

Framework Construction Environmental Management Plan

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1. Introduction

1.1. Background

- 1.1.1. This Framework Construction Environmental Management Plan (Framework CEMP) relates to the environmental management of the proposed enabling and construction works for the Proposed Development for Prestwich Village. It details, the specific construction environmental risks, proposed mitigation and commitments required in the interests of protecting all aspects of the Environmental. This report has been proposed on behalf of The Prestwich Regeneration LLP.
- 1.1.2. This Framework CEMP describes how the enabling and construction activities will be undertaken and managed in accordance with these commitments as well as contractual and legislative requirements, and construction industry best practice.
- 1.1.3. The Framework CEMP has been produced to accompany the planning application for the Proposed Development and is referred to as the "Framework CEMP" because it contains measures as identified at the point of application. Prior to commencement of the Proposed Development, a final CEMP will be produced by the Principal Contractor. This will contain more detailed information and methodologies on the design and construction of the Scheme. It is straightforwardly referred to as the "CEMP" and will be secured by planning condition.
- 1.1.4. The formal description of the Proposed Development as set out in the planning application is as follows:
- 1.2. *"Part full planning application proposing demolition of existing buildings and structures and the erection of a phased mixed use development including a Community Hub comprising flexible uses including library, offices medical or health services (Use Classes F1 (a-f), F2(b), E(c), E(e), E(g), and retail uses (Use Classes E(a), E(b) and Sui Generis), a new Market Hall (Use Classes E(a), E(b) and Sui Generis), a Commercial Building comprising flexible uses including retail, offices, gymnasium (Use Classes E(a), E(b), E(c), E(d), E(g), a Travel Hub comprising car parking and cycle parking (Sui Generis), a public square and public realm and associated landscaping, car parking provision, cycle storage and other associated works; and part outline planning application (with all matters reserved) proposing a phased residential led mixed use development comprising residential (Use Class C3) and flexible commercial, business, service, local community and learning uses (Use Classes E, F and Sui Generis), engineering works to Rectory Lane, new public realm and associated landscaping, car parking provision, cycle storage and other associated works".*

1.3. Guidance

- 1.3.1. The document has been produced in accordance with CIRIA Environmental Good Practice on Site (2015) and has been informed by professional experience.
- 1.3.2. In order to assist in implementing environmental good practice, the Principal Contractor will register with the "Considerate Constructors Scheme".

1.4. Framework CEMP Objectives

- 1.4.1. The ES identifies those measures that are envisaged and proposed, in line with the mitigation hierarchy, to avoid, prevent, reduce or, where possible and appropriate, offset the potential environmental effects associated with the construction of the Proposed Development. This Framework CEMP brings together these measures identified within the ES and details how they will be delivered.
- 1.4.2. The Framework CEMP also provides details of environmental roles and responsibilities, details of subsequent consents and permissions, collection and submission of environmental data, environmental maintenance and monitoring requirements including procedures for monitoring and reviewing compliance with the CEMP. It also deals with induction, training and briefing procedures for those persons carrying out the construction of the Proposed Development.

- 1.4.3. This Framework CEMP is based on the design as submitted with the application, and will be refined, developed and expanded upon in the detailed design stage as enabling and construction methodologies are finalised, and more information becomes available. The Framework CEMP will form the basis of the CEMP which will be produced by the Principal Contractor prior to commencement of development. The CEMP will be a live document that will be maintained and updated and will provide information such as:
- Details of the site set-up, site compound facilities and services;
 - The plan of the phasing of the works;
 - Prohibited or restricted operations (location, hours etc.);
 - Details of enabling and construction operations highlighting any operations likely to result in disturbance and/or working hours outside the core working period, with an indication of the expected duration of key phases and dates;
 - The details of proposed routes for HGVs travelling to and from the Site;
 - Details of all works involving interference with a public highway, including temporary carriageway/footpath closures, realignment and diversions;
 - Housekeeping procedures and environmental control measures;
 - Procedures for managing environmental risks and responding to environmental incidents;
 - Standard measures to control and mitigate potential for ecological, noise, dust, air quality and water pollution;
 - Standard measures for the management of run-off due to construction activities to reduce the risk of pollution and elevated flood risk on and off site;
 - Any requirement for monitoring and record keeping;
 - Contact details during normal working hours and emergency details outside working hours;
 - The mechanism for the public to register complaints and the procedures for responding to complaints;
 - Provision for reporting, public liaison, prior notification etc; and
 - Procedures for regular dialogue with the Council, relevant authorities and the local community.
- 1.4.4. All documentation in relation to the environmental management of the works will be maintained by the Principal Contractor and made available to the client (as defined under CDM) and third parties as required.
- 1.4.5. Similarly, performance against environmental objectives and targets, and in achieving effective environmental management will be subject to ongoing review by the client, or their designated representative.
- 1.5. **Project Description**
- 1.5.1. The planning application formally describes the Proposed Development as set out in the planning application is as follows:

