EVERILL GATE LANE, BARNSLEY – PROPOSED INDUSTRIAL DEVELOPMENT CONSTRUCTION METHOD STATEMENT AND ENVIRONMENTAL MANAGEMENT PLAN

The following provides the framework of a Construction Method Statement (CMS) and Construction Environmental Management Plan (CEMP) which will govern the undertaking of the construction works to the proposed industrial development at Everill Gate Lane, Barnsley.

ROLES AND REPSONSIBILITIES

The Project Manager would have overall responsibility for the project being responsible for the development and implementation of the CMS/CEMP. Other members of the project team would also be assigned specific roles and would be responsible for the correct application of the CMS/CEMP. Individual specialists may also be appointed to provide expert advice. Suggested specific roles are described below:

Project Manager

The Project Manager would have overall responsibility for environmental performance throughout the construction period and would ensure that appropriate resources are made available and environmental control and any agreed or appropriate protection measures are implemented.

They would be responsible for co-ordinating and managing all the environmental activities during the construction phase and would carry out the following duties:

- Develop and review the CMS/CEMP and specialist procedures;
- Lead the appointment of construction staff and environmental specialists;
- Ensure delivery of environmental training to personnel within the project team;
- Monitor construction activities and performance to ensure compliance with the CMS/CEMP and that identified and appropriate control measures are being effective; and any complaints are dealt with in a timely manner,
- Act as a main point of contact between the regulatory authorities and the project on environmental issues.

Site Manager

A full time Site Manager would be responsible for recording the progress of the Environmental Works. They would carry out the following duties:

- Support the Project Manager in delivering the environmental components of the project;
- Monitor construction activities and performance to ensure control measures are effective;
- Maintain full records of the progress of the Environmental Works;
- Implement an auditable environment record filing system;
- Maintain regular contact and liaison with the Environmental Specialists; and,
- Carry out audits as required.
- Deal with complaints and communicate with Project Manager, operatives and public. Ensure compliance with Duty of Care at all times;
- Implement and monitor measures to ensure correct waste minimisation, segregation and disposal.

Environmental Specialists

A team of Environmental Specialists would support the project on a part-time basis, as required. Their role would be to undertake the required Watching Briefs during construction and to assist the project team with specific issues as they arise during the project.

COMMUNICATION AND CO-ORDINATION

Co-ordination within the project would be achieved through periodic meetings attended by representatives from the construction teams, major subcontractors, and the Project Manager. Consideration will be given to past performance – from the results of inspections, environmental monitoring, and any complaints - and would look ahead to plan actions required to prevent or mitigate forthcoming risks and disseminate best practice.

TRAINING AND AWARENESS

A project specific training plan would be produced to ensure personnel allocated with environmental responsibilities are competent to carry out their duties.

As a minimum, all staff would receive an environmental briefing as part of their site induction.

Supervisors would support information provided at induction through completing briefings and 'toolbox talks' prior to specific activities commencing.

OPERATIONAL CONTROL

All activities on site would be reviewed against the requirements of the CMS/CEMP via an integrated risk assessment and method statement procedure. The relevant construction teams would review environmental risks associated with the construction process and appropriate control measures included in method statements and field control sheets. Mitigation or protection measures that are agreed with statutory authorities would be implemented prior to the undertaking of any potentially polluting activities and would form the basis of briefings.

All Method Statements would be approved by the Project Manager and where necessary the relevant specialist.

CHECKING AND CORRECTIVE ACTION

Construction teams using a field inspection sheet would carry out day to day monitoring of construction activities. In addition, a weekly inspection would be completed by each of the appointed Site Manager against a suite of agreed site standards. The Project Manager would also carry out a monthly assessment of the project's environmental performance, based upon the performance measured by Site Managers during the period, environmental monitoring undertaken and his/her own site inspections.

Regular audits would be completed to verify that the Project is compliant with the established CMS/CEMP, contractual requirements and legislation.

WELFARE FACILITIES

The contractor is expected to consider from the outset the likely welfare facilities required to implement suitable and sufficient facilities on site in accordance with the Construction (Design & Management) Regulations 2015.

