Construction Management Plan

Planning Condition 13

Weybeards Farm, Hill End Road, Harefield

The works involve the following :
Conversion of existing barns into 5 (2 x 3-bedroom, 2 x 2-bedroom and 1 x 1-bedroom) residential units, including roof lights, alterations to fenestration, cladding with associated external works.

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1.0 Project Background

1.1 Outline of project

The works comprise :
Conversion of existing barns into 5 (2 x 3-bedroom, 2 x 2-bedroom and 1 x 1-bedroom) residential units, roof lights, alterations to fenestration, cladding with associated external works including

1.2 Purpose of this CMP / CEMP

This document has been prepared to provide the details required to discharge condition 13 of planning permission 42197/APP/2022/1124
This CMP/CEMP is based on measures to ensure compliance and established good management practice and includes the following :
Site Information: including environmental management structure, roles and responsibilities, location of any potentially sensitive receptors such as trees, watercourses, local residents, etc.;
Construction Information: a description of the works based on the information available to date, anticipated construction programme, proposed working hours, equipment to be used, etc.;
Environmental Issues and Environmental Control Measures: potential environmental issues related to the construction works, methods for managing environmental risks and reducing impacts, emergency procedures and specific project environmental procedures relating to dust and air quality, noise and vibration, vehicles management and protection of vegetation and fauna.

1.3 Planning conditions

Planning conditions are worded as follows:

Condition 13 :

Prior to the commencement of any site clearance, demolition or construction work, a demolition and construction management plan shall be submitted to and approved in writing by the Local Planning Authority. The plan shall detail:
(i) The phasing of development works
(ii) The hours during which development works will occur (please refer to informative I15 for maximum permitted working hours).
(iii) Measures to prevent mud and dirt tracking onto footways and adjoining roads (including wheel washing facilities).
(iv) Traffic management and access arrangements (vehicular and pedestrian) and parking provisions for contractors during the development process (including measures to reduce the numbers of construction vehicles accessing the site during peak hours).
(v) Measures to reduce the impact of the development on local air quality and dust through minimising emissions throughout the demolition and construction process.
(vi) The storage of demolition/construction materials on site.
The approved details shall be implemented and maintained throughout the duration of the demolition and construction process.
REASON
To safeguard the amenity of the surrounding area in accordance with Policies DMHB 11, DMT 1 and DMT 2 of the Hillingdon Local Plan Part 2 (2020).

1.4 Summary of the requirements of Planning Permission (Condition 13)

The condition requires the completed CMP to include details of the following:-

Phasing of works
Working hours
Prevention of mud and grit tracking onto footways
Traffic management and access arrangements
Reduce impact of the development on air quality
Storage of demolition materials onsite

1.5 Legal compliance

The below table identifies all relevant legislation to the project. All articles held within the legislation are to be adhered to.

Health & Safety at Work Act 1974 Management of Health & Safety at Work Regulations 1999 Workplace (Health, Safety and Welfare Regulations) 1992	Employers must ensure health, safety and welfare of employees and others likely to be affected by work activities (recognising that certain substances may be harmful to the environment) Includes provision of any necessary protection or preventive equipment/procedures, giving adequate instruction and training on risks, maintaining working environments in a safe condition
Health & Safety at Work Act 1974 Control of Noise at Work Regulations 2005	Employers have a duty to protect employees against excessive exposure to occupational noise and to assess and protect employees against the risk of noise at work Noise exposures are to be reduced to the lowest level as reasonably practicable taking into consideration technical progress and the availability to control the noise This note must be kept for a minimum of two years. One transfer note can be used for multiple consignments of the same waste type
Management of Health & Safety at Work Regulations 1999 (MHSWR)	The MHSWR applies to all work activities, there is an approved code of practice that gives guidance on compliance with the regulations and specific HSE guidance on young persons at work along with expectant and new mothers The MHSWR requires employers to: Assess the risks to health & safety of their employees and others who may be affected by work activities in order to identify the measures needed to comply with relevant health & safety law Make arrangements for implementing the health & safety measures identified as being required by the risk assessment Appoint competent people to help with the implementation of H&S arrangements and set up emergency procedures Provide information to employees that can be understood, as well as adequate training and instruction Work together with other employers sharing the same workplace Employees are required to use equipment and dangerous substances in accordance with the training they have received, report dangerous situations and any shortcomings in their employers H&S arrangements
CDM Regulations 2015	
Provision and Use of Work Equipment Regulations 1998 (PUWER)	The regulations require risks to people's health & safety from equipment that they use at work to be prevented or controlled Equipment provided for use at work must be: Suitable for the intended use; Safe for use, maintained and inspected; Used only by people who have received adequate information, instruction and training; Accompanied by suitable safety measures Any equipment used by an employee at work is covered and employers or sub-contractor who provide their own equipment are also covered by PUWER Selection of work equipment shall have regard to the working conditions and to the risks to H&S which exist in the premises or undertaking in which the equipment is to be used
Control of Substances Harmful to Health Regulations 2002 as amended	Applies to all potentially harmful substances, employers must assess the health risks to their employees from exposure to substances considered hazardous. The regulations apply to all 'very toxic, toxic, harmful, corrosive or irritant' substances defined in the Chemicals (Hazard Information and Packaging) Regulations 1994) COSHH Risk Assessments must be undertaken on those substances used within an organisation and the results communicated to relevant staff for the safe use, storage and disposal of materials and containers
Electricity at Work Regulations 1989	These regulations require certain precautions to be taken against the risk of death or personal injury from electricity in any work activity
Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)	These regulations aim to reduce risks to people's health & safety from lifting equipment provided for use at work. Lifting equipment includes any equipment used at work for lifting and lowering loads. Lifting equipment is also subject to PUWER Regulations - as detailed in relevant section

