Outline Construction Environmental Management Plan

Woodside Link

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### Document Control Sheet

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1 Introduction

1.1 General

1.1.1 Amey have been commissioned by Central Bedfordshire Council to produce an outline design and submit an application for a Development Consent Order for the Woodside Link project. This document, the Outline Construction Environmental Management Plan (OCEMP), has been produced to describe how a detailed, site specific CEMP will be developed to avoid, minimise or mitigate any construction effects on the environment and the surrounding community. An Environmental Statement (ES) has been produced, describing and assessing the effects of the construction and operation of the road on the environment, this OCEMP gives detail on how some of those effects will be managed.

1.1.2 This OCEMP has been developed to provide the management framework needed for the planning and implementation of construction activities in accordance with environmental commitments identified in the ES and in legisatory requirements.

1.1.3 The adopted construction stage CEMP should be considered by the Principal Contractor as a ‘living’ document with reviews being undertaken at pre-determined intervals and data added as appropriate. The measures identified in the CEMP should be:

- Viewed as mandatory and common practice on-site.
- Embedded within the company’s policies and site procedures, e.g. within an existing environmental management system framework.

1.2 Purpose

1.2.1 The purpose of the adopted CEMP is to:

- Identify stakeholder requirements.
- Set out the Environmental Management System requirements (in line with ISO 14001).
- Ensure compliance with current legislation.
- Effectively minimise any potential adverse environmental effects during construction including how site specific method statements will be developed to avoid, minimise and mitigate construction effects on the environment.
- Translate committed mitigation, set out in the ES, into committed site procedure.

1.3 Structure

1.3.1 This OCEMP has been drafted during the planning/outline design phase to ensure that the necessary measures become incorporated as the project progresses.

1.3.2 Prior to construction, this OCEMP may be revised to address all construction issues and ensure that any residual effects following the design process are mitigated as far as reasonably practicable. The document is to be reissued by the Contractor as the Construction Environmental Management Plan (CEMP).

1.3.3 Section 2 provides a summary of the works and principal components. Section 3 sets out the Environmental Management Framework. Section 4 sets out the legal and other requirements. Section 5 addresses operational control requirements. Section 6 provides an outline pollution control and contingency plan. Section 7 details the Handover requirements.
2 Scope of Work

2.1 Location

2.1.1 The Woodside Link scheme is a highway construction project that aims to provide a direct link from the Woodside industrial area of Houghton Regis, directly to a new junction (J11A, to be provided by others) on the M1 motorway. Currently, heavy goods traffic has to take an indirect route to the motorway through a built-up area.

2.1.2 The new section of road passes across a predominantly flat area of farmland and scrubland used by walkers. From its southern end, where the road will be located in a narrow, undeveloped corridor with overhead power lines, the road crosses the Houghton Brook twice (with one crossing being by Parkside Drive, a side road connecting with the scheme), passing through a broad area of farmland and nearing the M1, then turning north-west, running parallel to the motorway before connecting with the new junction.

2.2 A Description of the Works

2.2.1 The road will be constructed mainly on low embankment, in order to ensure that it is not susceptible to flooding and it will incorporate two structures crossing the Houghton Brook as well as roundabouts and associated footways and cycle ways. The road will be lit throughout.

2.2.2 A number of other significant projects are likely to be constructed around the same time as the scheme:

- The A5 – M1 Link will provide the new Junction 11A on the M1 and also the northern connecting point for the scheme.
- The Houghton Regis North development that will construct housing, infrastructure and employment facilities adjacent to the Woodside Link.
- The Environment Agency Flood Storage Area, a large depression designed to store flood water to alleviate flooding downstream from the site.
- UK Power Networks project to replace some overhead high voltage power lines on the site with underground cables.

2.2.3 Minimal demolition will be required for the construction of the scheme and there are no protected ecological or heritage sites within close proximity of the scheme site, however, there are sensitive environmental receptors within or adjacent to the site, these include:
- Local housing, within 50m at the southern end.
- The Houghton Brook watercourse.
- A principal groundwater aquifer.
- Chalton Cross Farm

2.2.4 The main construction activities are:
- Vegetation clearance and topsoil stripping.
- Site establishment.
- Partial demolition of Chalton Cross Farm.
- Earthworks construction, including movement of materials.
- Construction of highway, including roundabouts and junctions.
- Tying in the new road to the new motorway junction in the north and the existing highway network in the south.
- Construction of structures at locations where the road crosses Houghton Brook.
- Diversion of the Houghton Brook.
2.3 Construction Programme

2.3.1 The current programme is for an application for a Development Consent Order to be made in the spring of 2013. Subject to completion of the statutory process, any required advance mitigation measures (including archaeological works) would then commence in 2014, and be completed by 2015. Construction of the new road would commence in 2014 at the north end of the scheme (to tie in with construction of the A5-M1 Link) and proceed to the south with a completion date in 2017.