Toilets and washing facilities (appropriate to the number of operatives on site) are to be made available for use by contractors. Access to hot/cold water will be provided during the works. All facilities provided within the site will be kept in a clean and tidy condition. The welfare facilities will be located to the front of the site and comprise the following;

Canteen, Drying Room, Toilets, Offices and Materials storage areas (if required).

SITE SECURITY

The principal contractors are to make security provision throughout the duration of the project, in particular during the hours where work has stopped, the details of which are to be provided by the principal contractors and verified with the client to ensure that the proposals are adequate

The site shall be protected by the following procedures: Warning notices shall be placed around the site, including notices warning of “no unauthorised entry” and that all visitors must report to the site manager. All employees shall have their names recorded in the site register and shall be informed that no unauthorised persons shall be permitted onto site. Authorisation can only come from site management – except in the case of emergency. Any new staff or visitors must receive a site induction and sign to confirm receipt of this talk, which will include safety rules. The procedure above shall ensure that everyone except authorised persons is excluded from the workplace. Any person found on site without authorisation will be removed by the Harworth Estates Site Manager.

SITE TRANSPORT ARRANGEMENTS AND VEHICLE MOVEMENT RESTRICTIONS

On-site parking is available at agreed locations during construction works. Height restrictions shall be considered.

RESTRICTIONS ON DELIVERIES, WASTE COLLECTION AND STORAGE

The principal contractors are to adhere to any requirements imposed upon them. The compound areas a shown on the principal contractors’ site plans. Deliveries can be taken through the primary entrance with consideration towards the height restrictions.

ENVIRONMENTAL AND POLLUTION CONTROL MEASURES

To reduce the potential of nuisance being caused by construction activities, the Contractor will introduce control measures when developing construction programmes and methods of work.

Specific procedures to manage the key environmental aspects of the project would be developed by the Contractor prior to work commencing. This will include the following:

Noise and Vibration Management

Strict controls on the sequencing of works and providing noise protection would be developed on an activity-by-activity basis.

The adoption of Best Practicable Means, as defined in the Control of Pollution Act 1974 is usually the most effective means of controlling noise from construction sites. In addition, the adoption of the control techniques in line with BS 5228 2009 Parts 1 & 2 are to be used as far as reasonably practicable. In addition, the following measures will be considered, where appropriate:

All mitigation bunds would be constructed at the earliest opportunity. Local hoarding, screens or barriers would be erected as necessary to shield particularly noisy and dusty activities

On site noise levels would be monitored regularly, particularly when changes in process are required or in response to complaints. The monitoring would be in accordance with the guidance set out in Annex E of BS5228: Part 1:2009.

Any compressors brought onsite would be silenced or sound reduced models fitted with acoustic enclosures.

All pneumatic tools would be fitted with silencers or mufflers.

Deliveries would be programmed to arrive during daytime hours only. Care would be taken when unloading vehicles to minimise noise. Delivery vehicles would be routed so as to minimise disturbance to local residents. Delivery vehicles would be prohibited from waiting within the site with their engines running.

All plant items would be properly maintained and operated according to manufacturer's recommendations in such a manner as to avoid causing excessive noise. All plant would be sited so that the noise impact at nearby noise sensitive properties is minimised.

Where reasonably practicable plant and/or methods of work causing significant levels of vibration at sensitive premises should be replaced by other less intrusive plant and/or methods of working.

Working hours would be restricted to the following times:

Construction or remediation work comprising the use of plant, machinery or equipment, or deliveries of materials will only take place between the hours of 0800 to 1800 Monday to Friday and 0900 to 1300 on Saturdays and at no time on Sundays or Bank Holidays.

All as stipulated in the Planning Approval 2018/1353

Water Supply

Initially there will be water provisions from a bowser on site with the mains temporary supply implemented when the site is established. The contractor will monitor the usage to prevent wastage and over-use, not affecting peak demand times.

Dust and Air Quality

During any construction works, water should be used as a dust suppressant during any material processing. A banksman should be positioned at a suitable distance away from the area of works and proceed to fine spray water during any processes likely to emit dust (i.e. Scappling concrete, cutting concrete/ stone, dry raking mortar etc) to supress any dust emitted.

It is recommended that a designated material storage area (high risk area) is constructed on the northern elevation of the site bordering the existing access to the site approximately 85 metres from the bank of the canal. This area should be designated for high risk activities including site compounds/ parking areas, refuelling areas, chemical (including fuel) storage, vehicle and equipment washing areas. The high-risk area should contain a bund with a base created from an impermeable surface with a surface area capable of holding double the volume of the materials to be stored.