	The regulations require that lifting equipment is: Strong and stable and marked to indicate safe working loads; Positioned and installed to minimise any risks; Used safely i.e. the work is planned, organised and performed by competent people; Subject to ongoing thorough examination and appropriate inspection by competent people Every employer shall ensure that every lifting operation involving lifting equipment is: properly planned by a competent person; appropriately supervised and carried out in a safe manner
The Work at Height Regulations 2005	Creates regime for all persons working at height where height is any distance likely to cause injury Employers are required to: Plan for any work taking place at height; Provide adequate equipment, training and protection; Inspect working positions and equipment prior to use
Health & Safety (Consultation with Employees) Regulations 1996	These regulations state that the employer must consult all of their employees on health & safety matters. By consulting with employees an employer should motivate staff and make them aware of H&S issues and to become more efficient and reduce the number of accidents and work place illness
Protection of Young Persons (Regulation 19 of MHSWR 1999)	Requires employers to ensure that young person's employed are protected from risks to their health & safety arising from the young person's lack of experience, immaturity or lack of awareness of danger
	The regulations apply to all 'very toxic, toxic, harmful, corrosive or irritant' substances defined in the Chemicals (Hazard Information and Packaging) Regulations 1994) COSHH Risk Assessments must be undertaken on those substances used within an organisation and the results communicated to relevant staff for the safe use, storage and disposal of materials and containers
Workplace (Health, Safety & Welfare) Regulations 1992	These regulations apply to all workspaces, other than those used for construction work. The regulations require employers to take measures concerning: Maintenance; Ventilation; Temperature; Lighting; Cleanliness & Tidiness; Space; Workstations & Seating; Floors & Traffic Routes; Sanitary Conveniences & washing facilities In the context of these regulations 'workplace' means any place provided for use as a place f work including corridors, stairs, access roads and welfare facilities
The Control of Asbestos at work Regulations 2006	All industrial exposure to asbestos is subject to these regulations and the associated Codes of Practice – 'The Control of Asbestos at Work' These regulations and approved codes of practice specify the requirements for working with asbestos regardless of its sources, type or the process involved
Health & Safety (Display Screen Equipment) Regulations 1992	The regulations require employers to minimise the risk in VDU work by ensuring that workplaces and jobs are well designed where staff habitually use VDUs The regulations set general objectives for employers to: Analyse workstations and assess and reduce risks; Ensure workstations meet minimum requirements; Plan works so there are breaks or changes of activity; On request arrange eye tests; Provide H&S training
The Health & Safety (First Aid) Regulations 1981	The H&S (First Aid) Regulations place a general duty on employers to make or ensure that there are adequate and appropriate first aid provisions for their employees if they are injured or become ill at work
The Health & Safety (Safety Signs & Signals) Regulations 1996	These regulations require employers to provide specific safety signs whenever there is a risk that has not been avoided or controlled by other means. Where a safety sign would not help to reduce that risk or where the risk is not significant, there is no need to provide a sign
Manual Handling Operations Regulations 1992	These regulations apply to all work activities where human effort as opposed to mechanical means is used to transport or support a load The regulations require employers to: Avoid hazardous manual handling operations, so far as is reasonably practicable; Assess any hazardous manual handling operations which cannot be avoided; Reduce the risk of injury so far as is reasonably practicable; Provide information on the load to be handled

