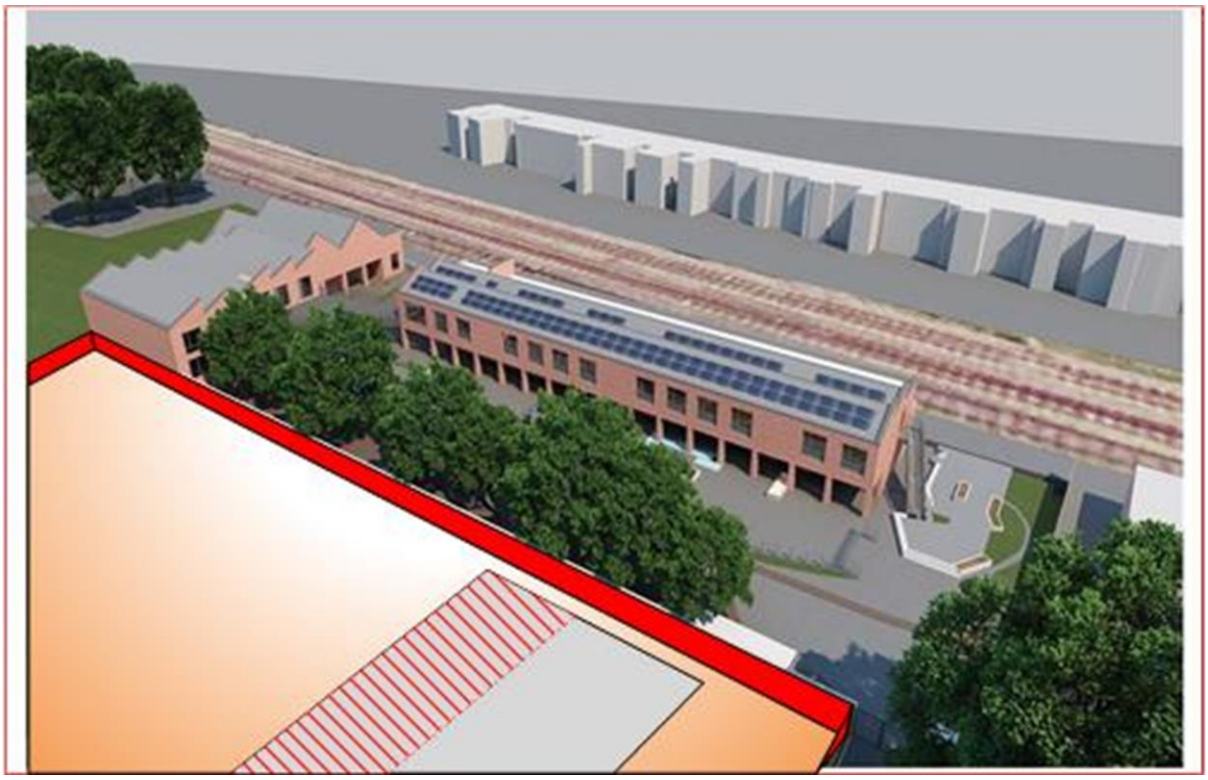
jackson|coles

DEMOLITION MANAGEMENT PLAN
REV B 20.12.17
LIDDELL ROAD, LONDON NW6 2EW



Revisions are recorded below:

REVISION RECORD				
Rev	**Date**	**Description**	**Prepared**	**Checked**
A	14.12.17	Minor Amendments	AB	
B	20.12.17	Incorporating Tibbalds Comments	AB	

CONTENTS

1.0	Introduction

The purpose of the Demolition Management Plan (**DMP**) is to help to minimise environmental impacts arising from the construction works, and relates to both on site activity and the transport arrangements for vehicles servicing the site.

It is intended to be a live document whereby different stages will be completed and submitted for application as the development progresses.

The **DMP** will address the way in which any impacts associated with the proposed works, and any cumulative impacts of other nearby construction sites, will be mitigated and managed.

We are aware that the **London Borough of Camden(LBC)** expects to receive no complaints regarding the proposed works to be carried out at Liddell Road, London NW6 2EW, and the information within the DMP will be followed at all times.

It is our intention to carry out all works in an environmentally responsible manner to the current industry's best practice, Camdens's Code of Practice for Construction Sites and to minimise disruption to the surrounding businesses, residents, visitors and members of the public.

The DMP will be kept on site available for inspection at the request of an Authorised Officer of LBC.

2.0	Project information

2.1	Project address

The Project is situated at former 32-33 Liddell Road, London NW6 2EW

2.2	Planning reference

This DMP has been prepared to address Condition 36 (Part A) of the Planning Decision Notice ref

2.3	Contact details

Management Responsibilities

Director

Name: TBC **Telephone Number:**

Responsibilities

Has overall responsibility for all project related risks on site. He will ensure that any reasonable request for additional resources to reduce the risk of l impacts are provided at the request of the Contracts Manager / Project Manager.

Contracts Manager / Project Manager

Name: TBC **Telephone Number:**

Responsibilities

The Contracts Manager/Project Manager shall be responsible for ensuring compliance with local environmental legislation i.e. dust risk assessment and registering all non-mobile plant with the relevant online register. The contracts manager will also be responsible for the ongoing monitoring recording and auditing of hazardous issues identified within this plan i.e. noise, dust, vibration. It is his responsibility to ensure that all environmental issues are planned and managed prior to, and during the construction phase.

Site Manager / Site Foreman
Name: TBC **Telephone Number:**

Responsibilities

The Site Manager will be present on site at all times during the construction period to manage any incidents on a day to day basis. The Site Manager must also ensure that all staff and contractors receive the required training and information. He will also be responsible for implementing and monitoring the requirements of the Demolition Plan. The Site Manager will also be responsible for liaising with local residents and other stakeholders.