Any piles of aggregates and powders, such as sand and cement, which are left on site should be covered when not in use by thick tarpaulin or similar to prevent wind dispersal. This should be checked at regular intervals to ensure its integrity. Powders retained on site should be stored within a designated area away from the location of the river and adjacent ditch network.

Skips and vehicles containing aggregates should be continually dampened with low levels of fine sprayed water to reduce dust. No materials should be crushed on site to prevent arisings contaminating adjacent watercourses.

Any aggregates brought onto the site should be fine sprayed with water to minimise dust levels and produce a clean aggregate.

Any wastewater associated with dust suppression and general site activities should be stored in settlement tanks then screened and clean water discharged (subject to the relevant legislation). The

disposal of contaminants and sludge arising from site workings should be disposed of according to the relevant environmental regulation.

Site staff should be inducted in environmentally sensitive working practices outlining measures to prevent contamination of adjacent water courses. An emergency procedure plan should be implemented prior to the onset of works and all site staff inducted.

Dust control and monitoring measures will be implemented as far as reasonably practicable using the guidance contained in line with the "The control of dust and emissions from construction and demolition". Best Practice Guide November 2006 London Councils. The following measures will also be considered.

Seeding and sealing of topsoil stockpiles

Sheeting of vehicles transporting materials to and from the site

Limiting the speed of site vehicles to 10mph (not including dump trucks)

Applying a coarse gravel surface (or similar) along the haulage road, where considered appropriate

Placing plant as far as possible from sensitive areas and switching engines off when not in use

Provision of a wheel washing facility and/or regular use of road sweepers at access points and on local roads (to remove mud from public highways)

Damping down of haul roads

Note: Visual monitoring to be carried out at sensitive locations on a daily basis.

Water Pollution

Suitable protection for watercourses potentially affected by the works would be installed prior to relevant works proceeding. These measures would be in-line with Environment Agency Pollution Prevention Guidelines.

The contractor shall consider construction of the attenuation pond early in the contract period to assist with attenuating surface water run-off from the proposed works and to minimise contaminated water entering the surrounding watercourses

Protection and control measures will be developed to include where practicable:

The main compound will have an impermeable and bunded surface to its vehicle maintenance and fuel storage areas, with a closed drainage system equipped with both a silt settlement facility and oil interceptor. Bunded storage areas, located in main compounds, would be provided for the duration of the construction period for the storage of oils, fuels, chemical and other hazardous construction materials. Local storage of these materials will also be within bunded facilities.

Plant and equipment would be stored in those areas designated as being less susceptible to possible pollution incidents, or on dedicated hard standing.

All mobile plant will be equipped with spill kits.

Wastewater from the temporary staff toilets and washing facilities would be discharged to sealed containment systems and disposed via licensed contractors.

The site construction compound will have a contained drainage system and would be equipped with a facility for recycling aggregates.

Early seeding of embankments near watercourses would be undertaken to reduce the potential for sediment run-off.

Monitoring of the watercourses potentially affected by the works would be undertaken, at a minimum frequency of once per week whilst construction operations are in progress.

SITE ENVIRONMENTAL CONTROL PLAN, IMPACT – Pollution of Water Courses

GENERAL CONTROL MEASURES

Welfare & Silty water (excavations)

Welfare water will be discharged to the nearest sewer under permission from the sewerage undertaker or if a private sewer system the land owner.

Water from excavations will also be discharged to the sewer system under the same permission.

Oil Storage & Refueling

The use of biodegradable oils will be considered wherever possible.

All fuel, oil, lubricant and chemicals storage shall be sited on an impervious base, within a bund and secured.

The base and bund shall be impermeable to the material stored.

The bunded area shall have a capacity of at least 110% of the volume of the largest tank.

Bunded areas shall have no outlet.

Delivery points and vent pipes shall be within the bund.

Bunds shall be regularly checked.

Disposal of contents of bunded area shall be via licensed waste disposal contractor.

Leaky or empty drums shall be removed from site immediately.

Delivery hoses from tanks shall have shut off valves.

Plant Nappys (drip trays) to be used for pumps and equipment to ensure no escape of oil and diesel into drains.