Personal Protection Equipment at Work Regulations 1992	These regulations require that when risks at work cannot be controlled adequately by other means employers have duties to provide suitable personal protective equipment (PPE) Assessments of the parts of the body endangered by the risk and the level of risk must be carried out in order to determine the type of PPE that is needed and to estimate its required performance
The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR)	These regulations require fatal and certain non-fatal accidents, certain specified diseases and certain specified dangerous occurrences to be reported directly to the appropriate authority
Gas Safety (Installation & Use) Regulations 1994	These regulations aim to protect the public from risks arising from gas supplied through pipes from a supplier to a consumer and cover the transmission, distribution and use of mains gas and LPG downstream of the distribution main or service pipe the regulations require that no person shall carry out any work in relation to a gas fitting, unless competent to do so. Every gas installation business and self-employed gas installer must be registered with the Gas Safe Register
Highly Flammable Liquids & LPG Regulations 1972	These regulations state how LPG is stored, used and handled: Storerooms, tanks and cylinders must be clearly marked and precautions must be taken to prevent leaks
Working Time Regulations 1998 as amended by The Road Transport (Working Time) Regulations 2005	Affects pregnant and new mothers, especially in the area of night working; Impose a limit of 48 hours per week up to 26 weeks with opt out agreement for all personnel with the exception of mobile workers (LGV Drivers) but see effect of The Road Transport (Working Time) Regulations 2005; A worker or group of workers can agree to exclude this maximum working requirement; the pattern of monotonous work must be broken with regular rest breaks; the working time of mobile worker (LGV Driver) cannot exceed 60 hours in any week inclusive of overtime; the average working time cannot exceed 48 hours unless opted out as above
The Regulatory Reform (Fire Safety) Order 2005	Requires the appointment of a responsible person who will carry out a risk assessment for the purpose of fire precautions. At the conclusion the responsible person will: implement general fire precautions including the provision of fire detection and firefighting equipment; ensure that adequate maintenance reduces the risk of fire; reduce exposure to dangerous substances; provide adequate signs and routes for means of escape; provide adequate training as required
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004 and (Amendment) 2005	Applies to the transportation of any hazardous substance or pressure vessel; Drivers must be trained in the procedures to be adopted in the case of accident; Pressure vessels must be CE marked if used from 1 July 2005 or tested and certified; Pressure vessels and fittings must be periodically inspected; Controls over loads must be made to prevent incorrect carriage of materials
The Control of Vibration at Work Regulations 2005	Sets limits for exposure for hand-arm vibration and whole body vibration expressed in terms of daily exposure limits and action values; A risk assessment is required and aspects to be considered are listed; Employers are required to eliminate or reduce exposure within the workplace; Health surveillance is required if assessment indicates that risk exists; Adequate training shall be provided

2.0 Site Information and Consented Development

2.1 Site and surrounding area

The site is located in Harefield in the London Borough of Hillingdon. It is accessible off of Hill End Road along a privately owned track. The Proposal is for the conversion of an existing barn into 5 residential units.

2.2 Scheme Description

Below is a detailed scope of works for the proposed development.

Demolitions and alterations :
Demolition of existing large central barn and refurbishment of existing barn structure

New windows and doors :
New double glazed windows and doors (see details provided in materials condition 3 & 4)

Electrical and Mechanical :

New heating and electrical supplies to be installed

Internal finishes :
New internal floor, wall and ceiling finishes throughout

2.3 Sensitive receptors

Table 2.1 below lists a number of receptors which have been identified as being potentially sensitive to the works to be undertaken during the construction of the development due to their proximity to the Site and nearby access roads Additionally, as the new development is constructed and occupied, later phase-specific CMS's will need to take these sensitive receptors into account.

Table 2.1

Existing residential properties	Local residences to the side of the development are to be protected throughout the works
Public rights of way that cross the site	There is no public right of way across or near the construction site and all surrounding land is privately owned by the barn owner, including private access track.
Hedgerows & tree groups	No hedgerows or trees are in the site area
Protected species	Bats. See bat mitigation license for strategy
On-site construction workers	On site workers are to be protected throughout the development as directed by the construction phase health and safety plan
Archaeologically sensitive areas	None identified
Overhead power lines	None identified
Existing utilities	Existing power supplies enter the site near the entrance track. Foul water services leave the site in the same location. All new utilities will be provided along the track and bought into the site in the same manner as existing if necessary.

3.0 Control of the construction process

3.1 Roles and responsibilities

Principal Contractors :

A Principle contractor will be appointed to develop specific phases of the development they will be contractually responsible for delivering the CMP / CEMP.

They will be responsible for delivering this CMP / CEMP to ensure that it covers the specific activities to be undertaken as part of any given phase of development, through the submission of a construction phase Health and safety plan (CPHSP).

They will appoint a Site Manager, full details of which will be included within the CPHSP.

Site Manager:

The Site Manager will be responsible for the day to day management of Health and Safety, Environmental and Quality performance during the construction of the Proposed Development. The Site Manager will also be responsible for implementing the CMP / CEMP, including the development of a detailed Environmental Action Plan for delivering the CEMP, monitoring the performance of sub-contractors and maintaining records to demonstrate compliance with and implementation of the CPHSP. This will include participating in communication with OCC and other third parties (e.g. Environment Agency) as required and arranging for the periodic review and update of the CMP / CEMP, including construction phase reviews.