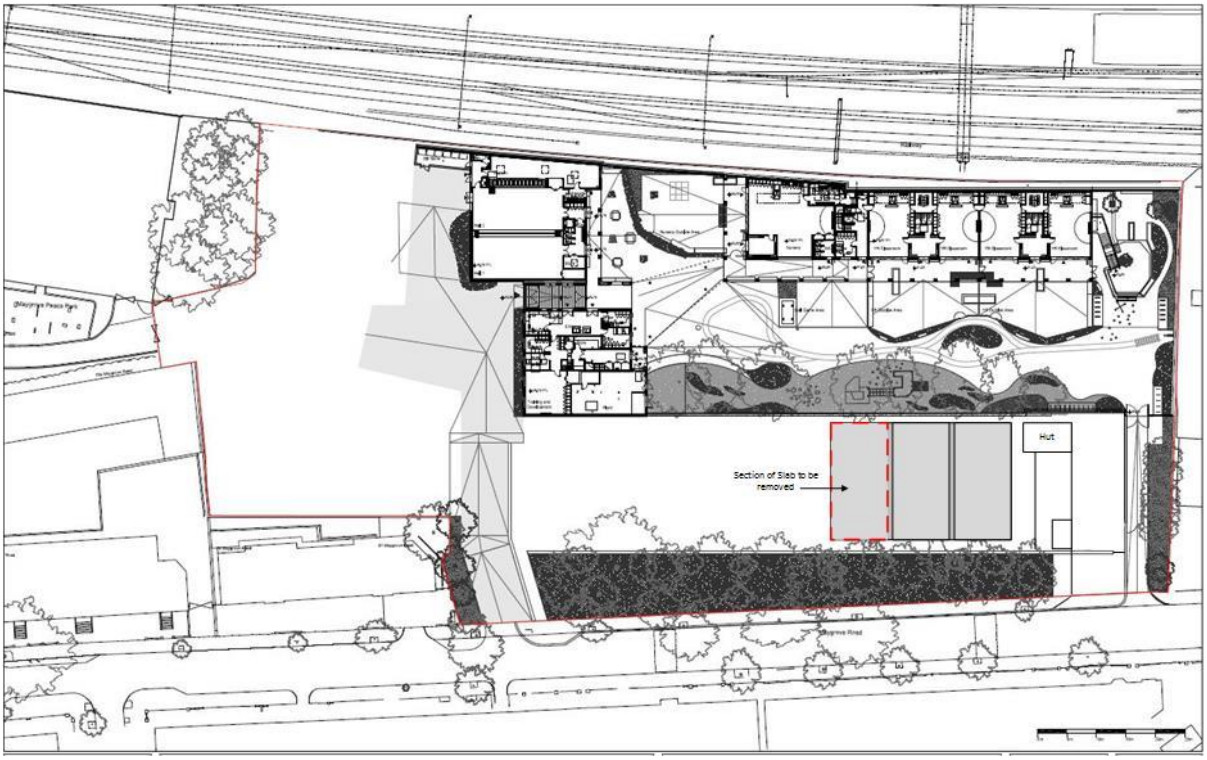
Employees and Contractors

Responsibilities

To work in a safe manner that does not create site risks. Follow tool box talks and the company health and safety and environmental standards. Use the correct tools and equipment for the job, and report all hazards to the Site Manager.

3.0	Site details and proposed works

The proposals involve the removal of a section of concrete slab and the clearance of the arising's from site.



One bay of reinforced concrete slab will be removed up to but excluding the spine beam which will be left as a clean and tidy edge on site. The slab will be broken and lifted out in sections using a 360 degree excavator with a pneumatic breaker. Once broken the sections will be removed from site via waste lorries.

All drainage and services were disconnected in the previous phase so no live hazards exist in the vicinity of the area of slab to be removed.

The proposal is to undertake the works whilst the adjacent Kingsgate Primary School is closed for February Half Term to minimise disruption and risk.

In order to minimise disruption to surrounding residential properties, the works will be carried out on Mondays to Fridays 9.00am to 5.30pm and no work will take place on Saturdays, Sundays and Bank Holidays.

Photo 1: Showing current site and extent of existing concrete slab.

Photo 2: Showing edge of slab to be removed.

