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Four Ashes Limited

West Midlands Interchange

Four Ashes Ltd

Intended for
Four Ashes Ltd

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WEST MIDLANDS INTERCHANGE

OUTLINE DEMOLITION AND CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

RAMBOLL

OUTLINE DEMOLITION AND CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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1. INTRODUCTION

Background

1.1 Four Ashes Limited (the 'Applicant') intends to make an application to the Secretary of State via the Planning Inspectorate for a Development Consent Order ('DCO') under the Planning Act 2008 for the development of a new Strategic Rail Freight Interchange ('SRFI') and associated warehousing (together, the 'Proposed Development') at land located at Four Ashes, Staffordshire (the 'Site'). The Proposed Development is also known as the West Midlands Interchange ('WMI'). The Proposed Development comprises the demolition of existing structures and the construction of an intermodal SRFI and associated rail freight warehousing, ancillary buildings and infrastructure. Ramboll has prepared this Outline Demolition and Construction Environmental Management Plan (ODCEMP) to support the DCO application and provide a framework on which the Demolition and Construction Environmental Management Plan (DCEMP) will be developed. For ease, "the DCEMP" is referenced as a single document, in reality it will comprise a series of plans which are prepared for specific areas of the Proposed Development as they are developed in a phased manner.

1.2 This ODCEMP has been developed alongside the Environmental Impact Assessment (EIA) for the Proposed Development, and provides an outline of the mitigation measures agreed and 'embedded' into the Proposed Development to control the environmental effects of the demolition and construction phase.

1.3 It is recognised that the DCEMP will need to be updated as the design is developed further following the DCO application, and that further detailed information will be supplied by a contractor (the 'Contractor')[1] prior to demolition and construction. As such, this document aims to provide a framework for specific mitigation measures that will be adopted by the Contractor during the demolition and construction process.

1.4 The detailed DCEMP, which will be produced post consent, will be prepared in accordance with standard best practice and regulatory requirements. The submission and approval of a detailed DCEMP is secured by the draft DCO Requirement. It is not proposed that a single DCEMP would be produced, instead that a DCEMP would be prepared for each phase of development to reflect Site conditions and guidance applicable at the specific time. The Contractor will be responsible for the implementation of the plan and the production of method statements and risk assessments for the mitigation measures set out in this document, and for providing the necessary evidence in the form of their DCEMP that the minimum requirements outlined in this ODCEMP will be met.

1.5 The DCEMP will be accompanied by an Ecological Mitigation and Management Plan (EMMP) which will specifically deal with the requirements relating to the implementation of ecological mitigation identified for the design of the Proposed Development and the construction methodology. The EMMP will be further developed following the DCO application as the design is progressed in more detail, and will be adopted and updated by the Contractor as a live document. A Framework Ecological Mitigation and Management Plan (FEMMP) has been prepared (Technical Appendix 10.4 of the Environmental Statement (ES)) which outlines the principles and minimum requirements for the EMMP.

1.6 A number of additional plans will be produced to support the DCEMP, these will include:

- Site Waste Management Plan (SWMP);
- Materials Management Plan;
- Soil Resource Plan; and
- Dust Management Plan.

1.7 The Contractor will be responsible for the continual development of each DCEMP as the demolition and construction phases of the Proposed Development progress to take account of monitoring and audit results, changing environmental conditions and/or regulations and to take opportunities where appropriate to further enhance environmental performance and innovations. This will ensure development-specific environmental management procedures are identified and implemented.

[1] Please note that references to the Contractor generally refer to both the demolition contractor(s) and the construction contractor(s) unless otherwise stated. For ease a singular term is used, however the Contractor could comprise different entities.

2. GENERAL INFORMATION

Environmental Management Systems

2.1 The Contractor will be accredited under ISO14001:2015 for their Environmental Management Systems (EMS).

Working Hours

2.2 The normal construction working hours would be as set out below:

- Monday to Friday: 07.00 to 18.30; and
- Saturday: 08.00 to 13.00.