“Part full planning application proposing demolition of existing buildings and structures and the erection of a phased mixed use development including a Community Hub comprising flexible uses including library, offices medical or health services (Use Classes F1 (a-f), F2(b), E(c), E(e), E(g), and retail uses (Use Classes E(a), E(b) and Sui Generis), a new Market Hall (Use Classes E(a), E(b) and Sui Generis), a Commercial Building comprising flexible uses including retail, offices, gymnasium (Use Classes E(a), E(b), E(c), E(d), E(g), a Travel Hub comprising car parking and cycle parking (Sui Generis), a public square and public realm and associated landscaping, car parking provision, cycle storage and other associated works; and part outline planning application (with all matters reserved) proposing a phased residential led mixed use development comprising residential (Use Class C3) and flexible commercial, business, service, local community and learning uses (Use Classes E, F and Sui Generis), engineering works to Rectory Lane, new public realm and associated landscaping, car parking provision, cycle storage and other associated works”.”.

1.6. Programme and Phasing

- 1.6.1. Enabling works will firstly be required ahead of a phased development for which the sequence will be agreed with Bury Council prior to the commencement of development. However, the development is expected to be delivered in two principal phases; Phase 1 (full application element and; Phase 2: outline application element).

1.7. Proposed Levels and Earthworks Strategy

- 1.7.1. The proposals require minimal bulk earthworks to take place with levels carefully selected to ensure removal from site is minimised.
- 1.7.2. In summary, the earthworks will consist of the following activities;
- Cut and fill earthworks, including the excavation, reengineering, compaction, and re-profiling of material, to provide platforms and facilitate each plot being constructed.
 - Highways infrastructure as developed/required under section agreements.
 - Foul and surface water drainage infrastructure which will be a gravity system to the various selected outfall points.
 - Hard and soft landscaping in the final stages of the scheme.
- 1.7.3. Following the enabling works, commencement of construction can commence.

2. General Construction Arrangements

2.1.1. The standard construction best practice measures are proposed to include:

- Selection of construction methodologies to minimise generation of noise, vibration and/or dust;
- All vehicles and/or plant to be switched off when not in use;
- All vehicles and/or plant to be used in accordance with the manufacturer's instructions and subject to regular maintenance;
- The site compound / storage of materials to be appropriately sited to reduce environmental risk and appropriately secured;
- Stockpiles of soil materials to be appropriately sited to reduce environmental risks, of an appropriate height/batter to avoid slippage, with appropriate surface water management and subject to dust control measures;
- Implementation of surface water drainage traps/attenuation, where required, with appropriate arrangements for discharge and/or collection as appropriate;
- All liquids and solids of potentially hazardous nature (e.g. diesel fuels, oils and solvents) to be stored on surfaced areas with appropriate bunding to reduce the risk of spillage;
- Use of plant that may give rise to nuisance (noise and/or dust) to be adequately screened (where deemed necessary);
- Plant as far as reasonably practical should not be taken off a hard standing from the moment it enters to the moment it leaves site to ensure mud is not tracked out onto the public highways. These hard standings will be well maintained and regularly cleaned to support this strategy.
- A wheel pressure washing holding bay will be set up if required to ensure mud is not tracked out onto the public highway.
- Deployment of a road sweeper/road cleaning for use on the public highway (where deemed necessary);
- Programme of cleaning traffic management cones, lights and signs where deployed (as necessary); and
- Vehicles carrying materials to/off-site to be enclosed and/or sheeted as appropriate.

2.1.2. Any proposed departures from the approved CEMP will be submitted to relevant authorities and affected parties in advance.