Photo 3: Edge of Slab to be removed depth 250mm

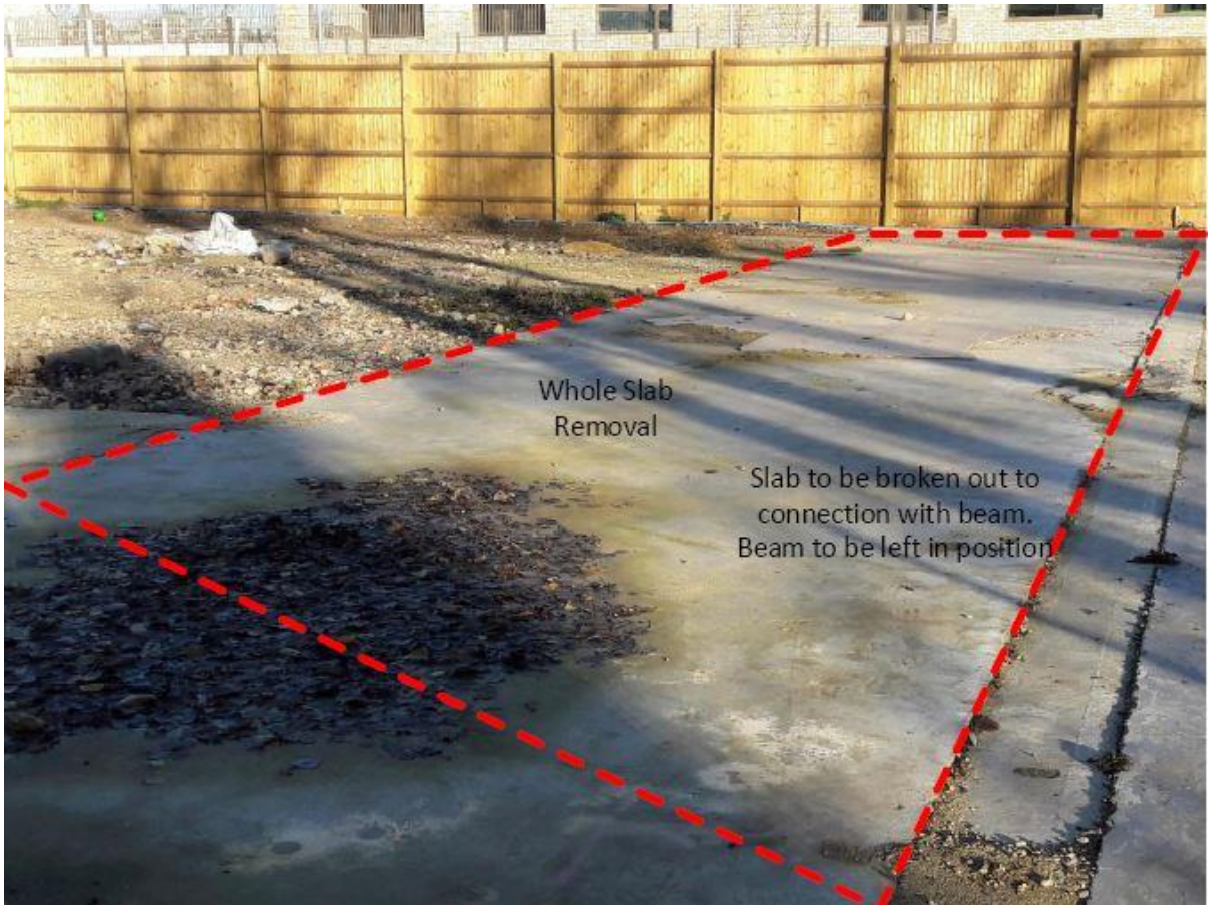


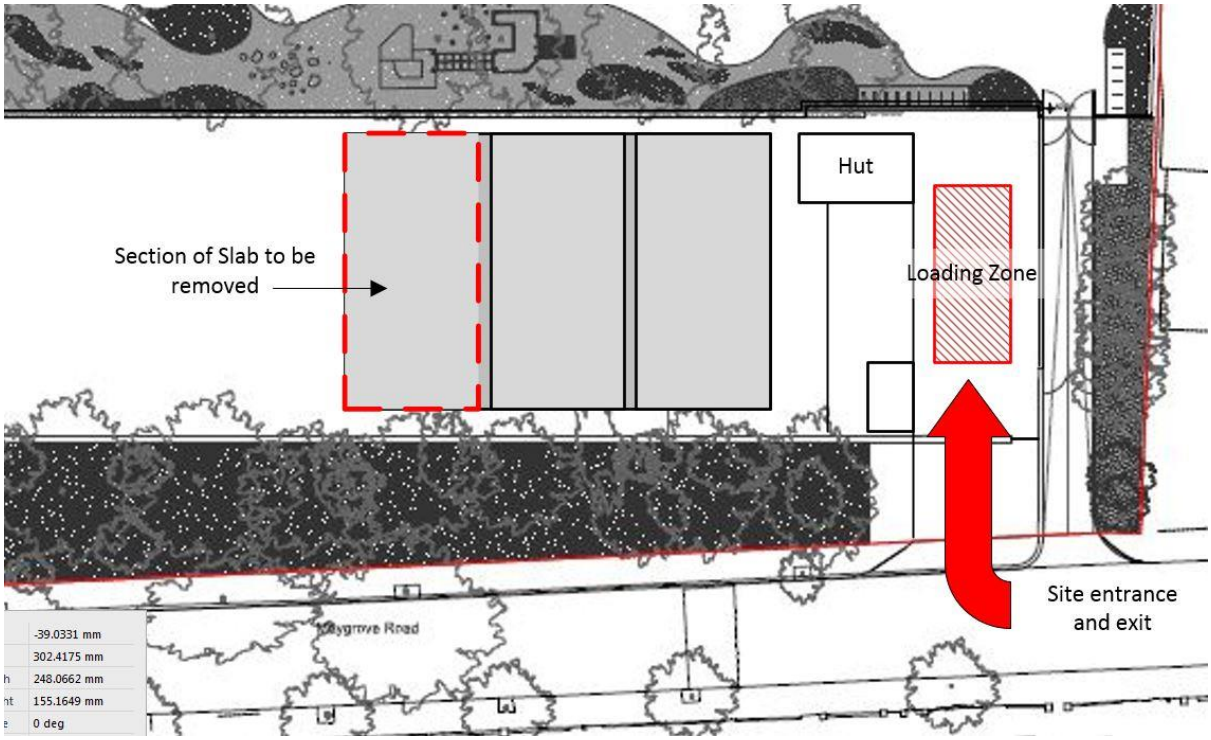
Photo 4: Slab to left of beam to be removed and beam left in position.

3.1	Site location

The site is accessed via Maygrove Road, northeast of Kilburn underground station and west of West Hampstead Thameslink station.

The site has been cleared during a previous phase and comprises of compacted hard-core with three bays of a concrete floor slab remaining from previous demolition. The site is entirely enclosed by a 2.4m wooden fence and has its own dedicated access road off Maygrove Road.

To the north is Kingsgate Primary School and to the south are residential units along Maygrove Road. The site is screened from the residential units via a bank and trees.



3.2	Description of works

The proposal is to remove one bay of the existing concrete floor slab, remove the arising's from site and leave the site in a clean and tidy state.

3.3	Programme

Proposed start date:	February 2018
Proposed Contract Duration:	1 Week
Proposed Practical Completion:	February 2018

It is proposed that the works will be undertaken to coincide with the adjacent Kingsgate Primary School Half Term week to avoid any disruption to the School and Children.

Works will be undertaken on Monday to Friday 9.00am to 5.30pm and no work will take place on Saturdays, Sundays and Bank Holidays in accordance with LB Camden CMP guidelines.

3.4	Legislative Requirements

The Works will be undertaken in accordance with the following legislative requirements:

- The Health & Safety at Work Act 1974 [72] and associated guidance [73]
- The Management of Health and Safety at Work Regulations 1999 [74] and Management of Health and Safety at Work ACoP (HSE L21) [75]
- The Construction (Design and Management) (CDM) Regulations 2015 [2], Managing Health and Safety in Construction (HSE L144) [76] and Health and Safety in construction (HS(G) 150) [77]
- The Work at Height Regulations 2005 (as amended [78]), and Work at Height Regulations 2005 (as amended). Brief Guide (INDG401) [79]
- The Lifting Operations and Lifting Equipment Regulations 1988 [81] and Safe use of lifting equipment ACoP (HSE L113) [80]

- The Personal Protective Equipment at Work Regulations 1992 (as amended [32]), and Personal Protective Equipment at Work – Guidance (HSE L25) [33]
- The Provision and Use of Work Equipment Regulations 1988 [81] ad Safe Use of Work ACoP (HSE L22) [82]
- The Electricity at Work Regulations 1989 [83]
- The Control of Asbestos Regulations 2006 [29]
- The Control of Noise at Work Regulations 2005 [88]
- The Confined Spaces Regulations 1997 [44]
- The Control of Lead at Work Regulations 2002 [67]
- The Building Act (England and Whales) 1984 [89]
- The Environmental Protection Act 1990 [5]
- The Highways Act 1980 [91]
- The Road Traffic (Temporary Restrictions) Act 1991 [92], The Road Traffic (Temporary Restrictions) Regulations 1992 [93] and Road Traffic (Temporary Restrictions) Procedure Amendment (Scotland) Regulations 2005 [94]

3.5	**Standard working hours**

Construction work activities will be carried out between the following hours:

Mondays to Fridays: 9.00am to 5.30pm

No work will take place on Saturdays, Sundays and Bank Holidays.

Noisy works hours see section 5.0

3.6	**Other construction in the local area**

We are not aware of any construction in the vicinity that will affect the works.

3.7	Protection of Public and Property

All works will be undertaken in accordance with the public protection measures as required in British Standard BS 6187:2000: Code of Practice for Demolition.

- Site is to be protected and closed off using Heras Palisade Fencing (HSG-151 compliant) where openings in the existing wooden fencing are made..
- Vehicle access and egress will be via Liddell Road by turning off from Maygrove Road.

These public and property protection measures will be reviewed at the time of contract award for the Works to ensure alignment with proposed preferred methodologies and sequencing developments and to ensure that the safety of the general public is maintained at all times.

To the north of the site there is Kingsgate Primary School which is adjacent to the Network Rail track which runs North-east from West Hampstead Thameslink station. There are also a row of houses along the south-western border of the site and a couple of flats further away on the western side of the site. Finally another industrial site is located on the eastern side of the site.

Information will need to be provided by the contractor within their Health and Safety Plan as part of the requirement as Principal Contractor under the Construction (Design and Management) Regulations 2015.

3.8	Traffic Management

Entry / Exit to Site

The contractor will maintain safe and unobstructed access to adjacent properties to minimise any delays created by the works.

The site has a dedicated entrance and access road located on Liddell Road just off Maygrove Road. Vehicles will reverse into the access road and site as there is insufficient turning space in the access road to allow them to turn in and then turn out without being required to reverse. At all times these activities will be supervised by Banksman to ensure there is no risk to other road users, cyclists and pedestrians.

No deliveries will be made before 9:30, between 15:25 - 16:15pm and after 5.30pm.

Any additional hours will be by prior arrangement only.

Pedestrian Protection

No mechanical plant or vehicles shall be permitted to cross a paved public footway unless there is a permanent footway crossing in existence, or a temporary footway of sufficient width and strength. Vehicles are not permitted to reverse onto the site without guidance from a competent Banksman

3.9	Hazard Management

We have carefully carried out an extensive survey of any hazardous issues which could cause harm to anyone within the areas of works.

- General Safety
- Dust from the breaking out process
- Noise – damage to hearing
- Fires
- Use of 360 demolition excavator
- Site security
- Services
- Site Traffic
- General Risk of Demolition Operations
- Manual Handling
- Working near general public
- Refuelling on site
- Safe use of quick hitch

These will be covered by risk assessments.

