Construction Environmental Management Plan

Relating to:

Sheridan Suite,
Oldham Road,
Manchester
M40 8RR

Prepared by:

PIN PROPERTY consultancy

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1. INTRODUCTION

1.1 Background

This Construction Environmental Management Plan (CEMP) has been produced on behalf of The Sheridan Suite (the client) following the granting of planning permission by Manchester Council for the proposed change of use to ground floor

1.2 Proposed Development

The Sheridan Suite intend for the proposed change of use of ground floor of building from exhibition and conferencing (Sui Generis) to a restaurant and bar (Sui Generis) including a single storey extension to the front and side of the building and associated boundary treatments

1.3 The Site

The site is currently occupied

The site is roughly rectangular in plan, occupying an area of circa 1.64 ha.

The Western sector of the development site is covered by hard-standing comprising predominately tarmac, whilst the western sector is taken up by the existing building.

The site is generally flat lying.

1.4 Purpose

Planning consent for the proposed development (Ref. 111699/FO/2016/N1; approval granted on 12th September 2016) is subject to a number of conditions. This CEMP has been produced to cover the relevant environmental planning conditions.

1.5 Applicable Environmental Legislation

There are in existence many Acts of Parliament, Regulations, Codes and Standards that address environmental and construction matters and these are referred to as applicable in this document. Notwithstanding the references included in this document, compliance with them shall not discharge the contractor from complying with any other legislative requirements applicable at the time of construction.

The **Control of Pollution Act (COPA), 1974** gives Local Authorities power to control all noise during construction. Section 61 of COPA 1974 outlines the procedure to obtain consent for work on construction sites. If consent has not been obtained, and/or the required noise limits are not being met, the Local Authority may impose requirements

According to Section 60. **BS 5228** Parts 1 and 2, 1997 Noise and Vibration Control on Construction and Open Sites and other relevant EC directives also cover noise emanating from work on building sites. A Section 61 application would be made.

Control of dust, smoke and air pollution is covered by the **Clean Air Acts, 1993**; Control of Substances Hazardous to Health (COSHH) Regulations 2002; Health and Safety at Work Act 1974, and the Environmental Protection Act 1990.

The **Health and Safety at Work Act, 1974** and associated Regulations and HSE Guidance Notes cover general safety of construction workers and passers-by. Monitoring of this would be the responsibility of the CDM Co-ordinator and the local HSE Officer.

The **Highways Act, 1980** requires Contractors to maintain free passage for pedestrians and vehicles around their work-sites and to obtain permission from the Local Authority's Highway Authority, before the public highway can be opened up, excavated or built upon. The Act also requires contractors to obtain licenses, permission for hoardings, fenced storage areas, scaffolding, gantries or strips in the public highway.

The **Road Traffic Regulation, Act 1984** contains provisions for the making of Traffic Regulation Orders (TRO), and other matters relating to the control of road traffic.

Prior to any discharge of surface water or de-watering effluent to rivers/watercourses, soakaways, or sewers, consent must be obtained from the Environment Agency (EA). Discharge consents are based on the **Water Resources Act 1991**.

The **Environmental Protection Act, 1990** establishes the principle of integrated pollution control, reforms the management of waste disposal and updates the law on statutory nuisances likely to cause personal discomfort or be prejudicial to health. The Hazardous Waste (England and Wales) Regulations 2005 apply controls on movements of hazardous waste. The Environmental Permitting (England and Wales) Regulations 2010 place responsibility on the landfill operators and producers of waste to ensure the separation of different classifications of waste based upon waste acceptance criteria, prior to disposal to landfill. If specific types of waste such as hazardous waste exceed the criteria then pretreatment is required prior to disposal. Formal Site Waste Management Plans (SWMPs) are a legal requirement for all projects over £250,000 in value. The movement and shipment of non hazardous waste must be undertaken in line with the requirements of The Environmental Protection (Duty of Care) Regulations 1991 and The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.