In addition, the Site Manager will be responsible for ensuring that all staff and operatives receive a site specific health, safety and environmental induction prior to starting work on-site and are provided with relevant information concerning environmental sensitivities and protection measures.

The Site Manager will be responsible for reviewing all risk assessment method statements and ensuring an appropriate programme of tool box talks are developed and effectively communicated.

The Site Manager will be responsible for overseeing any environmental monitoring programme, carrying out site environmental inspections and audits as necessary, and will co-ordinate the environmental monitoring programme. Such inspections will include completion of an 'End of Day Checklist' on a daily basis. The Site Manager will also be responsible for ensuring that all relevant legal consents, licenses and exemptions are in place in advance of relevant works commencing, and that all relevant license and legal requirements are adhered to.

All queries and complaints from the public and the local community will be directed to the Site Manager who will be responsible for responding to these and maintaining a register of complaints (together with the follow up actions which have been taken).

All staff and subcontractors

All staff and subcontractors involved in the construction of this project have a responsibility to:

- Work to agreed plans, method statements and procedures to eliminate and minimise environmental impacts
- Provide appropriate and controlled Risk assessments
- Understand the importance of avoiding pollution on-site including noise and dust and know how to respond in the event of an incident or limit environmental impact
- Reporting of all incidents or significant environmental risks to their line manager
- Cooperate as required with site inspections or audits

3.2 Project environmental management

A suitably qualified person will be appointed to fulfil the environmental management role and will co-ordinate monitoring and reporting of the CMP implementation, through liaison with relevant site staff, OCC and others as appropriate. This role could be undertaken by the Site manager and requires them to monitor, review and report on the effectiveness of the environmental controls on-site.

3.3 Training and raising awareness

The raising of environmental and health and safety awareness is viewed as a crucial element in the appreciation and implementation of the CMP. This CMP will be distributed to members of the project team, including suppliers and subcontractors as necessary to ensure that environmental and health and safety requirements are adequately communicated.

The Site Manager is responsible for ensuring that all people on-site are provided with relevant information concerning environmental protection. A system should be operated on-site whereby all staff and operatives receive a site specific safety and environmental induction prior to commencing any work on-site.

Individual appraisals and regular Health, Safety and Environmental Planning meetings will be held to ensure that the training requirements of staff are adequately monitored. At these meetings, the future site operations will be discussed in detail, including the standard and level of training required of site operatives (e.g. toolbox talks) and subsequently the individual needs of the staff. Training records for staff will be held on a central database and made available through regional offices.

3.4 Reporting

Accidents on site are documented in the accident book, regardless of severity. The accident book is to be filled out by the nominated first aider with cooperation from a representative of the injured person.

4.0 Construction Management

4.1 Description of the construction works

The main elements of site set up and construction works associated with the different components of the Proposed Development are summarised in Table 3.1 below.

Table 3.1: Overview of Construction Works

Description	
Site Set-up	On site facilities will include the following:- Internally constructed site office Internally constructed site materials storage area within the courtyard area, including w/c Site parking to be provided onsite in the location of proposed resident parking at the completion of the project. The site set up plan will be the responsibility of the on-site contractor to plan and implement
Site Infrastructure	Surface water drainage will be discharge to the existing infrastructure. Foul water will discharge into the existing foul drainage system located at the site . New applications will be made for Gas / water and Electrical supplies.
Construction of New Buildings and Associated Facilities	Refurbishment of existing barn into 5 units and associated outbuildings for parking or storage.
Site Completion (Provisional)	Start on site date : To be agreed, hope to be Autumn 2023 Completion date : To be agreed, assuming a 14month contracts, Early 2025

4.2 Phasing of the construction works

Works are planned to be undertaken in one single phase. A start date is yet to be agreed but hopes to commence in Autumn 2023

4.3 Construction equipment

The type of plant likely to be used for each type of construction activity:-

Activity	**Possible Plant Required**
Site preparation and earthworks	Rubber tracked excavator 7 ton Piling rig Concrete lorry Small dumper Bomag vibrating roller
Road /track construction Attenuation features construction	Tracked excavator Whacker plate roller
Utility diversions and installation Development	Rubber tracked excavator 7 ton Small telehandler Small dumper Wacker plate Bomag vibrating roller

The impacts associated with the use of this equipment / activities on noise and air quality and the environmental control measures which are recommended are discussed in Section 5.

4.4 Hours of working (Hours of site operation)
Site hours of operation are between 8.00am and 6.00pm Monday to Friday, 8.00am to 1.00pm on Saturday. Deliveries will be restricted to the hours of 9.30am to 3pm to avoid as much disruption to local amenities and the general public. No Sunday or bank holiday working will be allowed.