4.0	Environmental Management

Environmental goals and objectives will be displayed on the site office notice board and will be brought to the attention of the workforce at the induction stage.

The Site Manager will be responsible for undertaking an environmental audit on a periodic basis or ensuring that this is done by another competent person.

Records will be maintained on site for inspection purposes.

Where required, competent persons will be engaged to ensure that compliance with local legislation is achieved.

Summary of Project Environmental Risks

Impacts / Aspects	Environmental Impacts	Yes	No
Nuisance - Noise and Vibration	• Community complaints • Prosecution • Delays to the project (Local Authority enforcement notice) • Occupational Health Issues • Disturbance to habitats	X	
Waste Generation (Non Hazardous Waste)	• Pollution of Land (soil contamination due to use as landfill), air (odour) and water (leachate or spills) and subsequent effect on habitat loss and reduced biodiversity • Waste disposal operations use more energy, which causes higher amounts of GHG (CO2) being emitted • Contribution to global warming through landfill gas or incinerator emissions leading to production of CO2 into atmosphere • Inadequate storage/containment leading to increased risk of pollution to local and wider environment • Breaches in Duty of Care will incur in fines	X	
Waste Generation (Hazardous Waste)	• Waste disposal operations use vast amounts of energy, which causes higher amounts of GHG (CO2) being emitted • Solvents and Chemicals - Various health problems can be caused if these substances enter the body, damage can also occur to the local ecosystems and food chains • Inadequate storage/containment leading to increased risk of pollution to local and wider environment • Breaches in Duty of Care will incur in fines		X

Emissions to Air (Dust + other particulates)	• Production of PM10 and PM2.5 particulates resulting in damage to human respiratory health • Community Complaints • Production of carbon monoxide and volatile organic carbons resulting in damage to human respiratory health. • Reduced local air quality (VOCs) can lead to the risk to human health • Breach of planning conditions – project delays	X	
Visual intrusion	• Community complaints • Financial repercussions if visual intrusion is deemed unacceptable by Local Authority	X	
Energy use	• Contribution to global warming through transport emissions and emissions during construction resulting from the release of CO2 into atmosphere • Abnormal levels of energy use might difficult the achievement of BREEAM credits	X	
Emissions to Water	• Potential loss of ground water as a resource • Possible entry of the pollution into drinking water supplies – damaging human health. • Possible entry into freshwater and soil ecosystems leading to reduction in species diversity • Negative reputation repercussions from pollution incidents		X
Land Contamination	• Risk of contamination of groundwater with petrol, diesel, oil, antifreeze, hydraulic oils, suspended solids, grease, salt and heavy metals such as lead • It is an offence to allow polluting matter such as silt, cement, concrete, fuel, oils, cleaning chemicals and detergents to enter a watercourse, gully or drain. It is also illegal to cause invasive weeds to spread to new areas		X
Ecology – Tree Preservation Orders	• Breach of Legislation - Prosecution • Damage to protected trees • Reputation damage to the company if incident is investigated		X
Ecology – Protected Species	• Potential Habitat loss and damage to local diversity • Community and local groups complaints • Loss of reputation and future work		X
Archaeology & Heritage	• Loss of cultural heritage • Reputation loss if valuable heritage is damaged on site		X
Use of Raw Materials	• Depletion of finite resources • Inability to follow the guidelines of the Sustainable Procurement policy (fines)	X	
Plant Requirements & Use	• Production of greenhouse gases (e.g. CO2 / methane) leading to climate change and global warming • Production of oxides of nitrogen leading to photochemical smog formation, resulting in damage to human health, damage to plants and reduction of biodiversity • Breach of NRMM Regulations	X	
Concrete Washout	• Water contaminated with cement is highly alkaline and can be toxic to fish, plants and animals living in watercourses • It is illegal to allow cement, unset concrete or washout water containing cement to enter a watercourse or drain		X

5.0	Noise

The Contractor will comply with BS5228 in order to ensure that noise levels produced on site will not affect neighbouring residential premises. Reasonable measures will be used to control noise, vibration and dust.

All sub-contractors will be advised of the need to comply with BS5228.

Prior to work starting on site, a Construction Health & Safety plan will be developed, setting out process and restrictions to noisy works as appropriate.

The site will be operated under the principles of the Considerate Constructor Scheme Guidelines in terms of noise and dust levels.

The Contractor we will take a proactive approach to noise pollution by minimising risk and disturbance to residents, operatives, neighbours and the general public.

All sub-contractors will implement best practice to minimise noise in accordance with current regulations.

Prior to any noisy work starting, a noise assessment will be submitted within the sub-contractor Method Statement, to state how they will mitigate noise emissions.

Time of operations:

Time of operations and ancillary works which are audible at the site boundary shall normally be carried out between the following hours:

- Mondays to Fridays: 9.00am to 5.00pm

No work shall take place on Saturdays, Sundays and Bank Holidays.

Consideration of the use of Quiet Hours will be assessed for use during the demolition activities which following assessment of the available mitigation measures still present a high risk of significant and prolonged noise breakout beyond the site boundary.

Where deemed appropriate the Quiet Hours will be defined as:

- 10:00 – 12:00 (Monday to Friday)
- 14:00 – 16:00 (Monday to Friday)

Noisy operations:

Noisy works are defined as:

"Any work that exceeds or is likely to exceed the noise limit 75 dB LAeq 10 hour (0730-1730 Monday to Friday) and 75 dB LAeq 5 hour (0730– 1300 Saturdays)".

Any noisy operations required outside the standard hours will not be undertaken without prior written approval of the Local Authority.

Noise abatement techniques:

The main method of minimizing impacts will be to restrict noisy works to within 9 am and 4pm, Monday to Friday with no noisy works permitted on Saturdays, Sundays or public and bank holidays.

The quietest and newest vehicles/plant machinery will be used at all times. All vehicles and mechanical plant used for the purpose of the works will 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.

Monitoring of noise levels:

The Contractor will carry out a prediction of noise levels before any work is carried out on site.

Noise attenuation screening will be used if deemed appropriate and noise monitoring will be carried out at the start and at regular intervals during each task period, records of this monitoring will be kept on site. Any mobile screens used will have sufficient mass so as to be able to resist the passage of sound across the barrier and to be free of significant holes or gaps between or under any acoustic panels or board materials as far as reasonably practical.

Noise monitoring will be carried out where deemed appropriate using a combination of semi-permanent (continuous) and attended monitoring methods. The locations of the semi-permanent (continuous) and attended monitoring and the frequency of the sampling will be agreed with LBC in writing.

Where the measured noise levels are more than 3 dB (A) above the predicted noise levels or in the event of a complaint of noise, an investigation will be carried out by IPOS Ltd to ascertain the cause of the breach or the complaint and to check that Best Practicable Means will be used to control the noise in accordance with the steps set out in the application for 'prior consent'. Noise levels will be reduced further if it is reasonably practicable to do so.

All sub-contractors will implement best practice to minimise noise in accordance with current regulations. Prior to any noisy work starting, a noise assessment will be submitted within the sub-contractor Method Statement, to state how they will mitigate noise emissions.

Vehicles and plant engines will be shut down when not in use - 'No idling Policy' shall be enforced.

Vehicle and plant alarms will include broadband/white noise types and a risk assessment will be undertaken to review the volume, and reduce where appropriate.