2.1.3. The construction of the Proposed Development would use standard construction plant and machinery. Likely plant and equipment would include (but not limited to):

- Hydraulic excavators;
- Dumpers
- Poker vibrator
- Crushing machine;
- Cranes- Mobile and Tower.
- Scissor lifts;
- Cherry Pickers;
- Diesel generators. (Last resort/short term.)

2.2. Hours of Work

2.2.1. It is anticipated that the working hours will be as set out below:

- 07.30 – 18.00 Monday to Friday; and
- 07.30 – 13.30 Saturday

2.2.2. All work outside these hours will be subject to prior agreement, and/or reasonable notice, with Bury Council, who may impose certain restrictions. Nighttime working will be restricted to the minimum which is expected to be limited to the power floating of the concrete slabs of which noise will be kept to a minimum in that it is limited to the critical plant only. These working hours will be communicated to the local community via signage, newsletter and a residents notification letter sent to properties prior to the commencement of the works.

2.3. Traffic Management and Vehicle Routing

2.3.1. All construction traffic entering and leaving the Site will be closely controlled and follow the rules of the highway code. Vehicles making deliveries to the Site and/or removing spoil etc., will travel via designated routes. Construction access is to be taken from Fairfax Road and Rectory Lane. It is expected that the majority of construction workers would originate within the local residential areas and will approach the Site from the M60 Ring Road. The HGV traffic generated during the enabling works and construction phase of the Development is anticipated to originate predominantly from the wider strategic network specifically utilising the M60 Ring road.

2.3.2. All site plant vehicle movements will take place within the site boundary including the unloading and loading of vehicles. Detailed Construction Logistics Plans (CLPs) will develop over time and be updated on a monthly basis to ensure works are kept within the site boundary.

2.3.3. In order to minimise the amount of construction vehicles using the public highway, the following factors will be considered:

- Recycling of materials on site, where possible;
- Preparation of a Site Waste Management Plan (SWMP);
- Managing construction traffic access times to minimise peak hour movements;
- Communication of clear traffic route requirements to contractors and suppliers to reinforce the appropriate routes to site; and
- Contractual obligations imposed on the supply chain.

- 2.3.4. Site management and workers would be encouraged to travel to the Site by public transport. The use of public transport for workers will be a consideration during pre-tender discussions. The site logistics plan will identify all of the local facilities for bus, park and ride, train, tram and car sharing.
- 2.3.5. Parking will be managed to ensure that site staff and visitors do not park along or obstruct the access and circulation roads. The site will be set up to:
- Designate a location for site personnel and visitor parking;
 - Prevent delivery vehicles from queuing outside the site boundary; and
 - Make delivery drivers aware of traffic restrictions on and around the site.
- 2.3.6. Most materials will be ordered in bulk and will be delivered to the site as required by the construction Programme. The arrangements for deliveries and traffic routes will be communicated to all suppliers and sub-contractors.
- 2.3.7. Construction plant deliveries for any abnormal load vehicles i.e. potentially the piling rig and crane will be managed in coordination with traffic police who may need to escort abnormal loads. The timing and route of all such deliveries will be arranged at times when disruption can be minimised.
- 2.3.8. A detailed traffic plan will be produced prior to commencement of construction clearly stating the routes to be used and identifying any local site rules and directional requirements. Contractors will be required to share this with staff and operatives during the site induction process and include it within supply chain sub-contracts to ensure that it will be enforced.
- 2.3.9. Pedestrian routes through the site for the workforce will be segregated from vehicle routes using barriers and crossing points will be clearly defined in appropriate locations with good visibility of approaching traffic.
- 2.4. Pedestrian Management and Routing**
- In the interests of public safety and to allow the buildings to be constructed a series of public footpath closures will be applied for with Bury Council Highways department. These will be closed off with a secure ballasted hoarding system. Highways standard signage will be installed to identified locations in line with the National Road and Street works Act. A Highways Management Plan will be put forward for approval with the application for any closures and installed as per this highways management agreement. The closures will be carefully considered and agreed to ensure that the protection of the public is paramount at all times with pedestrian crossing taken into account.
- 2.5. Construction Materials and Resources Use**
- 2.5.1. Materials and resources used during construction of the Proposed Development would be sourced from sustainable and/or local sources where practicable.
- 2.5.2. Where possible materials arising from the breaking out of hard surfaced areas would be recycled and reused on-site or transferred to an appropriately licensed recycling facility.
- 2.6. Waste Management, Recycling and Disposal**
- 2.6.1. The construction process is likely to give rise range of waste arisings including, packaging (plastics, pallets, shrink wrap etc.) In addition, this waste materials may be generated from inaccurate ordering, poor usage, badly stored materials, poor handling, spillage etc. Care and attention will be paid to ensure this is controlled to minimise as much as possible.