Mobile plant shall be refueled in a designated area on an impermeable surface away from drains and watercourses.

Plant and vehicles shall be supervised during refueling.

Deadman handle trigger guns shall be used.

Plant & equipment checked for signs of wear – fully serviced and checked on a daily basis.

All spills must be reported to site management regardless of extent or nature. An estimate of quantity is required. Site Management will assess level of response.

Cement, Concrete and Grout

Concrete washout shall be in a designated area.

All concrete pouring and filling operations shall be supervised and monitored.

Concrete use shall be monitored.

Any drains in vicinity of concrete works will be covered.

Consider use of biodegradable shutter oils – handling, storage, use and disposal will be carefully controlled.

SPECIFIC CONTROL MEASURES

Washout Area

Designated area set out for vehicle washout.

Washout area will be >10m away from watercourse.

All drains in the area will be sealed to prevent escape of washout water.

Washout shall be supervised at all times.

A location plan of the concrete washout area in relation to the compound and works will be produced.

Concrete water will not be used for dust suppression.

Washout water will be re-circulated.

MONITORING AND MEASUREMENT

The amount of concrete used will be carefully monitored through poring operations in order to ensure there is no escape into drains etc.

Visual monitoring of works areas, drains & water bodies will be done as standard each day.

The washout area will be inspected on a regular basis by site management and recorded.

Drains will be inspected daily to ensure no affect as a result of construction activities.

IN THE EVENT OF AN EMERGENCY

Please refer to the Emergency Action Plan for procedure.

Sufficient spill kits will be provided and retained on site to ensure they can be employed within 15 minutes.

Plant will have individual kits.

Emergency Action Plan Actions to be taken in the Event of an Environmental Emergency

In the event of an actual or suspected pollution incident:

1.0 REPORT IMMEDIATELY:

- To a member of Site Management

OR

- To your manager or supervisor who should then report to a Site Management

Site Management will then put into action the Pollution Incident Response Plan and report to the Environmental Agencies and/or sewerage undertaker and others as appropriate. We will maintain a proactive stance on reporting of pollution incidents to the appropriate authorities.

2.0 TRY TO IDENTIFY THE SOURCE OF THE POLLUTION AND STOP THE FLOW IMMEDIATELY.

3.0 AVOID THE SPILLAGE SPREADING

- Check the site drainage plan – where will the spillage go?
- Stop the flow if possible;
- Dam the flow with earth/sand/polythene/absorbent material;
- Divert the flow from drains/watercourses where possible;
- Use drain covers if available

4.0 GET A SPILL KIT

- Use absorbent material if appropriate.
- Place a boom across watercourses if applicable.

5.0 DO NOT WASH SPILLAGE INTO THE DRAINAGE SYSTEM – IT ONLY MAKES IT WORSE.

- Never use detergents,
- Use sand or absorbent pads to mop it up and dispose of as special waste.

6.0 IF THE SPILL HAS ALREADY ENTERED THE DRAINS – BLOCK THE DRAINS OFF IF AT ALL POSSIBLE.

7.0 SEEK SPECIALIST ADVICE OR SEEK AUTHORISATION FROM THE ENVIRONMENTAL ADVISOR BEFORE MOVING CONTAMINATED MATERIAL.

8.0 AN INVESTIGATION WILL BE CARRIED OUT TO ASCERTAIN WHY THE INCIDENT OCCURRED.

Waste Management Procedure

The methods of waste management will include, where appropriate:

Storing and reusing earthwork materials and general arisings to negate the export or import of inert materials.

Storing and reusing demolition materials to negate the export or import of inert materials where possible.

Reduction of site generated waste through waste minimisation and re-cycling initiatives, including the source-segregation of re-usable and recyclable materials.

Appropriate methods of waste disposal linked to a robust waste disposal audit trial.

All topsoil and subsoil would be handled and stored carefully to minimise the potential for damage to the soil structure. A detailed method statement will be produced clearly identifying correct stripping, soil handling, storage, placement and programming requirements to avoid compaction and moving the material in unsuitable weather conditions.

Construction and demolition arisings being reused within the site as structural or non-structural fill.