2.3.2 Working hours at the site will be determined by agreement with the local authority and will be constrained by the requirement to work close to housing in some areas. It is anticipated that other projects, referred to above will be under construction on site at or around the same time as the Woodside Link, however, these other schemes are subject to separate planning applications and will be managed separately.

2.4 Equipment and Plant

2.4.1 The Contractor will identify the equipment and plant to be used, including type, size and expected number. Plant used for the scheme is likely to comprise conventional demolition, earthworks and highways construction plant.
3 Environmental Management Framework

3.1 Environmental Policy

3.1.1 The project will be carried out in accordance with the policies / objectives listed below:
- Central Bedfordshire Council’s Environmental Policy and procedures.
- The designer’s environmental policy and procedures.
- During the pre-construction and construction phases, management of the project will also need comply with the Contractor’s Environmental Policy and procedures.

3.2 Environmental Aspects and Impacts

3.2.1 A schedule of potential significant environmental effects relating to each activity will be developed by the Contractor and included within the CEMP. This information should be drawn on by the Contractor when developing the schedule of significant effects prior to construction.

3.2.2 The schedule should be reviewed and updated at each project phase or where changes are made to the project scope, changes should be reflected in the CEMP and Impacts and Aspects register.

3.3 Objectives and Targets

3.3.1 Environmental objectives for the construction phase will be developed and should refer to legal compliance and environmental good practice, these may include:
- Zero pollution incidents.
- Minimise waste sent to landfill.
- Minimise disruption to residents (and therefore complaints).
- Protect and where possible enhance biodiversity.
3.3.2 Procedures for monitoring construction processes against the project environmental objectives will be proposed by the Contractor and agreed with the Client Project Manager.

3.4 Structure and Responsibilities

3.4.1 A management structure that includes an organisational chart encompassing all staff responsible for environmental work is to be included within the CEMP. This will set out the respective roles and responsibilities with regard to the environment and identify the nominated Construction Environmental Manager. Illustrative key roles and responsibilities are set out in Table 1 below.

Table 1: Roles and Responsibilities

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibility</th>
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<tbody>
<tr>
<td>Construction Manager</td>
<td>Responsible for management of the construction phase of the project. Has overall responsibility for the environmental performance of the project.</td>
</tr>
<tr>
<td>Site Materials &amp; Waste</td>
<td>Responsible for implementing the Site Waste Management Plan during the construction phase to ensure that waste is disposed of legally, economically and safely.</td>
</tr>
<tr>
<td>Manager</td>
<td></td>
</tr>
<tr>
<td>Construction Environmental</td>
<td>Compliance with environmental legislation, consents, objectives, targets and other environmental commitments, including those arising from the Environmental Statement.</td>
</tr>
<tr>
<td>Manager</td>
<td></td>
</tr>
<tr>
<td>Site staff</td>
<td>To receive general environmental awareness training, and undertake work in accordance with Method Statement Briefings and toolbox talks. Trained personnel to manage particular tasks such as refuelling plant and equipment, managing the stores, water quality monitoring and supervising the segregation and collection of waste.</td>
</tr>
<tr>
<td>Client Project Manager</td>
<td>To ensure that the Contractor complies with all the relevant legal requirements, commitments and targets agreed for the scheme.</td>
</tr>
<tr>
<td>Designer</td>
<td>To provide information relevant to construction that may assist the Contractor to manage environmental aspects of the scheme.</td>
</tr>
<tr>
<td>Community Liaison Officer</td>
<td>Communications with the public and interested parties, outreach and education, where appropriate.</td>
</tr>
</tbody>
</table>
3.5 Training Awareness and Competence

3.5.1 Site staff shall be competent to perform tasks that have the potential to cause a significant environmental impact. Competence is defined in terms of appropriate education, training and experience. Project specific training is required.

3.5.2 Environmental awareness and training shall be achieved by:

- Site induction, including relevant environmental issues.
- Environmental posters and site notices.
- Toolbox talks, including instruction on incident response procedures.
- Key project specific environmental issues briefings.

All managers and supervisors will be briefed on the CEMP.
3.5.3 Method Statements will be prepared for specific activities prior to the works commencing and will include environmental protection and mitigation measures and emergency preparedness appropriate to the activity covered. The Construction Environmental Manager will review key Method Statements prior to their issue.

3.5.4 Method Statement briefings will be given before personnel carry out key activities for the first time.

3.6 Communication

3.6.1 The CEMP will be distributed to the project team, including sub-contractors, to ensure that the environmental requirements are communicated effectively. Key activities and environmentally sensitive operations will also be briefed to staff and Contractors. Project, client and company environmental policies, where available, should be displayed on site.