- 2.6.2. All contractors will be required to investigate opportunities to minimise waste arisings at source and, where such waste generation is unavoidable, to maximise the recycling and reuse potential of demolition and construction materials. A SWMP would be prepared to set out the procedures to sort, reuse and recycle construction waste. Adherence to the SWMP would support better control over materials handling and waste, compliance with relevant waste legislation for the handling, transport and disposal of wastes, compliance with environmental management systems and management of waste-related costs.
- 2.7. Prior Notice**
- 2.7.1. In the event of unusual activities or events that can be anticipated, these will be notified to Bury Council and to any relevant property owners or occupiers wherever possible, in advance of the activity.
- 2.8. Management of Contracts**
- 2.8.1. Individual contracts (for example for waste removal) will incorporate relevant requirements in respect of environmental control, based largely on the standard of 'good working practice' as well as statutory requirements. Any sub-contractors (where used) will be required to demonstrate how they will achieve best practice, how targets will be met and how potential effects will be minimised.
- 2.9. Public Liaison**
- 2.9.1. There will be a designated Community Liaison Officer who will deal with public and other complaints and enquiries. This nominated individual will be identified to Bury Council prior to the start of site activities, and whenever a change of responsibility occurs.
- 2.10. Responses to Complaints**
- 2.10.1. Any complaints will be logged on Site, where necessary in line with the requirements of the Considerate Constructors Scheme. The procedures will specify the roles and responsibilities of the Community Liaison Officer and Bury Council in respect of breaches and complaints from the public. The required actions will be different in each specific case, depending on the operation, equipment or location or applying additional controls.

3. Project Team Roles, Responsibilities and Training

3.1. Roles and Responsibilities

3.1.1. **Table 3.1** sets out the main responsibilities for the delivery of the CEMP throughout the project stages.

Table 3.1 Details of roles and responsibilities

Role	Key Environmental Responsibilities
Design team	Incorporate the use of sustainable materials, minimise material consumption and design out waste where feasible.
Contracts Manager	Overall responsibility for undertaking the project and implementing the Contractors Environment Policy. Implementation of CEMP and Procedures. Notifying the Employer of any Major Environmental Incident. Reviewing Roles and Responsibilities. Assessing Training needs along with the Environmental / Site Manager.
Site Manager	Ensure works are carried out in accordance with all consents. Ensure staff are aware and follow the requirements of environmental management plans and procedures. Ensure weekly environmental site inspections are undertaken. Ensure site documentation (Method Statements and Environmental Risk Assessments) are successfully implemented. Check all necessary notifications to client and local residents have been given. Develop and implement water monitoring as necessary. Implement mitigation measures identified in the CEMP and method statements. Brief site personnel and subcontractors on latest environmental and sustainability issues. Single point of contact for external parties.
Environmental Manager	Ensure environmental issues are discussed and communicated effectively to the project team.

	Liaise with procurement personnel to integrate sustainability into the procurement process. Work with the Employer to develop, manage and maximise the delivery of sustainability initiatives. Providing environmental and sustainability advice and guidance to the team. Identify, develop and provide sustainability training. Input into the production and ongoing maintenance of the CEMP. Identify and implement ways to avoid, reduce, reuse and recycle waste. Support the Sustainability Champion to improve sustainability performance onsite. Establish and oversee environmental monitoring onsite. Report best practice across the project and to the Employer. Assist in incident investigations and reporting. Encourage near miss reporting and identify trends. Support the site team to ensure compliance with environmental legislation. Assist in preparation of environmental permits, licences and consents as required. Develop relevant toolbox talks for site
Site Environment Engineer/ Sustainability Champion	Inform Environmental Manager in a timely way of environmental issues. Carry out weekly recorded site inspections. Collection and submittal of Key Performance Indicators (KPI) data to Environmental Manager. Maintain environmental records. Undertake and record environmental monitoring. Monitoring subcontractors for compliance with method statements. Draft community notification bulletins and arrange distribution accordingly. Complete monthly sustainability report.

