolition projects. The Government will develop the relevant regulations in due course. The aim of the site waste management plans will be to reduce wastage of construction materials; improve regulatory compliance (*for example Duty of Care Regime*); encourage re-use and recycling that reduces demand for primary materials; and reduce the illegal disposal of waste.

Demolition arisings and waste provide a significant opportunity to reclaim, recycle and segregate materials on site. The following measures should, where practicable, be implemented in respect of demolition activities on site:

- (i) concrete, brick from walls, foundations, terraces, bases etc. should be crushed (*subject to the appropriate licenses*) and reused for temporary site roads and/or capping of permanent roads;
- (ii) live vegetation should be removed for composting;
- (iii) suitable inert earth spoil should be stockpiled for reuse in landscaping or general fill;
- (iv) bituminous road surfacing should be crushed for reuse as temporary footpaths on site;
- (v) existing boundary fence panels should be reused as hardstandings;
- (vi) all metal components should be segregated for recycling; and
- (vii) existing strip-out materials should be segregated for resale/reuse off-site.

The reuse of materials will also reduce the number of vehicle movements to site.

Measures to reduce waste arising during construction should include the following, where practicable. The contractor should:

- (i) allocate sufficient storage space for materials which can be reused to avoid disposal;
- (ii) avoid over-ordering of materials;
- (iii) avoid damage on delivery by using a walled laid-out storage and off-loading area;
- (iv) use prefabrication, if feasible;
- (v) avoid repetitive handling;
- (vi) segregate materials for recycling, such as timber and cardboard wrapping;
- (vii) salvage top soil for re-use; and
- (viii) recycle municipal waste from temporary welfare accommodation on site.

Guidance on the re-use and recycling of construction and demolition waste is available from London Remade (www.londonremade.com), which is a strategic partnership between the business sector, London Boroughs, regional government, waste management companies and the not for profit sector.



9 URBAN ECOLOGY

9.1 Regulatory Overview

Protection of ecology is provided for by the Wildlife and Countryside Act 1981 and the Conservation (*Natural Habitats &c*) Regulations 1994 (*as amended*). The Act creates a large number of offences relating to the killing and taking of birds, other animals and plants. Several schedules of different categories of species are set out, each affording a different degree of protection. The 1994 Regulations implement the EC Habitats Directive and provide for designation of 'European sites'.

The Countryside and Rights of Way (*CRoW*) Act 2000 has provided for greater protection to Sites of Special Scientific Interest and has strengthened the wildlife enforcement provisions of the Wildlife and Countryside Act 1981. The *CRoW* Act also makes it an offence to recklessly disturb a place of rest or shelter of a protected animal or a nest site.

The Wild Mammals (*Protection*) Act 1996 provides protection for wild mammals against a wide variety of acts of deliberate harm. An offence under the Act would constitute an act "with intent to inflict unnecessary suffering". The Town and Country Planning (*Trees*) Regulations 1999 (*SI 1999/1892*) provide for local authorities to protect trees by means of 'tree preservation orders'. Consent of the local planning authority (*City Council*) is required before any tree protected by an Order may be cut down, topped, lopped, uprooted, damaged or destroyed. Certain trees are exempt from this requirement, e.g. those that are dying, dead or have become dangerous.

9.2 Protection of Habitats

The Contractor will comply with the provisions of the Wildlife and Countryside Act 1981, as amended, and other relevant nature conservation legislation together 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. Planning conditions and Agreements may include:

- measures to prevent any encroachment onto valuable habitats during the construction process.
- Compliance with standards of dust and air pollution control as set out elsewhere in this code of practice.
- precautionary measures to prevent entry of pollutants into any bodies of water and any incidents reported to the Environment Agency and English Nature.

Where it is demonstrably impossible to maintain habitats in their existing condition then the species will either be:

- relocated/transplanted to a suitable local site; or
- disturbed habitats will be properly restocked to an equivalent or richer ecological status after construction work ceases.

In either of these instances, the Contractor must consult with the London Ecology Unit prior to the commencement of remedial works.

Standards of dust and air pollution control, as set out in Section 7, will be applied at all construction sites to protect adjacent wildlife habitats.



9.3 Protection of Mature Trees

The Contractor will follow the specific requirements agreed with LBTH. Loss of trees will be avoided wherever possible. No mature trees shall be interfered with. Where appropriate, the requirements of BS5837: 1991 "Trees in relation to construction" shall be complied with.