The **Control of Asbestos Regulations, Act 2012** contains updated guidance on previous asbestos regulations to take account of the European Commission's view that the UK had not fully implemented the EU Directive on exposure to asbestos (Directive 2009/148/EC). The regulations establish that the identification of any potential (ACM) as well as the risks involved

with the removal of the asbestos be controlled, identified and dealt with in the appropriate manner. Taking the duty to manage the risk of asbestos fibre release to onsite and offsite personal through correct procedures and mitigation measures, the requirements for licensed work remain the same in the majority of cases, work with asbestos needs to be done by a *licensed contractor*. The control limit for asbestos is 0.1 asbestos fibres per cubic centimetre of air (0.1 f/cm3). *Training* is mandatory for anyone liable to be exposed to asbestos fibres at work.`

2. SCOPE OF THE CEMP

This CEMP defines responsibilities and methods during the construction phase of this development to manage potential impacts on the environment and nearby sensitive residential dwellings.

The CEMP addresses the following issues associated with the development:

- Noise and Vibration;
- Dust Emissions;
- Archaeology and Cultural Heritage;
- Visual Impact;
- Ecology;
- Water Pollution;
- Waste Management;
- Contaminated Land;
- Construction Traffic Management;
- Lighting; and
- Community Responsibility.

3. CONSTRUCTION MANAGEMENT PLAN

3.1 Roles, Responsibilities and Reporting

The Principal Contractor is responsible for:

- Implementing the CEMP;
- Monitoring Sub-Contractor's performance to the CEMP;
- Developing and implementing mechanisms for dealing with problems; and
- Acting as a point of contact for consultation and feedback with adjacent landowners, statutory consultees, the public and other interested parties.

The Principal Contractor would be responsible for establishing management procedures for compliance with:

- All relevant legislation (see Section 1.5);
- The environmental controls and mitigation measures contained in the CEMP; and
- Any environmental or other codes of conduct required by the Applicant.

The Site Manager, competent in environmental management, will be responsible for the co-ordination and implementation of this CEMP and would assist in ensuring that the Principal Contractor's CEMP responsibilities are met. Monthly records of compliance and non-compliance should be maintained and held at the Principal Contractor's Site office.

The client may appoint an independent Environmental Compliance Manager (ECM) to undertake regular environmental inspections to audit compliance of the Principal Contractor and Sub-contractors with the CEMP and to undertake general inspection of site conditions. Compliance records would also be available for inspection by representatives of the client, the Environmental Health Division of BMBC, and the Environment Agency.

If required, the ECM would submit progress reports to the client following site inspections to provide continuous feedback on environmental performance at the site.

3.2 Environmental Management Principles

Environmental management issues throughout the life of the development, will be governed or guided by the following 'standards', including:

- Those contained in legislation (see Section1.5);
- Those established by industry codes of practice (see Section 1.5); and
- Those that are specific to commitments made during consultation, and measures as may be set out in conditions or in other consents.

3.3 External Communications

The Principal Contractor would be responsible for formal external communications, particularly those with statutory consultees. The main consultees likely to be involved would include:

- Environment Agency;
- Health and Safety Executive;

  and

- Other stakeholders.

The Principal Contractor and their subcontractors would therefore be required to attend meetings as appropriate.

A complaints procedure will be established whereby any complaints would be made direct to the Principal Contractor's Project Supervisor. Details of a telephone number and contact details will be made available to all potential complainants and other interested parties. The telephone would normally be answered in person. Details of the complaint, its source, its location and date and time will be recorded in line with the complaints procedures.

Complaints will be investigated by the Site Manager (and if required the ECM), as appropriate. Appropriate action will be taken where necessary, and records of all such complaints and actions will be maintained on-site.

3.4 Training

All site personnel including contractors and sub-contractors would be made aware of their responsibilities with respect to the CEMP, and its appropriate implementation. As part of the implementation of the CEMP, the site induction programme will ensure that all site personnel are conversant with:

- The CEMP and its on-site implementation; and
- The environmental sensitivities of the site, particularly in respect of nearby receptors.

3.5 Monitoring

A monitoring programme of the environmental effects of the construction phase will be implemented in line with the CEMP requirements. This would:

- Evaluate the effectiveness of environmental mitigation, and identify environmental problems and appropriate responses at an early stage;
- Ensure that the works are carried out in accordance with the provisions of the CEMP; and,
- Identify and implement any environmental improvements that would contribute to the overall environmental performance of the project.

Any site inspections and more formal audits are likely to use a checklist pro-forma, which would cover the environmental issues addressed in this CEMP. Where any non-conformances are identified these will be rectified in line with non-conformance, corrective and preventative action procedures.