3.6.2 The Contractor will define procedures for internal and external communication. The client may require that any communication with external parties such as environmental regulators or the public is undertaken through a nominated client representative.

3.6.3 The agreed CEMP will be published on the project website.

3.6.4 During the construction phase, internal communication will include regular progress meetings, which should cover:

- Training undertaken
- Progress reports
- Inspections, audits and non-conformance
- Complaints received
- Visits by external bodies and the outcome or feedback from such visits
- Objective / target achievement, including reporting on environmental performance.
External communication, including letter drops or meetings, and liaison with statutory authorities will be overseen by the Client Project Manager.

3.7 Complaints, Compliments and Inquiries

3.7.1 A Community Liaison Officer will be available on site and a telephone number will be published for use by members of the public wishing to complain, provide other feedback, or make enquiries.

3.7.2 All complaints or information requests will be made aware to the Client Project Manager and will be logged promptly.

3.7.3 Noise may be a key subject of complaint where construction works take place close to residential areas. Working hours, plant types, construction methods and noise mitigation measures are likely to be subject to Section 61 consent, under the Control of Pollution Act which is granted by the local authority. Close liaison with the local authority environmental health team is likely to be necessary to develop mitigation measures.

3.7.4 Liaison will also be undertaken with local councillors and town/parish councils as representatives of the local community to discuss and address any issues.

3.7.5 The local authority environmental health team may also be the first to be contacted by residents affected by noise and will require to be kept appraised of progress, programme and upcoming phases of works that may give rise to disturbance in order that they can respond to complainants.

3.7.6 Careful monitoring of complaints received, including recording details of the location of the affected party, time of the disturbance and nature of the noise can assist with managing the works to reduce the likelihood of further complaint.

3.8 Checking

3.8.1 Environmental monitoring will be undertaken in order to provide information to be taken into account during construction and to feed back into the CEMP and
method statements, and to evaluate the environmental effects of the construction process.

3.8.2 The Contractor’s Environmental Advisor is responsible for establishing a programme of environmental monitoring. This will include monitoring against any consent requirements and objectives and targets.

3.8.3 Pre-construction monitoring should be considered, in order to set a baseline against which construction effects can be assessed. The ES should be referred to in establishing baseline conditions.

3.9 Evaluation of Compliance

3.9.1 The Contractor will define procedures for regular site surveillance to evaluate performance against legal requirements and the requirements of the CEMP.

3.10 Non-conformance and Corrective / Preventative Action

3.10.1 Procedures for addressing non-conformance and corrective actions are to be provided. These may include, for example:

- A Non Conformance Report (NCR) that will be raised to record any environmental incident and work that has not been carried out in accordance with the CEMP or Method Statement.
- A Corrective Action Report (CAR) that will be raised where a deficiency is identified as a result of monitoring, inspection, surveillance and valid complaints.
- Any actions identified shall nominate an owner to follow through the action to be taken, along with a specified timescale for it to be closed out.

3.11 Control of Records

3.11.1 Environmental records, including waste management records, will be maintained in accordance with the respective company procedure and legal requirements. The records are to be maintained, in either hard copy or
electronic format as required by the individual procedure that the records relate to, in such a way that they are readily identifiable, retrievable and protected against damage, deterioration or loss. The procedure that the records relate to also specifies the retention time for the records and who has the authority to dispose of them.

3.12 Management Review

3.12.1 The outputs from section 3.8 Checking, will be reviewed on an on-going basis at progress meetings to ensure continual improvement in accordance with the BS EN ISO 14001 model.

3.12.2 Review of the CEMP will be carried out at each project phase and where changes are made that affect the scope of the works to ensure its continuing relevance and accuracy.
4 Legal and Other Requirements

4.1 Legislation

4.1.1 A schedule of appropriate environmental legislation and good practice that will be adhered to is to be included within the CEMP.

4.2 Consents and Licenses

4.2.1 A register of permissions and consents that may be required, with responsibilities allocated and a programme for obtaining them is to be developed by the Contractor. Environmental consents and licenses that may be required to enable the construction works are given in Table 2.