2.3 No works will take place outside of the hours stated above, unless by prior written agreement from South Staffordshire District Council (SSDC) or in emergency situations. Emergency situations will be limited to genuine emergencies where there is a risk of endangerment to people, property, infrastructure or the environment. It will not be used for reasons of programme or for the justification of any works, planned or unplanned, where this criteria is not met, except by prior written agreement from SSDC. Noise limits for out-of-hours work will be agreed with SSDC prior to any work commencing. Light nuisance during out-of-hours working will be minimised through the use of task-orientated, directional lighting.

Security

2.4 Each phase of construction (or construction plot if applicable) will be secured by means of fencing or hoarding as appropriate. Plant, materials and other equipment will be stored in designated compounds, containers and storage facilities. Entrances will comprise secure gates which will be locked when not in use and each entrance will be manned during working hours by security staff.

2.5 Deliveries will be checked in and out of the Site by security and all visitors to the Site will be required to sign in and undertake an induction.

2.6 The Site will be monitored by Closed Circuit Television (CCTV) or on-site security staff.

2.7 All recorded instances of crime will be reported to the police. Local residents will be informed of contact details for the Proposed Development to report suspicious activity.

2.8 Instances of fly tipping will be recorded, and reported to the police as well as SSDC. Measures will be put in place where necessary to discourage fly tipping on or near the Site, such as CCTV and fencing.

2.9 Currently, public access to the Site is limited. A single Public Right of Way exists in the north-west and provides a link between Croft Lane and the A449 via an overbridge to the railway. This right of way will be stopped up during construction of that phase and an appropriate safe and secure alternative route provided in consultation with SSDC. A towpath also extends along the western side of the canal along its length through the Site. Appropriate fencing or hoarding will be installed adjacent to public rights of way so as to prevent access to the Site and provide safety and security to those using them.

Site Inductions and Training

2.10 All demolition and construction personnel will be appropriately briefed about the project-specific environmental impacts and mitigation measures by the Contractor at a mandatory induction before they are allowed onto the Site. This briefing will include as a minimum:

- Key procedures during the demolition and construction phase;
- Guidance on the significance and sensitivity of environmental features;
- The environmental objectives and policies of the Applicant and Contractor;
- The potential environmental effects of demolition and construction and how these can be avoided or mitigated;

- Responsibilities for environmental monitoring and reporting;
- Procedures for responding to environmental incidents and emergencies; and
- Health and safety requirements.

Work Permits and Method Statements

2.11 Necessary environmental controls will form a component of all work permits and method statements, and will only be signed off once the necessary environmental measures are included to the satisfaction of the Site Manager and/or Environmental Manager (refer to Section 3 for an outline of these roles). All personnel involved with a specific task will be briefed on the specific method statement requirements before work commences.

2.12 Toolbox talks will be delivered to all staff during the course of the demolition and construction by qualified Site personnel. These are short talks, usually carried out on-site and concentrate on reinforcing practical measures. The programme will be adjusted to suit any site-specific issues that may arise, and health and safety issues will also be covered. Typical toolbox talk topics are listed below:

- Safe handling and refuelling of plant and machinery;
- Precautions to prevent sediment-laden run-off from entering watercourses;
- Disposing of water safely;
- Drug and alcohol policy;
- Safety audits;
- Safety culture training;
- Waste storage and segregation and the potential planning and waste management licensing implications of reuse;
- Precautions and awareness for protected flora and fauna;
- Road safety and driving in the local area; and
- Safe work in excavations.

2.13 A minimum of two toolbox talks will be delivered per month for the duration of each phase of construction. This will be monitored and audited by the Environmental Manager.

Health and Safety

2.14 The Contractor will prepare and maintain a health and safety policy, and a detailed, Site specific health and safety plan. Furthermore, the Contractor will be required to manage the health and safety of employees and others affected by the demolition and construction works. Method statements, accompanied by safety risk assessments, will be produced to cover all demolition and construction activities. The Contractor will develop environmental, health and safety (EHS) procedures, which will include an accident and incident reporting procedure in accordance with the Applicant's requirements.