4. GENERAL CODE OF CONSTRUCTION PRACTICE

4.1 Noise and Vibration

Noise

The closest noise sensitive receptors to the Site have been identified as:

1. Residential dwellings are located directly to the south.

In the absence of construction noise level criteria being stipulated by Manchester Council, the proposals of this CEMP include the setting of an absolute $L_{Aeq,12hr}$ noise level (for weekdays, 07:00 – 19:00) and an $L_{Aeq,5hr}$ noise level (for Saturdays, 08:00 – 14:30) derived from BS5228- 1:2009 '*Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise*'. Given the urban locality of the site, it is considered reasonable to adopt the upper 75dB noise level, when measured outside the nearest window of the closest occupied noise sensitive receptors as detailed in Section 1.3.

Accordingly, the proposed construction noise level limits are as follows:

- Monday – Friday 07:00 – 19:00 hours: 75dB $L_{Aeq,12hr}$; and -
- Saturday 0800- 14.30 hours: 75B $L_{Aeq,5hr}$.

Where it is not possible to work to the target criteria (for example, if ground conditions determine particular plant requirements, or for necessary out of hours working), provisions would be set out in advance to reduce the effect, e.g. through prior notification or by other measures.

It should be emphasised that the use of the target criteria is intended to warn of activities that may require particular care and control. Departures from the target criteria should not be taken to imply that conditions would be unacceptable or that complaints would occur. Other issues, such as duration of the operation, may reduce the likely effect.

The following general mitigation measures would apply to potentially noisy operations, In particular:

- All plant and equipment to be used for the works would be properly maintained, silenced where appropriate, and operated to prevent excessive noise. Plant would be certified to meet any relevant EC Directives/UK/BS5228 standards;
- Vehicles and mechanical plant working at the site will be fitted with effective exhaust silencers;
- All equipment on the site will be maintained in good working order, to reduce extraneous noises, such as breaking and squeaking;
- Equipment which is used intermittently will be shut down or throttled down during the periods when not in use, this also includes stationary vehicles;

- All contractors would be made familiar with the guidance in BS5228 (Parts 1 and 2) which would form a pre-requisite of their appointment;
- Noisy plant would be sited as far as is practicable from noise sensitive receptors including adjoining residential properties, and ecological receptors within and adjoining the site;
- Static construction plant (e.g. compressors & crushers, if required) would be installed such that they are wholly or partially enclosed, or located where they would not require any enclosure as they would not pose any impact.
- On-site cutting and hammering will be kept to a minimum as much as practically possible;
- Where reasonably practicable, purpose made acoustic screens (i.e. for loading of rubble), or enclosures (i.e. for pumps, generators, compressors etc) will be used around noisy plant and activities;
- All construction activities will be undertaken using 'best practical means', as defined in Section 79(9) of the Environmental Protection Act, in a way to reduce noise and vibration emissions; and,
- Care would be taken when loading or unloading vehicles or dismantling scaffolding or moving materials etc. to reduce noise.

It is recommended that a programme of weekly noise monitoring is undertaken at the closest noise sensitive receptors as detailed above during periods of construction operation. Particular adherence to this should be made when construction operations are taking place at locations on the Site closest to these noise sensitive receptors.

Vibration

In the absence of any construction vibration levels criteria being stipulated by Manchester Council, the proposals of the CEMP include the setting of an absolute Peak Particle Velocity (PPV) vibration level derived from BS5228-2:2009 '*Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 2: Vibration*'.

BS5228-2:2009 provides the following table which suggests the corresponding effect to the level of vibration:

Table 1: Guidance on Effect of Vibration Levels

Vibration Level	Effect
0.14mm/s^{-1}	Vibration might just be perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration.
0.3mm/s^{-1}	Vibration might just be perceptible in residential environments.
1.0mm/s^{-1}	It is likely that vibration of this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to residents.
10.0mm/s^{-1}	Vibration is likely to be intolerable for any more than a very brief exposure to this level.