	Maintain waste data capture.
Engineering Staff	Ensure subcontractor's method statements incorporate the appropriate environmental mitigation and risk assessment prior to the commencement of works. Ensure work is undertaken to reduce or avoid environmental impacts. Support Site Manager in delivering relevant training to all personnel onsite.
Procurement Team	Ensure sustainability and environmental requirements are outlined in subcontractor's scope of works and contracts.

3.2. Environmental instruction, Awareness, Information and Training

- 3.2.1. In order to meet the environmental commitments, set out in the Framework CEMP, all staff will be suitably trained for their roles including their environmental responsibilities. A record of training will be maintained by the Principal Contractor. As a very minimum all site personnel will be given a site induction, monthly environmental tool box talks and briefings which will cover environmental issues related to the works and the CEMP.

Table 3.2 Environmental Training and Communication

Meeting/Briefing/Training	Frequency	Attendees
SHE Progress Meetings	Monthly	Full site team including subcontractors.
Induction Training (which will include environmental aspects)	On first visit to Site	All persons attending site
RAMS briefings	Every job task	All involved in job task
Environmental Toolbox Talks will be carried out appropriate to the construction works being carried out on site at that time.	Minimum of one per month	All persons carrying out work
Environmental briefings e.g. Environmental Bulletins / Alerts, Lessons Learnt, Results of Inspections / Audits	As required	All persons carrying out work
Job specific training e.g. IOSH working with Environmental	As required	All persons carrying out work

Responsibilities and Site Waste Management.		
Project specific information, including this CEMP.	As required	All persons carrying out work

4. Consents, Commitments and Permissions

4.1. Register of Environmental Actions and Commitments

- 4.1.1. A Register of Environmental Actions and Commitments (REAC) is a record of the project specific environmental actions and commitments to be implemented and managed through all stages of the Proposed Development.
- 4.1.2. The REAC will be utilised by the Contractor when reviewing and producing Risk Assessment and Method Statements (RAMS) to ensure relevant controls are detailed within.

4.2. Consents and Permits

- 4.2.1. The Principal Contractor will maintain a schedule of consents or permits, and any associated conditions, within the Environmental Management Plan (EMP) and ensure that they are appropriately briefed out to personnel on site. This schedule will provide a record of consents and permissions from Statutory Bodies and other stakeholders and any commitments made to them.

5. Key Environmental Legislation

5.1.1. The Contractor is required to comply with all relevant legislation for the construction phase of the Scheme. This shall include but not be limited to the following:

- The Conservation of Habitats and Species Regulations 2010 (as amended);
- The Countryside and Rights of Way Act, 2000;
- Control of Pollution Act (COPA) 1974;
- Environmental Protection Act 1990;
- Natural Environment and Rural Communities Act (NERC) 2006;
- The Badger Act 1992;
- Water Resources Act 1991;
- Land Drainage Act 1991;
- Environment Act 1995;
- Environment Act 2021;
- Wildlife and Countryside Act 1981 (as amended);
- The Waste (England and Wales) (Amendment) Regulations 2014;
- The Hazardous Waste Regulations 2015 (as amended);
- Clean Neighbourhoods and Environment Act 2005;
- The Control of Noise at Work Regulations 2005;
- BS 5228 Noise Control on Construction of Open Sites;
- Clean Air Act 1993;
- Town and Country Planning Act 1990;
- National Planning Policy Framework; and
- National Policy Statements.

6. Environmental Risk Assessments

6.1. Ecology

6.1.1. Measures in relation to Ecology are set out below but which may continually evolve as the project progresses;

- Keep up to date survey records during the enabling and construction phases;
- Survey and treatment programme for invasive species to ensure that these species are appropriately dealt with, not spread and eradicated from the site.
- Avoid breeding bird season (March - August) for site clearance works without the relevant approval of an Ecological Clerks of Work.
- Utilise directional lighting to avoid light spill.

6.2. Landscape

6.2.1. The use of site hoardings and restricting lighting away from the outside of the Site are proposed as mitigation measures to limit the visual intrusion caused by construction plant on site during construction.