Where practicable, all concrete and redundant road pavements would be transported to a dedicated crushing and recycling facility for return and re-use on the project

Detailed procedures and guidance will be developed and implemented through the construction process to minimise the import of non-sustainable raw materials and for identifying opportunities for re-using or re-cycling waste.

Site office wastes would be collected in separate containers to maximise the opportunities for recycling, this would include:

- Can, bottle, and paper banks;
- Paint spray cans, (used for surveying), would be logged when issued so that their return is ensured.

COMMUNICATION OF CONTROL MEASURES FOR NOISE, DUST & VIBRATION

NOISE, DUST AND VIBRATION

Noise can disturb local residents and give rise to complaints and delays. Noisy activities may include excavation, concrete cutting & breaking, unsilenced generators and concrete power floating. In particularly sensitive areas (Residential) this can also include radios, offensive language, leaving plant and vehicles left running unnecessarily. Noise can also be a disturbance of wildlife particularly in nesting/breeding times. **(Please refer to Appendix A detailing our standard procedures)**

Vibration can result in structural damage and lead to claims in respect of repairs. The Local Authority has the power to stop works if it considers a complaint is valid. Simple precautions to maintain good relationships include responsible/sensible positioning of equipment and utilising a consultation process. Control and use only designated parking areas and access/egress routes onto site. Don't obstruct vehicle accesses or driveways of neighbouring properties, or obstruct rights of way such as pavements, footpaths or bridleways. **(Please refer to Appendix B detailing our standard procedures)**

Dust, emissions and odours can annoy neighbours and may cause health risks at high concentrations, this could lead to prosecutions and compensation claims. Dust can settle on neighbouring properties and cause nuisance and include damage to watercourses and plant life;

the Local Authority has the power to stop works if it finds a valid complaint. Dust and grit can also cause eye irritation or aggravate asthmatic conditions. **(Please refer to Appendix C detailing our standard procedures)**

In addition to the above we vet every Method Statement & Risk Assessments from all subcontractors to ensure that they comply with policy and current legislation, no subcontractor will be allowed to start until we have agreed their Method Statement & Risk Assessment.

The site will also be registered with Considerate Constructors and we will liaise regularly (as necessary) with local residents so that they are aware of our activities over the forthcoming weeks.

PREVENTION MEASURES

DO

Restrict noisy activity to certain times of the day if possible.

Adhere to working hours where there is potential to cause disturbances.

Plan deliveries to minimise potential nuisance to the community.

Keep public roads and accesses free from mud and avoid parking where it can cause a nuisance.

Keep noisy plant away from public areas if possible.

Minimise drop heights into hoppers, lorries, skips, etc.

Use local screening where necessary, e.g. plyboard, temporary fencing.

Use silenced generators and tower lights where necessary.

Keep acoustics doors and hoods on plant closed.

Advise residents within a predetermined radius (e.g. letter drop) if noisy or disruptive activities are likely, at what times/dates they are likely and give contact details.

Keep surfaces swept and damp down with water regularly.

Ensure cutting/grinding operations are adequately shielded or wetted.

Cover skips and wagons carrying dry materials off site.

Store fine, dry materials in a container or within a building.

Position silos and stockpiles away from residential areas or watercourses.

Clean up or damp down any spillage of dry, dusty materials.

Notify Project Manager if work activities are creating poor air quality.

DO NOT

Carry out noisy activities in the evening, night time or early morning if it can be avoided.

Leave doors and hoods open on plant.

Leave plant running unnecessarily.

Use poorly maintained plant.

Undertake activities that could cause damage to nearby structures through vibration unless approved by the Project Manager.

Use loud or offensive language or behaviour near the public.

Ignore complaints from the local community. Make a polite response and refer to the Project Manager.