Adverse effects on mature trees within or in the vicinity of worksites will be minimised by the adoption of suitable mitigation measures, including, but not limited to the following (*where appropriate*):

- (i) Selective removal of lower branches in an approved manner, to reduce mechanical damage by construction plant.
- (ii) The use of matting around the root zone to prevent excess soil compaction.
- (iii) The use of chestnut paling around the trunk to prevent damage.

If any protected tree on the site dies or is damaged as a result of the construction process, a replacement tree of agreed species and age is to be planted in an agreed location.

9.4 Protection of Breeding Birds

The Wildlife and Countryside Act 1981 protects nesting wild birds, their eggs and their nests. If habitat removal is required it should take place outside the breeding bird season wherever possible (*Mid-March to August*). Where this is not possible, advice on mitigation shall be sought from a qualified professional. It may be necessary to hand-search habitat for birds prior to habitat removal. If nesting birds are found, they must not be disturbed until they have left the nest.

10 ARCHAEOLOGY

10.1 Regulatory Overview

The Ancient Monuments and Archaeological Areas Act 1979, as amended by the National Heritage Act 1983, provides for the designation of certain ancient monuments as 'Scheduled Monuments' by the Secretary of State. The Act also provides for the protection of 'Areas of Archaeological Interest' (AAIs). It is an offence to undertake works (*except those defined in classes of work subject to automatic consent*) to Scheduled Monuments and AAIs without first obtaining formal consent from the Secretary of State.

The Act defines an ancient monument as "any Scheduled Monument; and any other monument which in the opinion of the Secretary of State is of public interest by reason of the historic, architectural, traditional, artistic or archaeological interest attaching to it" (*Section 61(12)*).

In order to carry out works to these monuments the consent of the Secretary of State is required, although a special provision of the Act gives certain activities 'class consent'. The specific consent of the Secretary of State has to be given for:

- a) any works resulting in the demolition or destruction of or any damage to a Scheduled Monument;
- b) any works for the purpose of removing or repairing a Scheduled Monument or any part;
- of it or of making any alteration or additions thereto; and
- c) any flooding or tipping operation on land in, on or under which there is a Scheduled Monument.

The provisions of Acts of Parliament have been supplemented and enhanced by Department of the Environment Planning Policy Statements (PPS).

While both PPS1 and PPS7 refer to archaeology, the most directly relevant note is PPS16, "Archaeology and Planning", which gives detailed advice on the handling of archaeology within development plans and development control.

By making archaeology a material consideration within the planning process PPS16 places the responsibility for dealing with archaeological remains with the contractor. This means that prospective contractors must consider and mitigate the effects of their development scheme on the historic environment.



10.2 Archaeological Features

The Contractor must allow for prior archaeological excavation of sites of particular interest; alternatively, an archaeological “watching brief” may be authorised during initial surface layer stripping.

The Museum of London will be requested to carry out a preliminary assessment of sites to be investigated early in the project. The aim is to identify those of particular interest and to enable an action plan for excavation and/or a watching brief to be prepared.

Any worksite investigation required by condition or planning agreement will be carried out by a recognised archaeological institution.

Before submitting development proposals, developers should have established whether their site is in an area of archaeological importance. The Unitary Development Plan (*UDP*) includes guidance notes for developers.

A full archaeological investigation is required if the site is within the Archaeological Priority Zones defined by the *UDP*.

The site evaluation is to be carried out to a specification to be approved in advance by LBTH. This usually involves archaeologists opening up trial trenches on the site to assess the nature, extent and significance of the surviving ancient remains. The results of the evaluation will enable recommendations to be made as to how remains are to be treated.

If the evaluation revealed no ancient remains then no further action will be necessary.

Where significant remains are revealed the preferred option is to preserve in situ. This can be achieved by the relocation of groundworks or by a more sympathetic foundation design. If this is not achievable then the second option is that of preservation by record. This would involve a full-scale rescue excavation to record the remains before their destruction.

The overall objective is to ensure that the buried heritage of Tower Hamlets is properly safeguarded within the development and planning process.

The contractor shall follow the Code of Practice of the British Archaeologists and Developers Liaison Group¹.

11 BUILT HERITAGE

The contractor will comply with the requirements of the relevant legislation in respect of listed buildings and listed building consents. Attention is drawn to the Planning (*Listed Buildings and Conservation Areas*) Act 1990 and The Planning (*Listed Buildings and Conservation Areas*) (Amendment) (England) Regulations 2005.

The contractor must take advice from English Heritage before any application for development on a site that will affect listed buildings and conservation areas.