Table 2: Environmental Consents & Licences

<table>
<thead>
<tr>
<th>Legislation</th>
<th>License / permission requirement</th>
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<tbody>
<tr>
<td>Planning Act 2008</td>
<td>Consent for the scheme. Any requirements attached to the consent will need to be adhered to.</td>
</tr>
<tr>
<td>Control of Pollution Act 1974</td>
<td>Prior consent to carry out construction works from the Local Authority under Section 61.</td>
</tr>
<tr>
<td>Badgers Act 1992</td>
<td>A license is required from Natural England for works within 30 m of a badger sett.</td>
</tr>
<tr>
<td>Conservation (Natural Habitats &amp; c.)</td>
<td>A license may be required if protected species are disturbed by a development e.g. bats</td>
</tr>
<tr>
<td>Regulations 1994</td>
<td>Environment Permitting Regulations 2007 It is not anticipated that a waste management permit will</td>
</tr>
<tr>
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<td>be required as part of the works. However certain activities are exempt from waste management</td>
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<td></td>
<td>licensing and must be notified to the Environment Agency in advance.</td>
</tr>
</tbody>
</table>
5 Operational Control Procedures

5.1 General

5.1.1 Specific management proposals to be included in the CEMP are to be developed relating to the following topics:

- Site establishment
- Boundary fencing
- Protection of existing environmental features
- Access routes/points
- Site housekeeping
- Water quality and drainage
- Nature conservation
- Compensation & enhancement
- Landscape design
- Noise and vibration
- Air quality
- Archaeology and cultural heritage
- Soils
- Contaminated land
- Waste
- Energy
- Materials
- Transport
5.1.2 Outline management proposals for each of these topics are described in sections 5.2 to 5.19 below.

5.2 Site Establishment

5.2.1 Facilities will be established to minimise risk to the environment and promote efficient use of resources. This will include:

- Temporary protective fencing will be erected to delineate the working areas, site boundaries and protect sensitive features from disturbance.
- Temporary offices, welfare facilities and secure storage of equipment.
- Any necessary fuel and oil will be stored in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001. Refuelling will only be undertaken in a designated area, designed to contain contaminated run-off, and by trained personnel. Emergency spill kits are to be readily available.
- Materials storage areas will be set up and managed.
- Waste segregation areas will be established utilising containers of an appropriate design to ensure that no waste can escape.
- Sewerage effluent from the site office and welfare facilities will be removed from site using a vacuum tanker, if no sewer connection is available.
- Temporary lighting will be designed to minimise spillage of light, and oriented away from residential properties.
- The temporary site compound will be reinstated to its former condition, suitable for agricultural use, following completion of the project.
5.3 **Boundary Fencing**

5.3.1 The site boundary will be fenced as necessary for security, to prevent windblown litter or waste from polluting the wider environment and to exclude species such as badgers that may be trapped or harmed in excavations or around plant or materials.

5.4 **Protection of Existing Environmental Features**

5.4.1 Temporary fencing will be provided to protect existing environmental features to be retained, including existing trees which will be protected in accordance with BS5837 2012 - ‘Trees in relation to design, demolition and construction - Recommendations’. The fencing will be established prior to the start of the construction works. The location will be agreed on site with the Construction Environmental Manager and client. The fencing will be of sufficient durability to be in place for the duration of the works.

5.5 **Access Routes / Points**

5.5.1 The Contractor will define the method of delivery / removal of materials and plant from the site, including the identification of access routes for deliveries and personnel.

5.6 **Site Housekeeping**

5.6.1 A ‘good housekeeping’ policy will be adopted across the site. This will include the following requirements:

- No fires on site
- Considerate behaviour of all site staff, including on the highways
- Maintenance of staff welfare facilities
- Removal of food waste and other rubbish at frequent intervals
- Maintenance of road cleanliness surrounding the site
5.7 Water Quality and Drainage

5.7.1 The Contractor shall adopt good construction management practices that will reduce the risks of accidental discharge of pollutants into streams, rivers or ponds, or contamination of groundwater. Such practices shall be incorporated into the CEMP and adhered to (see also section 6 below and Chapter 6 of the ES).

5.7.2 The area of the scheme is underlain by chalk deposits, which comprise a principal aquifer. Groundwater protection zones are defined by the Environment Agency to protect areas of groundwater abstraction. The works overlie a Nitrate Vulnerable Zone and there are thought to be unregistered abstraction sites in the area.

5.7.3 A pollution control and contingency plan will be prepared to set out the requirements for pollution prevention during the works. See Section 6 for the outline plan.

5.7.4 As work is being undertaken above an aquifer, environmentally sensitive lubricants, such as synthetic non-toxic biodegradable hydraulic fluids, will be used. Biodegradable oils must be stored, handled and disposed of as any other oil and must not be disposed to surface water or foul drains.

5.7.5 Drainage during the construction phase will use the permanent drainage system where possible.

5.7.6 The Contractor is required to give consideration to minimisation of water use during the construction phase.

5.7.7 The Contractor shall identify or verify the extent and status of all ground waters below land used for the works, including any temporary works and land used for the extraction of materials or tipping. The Contractor shall identify or verify the extent and categories of any source protection zones for abstraction sources for public potable water supplies within this land.
5.7.8 The works shall comply with the “Policy and Practice for the Protection of Groundwater. Environment Agency; TSO 1998 ISBN 0-11-310145-7”.