Materials Management

2.15 Construction materials would be selected following the Building Research Establishment (BRE) 'Green Guide to Specification'. These include:

- Minimising embodied energy content (the energy used in manufacture);
- Using recyclable materials where they have high embodied energy; and
- Maximising the recycled content of the material, ease of maintenance, appropriate sourcing of materials and totally excluding deleterious and hazardous materials.

2.16 The 'sustainability' of raw materials will be considered during the procurement process. All construction materials will be appropriately stored on-site to minimise damage by vehicles, vandals, weather or theft.

2.17 Where possible, prefabricated elements will be lifted directly into position from delivery vehicles. This will assist in reducing on-site storage and labour requirements and construction noise levels, thereby reducing potential nuisance to the surrounding receptors.

Construction Compounds

2.18 Construction compounds, including welfare facilities and offices for construction staff would be constructed on-site during the enabling works and initial set up of each construction phase. The precise location construction compounds has not been determined at this stage, but it is envisaged that they would be located away from sensitive receptors. There may be more than one construction compound in use at the Site at any one time, due in part to the phased approach and the size of the Site, but also to facilitate construction of the new crossing over the canal which may require compounds on both sides.

Concrete batching and washout

2.19 Given the scale of the Proposed Development is proposed that concrete batching is undertaken on Site so as to reduce transport of raw materials and reduce waste.

2.20 Concrete batching and crushing activities are subject to regulatory control and permitting in accordance with the Pollution Prevention and Control (England and Wales) Regulations 2000, and the Environmental Permitting (England and Wales) Regulations 2010. Operation of the plant will be subject to permitting by the Local Authority and subject to stringent environmental controls.

2.21 The concrete batching plant would be located within the perimeter of the Site and positioned centrally to ensure ease of access for bulk material deliveries, to minimise haul distances within the Site, and to maximise distance from residential receptors.

2.22 The concrete batching plant will be located away from existing and proposed surface water features and situated on hardstanding with a dedicated temporary surface water drainage system to prevent runoff of concrete fines into surface waters, vegetation and soils.

2.23 There will be a dedicated concrete washout facility for the washing and disposal of waste concrete and concrete slurry. All arisings from this process will be captured in skips or containers and tankered off site for licensed disposal.

2.24 The precise location of the concrete batching plant and washout areas will be agreed with SSDC prior to commencement of construction. The concrete batching plant and washout facilities may need to be relocated during construction due to phasing. The same principles established above will apply.

3. KEY ROLES AND RESPONSIBILITIES

3.1 Environmental roles and their responsibilities are detailed in Table 3.1. A Site based Environmental Manager will be employed for the duration of demolition and construction to manage environmental responsibilities and liaise with landowners/occupiers and other stakeholders. The responsibilities outlined below are indicative in terms of the person/s to which they are assigned, and the appointed Contractor may wish to appoint additional roles (for example, a public liaison officer).