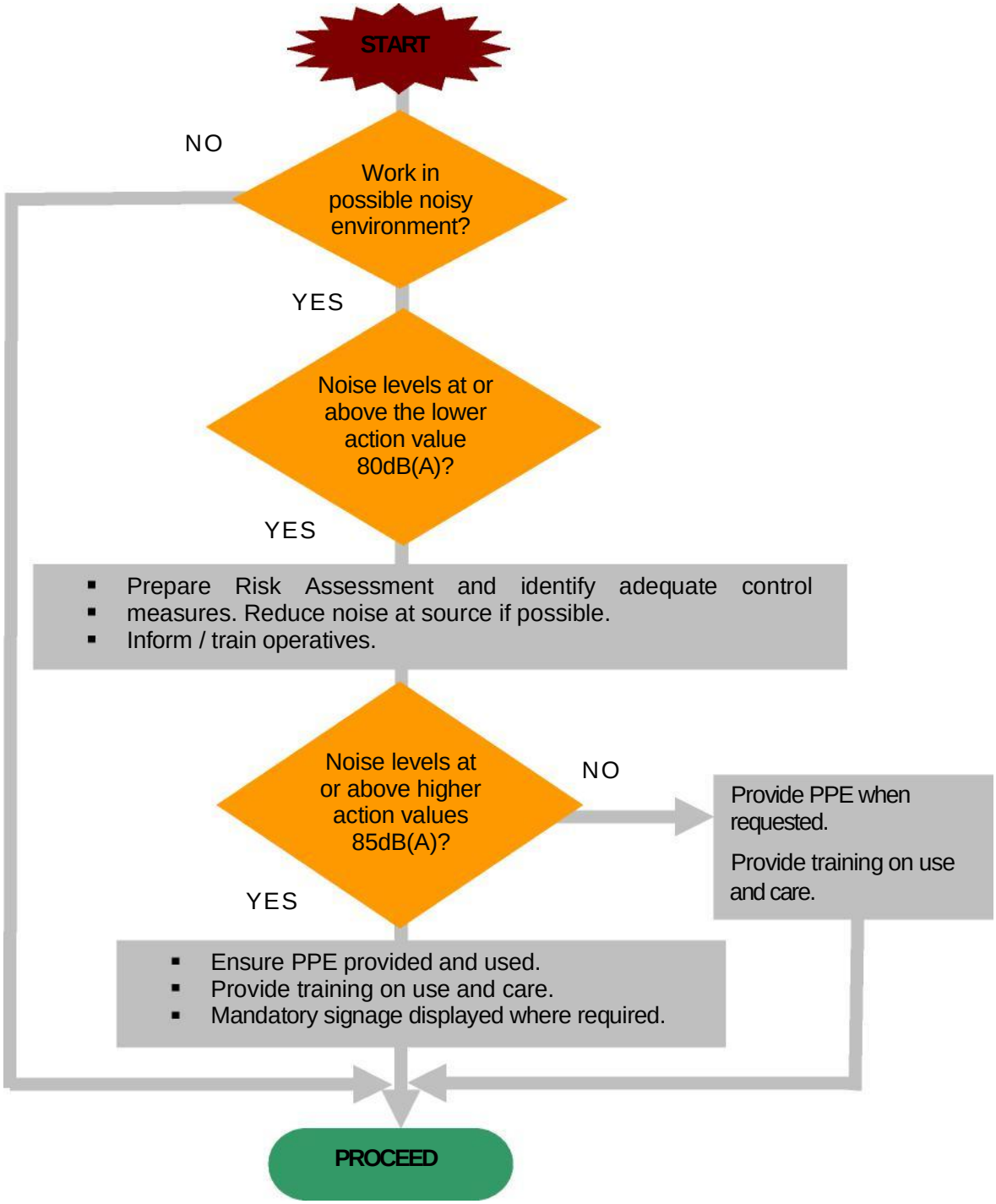
Allow slurry from any damp down or clean up operations to enter into a surface water drain or river, stream, pond or other controlled water source.

Ignore sources of poor air quality, notify Project Manager immediately.

Appendix A

Noise

1.0 General Requirements



Hearing damage is caused by exposure to loud noise and is permanent and incurable.
It can be caused by exposure to a sudden extremely loud noise like from a cartridge tool.

NOISE

Damage is more often from prolonged exposure to noise, and the damage caused by noise over the years combines with normal hearing loss due to aging causing hearing loss.

Noise levels are measured in decibels (dB) with an A-weighting used to measure average noise levels and a C-weighting used to measure peak impact or explosive noise levels.

Noise levels double for every increase of 3dB.

Health & Safety Advisors or specialist consultants can carry out noise surveys.