5.7.9 Authorisations for the use in earthworks of borrowed or waste materials may be required under The Groundwater Regulations 1998, or under other relevant legislation. The Contractor shall consult the Environment Agency and shall apply for and comply with such authorisations as they advise are necessary.

5.7.10 The Contractor shall consult the Environment Agency and agree with them any special measures to be taken within source protection zones (if present) in respect of the excavation and tipping of materials, the siting of Contractor's facilities and measures to prevent the spillage of potential pollutants.

5.8 Nature Conservation

5.8.1 Plans for managing any protected species are to be finalised, implemented and monitored. The Construction Environmental Manager is required to monitor ecological measures and ensure protected species are safeguarded.

5.8.2 Ecological surveys have been undertaken to establish whether protected species use the habitat types found within the site such as:

- Semi-improved grassland
- Chalton Cross Farm buildings
- Houghton Brook

5.8.3 There are potentially protected species using the site, these include:

- Nesting birds
- Bats, roost identified in the farm buildings
- Water voles using the Houghton Brook
- Badgers, activity identified on arable land

Specific mitigation measures to prevent adverse impacts on protected species and high quality habitats are set out below.
5.8.4 Site clearance will in general take place outside the bird breeding season (late February to early August). If any clearance is necessary within the bird breeding season then it will only take place if the areas concerned have been checked by a competent ecologist and found not to contain any breeding birds.

5.8.5 Bats are protected under the Conservation (Natural Habitats, &c) Regulations 1994 and the Wildlife & Countryside Act 1981. Demolition may need to be supervised by an ecologist and/or undertaken under control of a European Protected Species licence from Natural England.

5.8.6 Badger setts have been recorded on Chalton Cross Farm, in the vicinity of the scheme site and further survey is required to determine whether a licence may be required to work near a badger sett.

5.9 Compensation & Enhancement

5.9.1 Some habitat will be lost due to the construction of the road and the Houghton Brook will be affected. To mitigate loss and disturbance, drainage design and landscape measures have been developed to enhance habitats. Mitigation measures aim:

- To compensate for any adverse effects of the scheme.
- By the use of locally appropriate species, to create semi-natural habitats that reflect and complement those existing in the surrounding area.
- To provide habitat linkages between areas of the scheme and between adjoining areas, reducing habitat fragmentation.
- To contribute to appropriate local Biodiversity Action Plan (BAP) targets.

5.10 Landscape Design

5.10.1 The design has aimed to retain as much existing vegetation as possible given the location of the works.

5.10.2 A scheme of landscaping will be included with the project proposals in order to mitigate land take, limit habitat loss and to reduce visual intrusion. A section of
the Houghton Brook will be diverted as part of the scheme and a borrow pit is included; these works will include a significant element of landscape design.

5.10.3 A Landscape and Ecology Management Plan will be produced as part of the detailed design for the scheme. An outline of the plan is provided as Appendix 10.2 to the ES.

5.11 Noise and Vibration

5.11.1 The Contractor shall prepare a Management Plan for the control and monitoring of noise and vibration (see also Chapter 13 of the ES).

5.11.2 The Contractor shall make any necessary separate application(s) to all relevant Local Authorities, under Section 61 of the Control of Pollution Act 1974, and obtain consent(s) to undertake the works. Application(s) shall be made at least 28 days before commencement of any activity or works, which may cause noise and vibration disturbance. The application(s) shall include the Contractor’s proposals for minimising noise from the construction works to the level(s) agreed with the Local Authority. The Contractor shall comply with the terms of the consent(s) so obtained. Notwithstanding the terms of any consent obtained under Section 61 of the Control of Pollution Act 1974, the Contractor is required to comply with the provisions of the statutory code of practice BS5228: Noise Control on Open and Construction Sites. The Contractor shall provide a draft copy of the Section 61 Agreement to the Client Project Manager for comments and a copy of the final agreement.

5.11.3 Noise and vibration will be controlled and limited so far as reasonably practicable so that sensitive receptors are protected from excessive noise and vibration arising from construction.