The contractor must take advice from LBTH's Conservation Officer before any application for development on a site that will affect listed buildings and conservation areas.

(1) Published in 1986. Copies available from the Museum of London and the British Property Federation



12 SITE BOUNDARIES/HOARDINGS

12.1 Fencing and Hoardings

All work-sites will be completely fenced from public ingress. A range of allowable variations are as follows:

(i) The Minimum Case

A post chain link/mesh fence, where appropriate for minimum security and noise limitation needs.

(ii) The Standard Hoardings

A 2.4m minimum height, plywood faced, timber framed boundary hoarding, of a surface density of not less than 7kg/m² for normal security and noise limitation requirements.

It may be necessary to increase the minimum height to protect buildings from noise.

(iii) Special Circumstances

Where a particular appearance or acoustic rating is needed.

The provisions of the Health and Safety at Work Act 1974 will be followed in all cases.

Hoardings erected causing poorly lit walkways will have bulkhead lights fitted.

Gates in the fencing or hoarding should, as far as is practicable be positioned and constructed to minimise the noise transmitted to nearby noise sensitive buildings from the worksite or from plant entering or leaving the site.

Hoardings will be provided and maintained, by the Contractor, and the Conditions of Licence issued by LBTH.

Adequate security will be exercised by the Contractor to prevent unauthorised entry to or exit from the site. Site gates will be closed and locked when there is no site activity and site security provisions will be set in motion. Provision of alarms will follow HSE requirements.

12.2 Painting and Hoardings

The Contractor will ensure that all hoardings are painted on both faces. This should normally be in a plain uniform manner, but in some cases, where they will not distract drivers on the adjacent highway, approved murals to a high standard may be encouraged.

12.3 Fire Brigade Access

The requirements of the London Fire and Emergency Planning Authority (*the LFEPA*) will be followed in the provision of site access and will be monitored by the London Fire Brigade's local superintendent. In general the provisions of note FP/GEN/20 will cover their needs.

12.4 Temporary Structures on the Public Highway

Fenced storage areas, scaffolding gantries, loading/unloading bays, skips and other temporary structures on the public highway will be provided and maintained to the Conditions of the Licence issued by LBTH.

The Contractor will normally be required to provide steel beam framed structures rather than scaffolding where such structures are to be in place for the relatively long period of time.

12.5 Visual Intrusion

In environmentally sensitive areas construction buildings and equipment will be sited to minimise visual intrusion consistent with the efficient operation of the site. Local hedges, existing tree screens, shrubbery and the natural land form will be used to screen construction sites as far as practicable. The use of earth mounding will also be considered where appropriate.



13 SITE ACTIVITIES

13.1 Good Housekeeping

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

- Smoking areas will be provided.
- Open fires will be prohibited at all times.
- Rubbish will be removed at frequent intervals, and the site kept clean and tidy.

Hoardings will be frequently inspected, repaired and re-painted as necessary to comply with the conditions of LBTH’s Licence.

- Toilet facilities will be kept clean.
- Food waste will be removed frequently.
- The wheel washing facilities area will be brushed clean frequently.

Lorries will enter and exit the site in a forward direction except in special cases where space restriction does not permit this. These conditions will be subject to prior discussions with the Highway Authority and the Police before implementation.

All loading and unloading of vehicles will take place off the public highway wherever this is practicable.

13.2 Site Inspection

Worksite inspections will be carried out by LBTH.

13.3 Living Accommodation

No living accommodation will be permitted on site except with the approval of the LBTH. Mess rooms, locker rooms, toilets and showers will be permitted.

13.4 Information Boards

Information boards will also be erected containing information on the progress of the works and instructions for reporting complaints of public interest.

13.5 Clearance of Site on Completion

On the completion of the works the Contractor will clear away and remove from the site all plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the site and works clean and in a condition to the satisfaction of LBTH.

13.6 Pest Control

The Contractor shall ensure that the risk of infestation by pest or vermin is minimised by adequate arrangements for disposal of food waste or other material attractive to pests. If infestation occurs the contractor must take such action to deal with it as required by LBTH's Environmental Health Officer.