Table 3.1: ODCEMP Roles and Responsibilities

ODCEMP Roles and Responsibilities	
Role	**Responsibilities**
Contractor	• Overall responsibility for creation and implementation of DCEMP in compliance with the ODCEMP; and • Ensure compliance with all legislative requirements, including Environmental and Health and Safety requirements.
Contractor's Site Manager	• Site management, oversight of operations, deliveries and general housekeeping; • Oversight of weekly site audits; • Responsibility for appointing Contractor's Environmental Manager, ensuring that individual(s) have sufficient time, resource and training to discharge responsibilities; • Responsibility for signing off on permits to work and method statements, with assistance where required from the Environmental Manager and health and safety manager; • Review implementation of corrective actions; • Track performance of DCEMP (and all associated detailed management plans) against internal targets and report back to both staff on the ground and to contracts manager/corporate level; • Responsible for managing Considerate Constructors Scheme compliance; • Responsibility for public liaison, and complaints handling; and • Preparation, management, dissemination of information on project programme, noisy works, Site contacts and health and safety information to the site neighbours.
Contractor's Environmental Manager	• Responsibility for delivering environmental aspects of Site inductions; • Carry out toolbox talk training and work with site foremen to ensure implementation of good practice; • Carry out weekly site audits, and assist site manager in preparation of detailed monthly audit report; • In conjunction with the environmental specialists, overall monitoring of the programme for environmental works, and provision of status reports as necessary; • Monitoring of construction activities and performance to ensure that appropriate environmental control measures are being implemented and are effective; • Responsible for implementation of the Site Waste Management Plan, and record keeping and monitoring relating to waste transfer notes and waste volumes reporting; • Provision of advice and liaison with regulatory bodies to ensure that environmental risks are identified and appropriate controls are developed;

ODCEMP Roles and Responsibilities	
	• Attendance of weekly progress meetings with project management team, to report on environmental performance; and • Production of a monthly Environmental Report covering key environmental performance indicators.

3.2 Additional environmental specialists will be required for specific tasks, which are outlined in more detail in the following sections.

4. LIAISON AND COMMUNICATION

Considerate Constructors Scheme

4.1 The Contractor and all appointed key sub-contractors will be registered to the national Considerate Constructors Scheme (CCS). The CCS aims to improve the image of construction by ensuring best practice beyond statutory compliance with regard to protecting the general public, the workforce and the environment.

4.2 The CCS Code of Practice seeks to:

- Minimise any disturbance or negative impact (in terms of noise, dirt and inconvenience) sometimes caused by demolition and construction sites to the immediate neighbourhood;
- Eradicate offensive behaviour and language from demolition and construction sites; and
- Result in an improved understanding and respect from residents and others in the community and fewer complaints.

4.3 All Site personnel will be made aware of the environmental issues and constraints posed by the Proposed Development and the actions and responsibilities set out in the Contractor's DCEMP. This will be achieved through Site inductions, toolbox talks, risk assessments and method statement briefings.

Communication with Regulatory Bodies

4.4 The Contractor will be responsible for communicating with regulatory bodies. The Contractor will be responsible for giving prior notice to the regulatory bodies in the event that works (if applicable) will be undertaken outside of the agreed limits. Any proposed alterations to the working schedule and limits will be agreed with the regulators by the Contractor prior to commencing the relevant work.

Stakeholder Liaison

4.5 Specific complaints and enquiries from the public and landowners / occupiers will be dealt with by the Contractor or appointed communication consultants.

4.6 A contact name and telephone number of the appropriate contact person will be displayed at Site entrances for the duration of the demolition and construction phases. The contact name and details will be provided to all the relevant stakeholders by the Contractor prior to the start of the construction works.

4.7 The appointed contact person will identify a member of staff who will coordinate responses to queries and address issues in a timely and appropriate manner and will be responsible for liaising with landowners / occupiers, local residents, utility companies and affected third parties.

4.8 Communications with the relevant stakeholders will be on a regular basis to inform them of forthcoming demolition and construction activities and to establish and maintain a strong working relationship.

Complaints Procedure

4.9 Specific complaints and enquiries from the local residents and the general public will be dealt with by the Contractor's appointed contact person (this person's details will be displayed at Site entrances for the duration of the demolition and construction phases and passed onto SSDC and other applicable regulatory bodies). A central register of all complaints and enquiries will be held by the Contractor. The Contractor's Site Manager will make stakeholders aware of the complaints procedure as part of the communication programme. The complaints procedure will include the following aspects:

- Publication of contact details for the relevant contact, including telephone and email contact details;
- Set up and maintain a complaints register, which records all correspondence/telephone contact from the general public or stakeholders;

- Classify the nature of correspondence (e.g. complaint, enquiry, comment);
- In the event of correspondence that requires action, assign to an appropriate member of the management team; and
- Ensure the close-out of actions and update complaints register with a record of all actions and outcomes.