5.11.4 Certain activities may extend outside normal working hours to enable safe working or as a result of unforeseen events. The Environmental Health Team will be contacted to agree the activities required.
5.11.5 The principles of Best Practicable Means will be employed to minimise noise levels during construction. Recommendations for the control of noise and vibration on construction sites are set out in BS 5228. The following measures will be used where appropriate:

- Hydraulic plant will be used in preference to pneumatic plant where possible.
- Plant and equipment will be maintained in good working order and fitted with silencers and acoustic panels where appropriate.
- All plant will be shut down or throttled back between periods of use.
- Methods used for concrete breaking and demolition should be carefully considered, non-percussive means should be used where possible.
- In sensitive locations, acoustic enclosures may be required for fixed plant such as generators.
- ‘White noise’ type reversing warnings should be used on mobile plant in preference to ‘bleepers’, in order to minimise intrusion.

5.12 Air Quality

5.12.1 The Contractor shall prepare a Management Plan for the control and monitoring of dust, smoke and any other airborne pollutants (see also Chapter 12 of the ES).

5.12.2 The Contractor shall, prior to the commencement of the works on site, make any necessary application(s) for authorisation to the relevant Pollution Control Authority (Local Authorities and the Environment Agency) under the terms of the Environmental Protection Act 1990 and the Pollution Prevention and Control Act 1999.

5.12.3 Emissions to the air including dust and exhaust fumes can be caused from certain construction activities, including:

- Earthworks / excavation / demolition
- Use of diesel powered plant and equipment
5.12.4 The site is close to residential properties. Best Practicable Means shall be employed where appropriate.

5.12.5 All necessary and practicable measures to control dust emissions through good housekeeping and site operational practices shall be carried out including:

- Sheeting of vehicles: all HGVs carrying loose material capable of spillage or which has the potential to give rise to dusty emissions from the vehicles during transit shall be sheeted. This requirement shall be enforced by the Contractor and any transgressions shall be recorded in a log book by the Contractor with details of measures to be taken to prevent further occurrences. The log book shall be available for inspection by the Client Project Manager and local authority at any time during working hours.

- Compound: an area of hard standing of reasonable size shall be provided by the Contractor around site offices and over vehicle management areas, so that dust will be kept to a minimum by appropriate control methods. Drainage arrangements will be included where necessary. The area will be swept at least once every two days or more frequently as the Client Project Manager considers appropriate.

- Water bowsers/sprays: Water sprays shall be applied to all demolition operations as the Client Project Manager considers appropriate.

- Prevention of wind-blown dust arising from storage mounds: storage mounds shall be profiled to reduce erosion where the nature of the material could lead to it being rain washed or windblown. Mound surfaces shall be kept sufficiently damp to prevent windblow unless and until the surface is sprayed, sealed or stabilised by means of vegetation. Materials that have the potential to give rise to dust emissions shall be stored as far away from the site boundaries as is reasonably practicable.

- Dust collection during cutting and grinding works: if this is not carried out in an enclosure, tools shall be used that are fitted with dust collection devices (excluding small tools which require a continuously wet working surface).

- Fires: these will be prohibited on site.
- Compliance by construction vehicles with emissions legislation, servicing and MOT requirements: all vehicles regularly used on site shall comply with the relevant emissions standards and shall be serviced in accordance with the manufacturer’s recommendations. MOT and service documentation shall be produced for the local authority’s inspection. The Contractor is encouraged to use vehicles and plant that meet the latest emissions regulations.

- Engine idling time: No construction plant or vehicle shall leave its engine running when not directly in use, except where the Client Project Manager considers that there are operational or other reasons to justify an exception.

5.12.6 The Contractor shall keep a log book available for inspection by the local authorities, in order to record the following matters:

- Any complaint relating to emissions alleged to be due to construction activity received from a local resident or business, including date and nature of the complaint and any measures taken as a result of that complaint;

- The date and location of cleaning of paved areas and off-site roads; and

- The date and vehicle registration number of any construction vehicle that is observed carrying material that has the potential to release dust during transit and is not covered. Details of measures taken to prevent further occurrence shall be included.
5.13  **Archaeology and Cultural Heritage**

5.13.1  No designated sites of archaeological sensitivity have been identified on the route, however the Contractor will be required to have measures in place to manage the risk of adversely affecting historic resources, including reporting any potential finds and how potential archaeological investigations or recording would be accommodated in the programme.

5.14  **Soils**

5.14.1  Soil resources will (by volume) constitute the dominant material used in the construction of the scheme and in order to maximise the potential resource available on site and minimise waste needing to be disposed, careful handling of soils is critical.

5.14.2  A Soil Resource Plan, based on Defra guidance ‘Construction Code of Practice for the Sustainable Use of Soils on Construction Sites’ will be developed for agreement prior to construction. The Soil Resource Plan will describe the measures to be taken to prevent loss of soils or deterioration in their quality resulting from soil handling or other construction activities such as traffic movement. Measures may include:

- Comprehensive survey, prior to works of the soils and soil types present on site, in order to quantify material types and plan their use and handling.
- Only stripping, stockpiling or placing soil in the driest condition possible and using tracked equipment where possible to reduce compaction.
- Confining traffic movement to designated routes.
- Keeping soil storage periods as short as possible.
- Clearly defining stockpiles of different soil materials and minimising mixing.
5.14.3 See also Technical Appendix 11.1 to the ES, the Agricultural Land Quality and Farming Circumstances report.

