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Executive Summary

This draft Construction Environmental Management Plan (CEMP) outlines the commitments and measures that will be adopted by Countryside Properties (Bicester) Ltd to ensure that the construction of the proposed development at Land South-West of Bicester will have a minimal impact on the environment and any disturbance to local residents will be minimised.

Environmental controls will be implemented to minimise emissions of dust during the construction period, noise and vibration, and adverse effect on ecology and archaeology. The plan details how these controls will be implemented and the associated roles and responsibilities.

This draft CEMP is not, at this stage, a definitive final document. The development of the CEMP is an iterative process and as such is dependent upon ongoing dialogue between stakeholders and consultees to ensure that the CEMP addresses the necessary issues. This dialogue is, by nature, dependent upon the availability of greater detail relating to the construction activities than is currently available.

Yellow highlighted text throughout the report indicates where information is required to be inserted prior to construction works and following consultations with the Cherwell District Council (CDC). In addition, the nature of the CEMP requires that it is regularly monitored and updated where necessary throughout the construction works. Where further details/information is required prior to construction, individual developers should normally supply these to the Council as part of any reserved matters application for their residential land parcels or detailed development parcels.

1 Introduction

1.1 PURPOSE OF THE CEMP

- 1.1.1 WSP Environmental has been commissioned by Countryside Properties (Bicester) Ltd to prepare a draft Construction Environmental Management Plan (CEMP) to accompany the construction of a mixed-use development on Land to the South-West of Bicester. The location of the Site is shown in Figure 1 and details regarding Site and the Proposed Development are provided in Chapter 2.
- 1.1.2 The overall aim of the draft CEMP is to outline measures to minimise and mitigate the environmental impact of the Proposed Development during construction. More specifically, the CEMP aims to:
 - Ensure that the mitigation measures set out in the Environmental Statement (Amended October 2006)
 (ES) to avoid potentially adverse environmental impacts are implemented during the construction phase;
 - Ensure that any Planning Conditions relating to the construction of the Proposed Development are adhered to; and
 - Ensure that construction industry best practice standards are adopted throughout the entire construction process.
- 1.1.3 The CEMP is a working document and will be developed and updated as the scheme progresses through the detailed design and into the construction phase. [At this stage in the project not all of the information required above is available].

1.2 LEGAL COMPLIANCE

1.2.1 The CEMP is a requirement of the outline planning permission (06/00967/OUT). Condition 43 of 06/00967/OUT states:

"The CEMP shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement of development. The CEMP shall include details of measures to be taken to ensure construction works do not adversely affect residential properties on or adjacent to surrounding the site and shall include details of consultation and communication carried out with local residents. Construction work shall thereafter be carried out with the approved CEMP".

- 1.2.2 Further Conditions have also been imposed, many of which relate to activities to be undertaken prior to or during construction. These are listed in **Table 7.1**.
- 1.2.3 In addition, considerable environmental legislation applies to the works to be undertaken. Prior to each phase of works, all relevant legislation, including requirements for licences, permits and /or consents, shall be identified, and the appointed Main Contractor will be required to provide details of how compliance is to be achieved, as part of the delivery of the CEMP.

1.3 FRAMEWORK OF THE DRAFT CEMP

- 1.3.1 The draft CEMP is based on established good management practice and includes the following information:
 - Site Information: including environmental management structure, roles and responsibilities, location of any potentially sensitive receptors such as trees, watercourses, local residents, ecology etc;
 - <u>Construction Information</u>: a description of the works, construction programme, proposed working hours, details of haulage routes, equipment to be used, etc;
 - Environmental Management: details of the audit programme, methods for managing environmental risks and reducing impacts, emergency procedures, waste and hazardous materials storage procedures (including a Site Waste Management Plan), liaison with the local neighbourhood, and specific management plans relating to archaeology, ecology, landscape, lighting, and noise;
 - Monitoring: procedures for recording and reporting monitoring results and taking remedial action in the event of any non-compliance, details of receptors, threshold values and analysis methods; and

Legal Requirements: a schedule of relevant and current environmental legislation and good practice, objectives and targets imposed by planning conditions, consultations and a register of permissions and consents required, with responsibilities allocated and a programme for obtaining these.

2 Site Information

2.1 SITE AND SURROUNDINGS

- 2.1.1 The Site is located within Cherwell District Council (CDC), to the south-west of Bicester and covers an area of approximately 117.6 hectares (ha). The Site is bounded to the north by the B4030 Middleton Stoney Road, to the east by the A41 Oxford Road, and to the west by the A4095 (towards Chesterton). The southern boundary of the Site follows a number of existing field boundaries. The Site is located approximately 1km south-west of Bicester town centre.
- 2.1.2 The Site forms part of the Whitelands Farm landholding, although the farmhouse and associated outbuildings are located outside of the Site boundary. Whitelands Cottages are located within the Site boundary and will be demolished as part of the development proposals. The Site consists principally of agricultural land, both arable and pasture, divided up by a series of native hedgerows. There are several copses within the Site, the most significant being Foxey Leys Copse to the east of Whitelands Farm. The Pringle Brook lies in the north-east corner of the Site with several drainage ditches crossing the Site along field boundaries. There are two footpaths which cross the Site, one linking the A4095 at Bignall House to the centre of Bicester, and the other crossing the south-eastern corner of the Site. There is no statutory or non-statutory ecological, landscape or cultural heritage designation on the Site.

2.2 SCHEME DESCRIPTION

- 2.2.1 Outline planning permission was granted on 27th June 2008 (reference 06/00967/OUT) for the following:
 - 1,585 dwellings (any increase in unit numbers will require a new outline application);
 - Health village (to be marketed for health uses including a community hospital and GP surgery, and possibly an elderly persons nursing home);
 - B1 & B2 employment uses including a hotel;
 - A local centre comprising small scale shops, a community centre (and possibly a pub/restaurant, day nursery and small offices);
 - 1 primary and 1 secondary school;
 - Formal open space including a sports pavilion and playing fields;
 - Informal open space; and
 - A new by-pass or perimeter road linking the A41 to Middleton Stoney Road at the Howes Lane junction.

2.3 SENSITIVE RECEPTORS

2.3.1 **Table 2.1** below lists a number of receptors which have been identified as being potentially sensitive to the works during the construction of the Development due to their location in proximity to the Site and access roads:

Table 2.1 Receptors in the Vicinity of the Proposed Development that are Potentially Sensitive to Construction Works

Receptor	Location
Whitelands Farm farmhouse and associated agricultural buildings	Adjacent to western site boundary, to the west of the proposed built development area.
Existing residential properties (located mainly to the north of the Site	Adjacent to the northern boundary of the Site.
Bicester Community Hospital	50m north-east of the north-eastern corner of the Site.
Local Schools	Approximately 200m east of the north-eastern corner of the Site.

Receptor	Location		
Sports and recreation grounds within close proximity of the Site	 Pingle Recreation Ground and Sports Field - Adjacent to the north-eastern corner of the Site. 		
	Recreation Ground located off Shakespeare Drive – Approximately 140m north of the northern Site boundary.		
	Sports Ground located off Kennedy Road – Approximately 170m north of the northern Site boundary.		
Tesco	Adjacent to the eastern boundary of the Site.		
Bicester Village Retail Park	Approximately 50m east of the eastern boundary of the Site.		
The Pringle Brook and associated drainage ditches	Located on-site.		
Footpaths across the Site	Located on-site.		
Trees and hedgerows (in particular those being retained on-site)	Located on-site.		
Local road network	The Site is bounded to the north by the B4030 Middleton Stoney Road, to the east by the A41 Oxford Road, and to the west by the A4095 (towards Chesterton).		
Views to and from the Site.	Various		

2.3.2 The positions of potentially sensitive receptors are also provided in Figure 2.

2.4 MANAGEMENT STRUCTURE

2.4.1 The anticipated roles and responsibilities of the parties involved in the construction works are set out below. However, it should be noted that all members of staff are responsible for ensuring the requirements of the CEMP:

The Applicant

- 2.4.2 Countryside Properties (Bicester) Ltd (herein referred to as the Developer) was granted outline planning permission for the Site (06/00967/OUT) in June 2008 and will be responsible for providing all strategic infrastructure, primary streets, strategic foul and surface water drainage, structural landscaping, informal public open space and landscaping works to retained public rights of way.
- 2.4.3 In order to achieve this, the Developer will appoint a Main Contractor and Development Manager.

Main Contractor

2.4.4 The Main Contractor will be responsible for the day to day management of Health and Safety, Environmental and Quality performance during the construction of the strategic infrastructure. They will be responsible for implementing the 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 CEMP.

Development Manager

2.4.5 The Development Manager or his/her site representative/consultant will be responsible for directing the Main Contractor on the delivery of the CEMP. This will include checking that the Main Contractor has allocated sufficient resources to allow delivery of the CEMP, participating in communication with CDC and other third parties e.g. Environment Agency as required and arranging for the periodic review and update of the CEMP, including construction phase reviews. The Development Manager or his/her site representative will regularly

- review, the findings of the monitoring programme, normally at a monthly contractors site based meeting, and direct the Main Contractor as necessary.
- 2.4.6 The Development Manager, his/her site representative/consultant, or Health and Safety Auditor will facilitate communication on environmental matters between the project partners and any relevant statutory consultees, will carry out site environmental inspections and audits as necessary, and will co-ordinate the environmental monitoring programme. They will also be responsible for monitoring the Main Contractor to ensure that all relevant legal consents, licences and exemptions are in place in advance of relevant works commencing, and that all requirements are adhered to.
- 2.4.7 All complaints/queries will be directed to the Development Manager or his/her representative at Countryside Properties' head office at Brentwood. They will then identify the appropriate person to take action and/or determine what action is required to address the complaint or query raised. The Development Manager will, in most cases, contact the Site Manager to instigate action, and will employ the services of an ecological clerk of works, landscape consultant, contractor or individual developers, as required.

Site Manager

2.4.8 The Site Manager will report directly to the Development Manager and will be responsible for reporting on-site issues to the Development Manager, as necessary. The Site Manager will not be responsible for processing any enquiries or complaints as this will be the responsibility of the Development Manager.

All Staff and Subcontractors:

- 2.4.9 All staff and subcontractors have the responsibility to:
 - Work to agreed plans, methods and procedures to minimise environmental impacts;
 - Understand the importance of avoiding pollution on-site, including noise and dust, and how to respond in the event of an incident to avoid or limit environmental impact;
 - Report all incidents immediately to their line manager;
 - Monitor the work place for potential environmental risks and alert their line manager if any are observed; and
 - Co-operate as required during site inspections and audits.
- 2.4.10 [Add details about the Management Structure for each Detailed Application once known].

Key Contacts

James King

Development Manager

Countryside Properties (Bicester) Ltd

Countryside House

The Drive

Brentwood

Essex

CM13 3AT

Tel: 01277 260000

Sean Gregory (Contaminated Land and Air Quality)

Rob Lowther (Noise and other nuisance issues)

Cherwell District Council

Bodicote House.

Bodicote,

Banbury,

Oxon

OX15 4AA

Ms Michelle Kidd

Planning Liaison Officer

Environment Agency

Red Kite House,

Howbery Park,

Wallingford,

Oxfordshire

OX10 8BD

Kevin Lavender
Thames Water Utilities Ltd
Clearwater Court,
Vastern Road,
Reading
RG1 8DB

2.5 TRAINING AND RAISING ENVIRONMENTAL AWARENESS

- 2.5.1 The raising of environmental awareness is viewed as a crucial element in the appreciation and implementation of the CEMP. This CEMP will be distributed to members of the project team, including suppliers and subcontractors as necessary to ensure that environmental requirements are adequately communicated.
- 2.5.2 The Main Contractor is responsible for ensuring that all people on-site are provided with relevant information concerning environmental protection and should operate a system whereby all staff and operatives receive a site specific safety and environmental induction prior to starting work on-site.
- 2.5.3 The training requirements of staff will be monitored via individual appraisals and through regular Health, Safety and Environmental Planning meetings. At these meetings the forthcoming operations will be discussed in detail, including the standard and level of training required of site operatives 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.
- 2.5.4 Staff will be encouraged to attend training courses relevant to environmental protection, including:
 - Construction Skills Certification Scheme (CSCS);
 - Environmental Awareness Course and Internal Auditor Course; and
 - IEMA Foundation Certificate in Environmental Management for Construction.

[Add in details of training procedures and measures to raise environmental awareness for all contractors undertaking construction works once known].

3 Construction Information

3.1 DESCRIPTION OF CONSTRUCTION WORKS

3.1.1 The construction works associated with the different components of the Proposed Development are described in **Table 3.1** below.

Table 3.1: Required Construction Works

Works	Description
Initial Site Preparation	Excavate ground to divert existing underground services on-site. Lower overhead power lines. Set-up construction compounds. Set up contractors' parking. Lay temporary supplies and temporary access to contractors' compound. Set up sales enquiry centre in temporary cabin. Remove trees that are not to be retained. Protect trees and hedgerows that are to be retained.
Site Infrastructure	Excavate ground and construct internal road system including foul and storm sewers, manholes and chambers. Construct internal roads to base course only. Create surface water attenuation facilities. Construct show complexes and remove temporary cabins.
Road Construction	Excavate ground and move spoil around the Site. Install service ducts, crossings and highway drainage. Form road sub-base and set kerbs. Lay road base courses and tarmac wearing course. Install street lighting and establish footpaths and verges. Add landscape planting.
Residential and Commercial Development	Excavate ground, lay foundations, connect to services and add superstructure. Reinstate ground. Carry out external works and add landscape planting. Construct footpaths and add street lighting and wearing course to roads in reasonably practical sections.
Public Buildings/Open Space	Excavate ground, lay foundations, connect to services and add superstructure. Provide servicing facilities, reinstate ground and add landscape planting and external works.
Site Completion	Reinstatement of ground around the Site and removal of construction compounds.