4.10 This is an integral requirement of the Considerate Constructors Scheme and will be done in accordance with the requirements of the scheme.

4.11 The Contractor will also ensure that the Contact Centre of SSDC is provided with appropriate contact details for the Proposed Development before demolition and construction works commence.

5. GROUND CONDITIONS

General

5.1 The majority of the Site comprises agricultural land and plantation woodland. However, Calf Heath Quarry has been in operation in the eastern part of the Site since March 2012 and furthermore, part of the Site (in the south-west) is currently subject to an Environmental Permit (ref: DP3033NX, held by SI Group Ltd) under the Environmental Permitting (England and Wales) Regulations 2010 relating to ongoing remediation works. The measures outlined below comprise minimum standards across the entire Site, however specific, additional measures for the area undergoing remediation works are applicable (as per the Remediation Safeguarding report, Technical Appendix 11.5 of the ES).

5.2 Geological maps for the area indicate that the Site is located on a Secondary A Aquifer (superficial deposits) which is further underlain by a Principal Aquifer (sandstone formation) and there is one potable groundwater abstraction within 2 km. The Site is situated within Environment Agency designated Zones 2 and 3 Groundwater Source Protection Zones (SPZs). Overall, the hydrogeological sensitivity in the vicinity of the Site is considered to be high, furthermore the vulnerability of the groundwater resources is considered to be high due to the current lack of extensive building/hardstanding coverage of the Site, and the presence of abstractions including one for potable water supply located 1.39 km west. The vulnerability will be heightened further still during earthworks at the Site.

5.3 A full account of the baseline conditions and assessed effects for the Proposed Development is presented in Chapter 11: Ground Conditions of the ES.

Key potential issues identified during EIA process

5.4 The demolition and construction stages of the Proposed Development could generate some potential significant direct and indirect Ground Condition impacts, with temporary effects. Subject to the findings of further intrusive Phase II Investigation, the potential impacts could include:

- Construction workers may come into direct contact with potentially contaminated soils / groundwater and groundwater during the redevelopment works (including isolated asbestos materials recorded a depth in the eastern portion of the Site and the isolated chloromethane concentration recorded within the woodland area);
- As with any former commercial / industrial activities, a potential exists for further limited contamination hotspots to be discovered during construction works;
- Contaminated dust emissions (particularly associated with construction vehicle movement) and hazardous gas emissions generated could present a potential health risk to construction workers, off-site commercial users and members of the public;
- Land gas and / or residual volatile contaminants (if present) could pose a risk to construction workers within confined spaces (such as excavations for installation of new Site drainage);
- Oil and diesel stored at the Site during demolition and construction, if spilled may contaminate soil and groundwater;
- Controlled waters (surface watercourses and groundwater) could be affected during demolition and construction by accidental spillage of oil and diesel through infiltration of polluted runoff through the soil and groundwater to the controlled water (this could potentially affect groundwater in the underlying groundwater source protection zones II and III and nearby surface watercourses);
- Encountering and mobilisation of pre-existing localised contamination (if present) during construction phase works may occur which includes historically infilled materials;
- Generation and temporary stockpiling of potentially surplus materials (depending on finalised Site levels) associated with excavation of building foundations, installation of drainage systems and services. Inefficient management of stockpiled materials could lead to direct and indirect pollution impacts from silt-laden runoff;

- Uncontrolled dewatering of deeper excavations, should extended foundation depths or Site level reduction be required, could create surface water runoff if not adequately mitigated;
- In the absence of mitigation, demolition, excavation and construction works could introduce new contaminant sources and pathways creating a possible link to Site workers, visitors and contamination within the soil and groundwater; and
- Changing in groundwater levels as a result of excavations within the Site. This may be a temporary direct or an indirect impact affecting hydrological receptors.