6.3. Noise and Vibration

6.3.1. Adoption of best practice measures will minimise construction noise and vibration impacts. Best practicable measures includes the following:

- modern plant should be selected
- proper use of plant with respect to minimising noise and vibration emissions and regular maintenance. All vehicles and mechanical plant used for the purpose of the works should be fitted with effective exhaust silencers and should be maintained in good efficient working order;
- selection of inherently quiet plant where appropriate. Electrical plant items (as opposed to diesel powered plant items) should be used wherever practicable. All major compressors should be 'sound reduced' models fitted with properly lined and sealed acoustic covers which should be kept closed whenever the machines are in use. All ancillary pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers;
- machines in intermittent use should be shut down in the intervening periods between work or throttled down to a minimum;
- the loading and unloading of materials should take place away from residential properties, ideally in locations which are acoustically screened from nearby noise sensitive receptors;
- materials should be handled with care and be placed, not dropped. Materials should be delivered during normal working hours;
- all ancillary plant such as generators, compressors and pumps should be positioned to cause minimum noise disturbance, i.e. furthest from receptors or behind close boarded noise barriers. If necessary, acoustic enclosures should be provided and/or acoustic shielding;

- good community relations should be established and maintained throughout the construction process. This should include informing residents on progress and ensuring measures are put in place to minimise noise and vibration impacts.
- construction contractors should be obliged to adhere to the codes of practice for construction working and piling.
- site operations and vehicle routes should be organised to minimise the need for reversing movements, and to take advantage of any natural acoustic screening present in the surrounding topography;
- no employees, subcontractors and persons employed on the site should cause unnecessary noise from their activities e.g. excessive 'revving' of vehicle engines, music from radios, shouting and general behaviour etc. All staff inductions at the site should include information on minimising noise and reminding them to be considerate of the nearby residents;
- measures should be put in place to ensure that employees know that minimisation of noise and vibration will be important at the site; and

6.3.2. As the enabling works and construction activities progress, the construction contractor(s) will undertake and repeat noise and vibration surveys as is necessary to demonstrate compliance with all noise and vibration commitments.

6.3.3. **Traffic and Transport**

6.3.4. Measures in relation to Transport are set out below but which may continual evolve as the project progresses;

- On-site parking for construction workers will be restricted to a reasonable minimum. This will only be made available to those construction personnel who need to carry heavy equipment or materials to the Application Site. The labour force will be encouraged to use public transport;
- Local traffic management measures for site access will be agreed with Bury Council prior to construction commencing in conjunction with surrounding development sites;
- The principal contractor and sub-contractors will ensure a commitment to careful management of site deliveries and collections by scheduling them in a manner that consciously avoids, where possible, the most congested times of the day;

6.3.5. In terms of potential construction traffic onto the local road network, the following measures will be set out in the CEMP:

- The scheduling of deliveries to minimise potential disturbance on local residents and conflicts with the highway peak hours;
- The consideration of appropriate routes for construction traffic to access the Proposed Development.
- The provision of wheel washing facilities at site egress points to minimise the potential for site debris to be transferred on to the local road network.
- The consideration of appropriate traffic management measures.

- A Materials Management Plan (MMP) will be implemented to ensure verification and validation of any material transported to and from the Proposed Development and its transportation and storage protocol.
- As noted previously, the adoption of a CLP to manage traffic routing on the local road network.

6.4. Flood Risk and Drainage

6.4.1. Measures in relation to Flood Risk and Drainage are set out below but which may continual evolve as the project progresses;

- Potential pipe diversions

6.5. Air Quality

6.5.1. Dust Management;

- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this assessment. The desirable measures should be included as appropriate for the site.

6.5.2. Site Management;

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the Local Authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book.
- Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.

6.5.3. Monitoring;

- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the Local Authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary.
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the Local Authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

6.5.4. Preparing and maintaining the site;

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Fully enclose screens or barriers around dusty activities of the site boundary that are at least as high as any stockpiles on site.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Avoid, cover or fence stockpiles to prevent wind whipping.

6.5.5. Operating vehicle/machinery and sustainable travel;

- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing)

6.5.6. Operations;

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction (e.g., suitable local exhaust ventilation systems).
- Ensure an adequate water supply on the site for effective dust / particulate matter suppression / mitigation, using non-potable water where possible and appropriate.
- Ensure water cannon dust suppression in place during demolition activities.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.

- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

6.5.7. Measures for non-road mobile machinery (NRMM);

6.5.8. NRMM and plant would be well maintained. If any emissions of dark smoke occur, then the relevant machinery should stop immediately, and any problem rectified. In addition, the following controls should apply to NRMM:

- All NRMM should use fuel equivalent to ultralow sulphur diesel (fuel meeting the specification within EN590:2004);
- All NRMM should comply with the appropriate standards;
- All NRMM will be fitted with Diesel Particulate Filters (DPF) conforming to defined and demonstrated filtration efficiency (load/duty cycle permitting);
- The ongoing conformity of plant retrofitted with DPF, to a defined performance standard, should be ensured through a programme of onsite checks; and,
- Fuel conservation measures should be implemented, including instructions to (i) throttle down or switch off idle construction equipment; (ii) switch off the engines of trucks while they are waiting to access the site and while they are being loaded or unloaded and (iii) ensure equipment is properly maintained to ensure efficient fuel consumption.

6.5.9. Measures Specific to Construction;

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

6.5.10. Measures Specific to Trackout;

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Record all inspections of haul routes and any subsequent action in a site log book.

6.6. Ground Conditions

6.6.1. It is recommended that the earthworks specification identifies within the CEMP, where practicable, the re-use of site won materials, to reduce the volumes sent to landfill, and ensure there is provision for the use of recycled granular materials, where appropriate. Other measures to be included;

6.6.2. All works will be conducted in accordance with current legislation and standards including EA Pollution Prevention Guidance (PPG) documents that provide important information on a range of relevant environmental issues. In particular PPG5 (2007), 'Works and maintenance near water' and PPG6 (2012), 'Working at construction and demolition sites', provide information on protecting the water environment from pollution caused during construction operations. Measures to include;

- Fuels and chemicals would be stored in accordance with the Control of Pollution (Oil Storage) Regulations in either double skin tanks, or within appropriately sized bunds (i.e. a capacity of not less than 110% of the largest tank, or largest combined volume of connected tanks located within the bunded area).
- Storage containers would be inspected regularly for leaks or damage. Cement, concrete, other chemicals, and materials would be stored securely. Prior to construction an emergency response would be set up to deal with incidents of construction spillages.

7. Monitoring and Measurement

7.1. Environmentally Significant Changes

- 7.1.1. The CEMP will contain details of procedures to be followed if any significant changes are encountered once a project commences and the grounds which will result in a change to the CEMP e.g. the use of alternative construction methods or design. This will also detail who has responsibility for overseeing and assessing the environmental and compliance implications of changes and managing any changes to existing agreements or commitments

7.2. Monitoring

- 7.2.1. Weekly inspections of the site will be carried out by the Site Manager / Agent (or delegate) to ensure compliance with the CEMP and to minimise the risk of damage to the environment.
- 7.2.2. The Environmental Manager/Coordinator will carry out monthly inspections and complete an assessment of the works environmental performance measured against environmental standards, relevant legislation and the CEMP objectives. The Environmental Manager/Co-ordinator will produce a monthly report detailing environmental performance and non-compliances, and will inform the Project Manager/Supervisor of all findings.
- 7.2.3. Internal and external environmental auditing and inspections will be complied with. Internal audits will be undertaken by the Environmental Manager/Co-ordinator on a quarterly or biannual basis, as appropriate, and recorded. The Contractor will be responsible for investigating and addressing any non-compliance findings raised by the audit within an agreed time frame and ensuring that corrective and preventative actions have been addressed. In particular, the following requirements of the CEMP will be closely monitored:
- license and approvals required;
 - dust, noise and vibration monitoring;
 - water pollution prevention measures;
 - Vegetation protection and protected species monitoring;
 - Monitoring of new landscaping.
- 7.2.4. All updates or any environmental incidents will be reported to the Environmental Manager / Co-ordinator.
- 7.2.5. The frequency of monitoring activities or environmental inspections may be amended in accordance with the site activities and the risks to the environment, and as a result of any environmental incidents or near misses, and/or the outcomes of inspections and audits.