Accordingly, the following vibration criteria should not be exceeded, when measured on the foundation slab of the closest occupied vibration sensitive receptors as detailed above, during construction operations:

Maximum permissible vibration level (PPV): 1.0mm/s^{-1}

It is possible to employ a number of physical and operational measures in order to reduce the potential effects resulting from construction generated vibration, such measures may include;

- Where processes could potentially give rise to significant levels of vibration, or as a result of nearby complaints, on-site vibration levels should be monitored by a suitably qualified person;
- The provision of cut-off trenches in order to interrupt the direct transmission path of vibrations.

4.2 Dust Emissions

During the construction phase, the primary mitigation to alleviate dust effects from construction activities will be through a management scheme, key elements of which are outlined below:

- The project and construction methods should define, where practicable, the products of site clearance, excavation etc. will be used on site as part of the development to avoid the importation of materials onto the site and minimise traffic movements to and from the site;
- Site roads will be swept and sprayed with water to prevent dust causing nuisance off site;
- Roads around the site will be inspected on a regular basis for accumulations of dust and mud. All such accumulations will be removed as soon as possible after they have been identified;
- No bonfires would be allowed on-site;
- Where reasonably practicable, potentially dusty activities would be located away from Site boundaries. Equipment and techniques that minimise dust emissions, using the best available dust suppression measures, would be employed to reduce potential emissions. Such measures may include pre-washing of work surfaces, screening off work areas and damping down of dusty residues;
- All material and spoil storage should be sheeted were appropriate. Such storage will be located away from site boundaries;
- Material drop heights during loading and unloading of materials and the transfer of materials would be kept to a minimum wherever possible. All chutes and skips would be enclosed and in all instances material would be damped down prior to moving from one location to another;
- Vehicles carrying material to and from the Site would be adequately and securely sheeted. If material is especially fine, then transport would be in closed tankers;
- All vehicles leaving the site will, where necessary, be subjected to wheel washing procedure to limit the deposition of mud and dust from the site on off site road
- All non-road mobile machinery would use fuel equivalent to ultra low sulphur diesel and all would comply with current EU Emission Standards;
- All mobile plant allowed on-site would be managed in such a way as to minimise emissions, including being switched off when not in use and being located as far as practicable away from Site boundaries;

- Stationary construction plant, such as cranes and generators would, as far as practicable, be positioned away from Site boundaries. All construction plant would be serviced regularly and maintained in a satisfactory manner so as to minimise emissions;
- Detailed timetables for the delivery of materials and equipment to the Site would be compiled and agreed with trade contractors and suppliers to ensure a policy of 'just in time' deliveries are followed throughout the construction period where possible, to avoid congestion on the local network, and reduce the potential number of vehicle movements required. Timetabling would be discussed and principles agreed with Manchester Council, who would then be advised of the detailed timetables.

4.3 Visual Impact

Contractor's compounds and areas for material storage will be located within the allocated development area. The locations within the development area will be chosen with due regard as to recognise the sensitivity of the outlook from nearby residential dwellings.

4.4 Ecology

Attention will be paid towards any relevant ongoing requirements stipulated in the planning conditions.

4.5 Water Pollution

General Site Measures

Stockpiled materials will be placed away from any links to watercourses and stockpiles will be covered, especially during wet weather would reduce any sediment run-off loads.

All liquids and solids of a potentially hazardous nature, (e.g. diesel fuel, oils, solvents) will be stored on surfaced areas, with bunding, in accordance with the Environment Agency's Pollution Prevention Guidance Note 2 ('PPG Note 2') and with COSHH Regulations such that no oil or other contaminants are allowed to reach water courses or underlying ground and groundwater.

Tanks will be placed on impermeable bases to reduce the risk of spillage to groundwater. All facilities for the storage of oils, fuels or chemicals will be sited on impervious bases with adequate secondary containment. The volume of any secondary containment will be at least equivalent to the capacity of the tank plus 10%. If there is multiple tankage, any compound will be at least the equivalent to the capacity of the largest tank, or the combined capacity of all inter-connected tanks plus 10%.

All filling points, vents, gauges and sight glasses would be located within a contained area. The drainage system of any bund would be sealed with no discharge to any watercourse, land or underground strata. Associated pipe-work will be located above ground and protected from accidental damage. All filling points and tank over flow pipe outlets would be detailed to discharge downwards into secondary containment.