13.7 Considerate Contractors Scheme

Contractors may wish to join the UK Considerate Contractors Scheme. This scheme is recognised by industry and the government and encourages firms to be sensitive to the environment by considering aspects such as:

- * Consideration – positive consideration of neighbours at all times and recognising needs
- * Environment – minimising disturbance from dust, noise or traffic congestion and sustainable use of materials
- * Cleanliness – keeping sites clean and tidy
- * Good Neighbour – regular communication with the local community and businesses nearby
- * Respectful – not tolerating rude behaviour/language
- * Safe – activities must be carried out with care and consideration to workers and general public
- * Responsible – all personnel need to understand and operate within the code

Further information on the scheme registration and fees can be found at www.considerateconstructorsscheme.co.uk.



14 SAFETY

14.1 General

Safety provisions in this document cover aspects of safety likely to affect people outside the worksite. They do not cover safety provisions affecting construction workers either above or below ground (*except in emergency procedures –see Clause 14.2*), although reference is made to the Health and Safety at Work Act 1974 in Clause at the request of the HSE

14.2 Emergency Contacts Procedures

The Contractor will prepare and provide a current Emergency Contacts Set of Procedures for each work site. These Procedures will be followed in any site emergency.

They will contain emergency phone numbers and the method of notifying LBTH services for action by the Contractor. Copies of the Procedures will be issued to the Local Authorities, Fire Brigade, Police, Ambulance Service and Statutory Authorities etc.

Emergency telephone numbers for Contractor's key personnel will also be included for LBTH use, should the need arise.

14.3 Health and Safety at Work Act 1974

All site work will be carried out under the provision of this Act, to the satisfaction of the local HSE officer.

14.4 Contaminated Materials (*Special Precautions*)

For those sites at which contaminated material is encountered, the Safety Officer will ensure that a Workers' Safety Information Sheet will be prominently displayed in rest/mess rooms and wash rooms covering hygiene, work practices, clothing requirements etc.

For general provisions concerning disposal of contaminated materials – see Section 8.

14.5 Crane Arcs

These will be confined within the site periphery unless agreed otherwise with LBTH and the Police.

14.6 Unexploded Bombs

The attention of the contractor is drawn to the fact that there may be unexploded bombs, shells and incendiary devices buried in sites that have been left undisturbed since World War II. The contractor should warn all operatives of this possibility, and should any such items be uncovered during the works the Metropolitan Police should be notified immediately and take such action as directed by them.

14.7 Lighting

Section 79 of the Environmental Protection Act 1990 will be amended by the Clean Neighbourhoods and Environment Act 2005 to include artificial light emitted from premises to be statutory nuisance. However, only certain measures in the Act have so far come in to force, and the section relating to light pollution will come in to effect in 2006.

Lighting to site boundaries will be provided with illumination sufficient for the safety of the passing public, including disabled people. Wherever possible, such lighting will be fed from an electricity mains supply.

In particular, precautions will be taken to avoid shadows cast by the site hoarding on surrounding footpaths and roads.

Site lighting will also be positioned and directed as so to minimise nuisance to residents or adjacent buildings and land uses, or to cause distraction or confusion to passing traffic on adjoining public highways.

The contractor shall comply with the Institute of Lighting Engineers document *Guidance Notes for Reductions of Light Pollution 2000 (revised 05/03)*.

Arrangements for site lighting will be subject to the approval of LBTH.



15 Review and Update

15.1 Review and Update

Periodic review of this code is necessary to ensure that it is sufficiently current and robust. The Environmental Health Service will lead a review of the document on a five-year cycle. Where necessary intervening updates will be produced to make minor changes where a review of the whole document is deemed not to be necessary.

Appendix A

COUNCIL POLICY ON NOISE AND VIBRATION FROM CONSTRUCTION AND DEMOLITION SITES

- (A) All works and ancillary operations which are audible at the site boundary, or at such other place as may be agreed with the Council, shall be carried out only between the hours of 0800 and 1800 on Mondays to Fridays and between the hours 0800 and 1300 on Saturday and at no time on Sunday, Bank and Public Holidays. At all other times noise from working on the site should not be audible at the site boundary. Noise levels may be set according to local conditions and circumstances.
- (B) Where it is proposed by the contractor for reasons of safety and/or engineering practicality it is not possible to comply with the above conditions, the contractor may apply to the Council for a dispensation.
- (C) Such application shall be made 14 days in advance, or as determined appropriate by the Council, of the activity concerned for dispensation from the above conditions. In the dispensation request, adequate information will be required, which may include the following:
1. Full details of the operation in question
 2. Rationale for requiring extensions in working hours
 3. Proposed working hours
 4. Predicted noise levels at sensitive locations
 5. Measures being adopted to reduce noise to a minimum, and site supervision
 6. Measures being taken to inform residents of the activity, the reasons for it and operational complaint telephone number with guarantees that appropriate action will be taken in the event of complaints.