3.2 PHASING OF CONSTRUCTION WORKS

3.2.1 The construction of the development is currently expected to commence in January 2010. It is anticipated that a 7 to 8 year build programme will be required (estimated 2018 completion) but there are various factors which may influence this programme, which will be continually reviewed during the life of the project. The phasing plan for the construction of the proposed development including provision of key (strategic) highway infrastructure, is shown in **Figure 3**.

Phase 1

3.2.2 During the first phase of the construction works, a new roundabout will be constructed on the B4030 Middleton Stoney Road. This will create an access to the north-western corner of the Site and enable Phase 1 of the residential development to take place. A second access off Middleton Stoney Road will then be built which will enable the first parcel of land within Pingle Brook character area to be built.

Phase 2

3.2.3 By 100 occupations, a roundabout will be constructed on the A41 creating an access to the south-west corner of the Site. By 400 occupations, the Southern Gateway will be constructed which will enable the primary

school to be accessed, allow access to the employment zone and enable Phase 2 of the residential development to take place.

Phases 3 and 4

3.2.4 Phase 3 comprises the development of the eastern side of the Urban Village character area, infilling the land between the area developed in phases 1 and 2. Phase 4 comprises the development of the remainder of the residential development, completing the development of the Urban Village and Pingle Brook character areas. Both the community centre and recycling centre are to be completed by the occupation of the 500th dwelling.

3.3 CONSTRUCTION EQUIPMENT

3.3.1 The type of plant likely to be needed for each type of construction activity is indicated **Table 3.2**.

Table 3.2 Likely plant required for construction activities

Activity	Likely Plant Required
Road construction	45 Tonne Excavator
	Hammermaster Attachments
	Rockwheel
	Articulated Dump Trucks and Crushers
Residential and commercial development	Tracked Excavator
	JCB
	Concrete and Bitumen Paver
	Site Dumper
	Cement Mixer
	Fork Truck
Primary schools, secondary school, local centre,	Tracked Excavator
community building, public house and hotel	Concrete and Bitumen Paver
	Site Dumper
	Cement Mixer
	Fork Truck
Open Space	Tracked Excavator
	Site Dumper
	Bulldozer

- 3.3.2 [Details of the exact type, make and expected number of machines to be used on-site to be inserted].
- 3.3.3 It is important to note that approximately a third of the Site is covered by Jurassic Cornbrash Limestone, found at depths of between 0.70m and 1.70m below present ground level (bpgl). Heavy duty equipment will be required to break up the areas of Cornbrash on-site.
- 3.3.4 The impacts of this equipment/process on noise and air quality and recommended mitigation measures are discussed in **Chapters 4** and **5**.

3.4 HOURS OF WORK

- 3.4.1 The standard working hours for all construction activities will be from:
 - 07.30–17.30 Monday to Friday; and
 - 08.00 13.00 Saturdays.

- 3.4.2 Any proposed changes to these working hours will need to be agreed in advance with CDC.
- 3.4.3 [Add details of notice and agreement procedures for works taking place outside agreed limits and details of delivery times].

3.5 HAULAGE ROUTES

- 3.5.1 A lorry routing agreement has been entered into between Oxfordshire County Council (OCC), Countryside Properties (Bicester) Ltd and the site owners.
- 3.5.2 The lorry routing agreement confirms the access to the Site during the following phases (see **Appendix A**):
 - Prior to improvements to railway bridge and the perimeter road being completed (Plan CT1);
 - Prior to improvements to railway bridge, following completion of the perimeter road (Plan CT2); and
 - After improvements to both the railway bridge and perimeter road have been completed (Plan CT3).
- 3.5.3 Construction traffic will be segregated from traffic generated by Bicester and the new development as far as possible in order to minimise disruption to the local road users and to minimise safety risks. A clear signage strategy will be implemented to ensure that construction traffic utilises designated routes to minimise the impact on existing and evolving communities. HGV movements will be restricted as far as reasonably possible so as to avoid peak traffic flow periods (i.e. from 0800-0900 and 1700-1800).

[Add details on the monitoring and enforcement of construction traffic].

- 3.5.4 Haul roads within the Site will be located and landscaped in such a way as to avoid any noise where possible, smell, dust or adverse impacts on the existing residents and businesses in the vicinity of the Proposed Development. Details of internal haulage routes to be used during the construction of the strategic infrastructure works can be found in **Appendix B**. Internal haulage routes may be subject to review and change, however Countryside Properties (Bicester) Ltd will inform the individual developers, council and highways authority as required.
- 3.5.5 Individual developers will be issued with Traffic Management Plans and these will be enforced by Countryside Properties (Bicester) Ltd. These plans will relate to construction traffic and pedestrian routes.

3.6 ROAD CLOSURES

3.6.1 Road closure notices will be applied for as required to allow for the construction of the Section 278 works which includes the Middleton Stoney Road roundabout, A41 roundabout, A41 signalised junction, Howes Lane roundabout and Middleton Stoney Road traffic calming and junctions.

3.7 MATERIAL STORAGE AND COMPOUND AREAS

- 3.7.1 In accordance with Condition 45 of the outline planning permission (06/00967/OUT):
 - "details of the location of all site compounds and the associated areas for plant storage and access thereto, as well as a scheme for their subsequent removal and restoration of the land, shall be submitted and approved in writing by the Local Planning Authority prior to their establishment. The compounds and accesses shall be located and subsequently removed in accordance with the approved details".
- 3.7.2 There will be up to four construction compounds on the Site at any one time. Temporary buildings such as offices for the Site Manager and other supervisory staff, and welfare facilities will generally be located within the construction compounds. Construction materials will also be stored within the construction compounds, with the exception of sand, aggregates, bricks, blocks, roof tiles and trusses which will be stored near the houses being constructed and in accordance with health and safety requirements. All site works should be undertaken in accordance with the Environment Agency's Pollution Prevention Guidance (PPGs) Notes.
- 3.7.3 During Phase 1, the main compound (for the strategic infrastructure works) will be located off Middleton Stoney Road, adjacent to the existing farm access track. During the rest of construction period, the main site compound will be located off the A41 Oxford Road, near to the Esso Garage. Wheel washing facilities will be provided in this location. The locations of the compounds are illustrated in **Appendix B**.
- 3.7.4 [Location of wheel wash and storage areas will be added later once a contractor is appointed].
- 3.7.5 [Add details regarding lighting of compound areas and screening and hoarding once available].

3.7.6 It will be the responsibility of the individual developers to provide their own compounds and wheel washing facilities. The exact details of these site compounds and associated storage, including how the materials are to be stored, will be submitted at the Reserved Matters stage, if required.

3.8 DELIVERY/REMOVAL OF MATERIALS AND PLANT

- 3.8.1 Delivery and removal of materials and plant will be made to and from the Site compound areas for the infrastructure works.
- 3.8.2 [Separate proposals to be submitted to CDC by housing developers].

3.9 SECURITY ON-SITE

- 3.9.1 Only authorised persons will be allowed on the Site. A Site Risk Assessment will be produced which will detail how security will be managed on the Site. Any person identifying unauthorised personnel on-site should contact the Site Manager who will take appropriate action and ensure the unauthorised person leaves the Site safely.
- 3.9.2 Two metre high security fencing will be erected around all site compound areas.

3.10 HEALTH AND SAFETY ARRANGEMENTS ON-SITE

3.10.1 The details of Countryside Properties CDM co-ordinator are as follows:

John P Wallace

MDA Consulting Ltd

Philip House

6 Lansdowne Road

Croydon

CR0 2BX

Tel: 020 8686 5566

- 3.10.2 [Add details about on-site health and safety arrangements, including information signage, to be agreed with the appointed Main Contractor].
- 3.10.3 In accordance with Condition 31 of the outline planning permission (06/00967/OUT):

"Fire hydrants shall be provided on each phase of the development in accordance with a scheme which has first been submitted to and approved in writing by the Local Planning Authority. The details of the provision of the fire hydrants shall be approved prior to the commencement of construction of each phase and therefore shall be implemented in accordance with the approved details".

4 Key Significant Environmental Issues and Risks

4.1 ENVIRONMENTAL RISK REGISTER

- 4.1.1 An Environmental Risk Register and associated procedures, which identify how environmental risks will be assessed for each activity, will be prepared prior to the construction works starting. The identification of environmental risks at the pre-start stages of a project is vital to ensuring that all the issues controlled throughout the scheme. A pro forma environmental risk register is in included within Appendix C.
- 4.1.2 [The risk register will need to be completed by the Main Contractor and Development Manager or his/her representative following the site investigation (see procedure PEP1 in Appendix D), prior to construction works starting].
- 4.1.3 [The appointed Main Contractor will need to provide risk assessments for all elements of the works to define the level of environmental risk that particular activities will have. Within these risk assessments, the control measures that are to be implemented to reduce the level of risk should be identified. The results of the completed assessment will then be used as a checklist for controls and working practices to be included in method statements. All operations on-site are to be covered by a method statement. The applicability of the completed E01 should be reviewed as part of the Health, Safety and Environment Meetings, during which any additional controls for future activities can be identified].

4.2 POTENTIAL SIGNIFICANT ENVIRONMENTAL IMPACTS

4.2.1 A schedule of potential environmental effects relating to each activity is provided in Table 4.1 below.

Table 4.1: Potential Environmental Effects during Construction Works

Topic	Potential Environmental Effect
Transport	Increase in HGV movements;
	Increase in congestion on the local road network;
	Increased risk of accidents due to construction works on the existing road network; and
	Transfer of mud and materials by vehicles onto the public highway.
Cultural Heritage & Archaeology	 Damage to below ground archaeological remains (where they exist) during on-site earthworks;
	Impact of site clearance, construction, ground preparation and drainage works on any buried material of archaeological importance that is still present on-site; and
	 Temporary effects of construction on the settings of buildings and the character of the conservation areas.
Hydrology and Water Quality	Degradation in surface water quality of the Pingle Brook and the unnamed watercourse due to pollution from spills or silt;
	An increase in silt (affecting water quality, flood risk and ecology) during the realignment of the Pingle Brook and the unnamed watercourse;
	 Degradation in groundwater quality as a result of seeping of spills during construction; and
	Potential impact on groundwater flows.
Landscape and	Changes to the landscape and visual amenity due to:
Visual	Removal of surface vegetation and topsoil resulting in an exposed soil surface;
	Erection of temporary site fencing;
	Establishment of site compounds, storage areas and contractors' car park;
	 Establishment of temporary lighting and signage associated with the works;
	Construction traffic movements to and from the Site;
	Adjustments to the existing road layout, including the A41; and
	General building infrastructure including views of large machinery and cranes.
Noise & Vibration	 Noise arising from the construction works, particularly when breaking up the Cornbrash on-site.
	 Increase in noise levels generated by the increase in road traffic as a result of the construction vehicles, particularly on the M40 which could cause disturbance to

Topic	Potential Environmental Effect	
	Chesterton residents; and Increase in vibration levels due to construction works, particularly during piling and drilling work.	
Local Air Quality	Increase in dust deposition at nearby sensitive receptors during certain demolition and construction activities; and	
Land use	 Exhaust fumes from construction vehicle movements. Loss of Grade 3 agricultural land; and Temporary distribution and possible redirection of footpaths crossing the Site. 	
Waste & Materials Management	 Generation of waste during the demolition and excavation work, and impact on local landfill capacity; and Use of virgin materials for the construction of new buildings. 	
Contamination & Hazardous Substances	 Risk of spillage of hazardous substances; Mobilisation of existing contamination during excavation, piling, etc. Preliminary assessment has identified some contamination within the Site; and Potential exposure of site workers to hazardous material and contaminated land. 	
Ecology & Nature Conservation	 Removal of habitat, including the loss of a proportion of the species rich grassland and all of the semi-improved grassland on-site; Removal of trees and hedgerows; and Disturbance to flora and fauna (including reptiles, bats, badgers and farmland birds). 	

4.2.2 Further details on the significant environmental effects for each of these topics can be found within Volume 1 of the ES.

4.3 PUBLIC RELATIONS AND COMMUNITY RELATIONS

4.3.1 Condition 9 of 06/0097/OUT states that:

"A strategy for public consultation in respect of development shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement of development. The public consultation strategy shall include details of consultation process to be undertaken during the all the conservation and other works on the site including provision of infrastructure and mitigation as well as in respect of design codes, reserved matters application and construction management plan."

- 4.3.2 Extensive public consultation has been undertaken as part of the planning process and the preparation of the Design Code. The discharge of the Reserved Matters will continue to be reviewed by CDC under their statutory procedures. A website will be established prior to the commencement of any construction works. This will provide local residents and other interested parties with information on the progress of the development.
- 4.3.3 The Development Manager or his/her representative will be responsible for communication with statutory authorities, including the Environment Agency, OCC, CDC, non statutory authorities and local interest groups. Environmental specialists will liaise directly with statutory authorities where appropriated and as directed by the Development Manager.

Complaints procedure

- 4.3.4 All queries and complaints received will be directed to either the Development Manager or his/her site based representative. The contact details of the dedicated points of contact will be communicated to residents nearer the time through the use of letters/leaflets. A register of complaints will be maintained.
- 4.3.5 In addition, Countryside Properties (Bicester) Ltd will be setting up a website for Kingsmere prior to the commencement of any development on the site. This website will provide information updates on progress with development and activities at the site. There will be a "development update" page. This will be updated regularly to give development news. Such news could include information on significant construction activities on the site, which developers have started to commence work on site, not only for residential parcels but for the other permitted uses on the site.