Equipment and plant that could potentially cause a noise nuisance will be enclosed by acoustic covers. Plant shall be directed away from sensitive receptors and sited behind physical barriers.

Anti-social behaviour such as shouting, radios and swearing will not be permitted or accepted on site.

Where generators are required they will be enclosed in an acoustic enclosure, sited away from sensitive receptors and incorporate diesel exhaust particulate filters and oxidation catalyst wherever possible.

6.0	Vibration

Where appropriate, the Contractor will ensure measured vibration levels are compared with the criteria in BS5228: 2009 part 2 (i.e. 1mms^{-1} PPV for potential disturbance in residential and using a suggested trigger criteria of 2mms^{-1} for commercial). Lower limits will be agreed with LBC if there is a risk that vibration levels may interfere with vibration sensitive equipment or other vibration sensitive objects.

The following measures will also be undertaken in order to reduce environmental vibration on site.

Reducing the need to adopt percussive and vibrating machinery.

All plant and machinery will be switched off when not in use and not left idling.

Drop heights will be minimised during deconstruction and during the loading of arising's into lorries for removal from site.

Plant and equipment to be maintained in-line with manufacturers' instructions.

Staff to report operating problems with plant and equipment.

Staff will be given sufficient information, instruction, training and supervision on environmental vibration topics.

7.0	Air quality (Dust and odours)

7.1	Dust

The Contractor will use the following 3 principles to control dust on and off site

1. Prevention
2. Suppression
3. Containment

These three principles are well established and are central to the control strategies to control dust. They follow a hierarchy to control the emissions.

This project has been reviewed in line with GLA's SPG on Control of Dust and Emissions from Construction and Demolition.

All operations will be carefully considered with dust prevention and control measures clearly set out and agreed as part of the Risk and Method Statement reviews prior to any activity taking place.

The following activities and operations will give rise to dust

- Demolition works – Removal of concrete floor slab

Generally, it is anticipated that dust will be contained at source to prevent airbourne spread outside.

The local wind speed and direction will be monitored, to inform dust control measures. These inspections will increase in frequency when activities with a high potential to produce dust and emissions are being carried out, especially during dry or windy periods.

All waste removal Lorries will utilise load covers.

Where available at source dust extraction and containment will be utilised on all tools and plant.

Damping down will be used on all dusty work faces.

Dust and Air Quality measures will form part of our Toolbox Talks at Induction.

Regular site inspections will be undertaken to monitor compliance with air quality and dust control procedures, and to ensure the dust management plan is updated as appropriate.

7.2	Smoke

Bonfires or any burning of materials will not be permitted on site

7.3	Odours

The site team will monitor the works during construction to ensure no strong odours are generated from materials arising from the demolition and anything encountered during the works.

8.0	Rodent Control

The Contractor will take the necessary measures to ensure proper control of rodents.

Whilst given the nature of the work it is not anticipated that rodents will be encountered, there is a risk that they may be encountered under the suspended floor slab.

Any open drainage runs encountered under the slab will be sealed during the construction process.

A method statement will demonstrate if / how the presence of rats and mice has been ascertained and how they will be destroyed if they have been/are found on site.

At all times the site shall be kept free, so far as is reasonable practicable, from rats and mice. (Prevention of Damage by Pests Act 1949**,** part 'H' of the Building Regulations (Drainage & Waste Disposal).

9.0	Community liaison

9.1	Liaison and provision of information

The Contractor will keep residents and others informed about unavoidable disturbance such as from noise, dust, or disruption of traffic. Clear information will be given well in advance and in writing.

Local residents and other stakeholders will be kept informed about general progress and activities that are likely to take place on site via the information letters/newsletters/e-mail and site notice board on a regular basis. These methods of communication help in reducing any concerns that residents might have.

Periodic meetings will be held and the site managers contact details will be displayed on the external notice boards.

9.2	Site contact board

A Site Contact Board will be displayed prominently on the outside of the building. This is to ensure that problems can be rectified quickly, and that residents and others can channel their questions and complaints to a member of staff who has the authority to take action.

The Contact Board will include the following information:

(a) The title ‘Contact Board’

(b) Name of the main contractor, address and person to whom correspondence should be addressed

(c) Name of the site manager

(d) Month and year of completion of works

(e) Names and telephone numbers of staff who can take immediate action, so that contact can be made at any time.

Occupiers in the vicinity who may be affected by noise from the works will be notified of the nature of the works, a contact name, telephone number (including that to be used outside normal working hours), and address to which any enquiries should be directed. Such notification shall take place, where possible, within 2 weeks but, in any event, at least 1 week prior to the works commencing (details will be included on the contact board).

The Contractor will ensure that a staffed telephone enquiry line is maintained at all times when site works are in progress to deal with enquiries and complaints from the local community. The telephone number (and any changes to it) will be publicised widely in the local community affected by the works. It shall also be notified to the LBC Public Protection Division

9.3	**Complaints**

Should complaints about noise/vibration/dust arise from the building construction/building works, these will be recorded in a Complaints Register held on site. The Complaints Register will provide information on day, time, details of complaint, details of monitoring carried out and any additional mitigation works. This will be made available to LBC on request.

Should complaints be received concerning works/activities, then all works/activities being the cause of complaint will cease (Tasks in progress accepted due to structural integrity issues), until such time as further agreement to work is negotiated.

The site rules for the project will cover the provision of a suitable smoking area, no bad language and no unnecessary shouting.

9.4	**Incident logbook**

An incident logbook shall be on site and all incidents shall be recorded stating date, time and worker(s) involved and action taken.

10.0	Waste and recycling

Our environmental goals and objectives will be displayed on the site office notice board and will be brought to the attention of the workforce at induction stage. Whilst we would normally expect waste to landfill to not exceed 10 **%** of the total waste arising, it is anticipated that 100% of the arising's from the removal of the slab should be recycled.

Waste removal will be organised frequently to avoid accumulation of large quantities.

Waste will be removed from site by wait and load and will be restricted to the standard working hours. Waste transfer will be accompanied by a full description of the waste and a waste transfer note and be disposed of lawfully.

The transfer of hazardous waste, such as oily wastes, acids, solvents and solvent-based products, will be accompanied by a consignment note as proof of legal disposal. Waste contractors will be checked prior to being selected to ensure they meet our duty of care requirements.

Wherever possible demolition materials will be crushed and used for back-fill. Where it is not possible to reuse material on site, this will be deposited at approved and certified waste transfer station. Recyclable materials such as scrap metal, timber and glass etc. will have to be separated prior to transportation off site.

Where appropriate waste will need to be deposited at different locations capable of handling each material. Waste segregation strategies will be developed and encouraged in line with the overall logistics plan for the site.

As a minimum, general waste, COSHH, gypsum / plasterboard and liquid waste will be segregated. Details of the waste produced on site will be analysed periodically to identify emerging risks.

Construction waste on the project will be stored in suitable containers and appropriately maintained:

- Recyclable - recycled containers/wheelie bins
- Reusable - salvage
- Compactable - visiting compactors/wheelie bins
- Non-compactable - skips
- Hazardous - special removal

A spill kit will be kept close to the storage area and the staff will be trained on how to use these correctly. Staff will prevent any liquid wastes leaching from bins or skips – including dry waste that may become wet. Any damaged leaking or empty drums will be removed from site immediately and disposed via a registered waste disposal contractor. Staff will ensure hazardous waste is not mixed with other hazardous waste or non-hazardous waste.