4.5 Health and safety management
The overall responsibility for health and safety on the site lies with the contract manager. It is their responsibility to ensure that all necessary procedures are followed in line with the CPHSP. In the event that CAP forms are raised it is the site manager's responsibility to close out any and all issues in order to maintain compliance.
The site manager must maintain up to date site records and must ensure that all updates to the health and safety concerns of the site are communicated to site operatives and that appropriate information, instruction and training is given to all operatives in order to ensure their safety throughout the fulfilment of their duties.
Emergency procedures are to be reviewed and revised continually to coincide with changes to the nature of the site and the current risks associated with the conditions in the area. These procedures are to be implemented, communicated and monitored by the project manager.
Any emergency deviation of working hours to be requested by the site manager and approved in writing by the senior management.

4.6 Security on site
The Site will be surrounding by Heras fencing will be erected to prevent unlawful access. The fencing is to be kept in place for the duration of the build.

4.7 Construction method statement(s)
Subcontractors are responsible for the production and submission of appropriate risk assessments and method statements that are appropriate and sufficient to cover their designated works.

5.0 Traffic Management Plan
5.1 External Traffic Management

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Duration of Traffic management

Works are planned to be undertaken in one single phase, a start date is yet to be agreed but duration on site will be approximately 14 months

Vehicle movement restrictions

Construction vehicle access will be minimised between the hours of 9.30am to 3pm to reduce the impact on local services.

Vehicle frequency

The site restricts the nature of vehicles to be used for the purpose of delivery or collection of materials from its premises to maximum of 30 ton standard merchant delivery vehicle

We anticipate that all deliveries can be accommodated on the site with 30 ton vehicle deliveries. All deliveries will pull up onto privately owned land and unload from there, these will be scheduled as follows :

1) Demolition & site clearance, number of deliveries = 4 No. in total on different days, 30 minute duration on site each delivery, time of delivery to be planned between 9.30am to 3pm
2) Groundworks, number of deliveries = 4 No. in total on different days, 30 minute duration on site for each delivery, time of delivery to be planned between 9.30am to 3pm
3) Plant and material delivery = 3 No. in total on different days, 30 minute duration on site for each delivery, time of delivery to be planned between 9.30am to 3pm
4) Formwork, props, reinforcement = 5 No. in total on different days, 30 minute duration on site for each delivery, time of delivery to be planned between 9.30am to 3pm
5) Timber/roofing delivery, number of deliveries = 6 No. in total on different days, 30 minute duration on site each delivery, time of delivery to be planned between 9.30am to 3pm
6) Wall partitions, plasterboard, number of deliveries = 8 No. in total on different days, 30 minute duration on site each delivery, time of delivery to be planned between 9.30am to 3pm
7) Carpentry, fixtures and fittings, number of deliveries = 5 No. in total on different days, 30 minute duration on site each delivery, time of delivery to be planned between 9.30am to 3pm

The remaining deliveries and waste removal will be facilitated using smaller transit vehicles. These will be planned so as not to clash with the larger deliveries shown above.

From the number of deliveries mentioned above, potentially 4 No. deliveries/ removals a day will arrive and leave on a single day to ensure the least amount of disruption possible.

5.2 Traffic management within the site boundary

The traffic management plan has been formulated in order to control the impact of construction traffic effectively. A primary objective of the plan is to alleviate / avoid any increase to the congestion of the areas surrounding the site. The following control measures are in place to reduce congestion and ensure smooth operation on the highway :

- Specific delivery times
- Site parking for operatives to be provided
- Traffic Marshall/ Banksman to coordinate vehicular access when deliveries are scheduled to arrive onsite
- Coordinated material storage / movement
- No articulated lorries
- Staggered deliveries
- Just in time deliveries

6.0 Environmental Management Plan
6.1 Environmental Objectives
- Recycling of grey water resulting on the site for use for certain activities
- A low risk of flooding on the site
- Monitor and reduce water usage from the mains
- No non conformities in relation to Gas storage/use
- Use of solar power in conjunction with other sources to reduce carbon footprint of the site
- Zero damage to local flora and fauna as a result of site activities

6.2 Environmental Controls

Water
All incoming water supplies will be fitted with a meter which will monitor any water utilised during the project. This meter will be checked once a month and will indicate the peak usage of the site while indicating areas for potential reductions in water usage.
The site does not have any standing water or significant water features present. As such there are no specific risks posed to aquatic wildlife.
Black water waste generated by the site during the project will be stored in an appropriate storage tank and will be emptied weekly though the use of a vacuum tanker provided by a designated subcontractor. The foul water is then disposed of responsibly off site.
Grey water waste from guttering and general amenities wherever possible is recycled for re-use, cleaning tools and equipment and wheel washing of vehicles before leaving site.
Surface water from the site drains into the existing drainage system. This is to remain unaltered.