4.3.6 Details regarding general community liaison and communication are set out in the approved Public Consultation Strategy. If required copies of this document can be obtained from the Development Manager.

4.4 PUBLIC SAFETY

- 4.4.1 The Site is contained by hedgerows which line the Site boundaries. Should these hedgerows be removed, fencing will be provided during the construction works to ensure the public is not at risk of harm from the construction activities. Site signage will be provided on any fencing to advise members of the public of the construction works [subject to production of a detailed signage strategy].
- 4.4.2 Public rights of way running through the site will be protected by fencing where construction activities are to take place in close proximity to the rights of way.

5 Environmental Control Measures

5.1 ENVIRONMENTAL PROCEDURES

- 5.1.1 In order to ensure compliance with the requirements of the relevant legislation (see Section 7), and avoid/mitigate against any significant environmental impacts, a series of Project Environmental Procedures (PEP) have been developed.
- 5.1.2 Responsibilities for the implementation of each PEP have been assigned to specific members of the project team, which it is envisaged will comprise:
 - Main Contractor (site based);
 - Development Manager;
 - Landscape Architect;
 - Ecological Clerk of Works; and

Acoustics Consultant.

- 5.1.3 For each PEP, relevant pro-formas are required to be completed and updated on a regular basis, throughout the construction period.
- 5.1.4 A list of the key PEPs is provided in **Table 5.1 below**. Further details relating to each PEP are contained within **Appendix D** of this document.
- 5.1.5 In addition to the PEPs, Method Statements will be prepared on behalf of the Main Contractor in consultation with the Development Manager or his/her consultant. Preparation of the Method Statements would include a review of the environmental risks and commitments as detailed in the Environmental Action Plan and risk assessment, to ensure that appropriate control measures are integrated within the construction process. The Method Statement will be submitted to CDC and other consultees, as required.

Table 5.1: Project Environmental Procedures

Procedure (Appendix C)	Title	Procedure Relevant to:			
		Main Contractor	Development Manager	Landscape Architect	Ecological Consultant
PEP/01	Site Investigation	√	1		1
PEP/02	Waste Management	1	1		
PEP/03	Noise & Vibration	✓	/		
PEP/04	Dust and Air Quality	✓	✓		
PEP/05	Vehicles Management	1	✓		
PEP/06	Pollution Incident Control	✓	/		
PEP/07	Protection of Vegetation and Habitats	✓	✓	✓	✓

5.2 PUBLIC ACCESS AND TRAFFIC MANAGEMENT

- 5.2.1 Detailed mitigation measures to control construction traffic will be discussed and agreed with CDC. A lorry routing plan has already been agreed with CDC (see **Appendix A**) and OCC.
- 5.2.2 The initial phase of the construction works is likely to generate 65 construction vehicles movements a day. During this time construction traffic will access the site via the existing farm access track. During the latter phases of construction, traffic will access the site via an internal haul road off the roundabout on the A41 Oxford Road. During this time, the construction works are likely to generate 145 construction vehicle movements a day.

- 5.2.3 Construction traffic will comprise a mix of Light Goods Vehicles (LGVs) and Heavy Goods Vehicles (HGVs). It is anticipated that HGV's will comprise approximately 15-25% of total movements.
- 5.2.4 During the construction of the junctions off the A41 Oxford Road and B4030 Middleton Stoney Road, there will be some disruption to the users of the local road network, in particular on the travel time of drivers.
- 5.2.5 An overall increase of 1-2% in traffic flows is expected as a result of all construction traffic, with most vehicle movements being made outside the peak hours. The ES (2006) considers the impact of construction traffic to be negligible,
- 5.2.6 The most effective mitigation will be achieved by ensuring that construction traffic travels minimum distances along sensitive routes (residential or congested roads), that vehicles are kept clean through the use of wheel washers, and that vehicles are sheeted when on public highways. Large-scale vehicle movements will be timed to avoid peak hours on the local road network.
- 5.2.7 Action will be taken to minimise and control any nuisance arising from construction traffic by using measures such as controlling vehicle speed, wheel washing of HGVs upon departure from the Site and keeping all entrance areas to the Site clean. Guidance given in Oxfordshire County Council's 'Conditions and Specifications for the Construction of Roads' should be adhered to, in accordance with Condition 23 of the outline planning permission (06/00967/OUT).
- 5.2.8 In addition, the following safety measures will be implemented to reduce the risk of accidents due to the presence of HGVs on the Site:
 - Identification and use if dedicated haulage routes on-site; and
 - Use of signage around the site providing advance warning of the presence of heavy vehicles manoeuvring.

5.3 ARCHAEOLOGY

- 5.3.1 Wessex Archaeology undertook archaeological investigations in 17 areas across the Site due to the high potential for archaeological remains and previous evidence for settlement and agricultural activity during the Late Iron Age/ Romano-British periods with a scattering of finds and features from the early prehistoric, Saxon and medieval periods. The results of these investigations were varied across the Site.
- 5.3.2 All archaeological excavation has been completed on the Site and CDC has confirmed that no further mitigation is required for archaeology. Further details of the excavation works are provided in the Post Excavation Assessment Report (Wessex Archaeology, March 2009).
- 5.3.3 The principal known area of archaeology on the Site is the area in which the proposed primary school playing fields will be located, where two Bronze Age ring barrows are known to exist below ground. These will be preserved in-situ below the playing field and a 50m buffer zone is recommended from the centre point of both ring barrows. This area must not be used for any purpose during construction, including materials or soil storage, site compounds, and haul routes. The locations of the barrows and the 50m buffer zone are illustrated in **Figure 2.**

5.4 HYDROLOGY AND WATER QUALITY

- 5.4.1 The water environment at the Site is considered to be sensitive and therefore it will be important that construction is undertaken with due regard to the water environment.
- 5.4.2 Condition 49 of 06/00967/OUT relates to hydrology and water quality and states:
 - "Development shall not begin until a drainage strategy for the site, incorporating sustainable drainage principles and an assessment of the hydrological and hydrogeological context of the development, have been submitted to and approved by the Local Planning Authority, and the scheme shall be subsequently implemented in accordance with the approved details before the development is completed".
- 5.4.3 A Drainage Strategy for the Site has been prepared as part of the Design Code (July 2008), and is illustrated in Drawing 1546/D/005 produced by WSP.
- 5.4.4 The following mitigation measures are incorporated into the CEMP to protect the water environment:

Surface Water Quality

- 5.4.5 The ES (2006) considers surface watercourses at or near the Site to be of medium sensitivity to the potential changes to water quality arising from the proposals.
- 5.4.6 All site works should be undertaken with suitable temporary drainage measures in place and in accordance with the Environment Agency's Pollution Prevention Guidance (PPGs) Notes.
- 5.4.7 Implementation of an appropriate temporary drainage system will be required in order to minimise the potential risk of increased sediment reaching nearby surface waters.
- 5.4.8 Strict control of the Site boundaries will be enforced by the Main Contractor, including minimal land clearance and restrictions on the use of machinery near water bodies. This is enforced by Condition 27 of 06/00967/OUT which states that:
 - "'No development shall take place within 8m of any watercourse without the prior written consent of the Local Planning Authority".
- 5.4.9 This Condition accords with current environmental legislation. Under the Land Drainage Act 1991, as amended by the Land Drainage Act 1994, and the local Land Drainage Byelaws 1981, written consent is required for works under or within 8m of an 'ordinary watercourse'.
- 5.4.10 In addition to the above, wheel wash facilities should be provided for vehicles leaving and entering the construction site.
- 5.4.11 Sustainable Urban Drainage Systems (SUDS) will be installed as part of the Proposed Development. If the SUDS are not installed prior to the built development phase then contractors must take precautions during the construction phase to protect the entire drainage system, including existing water courses from siltation or pollution.

Groundwater Quality

- 5.4.12 The ES (2006) considers groundwater to be of medium sensitivity to the potential changes to water quality and groundwater levels as a result of the development proposals.
- 5.4.13 The design of the SUDS and the use of pollution prevention control measures will ensure that the development does not affect groundwater. Infiltration SUDS will be incorporated into the Proposed Development and will help to ensure that local aquifers are unaffected by the Proposed Development.
- 5.4.14 In addition, the Environment Agency has advised that no special 'anti-pollution' measures will be required with respect to groundwater protection where residential and non-manufacturing businesses on-site are to be constructed.

Flood Risk

- 5.4.15 The ES (2006) considers the Pingle Brook to be highly sensitive to changes in flood risk as a result of the development proposals.
- 5.4.16 Condition 48 of 06/00967/OUT requires that:
 - "The development shall be designed and constructed in accordance with recommendations in the Flood Risk Assessment Rev.4 produced by WSP dated January 2007 ref 11011545".
- 5.4.17 Surface water attenuation on-site will be achieved by creating four ponds. These will designed for a 1 in 100 year storm event plus 20% storage, in line with the Environment Agency's requirements. There are 2 ponds to the north of the Site (within Pingle Brook) and 2 to the south of the Site. One of the ponds to the north will contain an area which will be permanently wet and in the south one pond will remain permanently wet and the other dry.
- 5.4.18 Condition 12 of 06/00967 requires that:
 - "No development on any phase or parcel shall commence until a scheme for disposal of surface water, including phased works and maintenance thereof, attenuation and storage and on-site balancing arrangements, reflecting current best practice for sustainable urban drainage, have been submitted to and approved in writing by the Local Planning Authority. No development shall take place than in accordance with the approved scheme".

- 5.4.19 In addition to the mitigation measures above, construction plant/materials will be stored on hardstanding surfaces to minimise the risk of soil compaction resulting in localised flooding. If this is not possible, compacted soils will be loosened as soon as possible following completion of the works.
- 5.4.20 Cleared land should be replanted or vegetated as soon as practicable to minimise the extent of exposed land and the volume of surface water run-off.

5.5 **VISUAL IMPACTS**

- 5.5.1 The protection of existing trees and hedgerows on-site will help to reduce the impact of construction works on the setting and views to the Site. Measures to protect trees and hedgerows will be provided in accordance with the schemes submitted to and to be approved by CDC. CDC have imposed a number of planning conditions with respect to the protection of woodland, trees and hedgerows during construction:
 - Condition 26 of 06/00967/OUT "No service trenches, pipe runs or drains or any other excavation, earth movement or mounding shall be constructed within 2m of the canopy spread of trees on-site, without the prior approval in writing of the Local Planning Authority".
 - Condition 28 of 06/00967/OUT "Before any works commence, the existing trees and hedges on the land to be retained shall be preserved, fenced around and properly maintained in accordance with the advice contained in the attached tree protection schedule and none of the trees shall be felled, topped, lopped or uprooted without the prior consent of the Local Planning Authority unless such tree has become dangerous. In the event of any tree or hedge dying or being seriously damaged or destroyed within five years from the completion of the development, a new tree or hedge of a species first approved in writing by the Local Planning Authority shall be planted and properly maintained in a position or positions first approved by the said authority".
- 5.5.2 Protective fencing shall be erected in accordance with the Tree Protection Plan. Fencing should be positioned no less than 15m from construction areas. If trees and hedges require protection less than 15m away from intensive construction such as buildings and structures, standard fencing as specified in *British Standard BS* 5837:2005 Trees in Relation to Construction should be put in place.
- 5.5.3 Once the fencing is in place it must remain in-situ throughout the following:
 - Contractor occupancy;
 - Plant and Materials delivery;
 - Construction works;
 - Installation of porous surfacing;
 - Utility installation;
 - Completion of development; and
 - Landscaping.
- 5.5.4 The tree protective fencing will be installed and removed in phases, as required.
- 5.5.5 Site personnel will be provided with a leaflet detailing the requirements of Tree Protection at the time of the site induction. Spare copies of this leaflet shall be available in the site office. Information notices shall be placed on the fencing at 5m intervals in order to inform site personnel of the purpose of the fencing.
- 5.5.6 The implementation of these protection measures will be monitored through the CEMP and should complaints regarding the appearance of the Site be received, the above procedures will be reviewed.

5.6 NOISE AND VIBRATION

5.6.1 Due to the nature of the building processes it is inevitable that a temporary increase in noise will be experienced during the construction phase. It is anticipated that there will be short-term noise level implications for nearby residential properties, but that noise levels will be well within acceptable construction levels.

- 5.6.2 The greatest impacts with respect to noise and vibration are likely to occur at houses within close proximity to the proposed roundabout on Middleton Stoney Road. Due to the need for the works to extend to the edge of the existing road, there are no opportunities to consider the use of temporary barriers.
- 5.6.3 The construction works will comply with *BS 5228: Noise and Vibration control on construction and open sites* and the following mitigation measures are proposed:

Plant and equipment

- Modern, silenced and well maintained plant will be used at all times, conforming to standards set out in the EU Directives;
- 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;
- Generators and water pumps required for 24-hour operation will be super silenced or screened as appropriate; and
- Where possible, mains electricity to be used instead of generators.

Methods of working

- Where ground conditions permit, first preference shall be given to reaction piling methods ('silent piling'). Otherwise vibratory piling methods, together with pre-augering, shall be used. Percussive piling shall only be considered where ground conditions preclude the use of other methods and prior agreement should be sought from the local authority;
- Where practicable, pile caps will be cut and then broken with hydraulic rams to minimise the use of heavy air-powered breakers;
- Burning equipment will be used in preference to cold cutting where possible; and
- 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.