An Asbestos Refurbishment/Demolition Survey is not required for these works.

11.0	Light and Visual Pollution

11.1	Light Pollution

All lighting will be downward facing and where required shielded to prevent stray light causing nuisance.

External lighting will be switched off during daylight hours unless required for safety or work reasons.

Internal lighting will be reduced to emergency lighting only when the site is closed.

11.2	Visual Impacts

Management of the visual impact of the works is limited on site [e.g. vehicles need to be brightly coloured and have flashing beacons for health and safety reasons], however, the Contractor will ensure that wherever practicable visual impact is minimised.

The Contractor will ensure that the site compound is well established, maintained and kept clean and tidy throughout. Work areas on site will be minimised wherever possible and will be kept clean and tidy. In addition work areas will be reinstated as soon, as is practicable to help reduce the visual impact. For hoardings, particular attention will be paid to the use of the most suitable materials, colours and sizes.

12.0	Water Management

Works generally shall comply with the requirements of Working at Construction and Demolition Sites PPG 6, issued by the Environment Agency.

Fuel and chemical storage shall comply with the requirements of PPG 2 - Above Ground Oil Storage Tanks and PPG 26 storage & handling of drums & intermediate bulk containers, issued by the Environment Agency.

Existing site connections to the Thames Water mains should be disconnected in a way that is safe and enables reconnection during the main contract works.

Thames Water asset location plans, as well as the available existing survey drawings show the location of Thames Water assets.

A drainage plan showing the location of the site foul and surface water sewers will be made available on site.

To prevent any accidental spillages on site, a dedicated COSHH storage area will be provided on site.

Spill Training will be provided by the Environmental Manager to relevant site team.

Disposal of oils shall comply with the requirements of the Safe Storage and disposal of used oils - PPG 8, issued by the Environment Agency.

Due to the limited space available on the site, there will be no external soil and fill material stockpiles and therefore no likelihood of run-off affecting nearby water courses / drain systems.

Water consumption for the contract works will be reduced by good housekeeping policy.

13.0	Outline Pollution Control

Emergency Spill Response

Ref	Action	Evidence Required
13.1.1	Establish spill response procedure (Consult EWP2) Spill response posters to be distributed on boards around site.	Site inspection
13.1.2	Communicate procedure to all site personnel and post instructions at suitable places around site.	Induction Records Posters
13.1.3	Place and maintain stocks of spill response equipment appropriate to materials on site	Site inspection
13.1.4	Train personnel on use of spill response equipment and update training as appropriate. Training to be included with the site induction and tool box talks.	Site inspection
13.1.5	Report significant spills immediately	Incident records

Waste Control

Ref	Action	Evidence Required
13.2.1	Ensure Site Waste Management Plan in place to include Waste Minimisation strategy.	Reports
13.2.2	Skips should be covered (if material can be blown away or if it is a plasterboard-only skip).	Site Inspection Reports
13.2.3	Label waste skips with allowable contents	Site Inspection Reports
13.2.4	Manage wastes in accordance with Site Waste Management Plan.	Duty of care records. Waste Transfer Notes

Controlled Water Courses and Discharges

Ref	Action	Evidence Required
13.4.1	Obtain consent from local water company before discharging to storm or foul sewers.	Records of consent
13.4.2	Monitor discharges in accordance with requirements of consent. Visually inspect discharge quality and take remedial action as necessary	Monitoring Records

13.4.3	Report any significant noncompliance with consent conditions immediately to Project Manager.	Reports

Oils, Fuels and Chemicals Storage

Ref	Action	Evidence Required
13.6.1	Locate storage facilities in marked zones away from sewers, gullies and at least 10m from channels and water courses. If not feasible, take or adequate measures to protect against pollution.	Site Inspection Records Site Plan
13.6.2	Store fuels, oils and COSHH materials in accordance with good practice. Locate storage facilities on impermeable surfaces where possible. Ensure storage bunds/trays/pallets are minimum volume of 110% and maintained in good condition. Empty buds/trays/pallets regularly and in accordance with waste disposal procedures. Protect fuel facility from vandalism and lock when not in use.	Site Inspection Records Contract Manager inspection record
3.6.2	Appoint responsible individuals trained in emergency response. Communicate emergency responses in site induction.	Site Induction Records
3.6.3	Keep spill response equipment, appropriate to the size of the facility, in close proximity to the facility.	Site Inspection Reports
3.6.4	Appoint designated person for fuel-filling operation.	Appointment record
3.6.5	Vehicle re-fuelling to take place on an impermeable surface.	Site Rules

Noise and Vibration

Ref	Action	Evidence Required
3.7.1	Prior to the commencement of works, identify all potentially noise and vibration sensitive properties and boundaries and carry out baseline noise and vibration surveys.	Noise and vibration surveys
3.7.2	Carry out environmental and occupational health noise and vibration surveys during the Works as necessary	Noise and vibration surveys
3.7.3	Detail any necessary measures to mitigate noise and vibration impacts in risk assessments (RAs) and method statements (MSs). Select construction methods and plant that minimise noise and vibration	Environmental Risk Assessment
3.7.4	Communicate noise and vibration issues to site personnel and visitors.	Induction records
3.7.5	Monitor measures to mitigate noise and vibration periodically to ensure effectiveness	Site Inspection records
3.7.6	Adopt Best Practicable Means for noise reduction. Consult EWP 04 and EWP 07 for Guidance.	Site Inspection records

3.7.7	Establish procedure for notifying local authority, local residents (and general public if necessary) of extended working hours, with one week notice period whenever possible.	Site Records

Dust and Fumes

Ref	Action	Evidence Required
3.8.1	Maintain high standard of housekeeping. Avoid infestation with vermin.	Site inspection Reports
3.8.2	Monitor cleanliness of access routes regularly and use road sweepers when required	
3.8.3	Damp down surfaces during periods of dry weather to prevent dust nuisance.	
3.8.4	Provide wheel-washing facilities at exits onto public roads, where required.	Site setup Site layout Plan
3.8.5	Establish and monitor speed limits on approach roads.	Site Rules
3.8.6	Stockpile shall be located downwind of sensitive receptor sites	Site Inspection reports

Contaminated Land

Ref	Action	Evidence Required
3.9.1	Establish plans of action for dealing with identified contaminants	Action plans Site inspections
3.9.2	Ensure there is adequate planned prevention of pollution of any watercourses, land or air contained in method statements.	
3.9.3	Report any significant contamination identified on site during construction	Incident Report
3.9.4	Correct planning for the removal of contaminated soils first when on site	Site Assessment Report Pre-Construction Report

Ecology, Archaeology and Built Heritage

Archaeology and Built Heritage are/are not a concern for this project.