Gas
No gas is required for the construction works.

Electrical
Temporary site supplies will be made via Southern and Scottish Electric
Permanent suppliers will be made via Southern and Scottish Electric

Fuel
Fuel is to be stored correctly in bunded containers and is not to be held in excess, spill kits are to be held on-site nearby to the storage of fuel. Operatives are to be informed of their use and are to inform the site manager of any environmental risks in order for prevention measures to be mobilised.

Dust
Suppression measures are required to be used during all operations which have the potential to produce dust, these will include the following measures :
1) Wetting down dry materials with water spray during dusty operations.
2) On tool extraction to be used wherever possible.
3) If necessary local encapsulation will be used to prevent dust escaping.
4) Hoovering and cleaning up dust as soon as it is generated.
5) wheel washing will be provided before leaving site to ensure no debris or dust is transferred out of the site.

During such activities, face fitted dust masks are required to be worn by operatives entering and working in the area.

7.0 Site Waste Management
7.1 Site Waste Management Objectives
- Full compliance with waste legislation
- Complete and compliant COSHH register
- 95% recycling of waste produced from site activities
- All waste and materials stored appropriately
- No spillages

7.2 Waste and materials management
Waste produced on site will be subject to all relevant legislation. Liaison with the Environment Agency will be undertaken to ensure that waste and materials handling on-site will be conducted appropriately.
The site objective is to achieve 95% recycling of waste produced through site processes alongside a 100% rate of segregation for hazardous waste.
The transportation of waste to and from the site will be carried out exclusively by registered carriers and will be disposed of at appropriately licensed sites. Appropriate waste transfer documentation will be held by the site and will be signed by both the waste producer and the carrier.
The Site Manager will audit waste carriers and disposal facilities and maintain documentary evidence that these requirements are being met, including a register of waste carriers, disposal sites (including transfer stations) and relevant licensing details for each waste stream. Waste contractors who remove waste will be registered with the Environment Agency.
As a part of the overall site infrastructure the need to recycle or re-use materials from site processes is to be communicated to all site operatives. The waste hierarchy is adopted as a principle with waste generation being minimised and waste recycled/reused as much as possible and handled and managed to avoid nuisance and health risks.
Excavated materials will be re-used on-site wherever possible as general or landscaping fill (dependent on its quality). Contaminated soil that may be encountered during operations will be dealt with according to defined processes.
Materials used during the construction works such as oil, chemicals, cement, lime, cleaning materials and paint have the potential to cause serious pollution. Therefore, the Environment Agency's Pollution Prevention Guidance, alongside the COSHH risk assessment will be followed during the handling, storage and use of such materials.

7.3 Storage of waste
Waste is to be stored, managed and segregated internally, wherever possible in waste bags. This will be collected from time to time and loaded onto 20 ton waste lorries in order to ensure that it is disposed of correctly while striving to achieve the sites targeted 95% recycled waste. Priority will be given at all times to the general public and the adjacent vehicle movements.
Plant and equipment will be stored in areas on site which are less susceptible to possible pollution incidents, or on dedicated areas of hard standing. All static plant shall be placed with drip trays to prevent ground contamination as a result of oil spills and leaks.
Refueling of plant will be undertaken in designated areas on an impermeable surface and away from any drains or watercourses. A spill kit will be available for use in the event of an accident. Refueling will always be carried out in a controlled manner with absorbent materials available to clean up any spillages. All deliveries on site will be supervised by a responsible person and storage tank levels will be checked before and during delivery to prevent overfilling and that the produce is delivered to the correct tank.
A bunded storage area will be located on-site and will be provided for the duration of the construction period for the storage of oils, fuels, chemical and other hazardous construction materials. The base and bund walls of the storage area will be impermeable to the material stored and will be of adequate capacity to comply with best practice guidelines.
Storage containers will be clearly labelled and a notice displayed requiring that valves and trigger guns be locked when not in use. Storage areas and containers will be protected against vandalism and unauthorised interference, and will be turned off and securely locked when not in use.
Leaking or empty oil drums will be removed from the Site immediately and disposed of via a suitable licensed waste disposal contractor.
Procedures will be set in place to respond to any emergency incidents which may occur on the Site. All appropriate staff will be trained and made aware of the spill contingency procedures set in place. In the event of an incident the Environment Agency will be notified immediately.

8.0 Contaminated Land

Soil testing which has been carried out on site during the ecological survey confirmed an absence of contaminated land within the site boundary.

It is possible that areas of localised contamination may be encountered during the site preparation and ground works phase that have not previously been identified. Should any areas of contamination be encountered, these will be rectified in accordance with best practice guidelines published by the HSE.