Demolition

- When breaking out concrete, an oversized breaker will be used to minimise the blow rate and hence the percussive nature of the noise being produced. This should also minimise the time taken to complete the breaking out works. Where concrete obstructions arise, these will be removed and taken to a less sensitive location before being broken up;
- Where possible, hand breakout of structures will be encouraged and walls/structures will be dismantled or 'pushed over' rather than conventionally broken-out using pneumatic drills;
- Hydraulic 'munchers' will be used where reasonably practicable in preference to breakers;
- All materials will be handled, stored and used in a manner that minimises noise; and
- Concrete bursting and cutting will be considered where practical.

Management of works programme

- Wherever practicable, noisy works, which are audible at the site boundary, will be undertaken during the following hours (unless otherwise agreed with CDC) - between 07.30 and 18.00 Monday to Friday and between 07.30 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 instructed on BPM measures to reduce noise and vibration as part of their site induction training; and
- 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.

- 5.6.4 Strict controls on the sequencing of works and provision of noise protection will be developed on an activity by activity basis. It should be noted that a trench cutter is required to break up the Cornbrash present on-site. During such activities, noise levels on the Site will be elevated.
- 5.6.5 Noise monitoring will be carried out by the main contractor to ensure the works comply with BS 5228.

5.7 DUST AND AIR QUALITY

- 5.7.1 The construction works will include various site clearance and construction activities, which all have the potential to generate particulate emissions arising from dust.
- 5.7.2 The main sources of particulate emissions during construction activities include:
 - Construction traffic and equipment usage;
 - Materials handling, storage, stockpiling, spillage and disposal;
 - Site preparation and restoration after completion;
 - Construction and fabrication processes; and
 - Internal and external finishing and refurbishment.
- 5.7.3 A number of mitigation methods will be implemented to minimise the nuisance and impact arising from dust produced during construction (a requirement of Condition 47). These include;
 - Vehicles carrying loose aggregate and workings to be sheeted at all times;
 - Implementation of design controls for construction equipment and vehicles and use of appropriately designed vehicles for materials handling;
 - Completed earthworks to be covered or vegetated as soon as is practicable;
 - Slopes of stockpiles and mounds must be at an angle no greater than the natural angle of repose of the material, the stockpiles/mounds must not have sharp changes in shape;
 - Short-term storage mounds and stockpiles may be enclosed or kept under sheeting. Prevention of wind-borne dust from these mounds may also be achieved through suitable and sufficient use of water sprays, wind barriers, and protective fences of a similar size and height to the mound;
 - Suitable wetting of soil surfaces shall be carried out during the earth moving activities to minimise soil loss through airborne dust, this may be done through the use of a water bowser, or static sprinklers. Early hard surfacing of internal roads will also aid in minimising dust re-suspension on the Site;
 - Regular inspection and, if necessary, cleaning of local highways and along the Site boundaries to check for dust deposits (and removal if necessary);
 - Ensuring that all construction plant and equipment is maintained in good working order and not left running when not in use;
 - Establishing wheel washing facilities at all access points into the Site (requirement of Condition 44), minimising the transfer of dust and particulate matter onto surrounding highways;
 - Burning of any material prohibited anywhere on-site. A Fire Safety Plan for the Site has been established which contains all the general requirements of fire prevention, fire detection and fire fighting;
 - Construction vehicle access arrangements shall be designed to avoid sensitive streets or narrow, congested roads;
 - Materials deliveries and vehicle access to the Site should be timed to avoid the need to queue outside the site prior to opening or whilst other deliveries are completed; and
 - Timing and phasing of construction activities plus contact details of relevant offices shall be published, to facilitate the raising of concerns should they arise.
- 5.7.4 Close liaison with CDC should be maintained throughout the construction phase.

5.7.5 It should be noted that a trench cutter is required to break up the Cornbrash present on-site. During such activities, dust levels on the Site will be elevated.

5.8 LAND USE

- 5.8.1 During construction, there may be temporary diversions and possibly the temporary closure of the footpaths to allow the construction of the residential development, infrastructure and secondary school to be carried out.
- 5.8.2 [Insert mitigation measures for impacts on footpaths once decided].

5.9 WASTE AND MATERIALS MANAGEMENT

- 5.9.1 Waste produced on site will be subject to the Duty of Care under the Environmental Protection Act (1990). Liaison with the Environment Agency will be undertaken to ensure that waste and materials handling on-site will be conducted appropriately, this will include a site meeting with the local Environment Agency officer before work commences.
- 5.9.2 The transportation of waste to and from the Site will comply with the Duty of Care requirements. These include ensuring waste is transported by registered carriers, disposal to appropriately licensed sites and maintenance of appropriate waste transfer documentation. The Main Contractor 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.
- 5.9.3 Where possible, excavated materials will be re-used on-site as general or landscaping fill (dependent on its quality). Any contaminated spoil will be removed and taken to an appropriately licenses landfill for disposal. In accordance with Condition 41 of 06/00967/OUT:
 - "No imported waste material whatsoever shall be imported and deposited on the Site".
- 5.9.4 In addition, Condition 42 of 06/00967/OUT requires that:
 - "No minerals shall be dug from or exported from the Site".
- 5.9.5 A Site Waste Management Plan (SWMP) has been produced and will be implemented by the Main Contractor as part of the CEMP.
- 5.9.6 A Waste Management Strategy will also be produced for the development. The waste management strategy will include the following:
 - Review of design to ensure waste is considered regarding modular sizes etc;
 - Use of pre-fabricated assemblies where practical;
 - Re-use of construction materials;
 - Re-cycling of construction materials;
 - Segregation of waste; and
 - Raising awareness of minimal packaging requirements.

5.10 MATERIALS STORAGE

- 5.10.1 Materials used in the construction process 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 and other relevant guidance will be followed during the handling and storage of such materials.
- 5.10.2 Plant and equipment will be stored in areas which are less susceptible to possible pollution incidents, or on dedicated areas of hardstanding. All static plant shall be placed with drip trays to prevent ground contamination as a result of oil spills and leaks.
- 5.10.3 Refuelling of plant will occur 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. Refuelling 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.

- 5.10.4 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 will be impermeable to the material stored and will be of adequate capacity. Condition 46 of 06/00967/OUT requires that:
 - "All chemicals, oils, fuels and other potential contaminants shall be stored in bunded tanks or structures with a minimum of 110% of the maximum volume stored. The location of any tanks or structures shall be submitted to and approved in writing by the Local Planning Authority prior to their establishment".
- 5.10.5 Storage containers will be clearly labelled and a notice displayed requiring that values 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.
- 5.10.6 Leaking or empty oil drums will be removed from the site immediately and disposed of via a licensed waste disposal contractor.
- 5.10.7 Storage areas will not encroach on any tree/root protection zones.
- 5.10.8 Procedures will be set in place to respond to any emergency incidents which may occur on site. All appropriate staff will be trained and made aware of the spill contingency plan set in place. In the event of an incident the Environment Agency will be notified immediately.

5.11 CONTAMINATED MATERIAL AND HAZARDOUS SUBSTANCES

- 5.11.1 Preliminary assessment has identified some contamination within the tested soil samples. A detailed remediation scheme will be developed for the Site (in accordance with Condition 20), and no development will take place until this has been approved by CDC. The remediation scheme will involve further soil testing with respect to certain areas on-site. The results of these soil tests will have a bearing on the exact mitigation undertaken and an appropriate remediation design and specification will be prepared in consultation with the EHO and the EA as appropriate.
- 5.11.2 Areas of contamination identified during the intrusive ground investigation may require remediation prior to the start of construction. This will be undertaken in accordance with the detailed remediation scheme for the Site. [Add details from detailed remediation scheme once undertaken].
- 5.11.3 In addition Condition 50 of 06/00967/OUT requires that:
 - "If during development, contamination not previously identified, is found to be present at the site, then no further development (unless otherwise agreed in writing with the Local Authority) shall be carried out until the developer has submitted, and obtained written approval from the Local Authority for an addendum to the Method Statement. This addendum to the Method Statement must detail how this unsuspected contamination shall be dealt with".
- 5.11.4 All the workers on-site will be made aware of potential contamination issues on the Site and will use best practice techniques during the construction phase. 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;
 - Refuelling would be undertaken in specified areas where there is non-permeable hardstanding 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;
 - Oil interceptor(s) will be installed on discharge points from any temporary oil storage/refuelling areas;

- Development of site pollution control procedures in line with Environment Agency's Pollution Prevention Guidelines, and appropriate training for all construction staff. Provision of spill containment equipment such as absorbent material on site; and
- Where possible, store all construction and oil, fuel and diesel materials as far from the nearby waterbodies as possible.
- 5.11.5 An Asbestos Management Plan will be developed to manage and control the risks associated with any asbestos cement materials found on the Site, prior to any works.
- 5.11.6 Hazardous materials already present on-site, or proposed to be used during the construction works will be identified and an appropriate Control of Substances Hazardous to Health (COSHH) Assessment carried out. The information will be reviewed every 4 weeks to ensure that any new substances hazardous to health are identified prior to being brought on to the Site and that suitable arrangements are made for their storage, use and disposal.
- 5.11.7 A member of staff will be nominated to control and monitor the COSHH system. Suppliers must send data sheets for every hazardous substance to the Site. The assessment information sheet is completed in conjunction with Supervisors and Safety Managers who then brief the people who will be using the substance, on its safe use, disposal and any emergency procedures. Written records of these briefings will be kept in the COSHH file held on the Site.

5.12 ECOLOGY AND NATURE CONSERVATION

- 5.12.1 Ecological mitigation is set out in the approved Ecological Management Plan (EMP) or Land Management Plan which should be referred to by each appointed contractor.
- 5.12.2 The Ecological Management Plan includes details of mitigation measures that have taken place (including translocation of calcareous grassland), and identifies the further ecological mitigation measures required during construction, such as new planting and installation of bat, bird and invertebrate boxes.
- 5.12.3 The Clerk of Works will monitor development implications on ecology and will co-ordinate any mitigation measures which may be required or agreed. The Clerk of Works will regularly visit the site and report any incident of damage to ecological habitats to the development manager and CDC where required. Each contractor should also refer to the tree protection plan to ensure that retained trees and hedges are adequately protected during construction.

5.13 EMERGENCY PROCEDURES

5.13.1 [Emergency procedures to be followed in the event of an environmental incident (e.g. spillage) to be included here].

6 Monitoring

6.1 MONITORING, CONTINUAL IMPROVEMENT AND REVIEW

- 6.1.1 Frequent monitoring of noise, vibration and dust levels during the construction activities will be carried out in accordance with agreed environmental procedures. The Development Manager or his/her site based representative will hold the responsibility for maintaining a register of all environmental monitoring, which should be made available for auditing and inspection.
- 6.1.2 The CEMP shall be reviewed and updated during construction works to ensure that it remains suitable to facilitate efficient and effective delivery of the project environmental commitments. The CEMP will be reviewed at each new phase of the construction works. All revisions of the CEMP will be copied to CDC for approval in sufficient time to allow detailed environmental plans to be prepared and also submitted to CDC for approval. The CEMP review would consider past performance from inspections, audit report and monitoring data, plan actions required to mitigate forthcoming risks and disseminate best practice.
- 6.1.3 [Programme and timescales for monitoring to be included here].

6.2 REPORTING

- 6.2.1 Reporting procedures will be defined by the Development Manager who will hold overall responsibility for providing feedback to the Main Contractor and the Client on the environmental performance of the construction works.
- 6.2.2 [Details on any public notice board or website to be used to report and monitor progress to be included here].

6.3 ENVIRONMENTAL COMPLAINTS AND INCIDENTS

- 6.3.1 All complaints and incidents will be recorded and responded to. The Development Manager or his/her site based representative will keep a record of all complaints received, actions taken and responses provided. This register will be kept at Countryside Properties' (Bicester) Head Offices (see page 5 for details) and a report will be issued every quarter to CDC, which will be available to others for review, on request. Individual developers will be responsible for holding their own records of complaints which will be reported to the Development Manager at regular periods (to be agreed).
- 6.3.2 A procedure will be defined for managing incidents and a centralised register of all reported complaints and incidents should be maintained. The appointed Main Contractor shall provide training to staff as necessary to prevent environmental incidents and to ensure that personnel are aware of the actions to be taken in the event of an incident. The Development Manager or his/her site based representative will monitor performance of the Main Contractor in implementing the complaints procedure and will provide further instruction as necessary.

6.4 AUDIT PROGRAMME

6.4.1 [Details of the internal environmental audit programme, e.g. ISO 14001, to be implemented on-site during the construction works to be added here].

Legal Requirements

7.1 **SCHEDULE OF ENVIRONMENTAL LEGISLATION**

7.1.1 For each significant environmental aspect the relevant applicable environmental legislation and regulations will be identified, from the list provided in Appendix E. The list of relevant legislation and it's applicability to the Site and the construction works will be reviewed and updated where necessary throughout the construction programme.

7.2 **OBJECTIVES AND TARGETS**

- 7.2.1 A schedule of planning conditions will be issued to each developer (and CDC) identifying target to be achieved, progress in terms of compliance and responsibilities for compliance.
- 7.2.2 A summary of the planning conditions relevant to construction works are provided in Table 7.1 below.