Waste fuels, oils and chemicals will be disposed of via a registered waste disposal contractor. Spill response equipment in the form of spill kits will be retained on site in a place close to the site boundary, clearly marked and known to all site staff. Spill kits will also be issued to a

limited number of vehicles on site. Consideration will also be given to the use of biodegradable lubricants and hydraulic oils.

Water Pollution Control

No discharges of sewage will be made to the ground.

The construction site drainage system would be designed and managed to comply with BS6031:198 "The British Standard Code of Practice for Earthworks", which details methods that would be considered for the general control of drainage on construction sites. Further advice is also contained within the British Standard Code of Practice for Foundations (BS8004, 1986).

Any discharges to the sewer will be agreed with the Environment Agency and a licence obtained from United Utilities in advance of such activities.

The Client and any contractors will ensure that any water that may have come into contact with contaminated materials will be disposed of in accordance with the Water Resources Act, 1991 or Water Industries Act 1991, and to the satisfaction of the relevant authority.

Contractors would also take full account of the requirements of Environment Agency Pollution Prevention of Pollution of Controlled Waters (PPG1) guidance and of advice on the layout of construction sites and the surface drainage systems as given in:

- PPG1 General Guide to the Prevention of Pollution
- PPG3 Use of Oil Separators in Surface Water Drainage Systems;
  and,
- PPG5 Works in, Near or Liable to Affect Watercourses.

4.6 Waste

In accordance to the planning permission conditions only inert material which has been demonstrated as being suitable for use shall be deposited on the site. Any biodegradable material, plastic, timber, metal, paper wastes or putrescible material shall be strictly excluded.

All waste from the Site would be removed, by skips or compactor, to licensed waste transfer stations for recycling, treatment or disposal. Methods for separating and removing waste from the Site will be recorded by the Site Manager. The Site Manager would ensure the Principal Contractor is registered as a hazardous waste producer.

Where possible material will be reused on site. Surplus soils that require off site disposal, consideration must be given to the previous geo-environmental site investigation reports with respect to levels of contamination prior to any off site disposal.

Other surplus materials, which are not deleterious or hazardous but which cannot be recycled, will only be permitted to be deposited in authorised landfills in accordance with the requirements of the Environment Agency, specifically the Hazardous Waste (England and Wales) Regulations 2005 and the Duty of Care Regulations 1991, and the Environmental Permitting (England & Wales) Regulations 2010.

Clean topsoil/subsoil for landscaping areas will be imported from a local source to minimise vehicle movements and will be tested prior to landscaping.

Any asbestos waste should be removed from site by a suitably qualified contractor and taken to the correct waste facility. If ACM is encountered on site and can be removed it should be double bagged in the relevant asbestos bags and disposed of off-site.

4.7 Contaminated Land

A remediation and enabling performance specification has been undertaken in order to:

- Assess the most appropriate earthworks solution to ensure the delivery of the optimum development platform;
- Define validation criteria to demonstrate the successful implementation of a site Remediation & Enabling works plan;
- Specify Geotechnical Engineering Performance Requirements;
- Ensure the safe, cost effective and regulatory compliant redevelopment of the site;
- Provide a detailed specification for the re-engineering of site 'won' soils to be compacted as an engineered fill to uplift levels to support the proposed adopted highway, estate roads, infrastructure and general development platform;
- Provision of validation monitoring during the site works to facilitate the production of a suitably detailed deification report.

The Principal Contractor should continue to take appropriate levels of care and attention during the construction phase should other previously unknown areas of contamination be uncovered during construction activities.

Reference to the HSE Guidance Document *'Protection of Workers and the General Public During the Development of Contaminated Land'* should be considered.

In accordance with the current requirements of the regulatory authorities, validation samples will be collected from all materials that are to be subject to movement under the protocols outlined within this Remediation Strategy, or for materials to be imported onto site to facilitate the proposed residential development.

Upon removal of any hotspots of unexpected contamination, validation samples will be collected from the base (2 No.) and sidewalls (4 No.) of the resultant excavation to reasonably demonstrate no residual impact to the underlying strata.

Soil samples destined for chemical analysis will be collected at regular intervals in appropriate sampling containers. All samples will subsequently be stored in cooled boxes prior to submission to a UKAS / MCERTS accredited laboratory.