Management measures

5.5 The potential risk to workers' health during demolition and construction would be mitigated by:

- Design in accordance with Construction (Design and Management) Regulations (2015) to minimise risk to people and the environment through design;
- Using appropriate, safe working practices;
- Providing health and safety training and appointment of a health and safety manager for the demolition and construction phase;
- Installing guidance notes and signs at the Site;
- Developing a contingency plan in case of accidents / incidents;
- Using personal protective equipment (PPE); and
- Working in accordance with all UK Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPP) documents[2].

General Pollution Prevention Measures During Demolition/Construction

5.6 General risks to controlled waters receptors would be mitigated by:

- The Contractor will be required to ensure that any hazardous substances used on-site, including oil drums or containers, are used and stored in accordance with Control of Substances Hazardous to Health (COSHH) Regulations, as amended, and general compliance with Control of Pollution (Oil Storage) (England) Regulations 2001[3] to ensure that oil or other contaminants are not allowed to reach watercourses or groundwater sources including aquifers;
- All oils and chemicals will be stored in bunded areas in order to contain any spillages, should these occur (bunding would be specified to ensure secondary containment of at least 110% of the volume of the largest tank within the bund, or 25% of the aggregate volume of the containers within the bund (whichever is greater)). All filling points, gauges and vents would be situated within the bund. The drainage system of the bund would be sealed with no discharge to any watercourse, land or underground strata. Associated pipework would be located above-ground and protected from accidental damage. This would ensure that all oil / chemical storage is properly bunded, and this in conjunction with good working practices, would substantially reduce the risk that oil or other contaminants are allowed to reach watercourses or groundwater); and
- Tanks would be placed on impermeable bases to reduce the risk of spillage to groundwater (integral or self-bunded tanks would be favoured). All mobile tanks/fuel bowsers will be of double skin integral bunded type; and Redundant monitoring boreholes shall be appropriately

[2] Prior to their withdrawal in December 2015, UK PPGs provided best practice measures and regulatory requirements for pollution prevention across a range of construction activities. They have been withdrawn in England for review and are expected to be re-issued as UK GPP. In the interim, GPPs are developed for Northern Ireland, Scotland and Wales only. Nevertheless the former PPGs and new GPPs are still considered to be the best source of best practice guidance on pollution prevention across the UK. NetRegs provides a breakdown on which PPGs are still in use (not yet replaced) and which have been replaced by GPPs, this can be found here: http://www.netregs.org.uk/environmental-topics/pollution-prevention-guidelines-ppgs-and-replacement-series/guidance-for-pollution-prevention-gpps-full-list/

[3] The Control of Pollution (Oil Storage) (England) Regulations 2001 Statutory Instrument 2001 No. 2954, Crown Copyright.

decommissioned. The method of decommissioning shall accord with Environment Agency guidance.

5.7 Furthermore, all Site works would be undertaken in accordance with the Environment Agency's Pollution Prevention Guidance Note 6 (PPG6) 'Working at Construction and Demolition Sites'[4]. Demolition and construction vehicles would be properly maintained to reduce the risk of hydrocarbon contamination and would only be active when required. Materials would be stored, handled and managed with due regard to underlying soil and thus the risk of accidental spillage or release would be minimised. The measures in the Environment Agency's PPG2[5] and the Use and Design of Oil Separators (PPG3) would also be adopted on-site where applicable, and as a minimum on all temporary drainage structures for plant yards, refuelling areas, materials storage and the main construction compound(s).

5.8 Any hazardous materials present on-site would be removed prior to demolition following the necessary surveys and in accordance with any industry guidance and/or relevant regulations. Hazardous materials/wastes will not be stockpiled on Site unless in designated skips or containers specifically utilised for the storage and handling of hazardous wastes.

5.9 Refuelling of plant and vehicles will only take place within designated refuelling areas, protected by hardstanding and oil/petrol interceptors (or equivalent alternative biological treatment measures).