Table 7.1: Summary of the Planning Conditions relating to Construction Works

Planning Condition	Details
Public Consu	<u>l</u> utation
Condition 9	"A strategy for public consultation in respect of development shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement of development. The public consultation strategy shall include details of consultation process to be undertaken during the all the conservation and other works on the site including provision of infrastructure and mitigation as well as in respect of design codes, reserved matters application and construction management plan".
Health and S	afety
Condition 31	"Fire hydrants shall be provided on each phase of the development in accordance with a scheme which has first been submitted to and approved in writing by the Local Planning Authority. The details of the provision of the fire hydrants shall be approved prior to the commencement of construction of each phase and therefore shall be implemented in accordance with the approved details".
Transport	
Condition 23	"That, before any of the dwellings are first occupied, the whole of the estate roads and footpaths (except for the final surfacing thereof) shall be laid out, constructed, lit and drained to the Oxfordshire County Council's "Conditions and Specifications for the Construction of Roads".
Condition 24	"That, before any of the dwellings are first occupied, the proposed vehicular accesses, driveways and tuming areas that serve those dwellings shall be constructed, laid out, surfaced and drained in accordance with specification details to be submitted to and approved in writing by the Local Planning Authority prior to the commencement of development".
Archaeology	
Condition 19	"That no development shall take place within the application area until the applicant, or their agents or successors in title, has secured the implementation of a staged programme of archaeological and palaeoenvironmental mitigation measures, including physical preservation in situ, in accordance with the written scheme/s of investigation which shall first have been submitted and approved in writing by the Local Planning Authority. The written scheme of investigation shall include a formal commitment to implement a programme of archaeological post-excavation work. This will include all processing, research and analysis necessary to produce an accessible and usable archive and a full

Planning Condition	Details
	report for publication in accordance with a Post-Excavation Assessment review that has been submitted to and approved the Local Planning Authority. The work shall be carried out by a professional archaeological organisation acceptable to the Local Planning Authority".
Hydrology an	d Water Quality
Condition 15	"Within the vicinity of the Pingle Brook a minimum finished floor level of 300mm above the 1 in 100 year + 20% Pingle Brook top up water level shall be provided. Elsewhere on the site slab levels shall be a minimum of 150mm above existing ground levels".
Condition 27	"No development shall take place within 8m of any watercourse without the prior written consent of the Local Planning Authority".
Condition 48	"The development shall be designed and constructed in accordance with recommendations in the Flood Risk Assessment Rev.4 produced by WSP dated January 2007 ref 11011545".
Landscape a	nd Visual (including impacts on Trees and Hedgerows)
Condition 26	"No service trenches, pipe runs or drains or any other excavation, earth movement o mounding shall be constructed within 2m of the canopy spread of trees on-site, without the prior approval in writing of the Local Planning Authority".
Condition 28	"Before any works commence, the existing trees and hedges on the land to be retained shall be preserved, fenced around and properly maintained in accordance with the advice contained in the attached tree protection schedule and none of the trees shall be felled topped, lopped or uprooted without the prior consent of the Local Planning Authority unless such tree has become dangerous. In the event of any tree or hedge dying or being seriously damaged or destroyed within five years from the completion of the development a new tree or hedge of a species first approved in writing by the Local Planning Authority shall be planted and properly maintained in a position or positions first approved by the said authority".
Condition 30	"That all planting, seeding or turfing comprised in the approved details of landscaping fo any phase shall be carried out in the first planting and seeding seasons following the occupation of the building(s) or on the completion of the development, whichever is the sooner; and that any trees and shrubs within the phase which within a period of five years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of similar size and species, unless the Local Planning Authority gives written consent for any variation".
Condition 34	"Prior to the commencement of any works on site on any phase, sub phase or the carrying out of any operation relating to the provision of services, full details of all service trenches pipe runs or drains and any other excavation, earth movement or moulding required in connection with the development hereby permitted shall be submitted to, and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the details so approved".
Condition 45	"Details of the location of all site compounds and the associated areas for plant storage and access thereto, as well as a scheme for their subsequent removal and restoration of the land, shall be submitted and approved in writing by the Local Planning Authority prior to the commencement of the development, and by such means of enclosure shall be erected prior to the first occupation of the dwelling, building or phase".
Contaminatio	n
Condition 50	"If during development, contamination not previously identified, is found to be present a the site, then no further development (unless otherwise agreed in writing with the Loca

Planning Condition	Details
	Authority) shall be carried out until the developer has submitted, and obtained written approval from the Local Authority for an addendum to the Method Statement. This addendum to the Method Statement must detail how this unsuspected contamination shall be dealt with".
Air Quality	
Condition 44	"Prior to work commencing on any phase or sub phase, measures shall be put in place to ensure that vehicle wheel washing is carried out to prevent any material being carried on to the public highway".
Condition 47	"Construction dust mitigation measures shall be carried out in accordance with Figure 12.14 of the Environmental Statement during all construction works on-site".
Land Use	
Condition 22	"Prior to the commencement of development details of measures to protect the public footpaths and amenity of users of the public footpaths crossing the site during and after construction works shall be submitted and approved in writing by the Local Planning Authority. Thereafter the measures shall be put in place to protect the public rights of way and retained in accordance with the approved details".
Management	of Waste and Materials
Condition 41	"No imported waste material whatsoever shall be imported and deposited on the Site".
Condition 42	"No minerals shall be dug from or exported from the Site".
Condition 43	"No development shall commence until full details and a programme of works of excavation and raising of ground levels on the site (other than works immediately associated with the construction of individual buildings such as the digging of foundations) have been submitted to and approved in writing by the Local Planning Authority. The programme and works shall thereafter be carried out in accordance with the approved details".
Waste Storag	e
Condition 46	"All chemicals, oils, fuels and other potential contaminants shall be stored in bunded tanks or structures with a minimum of 110% of the maximum volume stored. The location of any tanks or structures shall be submitted to and approved in writing by the Local Planning Authority prior to their establishment".

7.3 **REGISTER OF CONSENTS AND PERMISSIONS**

7.3.1 A register of permissions and consents will be retained at Countryside Head Offices (see page 5 for details),

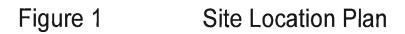
8 Summary

- 8.1.1 This CEMP has been developed in order to discharge the planning conditions as set out by CDC [27 June 2008]. It outlines the specific measures that will be adopted in order to minimise the environmental impacts associated with construction processes.
- 8.1.2 [To be completed on finalisation of the CEMP, to include overview of monitoring programme, key sensitive receptors and control measures].

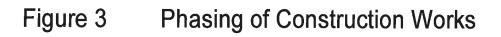
9 Sources of Information

- 9.1.1 The following sources of information have been consulted in the development of the draft CEMP and should be used as reference documents;
 - Countryside Properties (Bicester) Ltd (July 2008), Kingsmere, Bicester Design Code;
 - Environment Agency (no date), PPG1: General Guide to the Prevention of Pollution of Controlled Waters;
 - Environment Agency (February 2004), PPG2: Above Ground Oil Storage Tanks;
 - Environment Agency (no date), PPG5: Working in, Near or Liable to Affect Watercourses;
 - Environment Agency (no date), PPG6: Working at Construction and Demolition Sites;
 - Environment Agency (August 2004), PPG7: Refuelling Facilities;
 - Environment Agency (February 2004), PPG8: Safe Storage and Disposal of Used Oils;
 - Environment Agency (no date), PPG13: High Pressure Water and Steam Cleaners;
 - Environment Agency (February 2004), PPG21: Pollution Incident Response Planning;
 - Environment Agency Guidelines (2001), Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (NC/99/73);
 - Thomas Telford / British Drilling Association (1993), Guidelines for Safe Investigation by Drilling of Landfills and Contaminated Land;
 - Environment Agency (2006), Consignment Notes: A Guide to the Hazardous Waste Regulations; and
 - DEFRA (2006), Circular 01/2006 Environmental Protection Act 1990 Part 2A Contaminated Land.

[To be updated following completion of the CEMP]







Appendix A Lorry Routing Plans

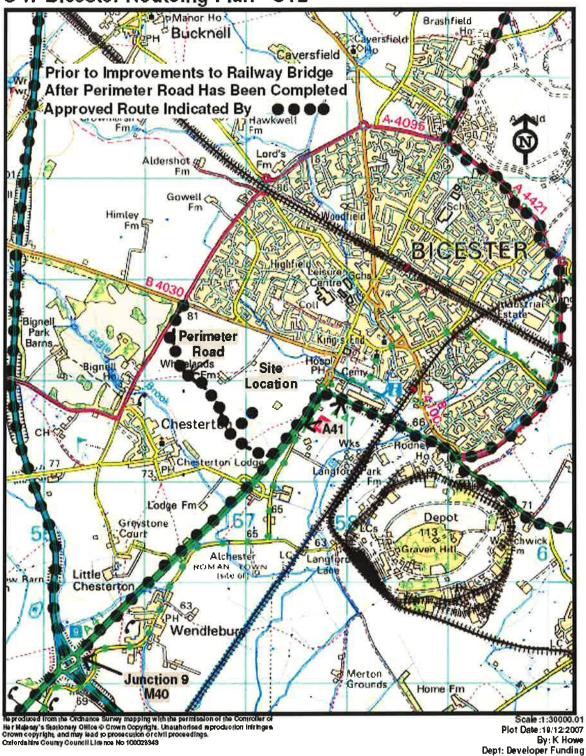
S W Bicester Routeing Plan - CT1 Manor Ho Brashfield Bucknell Caversfield Prior to Improvements to Railway Bridge Prior to Perimeter Road Being Completed Approved Route Indicated By Hawkwell Lord's Aldershät @ Gowell C Himley BICESTER Park Perimeter Road Whitelepals Fm Location Lodge Fm & Greystone Court Little Wendlebu Merton Grounds Junction 9

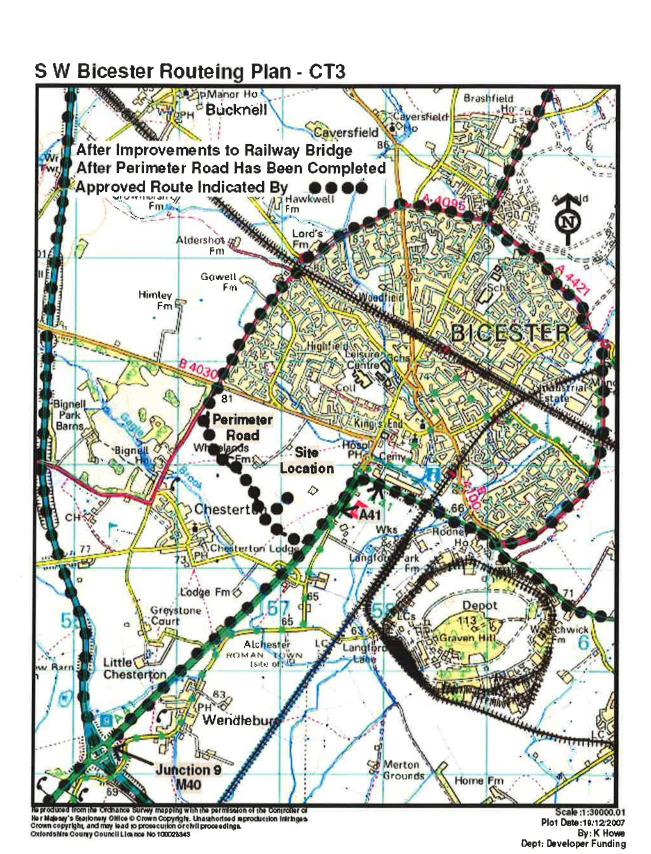
Construction Environmental Management Plan

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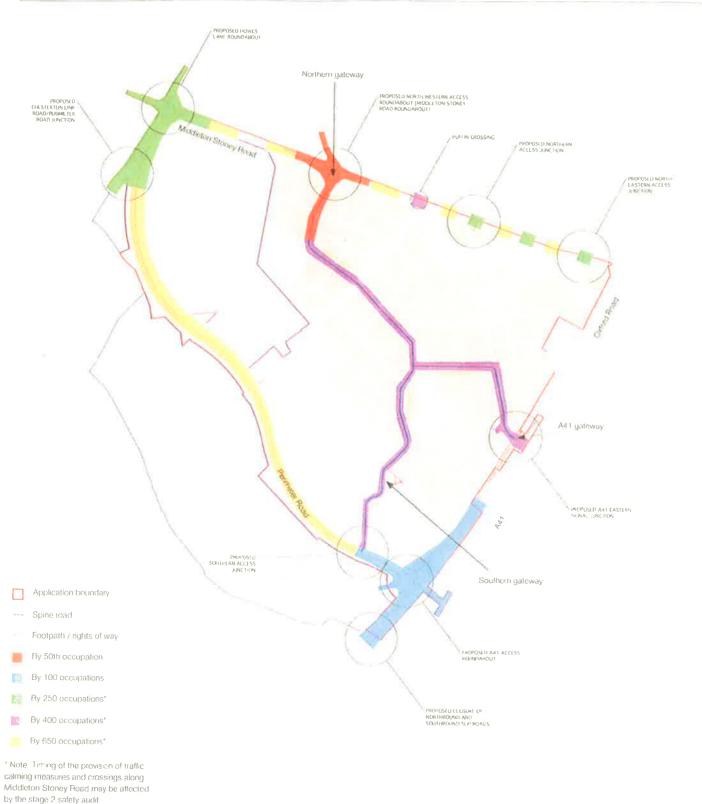
Plot Date:16/12/2007 By: K Howe Dept: Developer Funding

S W Bicester Routeing Plan - CT2





Appendix B Proposed Internal Haulage Routes during the Construction of the Strategic Infrastructure