8. Summary of Emergency Procedures

8.1. Emergency Response Plan

8.1.1. The emergency contact details for the works shall be clearly displayed at the site where the public can see them.

8.1.2. An Emergency Response Plan will be compiled which details the processes and methods to be followed in the event of an accidental release of potentially polluting materials. The Emergency Response Plan will contain the following information:

- The names and 24 hour contact details of all emergency response personnel and emergency services;
- The procedures for reporting and documenting an emergency incident;
- Personnel responsibilities during an emergency incident;
- The location of on-site information on potentially polluting materials and spill containment materials; and
- A list of all nearby residential properties, downstream abstractors and other sensitive receptors that could be affected by an environmental incident will be compiled and maintained by the Contractor.

8.1.3. The Emergency Response Plan will be clearly communicated to all site staff.

8.1.4. Emergency procedures will be tested on a regular basis by the Construction Manager/Environmental Manager/Co-ordinator and results reported to the Project Manager.

8.2. Incident and Near Miss Reporting

8.2.1. All incidents and near misses will be reported to the Environmental Manager/Co-ordinator and Construction Manager as soon as possible.

8.2.2. Environmental incidents will be recorded by the Contractor including:

- Nature of spill/leak/incident;
- Time/date;
- Exact location and extent;
- Type of material released;
- Approximate amount/volume released;
- Actions taken to prevent contamination;
- Individuals reported to, and
- Lessons learnt.

8.2.3. Lessons learnt will be fed back to site staff through safety and environment briefings and used by the Environmental Manager/Co-ordinator to amend procedures and update the CEMP accordingly.

8.3. Emergency and Incident Control Measures

8.3.1. Environmental incidents and non-conformances will be dealt with in accordance with the following sections below.

8.3.2. In the event of an incident the following actions will be taken:

- Stop work in the affected area;
- Control incident immediately (without putting the health and safety of yourself or others at risk); and
- The Responsible Person, Construction Manager and the Environmental Manager/Co-ordinator will coordinate the emergency response and inform the relevant authorities as necessary.

8.3.3. The following sections provide specific guidance on potential environmental incidents.

8.4. Spillage of Potentially Polluting Substance

8.4.1. The Emergency Spill Response Procedure will be followed.

8.5. Discovery of Unidentified Protected Species

8.5.1. Where protected species are discovered after enabling /construction work has begun the Responsible Person will carry out the following:

- Stop work immediately in the area;
- Demarcate the area and restrict access to ensure that there is no disturbance to the habitat or species;
- Do not attempt to disturb or remove protected species;
- Contact the Environmental Manager / Co-ordinator and / or Ecologist who will provide guidance on how to proceed; and
- Details of the incident, including photos and relevant information on the environmental Incident will be recorded and reported.

8.6. Discovery of Unidentified Artefacts, Archaeological or Historical Features

8.6.1. If archaeological remains are found after enabling /construction work has begun the Responsible Person will carry out the following:

- Stop work immediately in the area;
- Mark the area to avoid further disturbance;
- Protect the find by fencing/blocking it off;
- Contact the Environmental Manager / Co-ordinator who will inform the Construction Manager immediately; and
- The Environmental Manager / Co-ordinator will contact the County Archaeologist, so that the find can be inspected and recording can be undertaken if necessary.

8.7. Discovery of Unexpected Contamination

8.7.1. During excavation the exposed ground will be observed for visual signs of contamination e.g. noxious fumes, petrol, oils, solvents, chemical residues, odours e.g. smell of rotten eggs indicates the presence of hydrogen sulphide. When contamination is suspected the Responsible Person will carry out the following:

- Stop work immediately;
- Report the discovery to the Environmental Manager / Co-ordinator;
- Seal off the area to contain the spread of contaminants, as long as it is safe to do so;
- Contaminated spoil/materials shall be stored so as to prevent escape e.g. lined skip with material covered, covered skip or container;
- In order to inform the appropriate disposal route, the Construction Manager (with assistance from the Environmental Manager / Co-ordinator) will arrange for testing of the material to take place;
- The Construction Manager will contact the Environmental Manager / Co-ordinator if it is confirmed that contamination has been found;

8.7.2. The Environmental Manager / Co-ordinator will advise on the appropriate disposal route for the material and details of the incident, including photos and relevant information on the environmental Incident will be recorded and reported.