To protect employees' hearing, two exposure action values have been determined by Regulations where action by the employer has to be taken:

Lower exposure action value — 80dB(A) and 135dB(C)

Upper exposure action value — 85dB(A) and 137dB(C)

In addition, limits have been set which must not be exceeded:

Daily or weekly exposure limit value — 87dB(A)

Peak exposure limit — 140dB(C)

2.0 Ear Protection

Where noise levels reach to lower action level attempts should be made to reduce the noise and employees must be provided with suitable hearing protection if they request it.

At noise levels between the lower and higher action values hearing protection must be provided and used.

Mandatory hearing protection zones should be clearly defined with warning signs displayed.

Ear muffs and plugs, like any other PPE, should be considered as a last resort and other `engineering' means of reducing or muffling the noise should be considered first.

A range of ear muffs and ear plugs to EN 352 should be available where necessary.

3.0 Health Surveillance & Noise — Group Employees

Pre-employment Assessment: Employees assessed as at risk (Key Joinery, ADM / Cell Security and BKSF) will receive an audiometric assessment during an Initial Occupational Health screening.

Routine Assessment: `At risk' Employees will generally have their hearing re-assessed every three years.

Operatives experiencing confirmed symptoms of noise induced hearing loss may be referred to a medical practitioner for more detailed audiometric testing.

Anyone suspecting they have been affected by noise will be encouraged to report the condition and get early medical attention.

4.0 Managers should:

Ensure safety documentation addresses the noise hazard.

Identify equipment / operations likely to exceed the first action level and the action to be taken.

When high noise levels can affect other site personnel or the public, appropriate measures must be implemented including:

Alternative work methods;

Selection of plant emitting lower noise values;

Designing out the need for using noise emitting tools or work practices;

Information and education of workforce to improve understanding of noise related issues and personal protection;

Reduce noise by technical means e.g. shields, enclosures, isolation or

damping; Maintenance of equipment;

Organisation of work regime by reduction of exposure duration & rest

periods; Or lastly provision of suitable hearing protection.

When buying or hiring equipment obtain noise levels and when these are above the first action level implement appropriate control measures.

The following site activities are considered high risk:

Stud welding;

Cutting structural metal decking;

Floor grinding including Terrazzo;

Concrete cutting, sawing and drilling;

Cut off saws;

Gas and cartridge fired tools;

Workshop machinery.

Use hearing protection where required

5.0 Plant Selection

Only use plant which conforms to the relevant standards and directives on

emissions; Use noise control equipment when operating plant;

Electrically powered plant is quieter than diesel or petrol powered plant;

Shut down plant when it is not in use;

Maintain plant and tools to reduce noise levels;

Provide effective silencers for plant;

Fix rotating or impacting machines on anti-vibration mountings.

Noise from some types of plant may be emitted more in some directions than others - position the
machinery on site to reduce noise emissions to the neighbourhood.

6.0 Noise Screens

Factors affecting the efficiency of an acoustic screen include:

the screen should be positioned as close to the noise source as possible;

the density of the material used (avoid or seal holes / gaps / openings in the screen);

the height and width of the screen;

avoid noise-reflecting surfaces;

avoid sound traps that amplify noise;

seal all gaps and openings.

Generator within noise screen / enclosure

7.0 Nuisance Noise

Noise which is a nuisance to the general public: the Control of Pollution Act 1974 requires contractors to use the best practical means of controlling construction and demolition noise.

Planning conditions may stipulate noise restrictions during construction that need to be adhered to. Background noise monitoring prior to and during the course of the works by a suitably qualified person may be required.

Some construction activities are inherently noisy, for example, piling, and demolition, the use of explosives, breakers and scabbling equipment.

Noise is a major hazard to site workers; it can annoy neighbours and disturb wildlife.

Night shifts should be aware of any planning restrictions on noisy activities where it is planned to carry out noisy operations when there are less personnel on site e.g. Terrazzo grinding as it may create nuisance.

Include noise and vibration considerations in method statements for construction activities.

Address operational noise and vibration issues in design risk assessments for our designed elements of the permanent works

The three factors that can influence noise levels in the community are the site management and construction method, the type of plant used and the use of screening to provide noise attenuation.

Appendix B

Vibration

VIBRATION

1.0 General Requirements

Seek to maximise any opportunities to influence the decisions made during the design stage of construction projects to reduce the levels of vibration leaving site or impacting on existing structures. Where possible, vibration will be minimised through design, specification and the use of alternative methods particularly where there are sensitive receptors adjacent to the works, e.g. schools, public areas, sites of special scientific interest (SSSI's) and listed buildings.