Designed and Checked : JMM

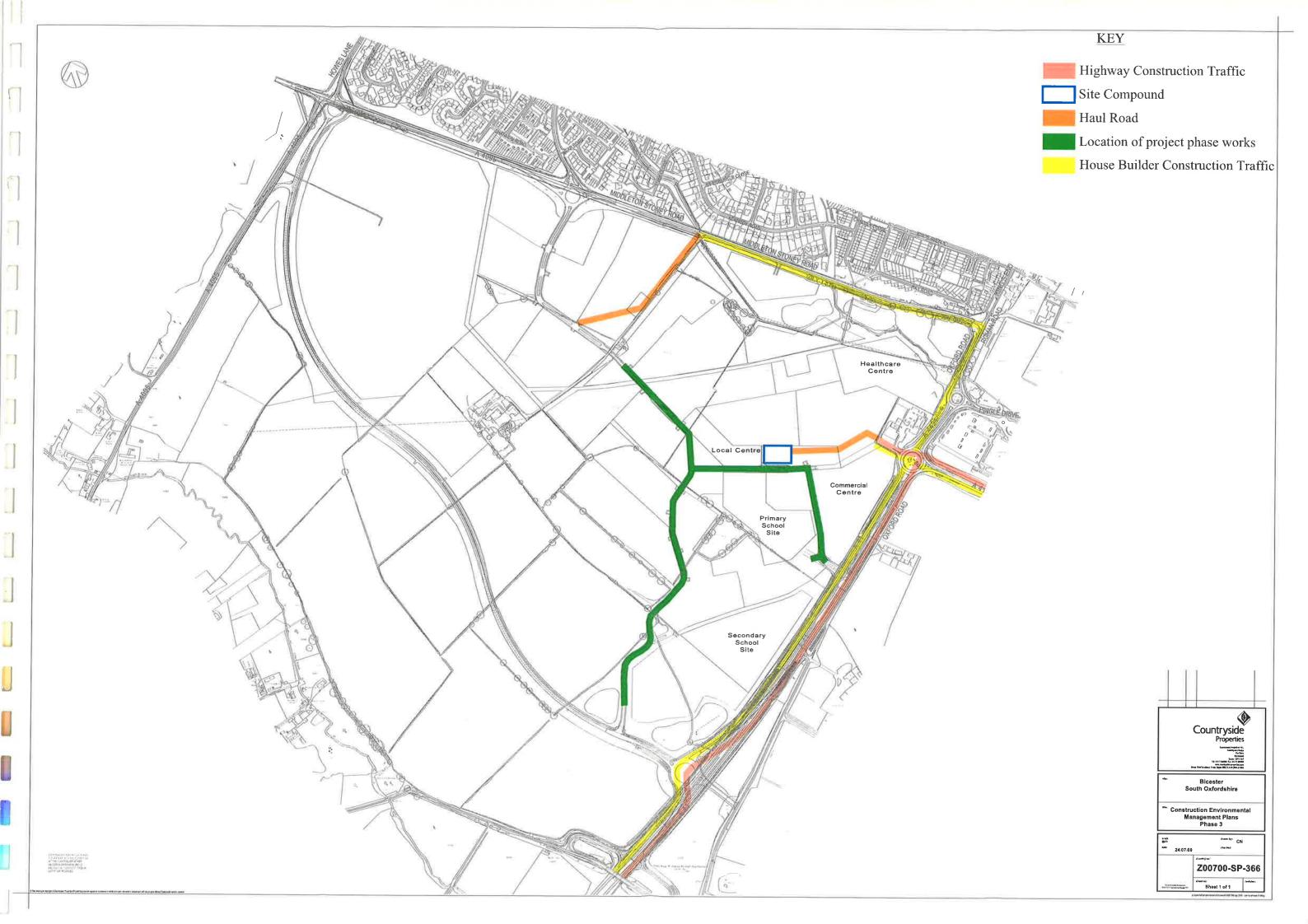
Approved : VT

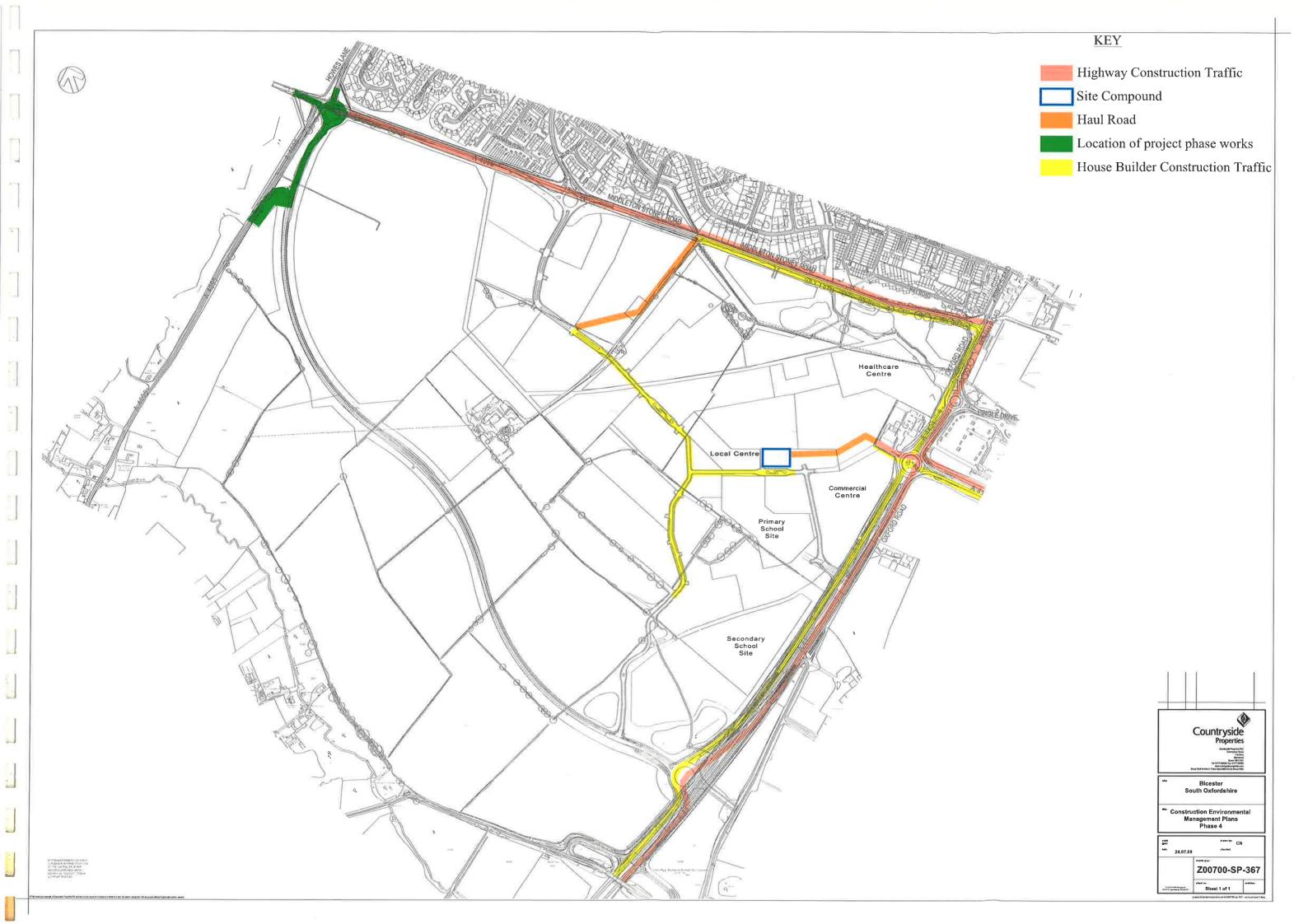
Drawn : JMM

Date : November 2008



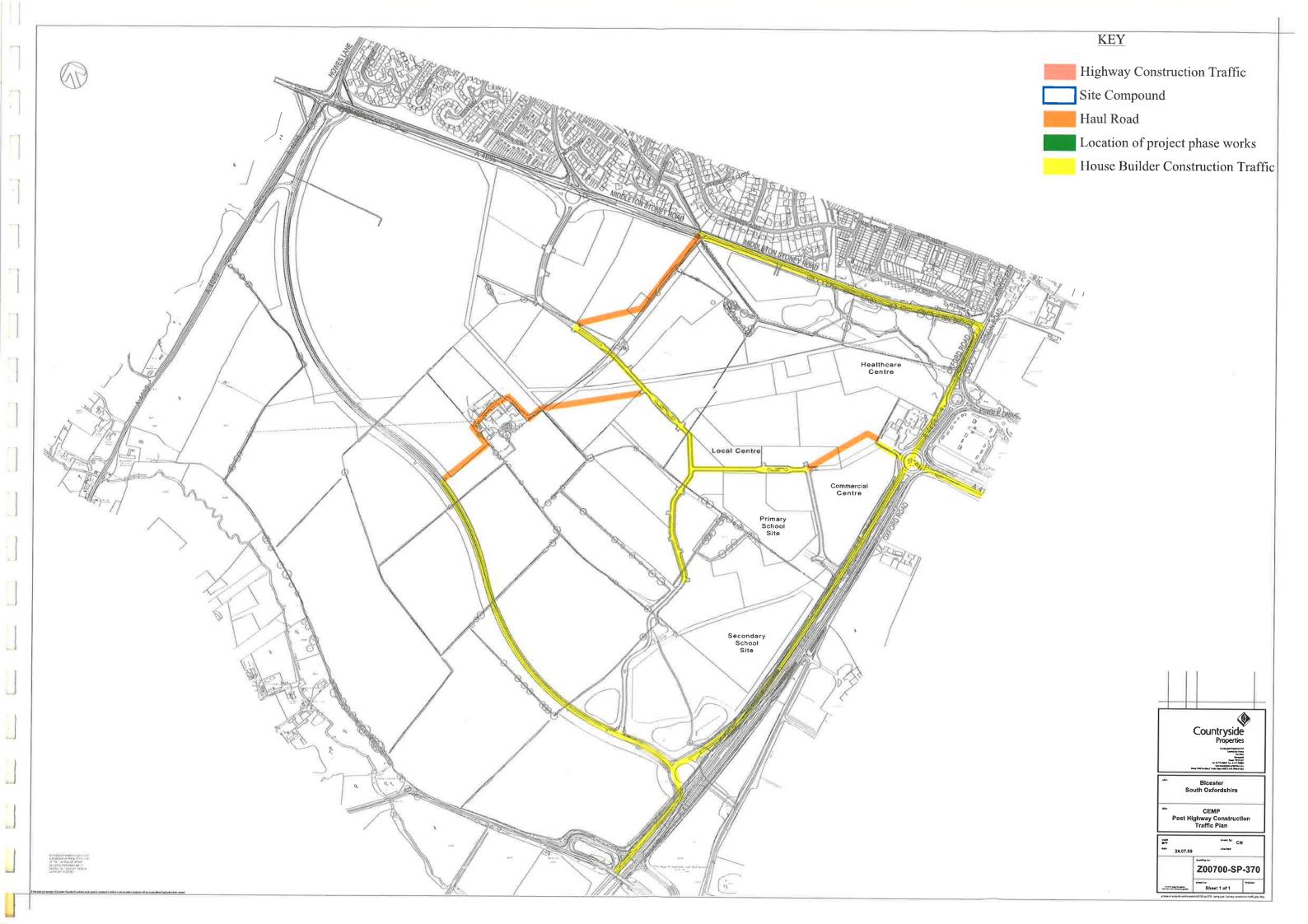














Appendix C Environmental Risk Register Pro Forma

South West Bicester Environmental Risk

Register

Completed By:

Authorised By:

Preparation Date:

	BISK Imbact		2 2							
	Probability		1							
RISK CONTROL MEASURE (RCM)			Carry out further investigation/monitoring. Design remedial measures and implement accordingly.				1			
SCM	BISK		12							
PRIOR TO RCM	Impact		4							
PRIC	Probability		က							
HAZARD			Oils found in the ground during excavations.							
Risk No.		e.g.	61							

RISK = Probability x Impact
Probability = Negligible (1), Unlikely (2), Probable (3), Likely (4), Very Likely (5)
Impact = Very Low (1), Low (2), Medium (3), High (4), Very High (5)

Review Date: (minimum of 3 months from preparation date)

Appendix D Project Environmental Procedures (PEP)

PROCEDURE:	SITE INVESTIGATION					
REF:	PEP/01					
Principal Action By:	Main Contractor, Site Environmental Manager, Ecological Consultant and Archaeological Consultant					
Purpose:	Identification, handling and removal of contaminated land. Identification of areas requiring protection.					
Procedure:	Identification of potentially contaminated land: A detailed remediation scheme will be developed which will identify the type and extent of contamination, and recommend appropriate remediation methods.					
	Excavation and clearance of contaminated land: Areas identified as being contaminated and in need of further remediation will be clearly marked out on site. Prior to the excavation of any area of contaminated land: The extent and volume of contaminated materials to be removed will be identified; and A stockpile area to temporarily store the excavated materials will be identified.					
	Handling of contaminated materials: Designated areas of storage will be used for contaminated materials; Nearby potentially sensitive receptors will be identified and appropriate safe actions taken to prevent contamination migrating; and All staff will be made aware of safe handling of contaminated materials.					
	Removal: Suitable vehicles and haul routes for transport of the materials will be identified.					
	Suitable contractors for the disposal of materials that require disposal off-site at a suitably licensed facility will be selected. No materials are to be deposited anywhere within the site unless in designated areas or this approach forms part of an agreed management / remediation strategy.					
	Landscape: Trees and hedgerows being retained on-site will be protected throughout construction with the use of protective fencing.					
References:	Archaeology: Authorities to be informed should any archaeological remains be discovered. PEP/02 Waste Management					
	Environmental Protection Act (EPA) 1990 – Part 2a Environment Act 1995 The Groundwater Regulations 1998 Water Resources Act 1991 Town and Country Planning Act 1990 Countryside and Rights of Way Act 2000					
	BS5930: 1981 Code of Practice for site investigations, BSI, London BS5837: 2005 Tress in relation to construction, BSI, London					