5.10 Plant 'nappies' will be used for all stationary plant not currently or recently in active use. Any plant arriving at the Site with leaks or not compliant with the maintenance requirements will be turned away from the Site. Any leaks or faults with plant observed on Site will be reported immediately and measures put in place to control the leak (e.g. plant nappies/drip trays), prior to repair within a designated maintenance yard on site, or taken off site for repair.

5.11 An Emergency Incident Plan would be in place to deal with potential spillages and/or pollution incidents. This would include the provision of on-site equipment for containing spillages, such as spill kits, emergency booms and chemicals to soak up spillages. Any pollution incidents will be reported immediately to the Environment Agency and SSDC. All site staff will be trained at Site induction and in tool-box talks in how to respond to a pollution incident and a flow diagram will be developed for the Contractor's DCEMP.

5.12 All site staff will be encouraged to report on any 'Near Misses', which described environmental incidents that nearly happened or minor incidents that could have been more serious. A system will be put in place by the Contractor for Near Miss reporting, and the Contractor's Environmental Manager will report on near misses at weekly progress meetings, as well as implementing any measures deemed necessary to further reduce risk.

Contaminated Land

5.13 Limited, further intrusive site investigation works are potentially required in advance of commencing demolition works / engineering operations (dependent on specific layouts for warehouse buildings). Given the findings to date these works may potentially only comprise building footprint specific ground gas monitoring. Where applicable, the resultant soil / groundwater / ground gas data would be assessed in order to determine remediation requirements (if any). If any locations are identified as requiring remediation and / or further assessment, these areas will not be disturbed until the Contractor (or appropriate consultant acting on behalf of the Contractor) has liaised with SSDC and the Environment Agency in accordance with the relevant DCO Requirement.

5.14 As with any development site, there exists the small possibility for further soil contamination hotspots to be discovered during the construction works.

5.15 Therefore, during the below-ground construction operations, the following works will be the responsibility of the Contractor:

- Stop works in that area should suspected contaminated material be encountered;
- Notify a contamination specialist in the first instance should potential impacted materials be identified;

[4] Environment Agency, 2011. Pollution Prevention Guidelines for Working at Construction and Demolition Sites (PPG6).

[5] Environment Agency 2006. Pollution Prevention Guidelines for the Use and Design of Oil Separators (PPG3).

- Providing deemed appropriate by the contamination specialist, excavate any determined potentially contaminated material and store on an area of hardstanding (or temporary impermeable surfacing) in a defined location on-site (to avoid cross contamination / accidental releases), and covered with an appropriate impermeable cover (e.g. plastic sheeting/tarpaulin);
- Notify all site personnel of the presence of the potentially contaminated material;
- To ensure material is not removed from the Site until suitable testing / analysis has been undertaken by the competent contamination specialist and received analytical data characterising the material; and
- If appropriate, arrange disposal from the Site in accordance with standard waste management practices.

5.16 The requirements above also apply to contaminated materials associated with building fabric (i.e. brickwork / concrete with residual contaminants). These materials will be stockpiled in separate locations away from 'clean' building materials (on hardstanding), covered appropriately and not subject to crushing, reworking, re-use or disposal without the approval of a competent contamination specialist.

Inspection and Monitoring Activities

5.17 The Site Environmental Manager will undertake inspection and monitoring as follows:

- Weekly inspections of waste disposal and recycling facilities to check that they are being used appropriately, to be reported at weekly progress meetings;
- Weekly inspections of all surface water management features, drains, gullies, pits and detention ponds to check they are functioning correctly and for visible signs of pollution;
- Weekly inspections of all chemical, fuel and oil storage to check that they are properly bunded, intact and that there are no visible signs of staining or leaks; and
- Weekly inspections of all stationary plant to check that all are fitted with plant nappies and parked in the designated compounds.

5.18 In addition, where applicable, a watching brief would be maintained to identify 'out of character' material and/or unknown, potentially contaminated material encountered during ground excavation works.