5.15 Contaminated Land

5.15.1 Contamination risk assessment has been undertaken and minor areas of suspected contamination have been identified at Chalton Cross Farm.

5.15.2 Proposals are required for dealing with areas of contamination, and these proposals are to include validation of the effectiveness of any remediation.

5.15.3 A comprehensive programme of materials testing will be required to demonstrate that earthworks materials are to highways standards and this testing programme should be extended to cover contamination testing of materials where appropriate.

5.16 Waste

5.16.1 The Clean Neighbourhoods & Environment Act 2005 established powers to create Regulations to require the mandatory production of Site Waste Management Plans (SWMP) for construction projects. SWMPs are mandatory for all construction projects over £300,000.

5.16.2 An outline SWMP will be drafted at the detailed design/construction stage to comply with the requirements of the Regulations.

5.16.3 The Contractor shall, in order to reduce the need for waste disposal, minimise the generation and environmental impacts of wastes arising during the works and shall maximise opportunities for the re-use and recovery of wastes. The Contractor shall include within the CEMP proposals for the identification, segregation, handling and storage, with necessary protection to prevent contamination of surrounding stockpiles and underlying ground, of the different types of wastes identified as arising from the works.

5.16.4 The Contractor shall make any necessary applications to the Local Authority and/or the Environment Agency, under the terms of the Environmental

5.17 **Energy**

5.17.1 In line with the UK Energy Efficiency Action Plan, energy efficiency measures and greener energy sources should be considered and implemented where possible. Using energy more efficiently assists with cutting carbon dioxide emissions:

- Energy consumption is to be minimised and energy use during construction monitored.
- Construction plant and equipment is to be maintained to maximise fuel efficiency.
- Utilise energy from renewable sources where practicable.
- Ensure efficient materials handling / husbandry.
- Minimise workforce travel.
- Incorporate and source local materials to minimise associated transportation.

5.17.2 The completed scheme will have minimal energy requirements in operation, but electricity for lighting should be procured according to a measure of the sustainability of the supply.

5.18 **Materials**

5.18.1 Materials required for the scheme are predominantly earthworks materials for the construction of the highway embankments required by the design. This material will be sourced from a borrow pit, to be dug on site and all earthworks materials and topsoil will be managed according to the Soil Resource Plan (see section 5.14 above), detailing how the structure and quality of soils and related
materials will be maintained, how erosion, siltation, compaction, weed growth and other issues will be managed.

5.18.2 Timber used in permanent and temporary works, such as for noise fencing is to be from sustainably managed sources with recognised timber labelling or from re-use.

5.18.3 Local materials will be sourced to minimise associated transportation, where possible.

5.18.4 Material procurement procedures are to be employed that involve purchasing materials based on their environmental impact.

5.18.5 A materials register is to be provided to the Client Project Manager at hand-over that identifies the main material types to facilitate recycling on demolition.

5.19 Transport

5.19.1 Road transport is a major source of local air and noise pollution and contributes to carbon dioxide emissions. Opportunities to minimise construction traffic are to be considered, measures may include for example, reducing the transport impacts of materials and construction staff.

5.19.2 A haul route will be established along the line of the new road, accessed initially from Sundon Road. Later, once it is complete, access to the Woodside Link site could be obtained from the new M1 junction 11A, subject to agreement with the Highways Agency’s Contractor. Consent requirements may stipulate public routes that must, or must not, be used by construction traffic and this information will be publicised to site staff, suppliers and hauliers required to access the site.
6 Outline Pollution Control and Contingency Plan

6.1 General

6.1.1 A pollution control and contingency plan will be developed by the Contractor and included within the CEMP to provide details of the measures to be implemented to prevent pollution of the aquifer and the actions to be taken in the event of an environmental incident or emergency.

6.1.2 An ‘environmental incident’ is defined as any event, activity or condition that causes, or has the potential to cause harm to people, or damage to property or the environment. ‘Pollution’ is defined as any harmful impact on the local atmospheric, aquatic or land environment caused by release of hazardous or nuisance-causing substances or excessive noise and vibration.