All the workers on-site will be made aware of potential contaminates on the Site and will use best practice techniques throughout the project which are to be detailed within subcontractor specific method statements.

The operation of construction vehicles and the handling, use and storage of hazardous materials will be undertaken as follows:

- Construction vehicles and plant will be regularly maintained and supplied with spill kits and drip trays to reduce the risk of hydrocarbon contamination
- All plant will be noted within the PEWER register and will be subject to regular thorough examination
- Refueling should be undertaken in specified areas where there is non-permeable hard standing and drainage passes through an oil interceptor prior to discharge. Drip trays will be installed to collect leaks from diesel pumps;
- The handling, use and storage of hazardous materials will be undertaken in line with the Environment Agency's Pollution Prevention Guidelines (e.g. PPG2 Above Ground Oil Storage Tanks);
- Adequate bunded and secure areas with impervious walls and floors, with a capacity of 110% of substance volume, are to be provided for the temporary storage of fuel, oil and chemicals on site during construction;
- Provision of spill containment equipment, such as specific spill kits in areas containing the potential for a discharge of contaminants along with appropriate training on their use

The site manager will maintain a COSHH register and risk assessment, suppliers must send data sheets for every hazardous substance to the Site. The site manager must ensure that relevant COSHH information of the storage, use and disposal is distributed to the operatives who may require their use during the course of their duties.

9.0 Artificial Lighting

- The control of artificial lighting is to be in place during all phases of the works
- Lighting should not be near or directed towards neighbours properties on site. Lighting should also be directed downwards as it may disrupt the commuting of bats
- Where possible no work outside of the specified working hours will be undertaken at the site during the construction period and careful selection of the location of temporary floodlights and construction compound will be undertaken for each phase
- Lighting is to be switched off when not required for construction activities or for the safety of site operatives
- Glare caused by poorly directed security and floodlighting will be minimised by positioning lights to less than 70 degrees and directing lights away from site boundaries;
- Sky glow will be minimised by the use of modern light fittings with appropriate shields to avoid light spilling upwards;
- Where possible, temporary lighting will be avoided in the vicinity of areas identified as being of ecological interest.

10.0 Emergency procedures

The main priority is to avoid spillages and emergency situations. This should be achieved through minimising the risk of spillage at the source through avoiding the use of polluting materials where possible. Where the use of polluting materials is unavoidable, then suitable containment in a sensible location is essential.

In addition, pathways for pollution to escape should be removed and/or easily intercepted. This can be achieved through isolating polluting materials from drainage infrastructure and ensuring that there are appropriate methods for intervention and containment such as spill kits and bunded containers.

A set of standardised emergency response procedures will govern the management of environmental incidents. Construction contractors will be required to adhere to and implement these procedures and ensure that site operatives are familiar with the emergency arrangements.

The emergency procedure will contain emergency phone numbers and the method of notifying local authorities and statutory authorities. Contact numbers for key personnel will also be included.

On site storage of chemicals, fuels, etc., will be checked regularly and any container found to be leaking will be removed immediately. Oils should be stored in accordance with any regulations pertaining to the storage of potentially polluting materials

Refueling, oiling and greasing of plant will:

- Take place above a drip tray or on impermeable hard standing;
- Be located away from surface water drains; and
- Be supervised at all times.

Spill kits with instructions should be located near areas used for refueling. If a bowser or tanker is used for refueling, then the bowser or tanker should carry an appropriate spill kit. All staff will be trained in the use of spill kits and the correct disposal of used spill control material. Guidance is available from the Environment Agency's Pollution Prevention Guidelines, PPG7: Refueling Facilities.

Use of detergents should be avoided as they may compromise the effectiveness of any oil separators or interceptors. A site drainage plan will be kept showing the water interests within the vicinity of the Site. This plan will include the location of both foul water drains and surface water drains. Spill kits will be kept on site. The precise contents and capacity of the spill kits will depend on the details.

Health and Safety procedures and processes should be established to minimise the risk of, and the appropriate management of, a fire emergency. Consideration should also be given to the appropriate management of any subsequent fire water (the run-off generated from firefighting activities), such as temporary storage on-site. This water should be considered contaminated and it has the potential to cause pollution. In developing strategies for dealing with a fire emergency, consideration should be given to minimising the risk to the environment associated with fire water.