Ref	Action	Evidence Required
3.10.1	Report any protected animals, habitats, plant, building, structure, etc, discovered during construction.	Ecological and Archaeological survey
3.10.2	Identify any protective/mitigation measures required by regulatory bodies.	Site inspections
3.10.3	Protect habitats, protected trees and hedgerows, nesting birds or archaeological remains from disturbance.	Incident Records

3.10.4	If unexpected archaeological remains or geological features of interest are uncovered then: • Stop work immediately in the area; • Protect the finds with fencing and notify the Local Authority County Archaeologist for advice.	Incident Records

Construction Plant

Ref	Action	Evidence Required
3.11.1	Create dedicated plant storage area.	Site Inspection Reports
3.11.2	Locate plant from sensitive noise boundaries and water bodies.	Site Inspection Reports
3.11.3	**Never leave plant running unnecessarily.** Ensure it is well maintained, fit for purpose and in a safe condition. Where appropriate, place drip trays beneath static plant and maintain. Keep emergency spill kits either on or near working plant. Ensure exhausts do not point towards ground.	Site Inspection Reports Site Rules
3.11.4	Report major environmental incidents or problems involving plant.	Environmental Incident Report

Energy Efficiency and use of Natural Resources

Ref	Action	Evidence Required
3.12.1	Operate construction plant in accordance with point 3.11.3	Site Inspection Reports
3.12.2	Use artificial lighting only where and when required. May be necessary for security reasons. Turn lighting and heating off after use.	Site Inspection Reports
3.12.3	Store materials properly to guard against breakage, theft and damage.	Site Inspection Reports
3.12.4	Where appropriate, resource use shall be reduced, reused and/or recycled.	Incident Reports
3.12.5	Where possible, use local suppliers to minimise travel distances.	Purchase Records
3.12.5	Report examples of good site practice and report energy figures, where available, for sustainability returns	Energy usage reports - Invoices

Transportation & Haulage

Ref	Action	Evidence Required
3.13.1	Site deliveries to be limited to between 09:30hrs and 16:00hrs Monday to Friday	Delivery Tickets

3.13.2	All vehicles to enter / exit site in a forward direction except where space restrictions do not allow this. Where vehicles are required to reverse a competent banksman is to be provided.	Site Inspection reports
3.13.3	All access onto the highway should be sufficient width to accommodate 2-way traffic where practical	Site Inspection reports
3.13.4	Haul roads to be constructed of suitable surface for use	Site Inspection reports
3.13.5	Vehicle protection zone of 10m from rivers to be provided. Protection zone to be fenced. For works within 10m of watercourse, a method statement and risk assessment shall be prepared to mitigate, reduce impact upon watercourses	Environmental Risk Assessment

Concrete Washout

Ref	Action	Evidence Required
3.14.1	Perform washout of concrete trucks offsite or in designated concrete washout areas only	Site design Site Inspection
3.14.2	Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets or drains.	Site design Site Inspection
3.14.3	Do not allow excess concrete to be dumped onsite, except in designated concrete washout areas	Site design Site Inspection
3.14.4	Washout area is at least 10 meters away from sensitive areas such as storm drains or water bodies.	Site Design
3.14.5	Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and disposed of per applicable solid waste regulations. Dispose of hardened concrete on a regular basis.	Site inspection

14.0	Non-Road Mobile Machinery

The site will be registered with the GLA NRMM Scheme (https://nrmm.london/register).

The site is located within the Central Activity Zone (CAZ), therefore only plant compliant with Stage IIIB EU emission Stage must be used.

An inventory of all NRMM will be kept on-site stating the emission limits for all equipment, and the relevant records saved on the NRMM website.

All machinery will be regularly serviced and service logs available for inspection.

15.0	Tree protection

No trees are in the vicinity of the intended works.

16.0	Utilities and TV Reception

Underground services will be located using plans etc.

Full details of underground services will be obtained in advance from the relevant authority, including Television Relay Companies and private property owners.

Plans, permits to dig and cable location equipment will be available before work starts. Plans will not be assumed to be accurate, and location devices will be used in addition. Trial holes will be dug, using hand digging and insulated tools to confirm locations, taking account of physical indications such as junction boxes and manholes. The lines of services will be marked, using paint, wooden pegs etc. All services will be assumed to be live until proven otherwise.

The Contractor will ensure that services are located and marked before further work begins. Full consultation will be held with the relevant authorities to agree precautions will be carried out before work begins. All staff, machine operators and subcontractors will be fully briefed before they begin work. All temporary services will be properly marked.

Mobile phones will be used where distance communication is required, instead of hand-held radios, to prevent TV/Radio reception issues.

Appendix A.

DUST CONTROL GUIDANCE

Potential dust source	Dust control guidance
Visible exhaust smoke	Vehicles and equipment should not emit black smoke from exhaust systems except during ignition at start-up.
Location of plant and equipment	Plant and equipment should be operated away from residential areas or sensitive receptors near to the site.
Material handling operations	Always keep the number of handling operations to a minimum by ensuring that dusty material isn't moved or handled unnecessarily.
Cutting, grinding, drilling, sawing, Cutting on site should be avoided by using trimming, planing, sanding	Cutting on site should be avoided by using trimming, planing, sanding prefabrication whenever possible. Avoid cutting out errors and re-bars. Employ equipment and techniques that minimise dust emissions, using best available dust suppression measures. Use water sprays to minimise dust from cutting equipment. Local exhaust ventilation should be used where possible.
Cutting roadways, pavements, Use a diamond bladed floor saw with water blocks etc.	Use a diamond bladed floor saw with water blocks etc. pumped through to suppress dust. Standard angle grinders and disk cutters with no dust control should not be used for this purpose.
Raking out mortar/pointing	Standard angle grinders and disk cutters with no dust control should not be used. Use plugging chisels when appropriate to limit dust.
Angle grinders and disk cutters	Dust extraction/minimisation systems should always be used.
Mixing and granular materials	The use of pre-mixed plasters and masonry compounds is recommended. The mixing of concrete or bentonite slurries should take place in enclosed or shielded areas. Fine materials should be palletised and shrink wrapped where possible.
Painting and decorating	Sanding and cutting machinery should be fitted with dust suppression or collection equipment. Vacuum cleaning should be used wherever possible.
Fitting out Ð plastering, rendering, Cutting and sanding machinery should be decorative finishing, furniture fitting	Cutting and sanding machinery should be decorative finishing, furniture fitting fitted with dust suppression/collection equipment. Vacuum cleaning should be used whenever possible.
Installation of electrical systems and plumbing	Cutting and sanding machinery should be fitted with dust suppression/collection equipment. Vacuum cleaning should be used whenever possible
Cleaning processes	Dry sweeping should be avoided and only carried out with vacuum extraction methods attached. Damp sweeping using fine mist should be used. Washing and damping down should be carried out whenever necessary.

Appendix B

MONITORING, MEASURING AND RESPONSE

Inspections and Audits

The following audits and monitoring will occur on a regular basis and as required:

- Regular site surveillances to check environmental good practice and compliance with the code of construction practice
- Regular site surveillances to assess compliance with the environmental management system

The on-site Safety, Health, Environmental and Procedures (SHEQ) Representative will undertake monthly inspections.

The Safety, Health, Environmental and Procedures (SHEP) Manager shall also carry out random inspections of site and complete an inspection report. External Health and Safety Advisors may also carry out site inspections on behalf of the company.

A copy of the SHEP Inspection Reports shall be issued to the Project Manager for action. The Project Manager shall be responsible for ensuring, by review, that such items have been addressed. Additional copies of the SHEP Manager's Reports will be given to the Contracts Manager responsible for the project.

The project may be visited by the EA or Local Authority.