All samples will be collected using appropriate PPE and sampling equipment that will be cleaned at each sampling location.

Where material is found to contain concentrations of potential contaminants at levels in excess of the site specific screening criteria, further assessment will be required with subsequent recommendations on the appropriate use for the material in question, which may involve the disposal of such materials off-site to a suitable waste management facility.

The sampling frequency for materials to be managed under the Remediation Strategy is presented within Table 4.1 overleaf:

Table 4.1 - Specification of Chemical Validation Laboratory Analysis

Material Use	Testing Frequency	Suite of Analysis
Site Generated		
Site Generated 6F2	1 Sample Per 1000m^3	A / B / C / D
Site Won Made Ground General Backfill	1 Sample Per 250m^3	G
Site Won Made Ground General Backfill	1 Sample Per 1000m^3	A / B / C / D
Site Won Made Ground General Backfill	1 Sample Per 2000m^3	I
Site Won Natural Backfill	1 Sample Per 2000m^3	A / B / C / D
Site generated Sub-Soil *(450mm garden cover)*	1 Sample Per 250m^3	A / B / C / D
Site Generated Topsoil Cover *(150mm garden cover)*	1 Sample per 50m^3	A / B / C / D
Hotspot Validation Samples	1 Sample per 10m of linear excavation to base and sidewall.	E / G
Imported		
6F2	1 Sample Per 1000m^3	A / B / C / D
Topsoil Greenfield Source *(150mm garden cover)*	1 Sample per 50m^3	A / B / C / D
Topsoil Brownfield Source *(150mm garden cover)*	1 Sample per 50m^3	A / B / C / D
Subsoil Greenfield Source *(450mm garden cover)*	1 Sample per 200m^3	A / B / C / D
Subsoil Brownfield Source *(450mm garden cover)*	1 Sample per 200m^3	A / B / C / D
General Engineering Fill (Class 1,2 & 6 Soil)	1 Sample Per 1000m^3	A / B / C / D
General Engineering Fill (Class 1,2 & 6 Soil)	1 Sample Per 2000m^3	I

Notes
Suites of Analysis

A) Speciated PAH
B) Speciated TPH (C5-C35)
C) Asbestos (ID)
D) CLEA Inorganic Heavy Metals
E) Speciated PAH, Banded TPH and VOCs
F) SVOC / Speciated TPH
G) On-site screening for VOC using calibrated PID
H) Lechate 2:1 Speciated PAH and Banded TPH
I) Leachate analysis of Inorganic heavy metals, TPH, sulphate and PAH.

All analysis prescribed above to be completed by UKAS accredited laboratory.

4.8 Construction Traffic Management

Closures and Diversions during Construction

It is not anticipated that any permanent road closures and diversions are required during the construction phase. Site entrances would be signposted to alert pedestrians to vehicle movements. A competent Banksman will be stationed at the site entrance whenever a vehicle enters or exits the site to ensure safe vehicular access and egress to and from the site and that pedestrian safety is not compromised by vehicle movements.

Prior permission from Manchester Council will be obtained for the delivery of loads likely to cause any significant disruption. At present no such loads are anticipated during the construction programme.

Manchester Council will be notified of any temporary diversions of footpaths, and the posting of notices informing local residents and businesses. Where necessary, for reasons of public safety, notice regarding planned closures or diversions of footpaths forming part of the Site would be given by the client to ABC, the Police, the Fire Brigade and other emergency services sufficiently in advance of the required closure or diversion dates.

Vehicle Movements and Exits/Entrance to Site

The construction traffic into the Site during peak hours will be minimised to reduce the impact on traffic congestion on local roads.

A detailed route for HGV's together with management proposals would be agreed with ABC, if required. The construction programme will aim to time the majority of lorry movements for completion outside the peak morning and peak afternoon hours.

During the construction phase, appropriate signage will be deployed to direct construction traffic to the prescribed off-site routes. The agreed routes would also be displayed prominently near the entry/exit points at Site. No out-of-hours parking on public roads would be allowed. Provision would be made within the Site for construction parking within the staff welfare and office complex. The construction traffic logistics would be managed by the Client.