11.0 Noise abatement plan
11.1 Noise abatement objectives
- Noise level monitoring is to be consistent
- Overall decibel levels for the site are to remain the recommended levels stated within the HSE guidelines
- No complaints received from sensitive reactants

11.2 Noise controls
The construction works will comply with *BS 5228: Noise and Vibration control on construction and open sites* and the following generic mitigation measures are likely to be adopted:
- Modern, silenced and well maintained plant will be used at all times, conforming appropriate legislation.
- Percussive plant will be avoided where alternative non-percussive plant is available for any given task
- Equipment and vehicles to be shut down when not in use;
- Semi-static equipment is to be sited and oriented as far as is reasonably practicable away from noise sensitive receptors and will have localised screening if deemed necessary;
- Where possible, mains electricity to be used instead of generators;
- Due to the nature of the development, piling will not be required and as such the associated noise and vibration generated by this activity are negated through exclusion
- Burning equipment will be used in preference to cold cutting where possible;
- Where possible, crunchers should be used in preference to pneumatic breakers. Where breakers are used, they should be of a suitable size for the task.
- Large concrete pours (for which an extension of working hours may be necessary) will commence as early as possible within normal working hours so that activities can be completed within normal working hours as far as possible;
- Where necessary, any permanent noise barriers would be constructed as early as is reasonably practicable
- Cutting operations or other noisy tasks will be minimised through off-site fabrication where practicable. Localised shielding of noisy operations may be required;

Wherever practical, noisy works, which are audible at the site boundary, will be undertaken during the following hours - between 08.00 and 17.00 Monday to Friday and between 09.00 and 13.00 on Saturdays;
Routes and programming for the transport of construction materials, fill, personnel etc are to be carefully considered in order to minimise the overall noise impact generated by these movements;
Personnel will be instructed on Best Practice Mitigation Measures to reduce noise and vibration as part of their site induction training;
Shouting and raised voices shall be kept to a minimum. Use of radios is to be prohibited except where two-way radios are required for reasons of safety and communication; and
Strict controls on the sequencing of works and providing noise protection would be developed on an activity by activity basis
Decibel meters will be distributed around the site compound, especially in areas that are likely to be subject to noisy works. These meters are to be monitored for excessive levels of disruption. Especially in the vicinity of sensitive reactants to the site.

Table 4.1 shows those processes that are required to be conducted during the development that has the potential for an increase in the ambient noise levels of the site. The table demonstrates the nature of the risk to noise pollution and the control measures associated with reducing these to an accepted level in accordance with the sites approved risk appetite.

Table 4.1

Task	Risk	Control
Install accommodation	Noise from Vehicular movement	No vehicle idling, use of modern equipment and methods
Excavations	Noise from plant operation	Limited operational hours, phased works
Concrete Pour	Noise from plant	Restricted use of concrete pumps, large batch pours to avoid repeated exposure
Erection of Scaffold	Potential percussion from tools	Hand tools to be used, communication via short wave radio
Concrete frame	Noise from plant, erection process	Controls applied in conjunction with results from sound monitoring
Brickwork / blockwork	Noise from plant, erection process	Controls applied in conjunction with results from sound monitoring
Erection of Roof coverings	Noise from vehicular operations	Limited hours of operation, modern equipment following approved method statement
Excavations for Pad foundations	Noise from vehicular operations	Limited operational hours, phased works. Limited use of percussive equipment
Formation of slabs	Low level noise	Controls applied in conjunction with results from sound monitoring
Installation of drainage	Low level noise	Controls applied in conjunction with results from sound monitoring

12.0 Dust and air quality management plan
12.1 Air Quality objectives
- Air quality monitoring is to be carried out regularly on the site
- Air quality controls should be followed
- Dust suppression measures are to be utilised

12.2 Air Quality controls
Air quality on the site is to be closely monitored throughout the course of the development. Throughout the project there will be activities that may have the potential to create dust or generally release emissions which may reduce air quality. Where necessary, additional measures will be developed to ensure that the effects of development related dust is minimised further.
The main sources of particle emissions during construction activities include:
- Haulage routes, vehicles and construction traffic;
- Materials handling, storage, spillage and disposal;
- Site preparation, earthworks and restoration after completion;
- Construction and fabrication processes; and
- Internal and external finishing and refurbishment.

In addition to monitoring, a number of other mitigation methods will be implemented to minimise the nuisance and impact arising from dust and smoke produced during construction.
These include:
- Vehicles carrying loose aggregate and workings will be sheeted at all times
- Implementation of design controls for construction equipment and vehicles and the use of appropriately designed vehicles for materials handling
- Completed earthworks will be covered, seeded, or vegetated where appropriate and practicable in relation to the phasing of the development
- Regular inspection and, if necessary, cleaning of local highways and site boundaries to check for dust deposits (and removal if necessary)
- Use of dust-suppressed tools or dust extraction for all operations
- Ensuring that all construction plant and equipment is maintained in good working order and not left running when not in use
- Restrict on-site movements to designated areas within the site and not near the perimeter, if possible
- No unauthorised burning of any material anywhere on site
- Use of clean generators, using LPG gas as a fuel source in combination with solar panels as a cleaner alternative to traditional diesel generators

13.0 Appendices