Measuring

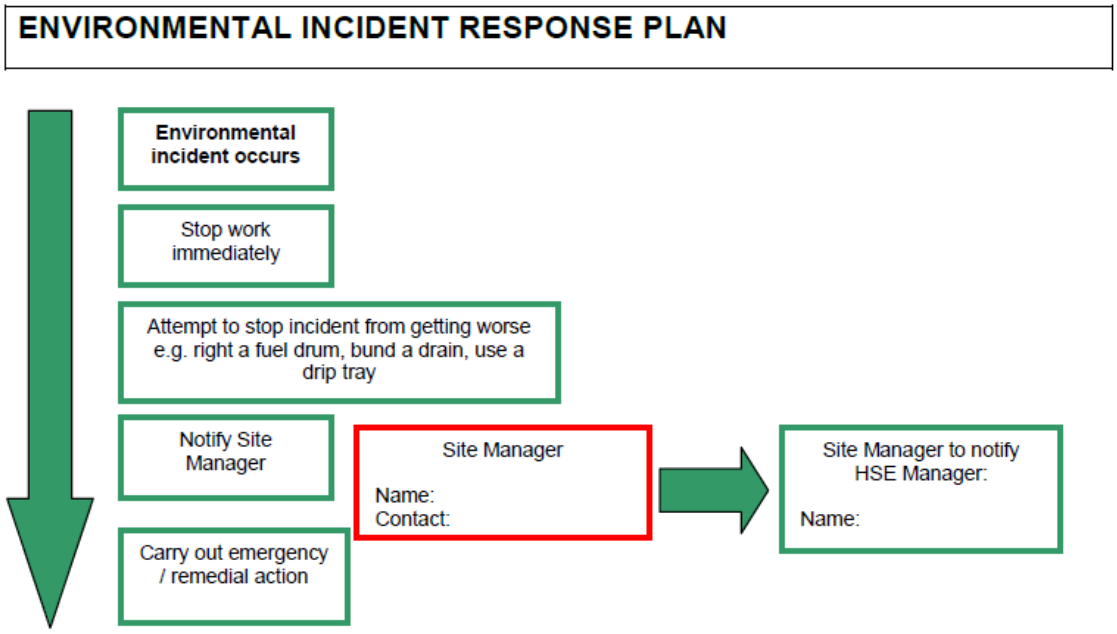
On Site Measuring

The project is required to report as a minimum on:

- Site Electric usage (where we have own meter)
- Fuel usage
- Delivery logs (transport type, distance travelled)
- Any work package specific requirements

All environmental incidents, dangerous occurrences or near misses will be recorded by the contractor on using an Accident/Incident Report. Once an incident is reported and recorded, actions will be identified to avoid a recurrence and the site procedures will be updated accordingly.

All accidents/incidents, dangerous occurrences and near misses will be reviewed by a Director and, where necessary, changes to working practices/procedures will be implemented.



Client and External Party Reporting

The project progress report will be issued as and when required by the client.

Project Monthly Reporting

Monthly reports will be issued to the Director in charge who will collate and analyse the data, and feed back to the site team.

Environmental KPIs will be assessed weekly for the project. The KPi's are related to the Project Targets.

EMERGENCY RESPONSE

The Environmental Emergency Response Controls are set out to:

- Establish the emergency response management procedure for the Liddell Road project.
- Outline the controls for any uncontrolled spillages or unforeseen emissions or events which effect 3rd Parties.
- State the measures applicable to the project under the requirements of company procedure Emergency Preparedness.
- Ensure all project activities comply with applicable statutory United Kingdom and European Legislation, the Code of Construction Practice, and client requirements and statutory approvals.

Definitions

For the purpose of implementing the PEMP the following definitions apply.

Minor/Incident

An uncontrolled and unexpected release of a substance with the potential to pollute air, land and water resources but that can be contained and mitigated against using on-site equipment and personnel. After controlling this incident, inform the Environmental Manager.

Intermediate/Incident

An accident where the effects of the event cannot be controlled, e.g., discharge of large volume of silt, oil and fire water to river or large spillages of hazardous materials, and outside assistance from external bodies (Environment Agency) is required to bring it under control.

Major/Incident

A major accident may attract the interest of local press or environmental regulators, i.e., Environment Agency, Local Authority, Natural heritage, etc. It could have an adverse effect on the company name or a major financial impact.

Contact details for key site and emergency response personnel with responsibilities relating to the protection of the environment will be kept and publicised in key locations on site.

Key contacts will include:

- Contractor's Project Manager
- Construction Manager
- Client Project Manager
- Environment Agency

Control Measures and Reporting

When an incident is able to be controlled by facilities on site, and no intervention is required from a third party or a statutory authority, controls should be implemented, the incident cleaned up and reported in the site diary. All incidents are being recorded.

Where an environmental incident occurs that has been dealt with in a manner which follows best practice and poses no further threat to the environment, an entry is made in the environmental incident log to record the issue. The environmental Non-Conformance/Incident Log will also be used to identify any trends in environmental incidents.

Where an uncontrolled incident is classed as an emergency or a major incident, the Director in charge of the Project may wish to investigate the root causes, communication systems and issue a "lessons learnt" memo to the workforce concerned in addition to any NCRs that may have been raised.

This procedure also relates to environmental emergencies relating to complaints raised from 3rd parties that involve the statutory authorities whereby the NCR process is being followed.

Summary of the Emergency arrangements for Environmental Incidents

Environment incidents	Spills of diesel or other liquids including chemicals	• Locate the spill and try to stop it.
		• Contain the spill – use spill kits materials (absorbent granules / booms), sand or drip tray
		• Check the spill has not reached any drains or watercourse
		• Report to management – details required are:
		  • Location
		  • What was spilled
		  • Whether it entered drains / watercourses
		• Clear up using spill kits
		• Dispose of used spill kits as hazardous waste
			Emergency Service Contact
			LB Camden Council

	Fly tipping of non-hazardous/hazardous waste	• Report to Director in Charge
		• Details required are:
		  • Quantity
		  • Location i.e. risk of pollution of land or watercourses, or is obstructing or causing potential flooding in watercourses
		• Do not touch waste and stay up-wind
		• Do not disturb, as evidence of "fly-tipper" may be lost
			Emergency Service Contact
			LB Camden Council

	Discovery of potentially contaminated land	• Stop excavation / piling / ground breaking works, immediately • Report to management • Fence off area • Contact site environmental advisor and health and safety advisor • The site environmental manager will contact a specialist to inspect the material	**Emergency Service Contact** LB Camden Council
	Discharge of silty water or other pollutants into a drain or watercourse	• Stop works immediately • Stop pumps • Report to Management • Contain the discharge – build a bund, use spill kits • Install a settlement tank or trap	**Emergency Service Contact** LB Camden Council

	Disturbing or damaging protected species and/or adjacent residents or stakeholders	• Stop works immediately
		• Report to– Details required are:
		  • What/Who has been disturbed or damaged (resident/stakeholder/plant or animal)
		  • Where it occurred
		  • How it happened
		• Fence off area
			Emergency Service Contact
			LB Camden Council

	Discovery of items of conservation value (flora/fauna/heritage)	• Fence off the area as a “no go” zone and contact the site Manager or Project manager immediately for further action	**Emergency Service Contact** LB Camden Council
	Waste Contractor not submitting waste tickets and/or illegally disposing waste in an authorized facility	• Immediately contact contractor to establish reasons • Hold all payments to contractor • Request waste tickets for approved facility • Notify local council where waste in being disposed	**Emergency Service Contact** LB Camden Council