PROCEDURE:	WASTE AND MATERIALS MANAGEMENT				
REF:	PEP/02				
Principal Action By:	Main Contractor and Site Environmental Manager				
Purpose:	Management of the storage, handling, movement and disposal of waste materials.				
Procedure:	Classification: The amount of waste, its classification and disposal route will be identified at site set-up to facilitate separation and correct disposal.				
	Segregation: Waste materials will be segregated by type. A separate skip for special waste will be used.				
	 Storage: All waste will be stored in designated areas which are isolated from surface drains; Waste will be stored in such a manner as to prevent its escape. This may be achieved through secondary containment as necessary; Stored waste will be clearly identified and its stability monitored; Sufficient equipment will be provided to staff on site to enable the safe storage and containment of waste; and Skips should be covered and regularly checked to see if they are full. 				
	Hazardous wastes: Used oil should be stored in bunded area for collection.				
	Waste licensing and Duty of Care: A full audit of materials leaving the site will be made; Licences of waste carriers, contractors and final disposal sites and consignment notes will be inspected and the results recorded; Waste management registers will be maintained in line with current legislation; Checks will be made to ensure the accurate completion of transfer notes; and Checks will be made to ensure waste reaches the destination detailed on the transfer note.				
References:	Records All records for waste disposal will be maintained for a minimum of three years after the completion of the contract, or any such period necessary to comply with relevant legislation. Waste Transfer Notes				
11GIGI 611063.	Special Waste Transfer Notes Controlled Waste (registration of Carriers and Seizure of Vehicles) Regs 1991				
	Environmental Protection (Duty of Care) Regs 1991 Environmental Protection Act 1990: Part 2 – Waste on Land The Hazardous Waste Regs 2005 The Waste Management Licensing Regs 1994 (as amended) Control of Substances Hazardous to Health (COSHH) Regs 1999				
	PPG8: Safe storage and disposal of used oils (Environment Agency) Waste Management Guidance Notes (Environment Agency) CIRIA, Waste minimisation in construction, Special Publications 133, Site Guide, 1997				

PROCEDURE:	NOISE AND VIBRATION
REF:	PEP/03
Principal Action By:	Main Contractor, Site Environmental Manager and Noise Consultant
Purpose:	Monitoring and control of noise and vibration caused by activities including demolition, excavation and crushing of concrete
Procedure:	Licensing: It will be ensured that where appropriate a Section 61 consent is in place prior to work starting (in accordance with the Control of Pollution Act 1974). Identification of sensitive receptors:
	 Local receptors to noise and vibration nuisance will be identified; and Interested parties will be pre-notified of noise and vibration levels associated with activities onsite.
	Plant maintenance: All plant will be maintained in accordance with the manufacturers' or suppliers' instructions; All machines in intermittent use will be shut down when not in use; and Where possible all plant will be placed away from the site boundaries to reduce the impact on the local community.
	[If monitoring is proposed add relevant details]
	 Noise and vibration abatement measures: Working hours will be limited to those agreed with CDC to minimise disruption to neighbours; All vehicles, plant and other equipment will be fitted with the appropriate silencers, mufflers or acoustic covers as applicable; and Neighbours will be kept informed of the times and dates of any potential noise nuisances.
References:	Control of Pollution Act (COPA) 1974 Environmental Protection Act (EPA) 1990: Part 3 – Statutory Nuisance Countryside and Rights of Way Act 2000 Noise and Statutory Nuisance Act 1993 Noise Act 1996
	BS5228: Noise and vibration control on construction and open sites, Parts 1 & 2 (1997), Part 4 (1992) – BSI, London HSE, Noise in construction, 1992 Ground borne vibrations arising from piling, CIRIA Technical Note 142, 1992

PROCEDURE:	DUST AND AIR QUALITY
REF:	PEP/04
Principal Action By:	Main Contractor, Site Environmental Manager and Air Quality Consultant
Purpose:	Control of dust and atmospheric emissions affecting local air quality
Procedure:	Sensitive receptors: Identify potential receptors: Residents Pedestrians Neighbouring tenants Areas of ecological interest Controlled waters Regular communication with local residents and businesses will be established Dust risk register: Site activities causing dust problems and existence of sensitive receptors will be identified to assess the risk of nuisance caused by dust; and Identify and record activities and receptors and any control or protection measures put in place. Stockpiles of soil and material: These will be dampened, if necessary, using sprinklers and hoses or covered with tarpaulins, during on-site storage prior to their removal from the site; Stockpiles will be located as far away as possible from sensitive receptors, taking account of prevailing wind directions; Windbreak netting will be used around stockpiles and vehicle loading / unloading areas and other exposed areas; and The surface areas of stockpiles will be minimised, within legal limits. Wind: Wind: Wind speed and direction will be observed prior to conducting dust-generating activities to
	determine the potential for dust nuisance to occur when wind direction may carry dust into sensitive areas and avoiding dust-generating operations during periods of high or gusty wind. Equipment: All construction plant and dust abatement equipment will be maintained in good working order and will not be used if it is not in full working order.
	 Construction: Cutting and grinding will be conducted using dust suppressed equipment and water sprays will be used to minimise dust emissions; On-site cement and concrete batching will be undertaken in enclosed areas with suitable water dowsing and wind shielding; On-site aggregate handling will be carried out in enclosed areas where practicable; The height from which materials will be tipped or dropped during transfer will be minimised; and The mixing of large quantities of concrete or bentonite slurries shall take place in enclosed or shielded areas where practicable.
	 Demolition: Water sprays will be applied to reduce dust from earthmoving and other vehicle movements on site; Dust extractors will be used on cutters and saws where feasible; and All loose materials that could be blown about by high wind will be secured. Vehicles: Haul roads and associated vehicle waiting areas will be regularly inspected and kept clean of all materials (including dust); Wheel washing will be undertaken on vehicles leaving the Site; General site traffic will be restricted to watered or treated haul roads; Appropriate speed limits will be established and enforced on roads within the site; and Local highways and site boundaries will be regularly inspected for dust deposits and, if necessary, cleaned.

	 Smoke nuisance: No burning of rubbish or any other activity likely to give rise to dark smoke on or off the site shall be undertaken.
References:	PEP/05 Vehicles Management
	Environmental Protection Act 1990 (EPA) Countryside and Rights of Way Act 2000
	Clean Air Act 1993
	Environment Act 1995 Part 4
	Road Vehicles (Construction and Use) Regulations 1986 (as amended)

PROCEDURE:	VEHICLES MANAGEMENT
REF:	PEP/05
Principal Action By:	Main Contractor and Site Environmental Manager
Purpose:	Minimisation of the impact of vehicles on site
Procedure:	 Traffic Management: Permitted access routes for HGV movements will be clearly signed and compliance with these restrictions regularly monitored; Speed limits will be set within the Site which are appropriate to the various activities which are required to be undertaken; Designated parking areas will be provided within the Site; Circulation of construction traffic along local routes will be prohibited; Delivery routes will be clearly marked; and Plant crossings, access and egress points will be kept clean in order to avoid the deposition of debris, mud or other materials which could cause nuisance to other road users. Control of dust and other materials: Haul roads and associated vehicle waiting areas will be regularly inspected and kept clean of all dusty materials; General site traffic will be restricted to watered or treated haul roads; Local highways and site boundaries will be regularly inspected for dust deposits and, if
	necessary, cleaned; and Refer to Procedure PEP/4 Dust and Air Quality. Fuel handling: Refuelling will be carried out as far away as feasible from any watercourse or drain or other sensitive receptor, only in designated areas on impermeable surfaces; Refuelling equipment will be regularly inspected with maintenance and repair as appropriate; Spill kits, locks and other suitable security devices will be provided; and Fuel bowsers and stores will be secure and as far as possible vandal-proof.
	 Washing vehicles: Where required, wheel-washing facilities will be provided at main construction access and crossing points; Hardstanding areas will be used for all plant maintenance and washing off; These areas will be sited away from any drain or watercourse; and Water released form this area will be directed to a temporary drainage system or pumped for off-site disposal.
	 Avoidance of nuisance from exhaust emissions: No vehicle or item of equipment emitting visible black smoke, other than during ignition, will be used on any construction site or public highway; Combustion engines on all plant and equipment shall not be left running unnecessarily; All vehicle and equipment engines and exhaust systems will be maintained so that the exhaust emissions do not breach statutory limits for the vehicle/equipment type and mode of operation; All vehicles and equipment shall be maintained in accordance with the manufacturers' and suppliers' recommendations; and Exhausts of vehicles and equipment used for construction shall be positioned at a sufficient height to ensure dispersion of exhaust emissions.
References:	PEP/03: Noise and Vibration PEP/04: Dust and Air Quality Anti-Pollution Works Regs 1999 Clean Air Act 1993 Environmental Protection Act 1990 – Part 3: Statutory Nuisance Road Vehicles (Construction and Use) Regs 1996 Road Traffic Regulation Act 1984 Water Industry Act 1991 Water Resources Act 1991 The Groundwater Regulations 1998
	PPG6: Working at Construction and Demolition Sites (Environment Agency) PPG7: Refuelling Facilities (Environment Agency)

PROCEDURE:	POLLUTION INCIDENT CONTROL
REF:	PEP/06
Principal Action By:	Main Contractor and Site Environmental Manager
Purpose:	Identification, prevention and control of pollution incidents
Procedure:	 Storage of hazardous materials: Stockpiles will be located, as far as is reasonably practicable, away from sensitive receptors such as the Pingle Brook, residential areas, places of public access etc.; On site storage of chemicals, fuels etc will be checked regularly and any container found to be leaking will be removed immediately; Hazardous substances will only be stored in dedicated enclosed areas with an impervious base; Adequate secondary containment (bunding) will be put in place. This should be at least 110% of the capacity of the containers where possible; Secondary containment will be regularly inspected, emptied and maintained; and A COSHH register documenting all materials stored and safe handling requirements will be kept in the site office.
	Handling hazardous materials: Use of potentially hazardous materials will be minimised and quantities stored will be kept to a minimum; Designated access routes for the delivery and transport of such materials will be used; and All site staff will be made aware of risks associated with the handling, storage and use of hazardous materials through training sessions.
	 Spill kits: Spill kits with instructions will be sited in areas of high risk and in close proximity to material storage areas; All staff will be trained in the use of spill kits and the correct disposal of used spill control material; Used spill kit equipment should be disposed of as hazardous waste (see PEP/02 Waste Management); and Spill kits will be maintained and periodically inspected.
	Site drainage and water courses: Site drainage plans will be obtained and a copy kept on site; The on-site drainage system will be tested; Abandoned drains will be sealed off or removed to minimise the loss of contaminated water; and The layout of the construction site will be designed to minimise the risk of pollution reaching the groundwater or watercourse.
	Ground clearance work: In the removal of topsoil the area of soil removed will be kept to a minimum; and The length of time for which this time is exposed shall be kept to a minimum.
	Written discharge consents will be obtained prior to any discharge to public sewer from the Environment Agency or the local sewerage undertaker as appropriate; and Consents to discharge will be recorded.
	Actions in the event of a pollution incident on site: Stop work on site immediately and take appropriate safe actions to prevent further pollution occurring; Notify Project Manager of incident, possible environmental impact and effect on works; Identify nearby potentially sensitive receptors and take appropriate actions to prevent migration of pollutants; Monitor surrounding areas for further contamination / migration of pollutants; and Agree and implement remediation techniques.
	Pollution incident reporting: Reporting form should include the following information: Date, time and location of incident; The nature of the incident and a description of the events;

	 The environmental effects of the incident; Immediate action taken following the incident; and Corrective action taken and the date closed. The completed form should be signed by the Project Manager and a copy passed to the Main Contractor for signing. Emergency contact and telephone numbers: A list of emergency contacts will be kept on display in the site office and in high risk areas (e.g. oil storage locations), including: Site Environmental Manager; Environment Agency contacts; and Approved pollution clean-up contractors.
References:	PEP/02 Waste Management COSHH Register Emergency contacts list Water Resources Act 1991 Water Industry Act 1991 Environment Act 1995 Anti-Pollution Works Regulations 1999 Salmon and Freshwater Fisheries Act 1975 Control of Pollution Act (COPA) 1974 The Groundwater Regulations 1998 Countryside and Rights of Way Act 2000 Environment Agency Pollution Prevention Guidelines, including: PPG1 — General guide to the prevention of pollution of controlled waters PPG2 — Above ground oil storage tanks PPG4 — Disposal of sewage where no mains drainage is available PPG5 — Working in or near rivers PPG6 — Working on Construction and Demolition Sites PPG8 — Safe storage and disposal PPG21 — Pollution Incident Response Planning

PROCEDURE:	PROTECTION OF VEGETATION AND FAUNA
REF:	PEP/07
Principal Action By:	Main Contractor, Site Environmental Manager, Landscape Architect and Ecological Consultant
Purpose:	Identification, prevention and control of impacts on vegetation and fauna
Procedure:	Protection of existing vegetation: It shall be ensured that sensitive areas within the Site are marked and / or fenced off, Where possible there will be a buffer zone as well as a fenced off area; Water features, protected species, trees and valuable habitats will be protected from runoff from the construction site; If necessary, a trench or bund will be constructed to intercept any runoff; Consideration will be given to the provision of running boards or similar protection over sensitive areas if unavoidable to prevent deep rutting; and Clearance work to be done outside of key seasons relating to activity of any protected species on-site. Protection of existing fauna on-site: Staff working on site to be made aware of the location of protected species; Appropriate measures will be taken when felling trees to identify and protect any bats present on-site; and Sensitive areas will be marked and/or fenced off. Stripping topsoil and subsoil: Topsoil and subsoil can only be stripped when in a dry and friable condition; and No topsoil or subsoil should be moved in wet conditions, during heavy rainfall or when pools of water are found on the surface, or when ground Is in a waterlogged condition Storage of topsoil and subsoil: Topsoil stockpiles should be a low and narrow as possible so that core materials is within 1 metre of the surface; Subsoil stockpiles are to be a maximum of 5m in height; Store topsoil and subsoil separately; Stockpiles should be: formed by loosely dumping soil, shaped to shed water and avoid ponding within the stockpile areas and sited to avoid interference with rainwater runoff from adjacent areas; Any weed growth on topsoil and subsoil stockpiles should be dealt with by regular mowing and by the use of herbicide that complies with the Control of Pesticide Regulations 1986; Locate stockpiles.
References:	Wildlife and Countryside Act 1981 Countryside and Rights of Way Act 2000 Control of Pesticide Regulations 1986 RS 5837: 1003 Trees in relation to construction, RSL Landon
	BS 5837: 1992 Trees in relation to construction, BSI, London