Operational Hours

Operational hours for on-site works are detailed below:

- Monday – Friday - 7:00am – 9:00pm
- Saturday – 8:00am – 14:30pm
- Sunday – No operational works

4.9 Lighting

Lighting to Site boundaries would be provided with illumination sufficient for the safety of the passing public, including any disabled people. Precautions would be taken to avoid shadows cast by items such as Site hoardings on surrounding footpaths and roads.

Site lighting would also be positioned and directed so as not to unnecessarily intrude on adjacent residential dwellings.

4.10 Community Responsibility

The Client will liaise with local resident groups so as concerns that they might have can be aired and resolved. The client should make available to the general public details of the following:

- Details for the site manager, including contact telephone number; and
- Out of hours contact telephone numbers in the event of an emergency.

END OF REPORT

APPENDIX I
Glossary of Acoustic Terminology

Noise

Noise is defined as unwanted sound. Human ears are able to respond to sound in the frequency range 20 Hz (deep bass) to 20,000 Hz (high treble) and over the audible range of 0 dB (the threshold of perception) to 140 dB (the threshold of pain). The ear does not respond equally to different frequencies of the same magnitude, but is more responsive to mid-frequencies than to lower or higher frequencies. To quantify noise in a manner that approximates the response of the human ear, a weighting mechanism is used. This reduces the importance of lower and higher frequencies, in a similar manner to the human ear.

Furthermore, the perception of noise may be determined by a number of other factors, which may not necessarily be acoustic. In general, the impact of noise depends upon its level, the margin by which it exceeds the background level, its character and its variation over a given period of time. In some cases, the time of day and other acoustic features such as tonality or impulsiveness may be important, as may the disposition of the affected individual. Any assessment of noise should give due consideration to all of these factors when assessing the significance of a noise source.

The most widely used weighting mechanism that best corresponds to the response of the human ear is the 'A'-weighting scale. This is widely used for environmental noise measurement, and the levels are denoted as dB(A) or L_{Aeq}, L_{A90} etc, according to the parameter being measured.

The decibel scale is logarithmic rather than linear, and hence a 3 dB increase in sound level represents a doubling of the sound energy present. Judgement of sound is subjective, but as a general guide a 10 dB(A) increase can be taken to represent a doubling of loudness, whilst an increase in the order of 3 dB(A) is generally regarded as the minimum difference needed to perceive a change under normal listening conditions.

An indication of the range of sound levels commonly found in the environment is given in the following table.

Typical sound levels found in the environment

Sound Level	Location
0 dB(A)	Threshold of hearing
20 to 30 dB(A)	Quiet bedroom at night
30 to 4 0dB(A)	Living room during the day
40 to 50 dB(A)	Typical office
50 to 60 dB(A)	Inside a car
60 to 70 dB(A)	Typical high street
70 to 90 dB(A)	Inside factory
100 to 110 dB(A)	Burglar alarm at 1m away
110 to 130 dB(A)	Jet aircraft on take off
140 dB(A)	Threshold of pain

Acoustic terminology

dB (decibel)	The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2x10-5Pa).
dB(A)	A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. 'A' weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.
LAeq, T	LAeq is defined as the notional steady sound level which, over a stated period of time (T), would contain the same amount of acoustical energy as the A - weighted fluctuating sound measured over that period.
LAmax	LAmax is the maximum A - weighted sound pressure level recorded over the period stated. LAmax is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall Leq noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
L10 & L90	If a non-steady noise is to be described it is necessary to know both its level and the degree of fluctuation. The Ln indices are used for this purpose, and the term refers to the level exceeded for n% of the time. Hence L10 is the level exceeded for 10% of the time and as such can be regarded as the 'average maximum level'. Similarly, L90 is the 'average minimum level' and is often used to describe the background noise. It is common practice to use the L10 index to describe traffic noise.
Free-field Level	A sound field determined at a point away from reflective surfaces other than the ground with no significant contributions due to sound from other reflective surfaces. Generally as measured outside and away from buildings.
Fast	A time weighting used in the root mean square section of a sound level meter with a 125millisecond time constant.
Slow	A time weighting used in the root mean square section of a sound level meter with a 1000millisecond time constant.
BS4142: 1997	This British Standard describes a method of determining the level of a noise of an industrial nature, together with procedures for assessing whether the noise in question is likely to give rise to complaints from persons living in the vicinity.

APPENDIX II
Planning Permission