2.0 Vibration Risks

High vibration levels over sustained periods can cause damage to buildings, roads and utilities. Lower vibration levels can cause nuisance to residents.

Vibration may also cause disruption to wildlife and damage to geological and archaeological sites.

Vibration is a safety critical issue adjacent to railway lines.

3.0 Evaluate the Potential for Vibration

Some construction activities will cause vibration, eg piling, plant and vehicle movements and the use of explosives.

The transmission of vibration is highly dependent upon ground conditions. Seek specialist advice from contractors / plant suppliers.

Identify what is on or around the site which may be affected by vibration. Obtain dilapidation surveys for sensitive structures.

Liaise with Regulatory bodies and other interested parties including Network Rail, English Heritage, TFL, Environment Agency etc.

Monitor Conditions before Work Starts.

4.0 Mitigate the Risk of Damage from Vibration

Choose appropriate working methods when working adjacent to sensitive areas or structures.

Inform Neighbours - consult residents or workers in the vicinity of the works to explain the type and duration of the works.

It might be possible to schedule the work to avoid particularly sensitive times.

Minimise effects during works.

Monitor vibration levels during the works - measure inside rooms when assessing for nuisance; measure the outside of the structure when assessing for damage.

Monitor conditions after works are completed.

Results should be compared to the pre-condition surveys.

Consider vibration caused by plant and vehicles when establishing traffic management.

Appendix C

Dust

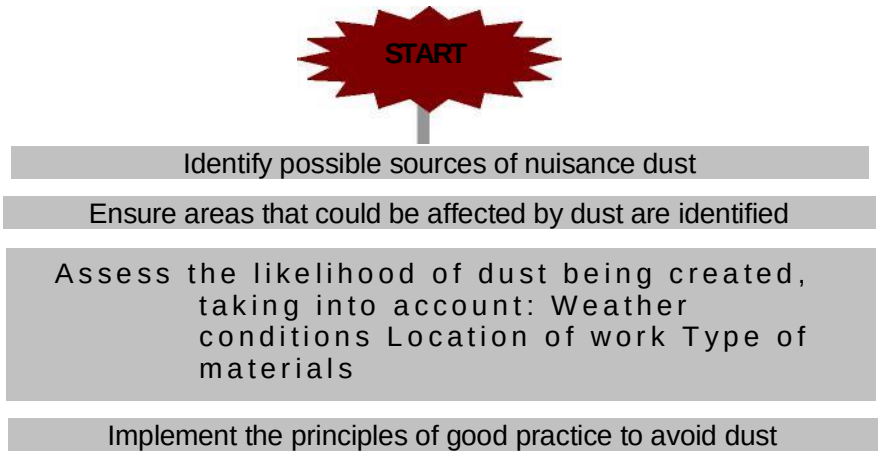
DUST

1.0 General Requirements

Dust emissions and odours arising from a site will annoy neighbours and can even cause health risks at high concentrations.

Under the Environmental Protection Act 1990 the Company has a duty to avoid causing a statutory nuisance due to creating dust that may affect the workforce, neighbours and the environment.

Failure to do so is a criminal offence and may result in prosecution and an unlimited fine.



Many activities carried out on site have the potential to create nuisance dust, some of which are as follows:

- Earth works
- Stock piling Site
- traffic Demolition
- Cutting & sawing

It is difficult to suppress dust once it is airborne; therefore it is essential to use measures to stop it being produced. Careful planning and design of construction operations is essential and wind conditions can be a significant factor.

2.0 Control Measures

The following is a list of control measures that can be applied in order to avoid dust emissions:-

Minimise the accumulation of loose materials on site road by regular sweeping.

Ensure an adequate supply of water is available for water bowsers.

Ensure water bowsers are effective and maintained.

Apply water spray to haul / site roads, earthworks and stockpiles during dry weather.

Pay particular attention to stockpiles in dry, windy weather.

Use wet methods of cutting where possible.

Ensure bulk deliveries /collections are sheeted (where appropriate).

Impose and enforce site speed limits.

Suppress and collect dust at source wherever possible, e.g. by using vacuum equipment on woodwork and cutting equipment.