Schedule of Environmental Legislation Appendix E

Environmental Legislation

Environmental Legislation	Summary of Relevance to the Site			
Hazardous Substances				
Asbestos (Licensing) Regulations 1983 (as amended 1998)				
Control of Asbestos 2006	 Employers are designated various responsibilities to protect employees from potential exposure to asbestos at work, including: Identification of asbestos risks within the workplace; Prevention and reduction in the spread of asbestos materials; Implementation of asbestos control and maintenance procedures; The commissioning of licensed contractors to carry out asbestos installation or removal works; and The Regulations are due to be amended to include a requirement for all site owners and operators to maintain a Register of asbestos containing materials. 			
Control of Substances Hazardous to Health (COSHH) Regulations 2002 (and amended 2003, 2004)	The COSHH regulations provide a legal framework for controlling people's exposure to all 'very toxic, toxic, harmful, corrosive or irritant' substances and apply to all places of work. There are various requirements including an assessment of the risk to the health of employees arising from their work and what precautions are needed, introduction of appropriate measures to prevent or control the risk, use of control measures and maintenance of equipment.			
<u>Waste</u>				
Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991	This legislation provides powers to control fly-tipping and prevents the unlicensed transport of waste materials. All carriers of controlled waste including the producers of building and demolition			
	waste, are required to be registered with the Environment Agency. Controlled waste is defined as household, industrial or commercial waste other than agricultural, mineral/ quarrying or explosive wastes.			
	This registration must be renewed every 3 years.			
The Waste Management Licensing Regulations 1994	The Regulations state that the deposit, keeping, treatment or disposal of controlled waste in or on land requires a waste management licence.			
	Applicants for, and holders of licences have to satisfy the Environment Agency that they are 'fit and proper persons' to dispose of waste. This includes a requirement to obtain a Certificate of Technical Competence.			
	When a licence is granted, it is likely to contain a range of conditions, which are subject to inspection by the Agency on a regular basis. The Regulations define the list of activities which are subject to a licence requirement and also provides a list of exempt activities.			
Hazardous Waste (England and Wales) Regulations 2005	The Regulations ensure the sound management, storage and safe disposal of hazardous wastes, to prevent environmental pollution and harm to human health. 'Hazardous' waste applies to wastes which contain any substance which: is listed a hazardous waste in the List of Waste Regulations 2005 (see below); is exceptionally classified as hazardous by the Secretary of State or any of the National Executives; or is declared hazardous by virtue of any regulations under section 62 of the Environmental Protection Act (EPA) 1990.			
	All hazardous waste movements require pre-notification to the Environment Agency prior to any hazardous waste being produced (where possible).			
	Producers are required to know and document the quantity, nature, origin and final destination of the Hazardous Waste and to certify that the waste carrier is registered under the Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.			

Environmental Legislation	Summary of Relevance to the Site
	Copies of the completed consignment notes must be retained for at least 3 years by all those in the waste chain.
List of Waste (England) Regulations 2005	The List of Waste Regulations categorises wastes as hazardous, and provides a coding system of waste and hazardous waste.
	Under the List of Waste Regulations, a set of criteria are provided to determine whether or not a waste is classified as hazardous, e.g. if it has a flash point lower than 55°C.
Environmental Protection (Duty of Care) Regulations 1991	A legal duty of care is imposed on anyone – from producers, to carriers and disposers of waste, to ensure that: Waste is not illegally disposed of or dealt with without a licence or in breach of a
	licence or in any way that causes pollution or harm; Waste is transferred only to an 'authorised person', i.e. a local authority
	 registered carrier or a licensed disposer; and When waste is transferred, it is accompanied by a full written description which forms part of a waste transfer note (or consignment note for hazrdous wastes).
	All persons subject to duty of care are required to ensure that neither they nor any other person commit an offence under the Regulations.
Environmental Protection Act (EPA) 1990: Part 2 – Waste on Land	This Act builds on the system put in place by the Control of Pollution Act with stricter licensing controls and other provisions aimed at ensuring waste handling, disposal and recovery operations do not harm the environment. It reorganised Local Authority responsibilities for waste management, introduced a duty of care for producers and handlers of waste and described the offences of unauthorised storage, treatment and disposal of waste.
Environmental Protection Act (EPA) 1990: Part 2a	Section of the EPA created by the Environment Act 1995 containing the legislative framework for identifying and dealing with contaminated land.
Environment Act 1995	Inserted Part '2a' to the EPA 1990 giving powers and responsibilities to Local Authorities regarding contaminated land.
Discharges to Water / Land	
Anti-Pollution Works Regulations 1999	Aimed at ensuring that site owners pay for the prevention and remediation of pollution arising from their activities. Notices can be served by the Environment Agency directing a site owner to carry out anti-pollution works where any poisonous, noxious or polluting matter is likely to enter, or to be, or to have been present in any controlled waters.
Water Industry Act 1991	The Act prohibits certain discharges to sewer including: Any matter likely to injure the sewer or interfere with the free flow of its contents or to affect the treatment, disposal of its contents;
	 Liquid waste or steam at a temperature higher than 110°F or any other chemica waste which is dangerous, a nuisance or prejudicial to health;
	 Any petroleum spirit; and Calcium carbide.
	Trade effluents may be discharged into public sewers only with the consent, or by agreement with, the sewerage undertaker (i.e. local water company). The consent may stipulate conditions relating to:
	Nature or composition of the effluent; Maximum daily volume allowed;
	Maximum daily volume allowed, Maximum daily rate of flow; and
	Sewer into which the effluent is discharged.
Water Resources Act 1991	The Act requires water abstractions to be licensed, and certain discharges into controlled waters to be subject to Environment Agency consent.
	It is an offence under the Act 'to cause or knowingly permit':
	Poisonous, noxious or polluting matter, or any solid waste matter, to enter controlled waters
	 Matter, other than trade or sewage effluent, to be discharged from a sewer in

Environmental Legislation	Summary of Relevance to the Site
	 contravention of a relevant prohibition; Trade or sewage effluent to be discharged onto into controlled waters or through a pipe into the sea (beyond the controlled waters) Trade or sewage effluent to be discharged onto land or into a lake or pond in contravention of a relevant prohibition or; Any matter to enter inland waters so as to cause or aggravate pollution by impeding flow. Pollution from individual discharges into water is controlled by a system of discharge consents which set legal limits on the type, concentration and total volume of discharge which can be released.
Water Act 2003	The Water Act replaces parts of the Water Resources Act 1991, and will be fully implemented by 2012. The Water Act introduces a new abstraction licence system which reduces the number of licences and encourages the development of Catchment Abstraction Management Strategies (CAMS).
Groundwater Regulations 1998	The Regulations transpose the requirements of the Groundwater Directive into UK legislation. The Regulations aim to prevent and limit the pollution of groundwater by certain listed substances or groups of substances. The listed substances are the same as those in the Groundwater Directive. The Regulations aim to prevent entry of List I substances into groundwater and prevent groundwater pollution by List II substances. The direct or indirect discharge of List I or II substances must be subject to prior investigation and authorisation. The Regulations also allow notices to be served to control activities which might lead to an indirect discharge of List I substances or groundwater pollution by an indirect discharge of substances in List II.
Control of Pollution (Oil Storage) (England) Regulations 2001	These Regulations require a person having custody or control of oil to carry out certain works and to take certain precautions and other steps for preventing pollution of any waters which are controlled waters for the purposes of Part III of the Water Resources Act 1991. The Regulations impose general requirements in relation to the storage of oil and the types of container used. Where the Environment Agency considers that there is a significant risk of pollution of controlled waters from the oil in question it has the power to serve a notice on the person having custody or control to minimise the risk.
Contaminated Land (England) Regulations 2000 (as amended 2006)	Local Authorities have a duty to inspect land, to identify contamination and to decide whether any such land should be designated a 'special site'. Public registers of contaminated land and special sites are kept by the local authority and the Environment Agency. Following designation of land as contaminated or a special site, the enforcing authority can serve a remediation notice on the appropriate person(s) specifying what needs to be done and the period within which remedial work should be completed. The appropriate person will be the person(s) who caused or permitted the contamination of the land. If this person cannot be identified then responsibility falls to the current occupier or owner of the land.
Building Regulations 1991 (as amended 2002)	The Regulations impose requirements upon people carrying out certain building operations, including new buildings, building extensions and a material change of use of land or a building. Building work must comply with schedule 1 of the Regulations which include minimum standards for various aspects including site preparation, toxic substances, drainage etc.
Emissions to Air / Noise	
Control of Pollution Act (COPA) 1974 (Sections 60, 61)	Section 60 of COPA gives powers to the Local Authority to control noise and vibration from construction sites. The basis of the COPA legislation is that Best Practical Means should be used to control noise and vibration pollution. Control is by service of an abatement notice (under S60) on the person responsible for the noise requiring specific controls to minimise noise and vibration. The notice may specify types of plant and machinery, hours of work, boundary noise levels, etc.
	Section 61 provides for the Contractor to apply to the Local Authority for consent before works commence. This protects the contractor from action by the local authority under S60, but not from individual residents' complaints.

Environmental Legislation	Summary of Relevance to the Site
Clean Air Act 1993	The Act prohibits, subject to certain conditions, the emission of dark and black smoke from chimneys serving boilers and other industrial plant. The Local Authority is empowered to undertake an examination of a plant likely to be causing air pollution, taking into account the possible relevance of statutory exemptions.
Noise and Statutory Nuisance Act 1993	This Act amends the Environmental Protection Act (EPA) 1990 to make noise emitted from vehicles, machinery or equipment in the street a statutory nuisance. It gives the Local Authority powers to serve an abatement notice on the person responsible.
Noise Act 1996	Introduces a new procedure for Local Authorities to seize noisy equipment, in relation to statutory nuisance offences under the EPA 1990.
Control of Noise at Work Regulations 2005	Requires that all employers must conduct an assessment of the exposure and therefore of the risk of their employees to noise where they have reason to believe that any of the specified action levels for various noise exposures is or could be exceeded.
Construction Plant and Equipment (Harmonisation of Noise Emission Standards) Regulations 1985 (as amended)	Provides for examination and certification of construction plant that comply with noise emission standards. The Regulations require that plant is certified by approved bodies. Various types of plant manufactured after the dates of the regulations are to meet noise emission standards and are certified as such.
Environmental Protection Act (EPA) 1990: Part 3 – Statutory Nuisance (section 80)	When a complaint of statutory nuisance is made to the Local Authority by a person living in its area, the Authority has to take steps to investigate the nuisance. Statutory nuisances include any premises maintained in such a state to be prejudicial to health or a nuisance; any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance. Noise emitted from premises so as to be prejudicial to health or a nuisance.
<u>Vehicles</u>	
Road Vehicles (Construction and Use) Regulations 1986 (as amended)	It is an offence to use a vehicle if it is emitting 'smoke, visible vapour, grit, sparks, cinders or oily substances' in such a way as is likely to cause 'damage to any property or injury to any person'. It is an offence to use a vehicle in such a way as to cause excessive noise.
Road Traffic (Vehicle Emissions) (Fixed Penalty) Regulations 1997 (as amended 2002)	These Regulations give powers to Local Authorities to enforce vehicle emission standards at the roadside as part of the implementation of the national air quality strategy.
	Under the Regulations, Local Authorities may issue fixed penalty notices to users of vehicles that do not comply with emissions standards set in the Road Vehicles (Construction and Use) Regulations 1986 as amended. Appropriately trained Local Authority officers can test emissions from vehicles with the help of a uniformed policy officer to stop the vehicle. The Local Authority officer may also issue a fixed penalty notice to drivers who leave their engines running unnecessarily.
Archaeology and Conservation	
Ancient Monuments and Archaeological Areas Act 1979	Under this Act the Secretary of State for the Environment schedules monuments and Areas of Archaeological Importance; a list of these is maintained by English Heritage.
1990 Town and Country Planning Act	This Act ensures that new developments are appropriately implemented, including in such a way as to minimise impacts on the environment.
	The Act includes provisions for attaching conditions to planning permissions. Conditions may include measures to control noise, drainage, protect wildlife, and maintain visual amenity, for example, through landscaping.
<u>Ecology</u>	
Countryside and Rights of Way Act 2000	This act amends the law relating to nature conservation and the protection of wildlife and gives greater protection to Sites of Special Scientific Interest.
Wildlife and Countryside Act 1981 (As amended by the	This act as amended provides protection for various species of plant and animals, as listed in schedules 1 to 10.

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Countryside and Rights of Way Act 2000)	
The Conservation (Natural Habitats &c.) Regulations 1994 (as amended 1997 and 2000)	The Regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species', and the adoption of planning and other controls for the protection of European sites. Under the Regulations, competent authorities have a general duty in the exercise of their functions, to have regard to the EC Habitats Directive.
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