- (D) On receipt of the information, the Local Authority will consider the request and if justified may grant a dispensation, which will specify hours of work and noise levels which must not be exceeded. The additional safeguards will be set in accordance with local conditions and circumstances with the objective to minimise disturbance to residents. A dispensation will apply exclusively to that operation and may be limited in duration.
- (E) The best practicable means, as defined in section 72 of the Control of Pollution Act 1974, to reduce noise to a minimum shall be employed at all times. The Council recognises the British Standard BS 5228 'Noise Control on Construction and Open Sites' as guidance for noise control with respect to this matter.
- (F) Ground vibration levels shall be specified depending on local circumstances and conditions with due regard both to protection of residents from disturbance and protection of property from damage.

Appendix B- Useful Contacts

<p>London Borough of Tower Hamlets 60 Southern Grove Mile End London E3 4PN Environmental Health, Environmental Protection</p> <p>Day Tel: 020 7364 6800 Eve Tel: 020 7364 7070</p> <p>Corporate Complaints 5 Clove Crescent London E14 2BG</p> <p>Tel: 020 7364 4161</p> <p>Traffic and Transportation</p> <p>Tel: 020 7364 6917</p> <p>Street Management</p> <p>Tel: 020 7364 6666</p> <p>Development Control Building Control 41-47 Bow Road London E3 2BS</p> <p>Tel: 020 7364 5338</p>	<p>www.towerhamlets.gov.uk</p> <p>Provides further information relating to a number of topics covered in this Code such as Air Quality, Contaminated Land and protection of Habitats</p>
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<p>Building Research Establishment HIS Rapidoc (BRE Bookshop) Willoughby Road, Bracknell Berks., RG12 8DW</p> <p>Tel: 01344 404407</p> <p>www.bre.co.uk</p>	<p>Department for Environment, Food & Rural Affairs (DEFRA) Nobel House 17 Smith Square London SW1P 3JR</p> <p>Tel: 020 7238 6000 Info Line: 08459 33 55 77</p> <p>www.defra.gov.uk</p>
<p>English Heriatge Greater London Archaeological Advisory Service 23 Saville Row London SW1 2ET</p> <p>Tel: 020 7973 3735</p>	<p>Transport for London Windsor House 42-50 Victoria Street London SW1H 0TL</p> <p>Tel: 020 7941 4500</p> <p>www.tfl.gov.uk</p>
<p>Greater London Authority City Hall The Queen's Walk London SE1 2AA</p> <p>Tel: 020 7983 4000</p> <p>www.gla.gov.uk</p>	<p>London Metropolitan Police HQ New Scotland Yard 8-10 Broadway London SW1H 0BG</p> <p>Tel: 020 7230 1212</p> <p>www.met.police.uk</p>
<p>Association of London Goverment 59 ½ Southwark Street London SE1 0AL</p> <p>Tel: 020 7934 9999</p> <p>Info@alg.gov.uk</p>	<p>Bethnal Green Police Station 12 Victoria Park Square Tower Hamlets London E2 9NZ</p> <p>Tel: 020 7515 1212</p>

<p>Health and Safety Executive Construction Division Rose Court 2 Southwark Bridge London SE1 9HS</p> <p>Tel: 020 7556 2100 Info Line: 0845 345 0055</p> <p>www.hse.gov.uk</p> <p>London Fire and Emergency Planning Authority 8 Albert Embankment London SE1 7SD</p> <p>Tel: 020 7587 2000</p> <p>Thames Water Utilities Ltd PO Box 286 Swindon SN38 2RA</p> <p>Tel: 0845 9200 800</p> <p>www.thames-water.com</p> <p>Museum of London London wall London EC2Y 5HN</p> <p>Tel: 0870 444 3852</p> <p>www.museumoflondon.org</p>	<p>Environment Agency Thames Region, North East Area Office Apollo Court Hatfield Hertfordshire AL10 9EX</p> <p>Tel: Customer Service Hotline 0870 506 506</p> <p>www.environment-agency.gov.uk</p> <p>British Waterways 1 Sheldon Square Paddington Central London W2 6TT Tel: 020 7985 7200</p> <p>www.britishwaterways.co.uk</p> <p>Home Office Direct Communications Unit 2 Marsham Street London SW1P 4DF</p> <p>Tel: 0870 000 1585</p> <p>www.homeoffice.gov.uk</p>
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