6.2 Pollution Prevention

6.2.1 Works will be taking place over a principal aquifer. The Houghton Brook runs through the site and will be significantly affected by the works. Potential pollutants from the works include:

- Silt
- Cement and concrete
- Oils and fuels
- Waste materials
- Effluent/waste water from site accommodation
6.2.2 Concrete and cement are very alkaline and can cause serious pollution. To minimise the risk of run-off entering any watercourse, concrete and cement mixing will be sited at least 10m away from any watercourse and plant cleaned within designated washout areas. Wash water from concrete and cement works must never be discharged into a watercourse.

6.2.3 To minimise the risk of pollution from oils on site, measures are required in relation to their storage, use and disposal. Environmentally considerate lubricants, such as synthetic, non-toxic biodegradable hydraulic fluids are available and may be used at sensitive locations.

6.2.4 Measures will be developed to control site runoff and prevent contamination. Account will be taken of the Environment Agency Pollution Prevention Guidelines:

- PPG 1 ‘General guide to the prevention of pollution’
- PPG 5 ‘Works and maintenance in or near water’
- PPG 6 ‘Working at construction and demolition sites’
- PPG 18 ‘Managing fire-water and major spillages’
- PPG 21 ‘Pollution Incident Response Planning’
- PPG 22 ‘Dealing with spillages on highways’

Appropriate pollution prevention measures will be proposed by the principal Contractor and will be detailed in the CEMP.

6.3 Fuel and Oil Handling

6.3.1 All fuel and oil will be stored in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001 and they will be handled in such a way that risk of pollution is minimised, this will include:

- Fuel and oil storage tanks will comply with the Control of Pollution (Oil Storage) (England) Regulations 2001 and will be locked when not in use.
• Storage areas will not be located within 10m of the watercourse or highway gully.

• Mobile bowsers will be bunded and will comply with the Control of Pollution (Oil Storage) (England) Regulations 2001 and will be locked when not in use.

• Drums will be stored in bunded areas with a minimum capacity of 25% of the total volume contained within the bund, or 110% of the largest container, whichever is greater.

• Drums will be maintained in good condition, fitted with lids and labelled to indicate the contents.

• Trained operatives only will carry out refuelling of plant and equipment.

• Static combustion engine plant (e.g. compressors, lighting sets) will be integrally bunded or placed on drip trays.

• Plant will be regularly checked for leaks and will be regularly maintained.

• Spill kits will be provided within close proximity to fuel and oil storage areas and operatives will be trained in their use.
6.4 Maintenance of Plant

6.4.1 Any maintenance of plant and equipment will be carried out at least 10m away from any watercourse or drain. Spill kits will be available during all plant maintenance operations and drip trays used to contain any leakage of oil.

6.4.2 Any plant or equipment considered to be a pollution risk will either be repaired or removed from site.

6.5 Concrete Washout

6.5.1 A designated concrete washout area will be provided for washing out concrete delivery lorries, concrete pumps and grout lines. This will consist of a small skip lined with an impermeable membrane or similar arrangement.

6.6 Control of Sedimentation

6.6.1 Natural, local materials can present a pollution risk in some contexts. Disturbance and handling of soils, particularly in wet weather, can lead to particles being carried by running water into watercourses. The Houghton Brook, running through the site and being crossed by the route is particularly at risk from sedimentation. Measures to minimise the risk may include good soils management (see 5.14) as well as:

- Locating activities likely to give rise to sediment away from watercourses.
- Ensuring vegetated areas are set aside to act as buffer zones along the top of each bank of a watercourse.
- The provision of silt fencing to remove suspended particles from running water.
- Settlement tanks or lagoons or the use of flocculants to treat water containing suspended particles prior to its release to any water body.
6.7 Notification Procedure

6.7.1 Procedures for reporting any spillages or pollution incidents are to be set out.

6.7.2 The procedure will include recording all incidents in the project progress report and providing details to the Client Project Manager.

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

- Contractor's Project Manager
- Construction Manager
- Construction Environmental Manager
- Client Project Manager
- Community Liaison Officer
- Fire, Police, Ambulance
- Environment Agency 0800 80 70 60
7 Handover Environmental Management Plan

7.1 Requirements

7.1.1 The CEMP is a live document that will consider maintenance implications of the design and construction phase of the project. Maintenance requirements will be recorded in the relevant section of the CEMP and will be updated to provide a Handover Environmental Management Plan (HEMP) at the end of the construction phase. The HEMP will set out the proposed strategy for the future maintenance and management of all environmental areas and will include the following:

- Strategies for the regular maintenance of all Environmental Areas.
- A timetable for the implementation of each regular maintenance operation.
- A timetable showing the anticipated date at which the ‘Environmental Function’ attributed to each Environmental Area will be achieved.
- A timetable showing the regular monitoring requirements for each Environmental Area, including those in relation to protected species and/or water quality, as agreed with the relevant Statutory and Non-Statutory bodies.
- Any supporting information e.g. agreements made with third parties.