Documentation

5.19 The Contractor will keep a record of all incidents and complaints received would be recorded and investigated.

5.20 Records of correspondence with stakeholders / the public would be maintained and would be made available upon request to the Applicant.

6. AGRICULTURE AND SOILS

General

6.1 Agricultural land at the Site is mainly arable comprising barley, potatoes, rough grassland and set-aside. Soil types at the Site comprise various sandy loams, loamy sands and sandy clay loam, deriving from glacial till geology.

6.2 The agricultural land classification (ALC) assessment divides the assessment area into the following grades:

- Grade 2 – comprising a total of 51.1 ha (17.2%) of the assessment area;
- Subgrade 3a – comprising a total of 121.9 ha (40.7%) of the assessment area;
- Subgrade 3b – comprising a total of 38.2 ha (12.8%) of the assessment area; and
- Other land / non-agricultural – comprising a total of 85.7 ha (28.7%) of the assessment area.

6.3 Land at the Site is divided into 13 individual holdings, in the ownership of three separate owners. The majority of land at the Site is under tenancy.

6.4 A full account of the baseline conditions and assessed effects for the Proposed Development is presented in Chapter 6: Agriculture and Soils of the ES.

Key potential issues identified during EIA process

6.5 The main agriculture and soil effects identified in the ES are as follows:

- Agricultural land quality: Permanent, adverse effect on agricultural land in ALC Grade 2 (Major significance), Subgrade 3a (Major significance) and Subgrade 3b (Minor significance) due to the permanent sealing of the land during construction. The presence of Grade 2 and Grade 3 agricultural land at the Site is to be expected, as these grades of agricultural land are widespread in the District;
- The development proposals retained as much best and most versatile (BMV) agricultural land in 'soft use' (i.e. Primary Green Infrastructure) as practically possible. No specific mitigation is proposed for these effects therefore there will be residual effects of major significance on agricultural land quality relating to the loss of Best and Most Versatile (BMV) land. No effects are identified for the completed development phase;
- Topsoil and Subsoil: the construction of the Proposed Development has the potential to adversely affect the quality of topsoil and subsoil; namely in terms of damaging soil structure through compaction and reworking; and
- Agricultural holdings: Effects on agricultural holdings of Moderate to Minor significance have been identified, and these will take place during construction when the holdings are taken out of use on a per-phase basis.

Management Measures

6.6 Soils and subsoils will be managed on Site in accordance with the DEFRA Construction Code of Practice for the Sustainable Management and Use of Soil on Construction Sites'[6]. In order to facilitate this, the Contractor will prepare a Soil Resource Plan (which will form part of the DCEMP to be secured as a DCO Requirement). The Soil Resource Plan will detail all necessary measures for the

[6] Department for Environment, Food and Rural Affairs (2009). Construction Code of Practice for the Sustainable Management of Soil on Construction Sites. Available online @ https://www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites Last viewed December 2016.

excavation, handling, storage and use of soils on site so as to preserve as much as possible their structural, biological and chemical qualities. The objective is to retain soils on-site.

6.7 Permanent impacts identified for loss of the best and most versatile agricultural land cannot be mitigated during construction, but compliance with the above will ensure that all retained soils are preserved in good condition for re-use in soft landscaping across the Site.

6.8 Typical measures for responsible use of soils in construction include the following:

- Minimising the need to re-work, move and transport soils through careful planning in advance of works;
- Stripping of vegetation and topsoil (top 15cm) immediately prior to heavy plant access;
- Segregation of vegetation, topsoils and subsoils, and reinstatement in turn. Also segregation of any contaminated materials, demolition rubble or other materials from good quality soils;
- Use of track mats and similar devices to reduce compaction when retained soils/vegetation are accessed by plant;
- Minimising duration and size of soil storage stockpiles to prevent compaction and preserve air spaces within the soil to prevent anoxic conditions;
- Damping down or avoiding work during very dry periods to minimise windblown dust and soil erosion;
- Installation of appropriate temporary drainage systems during construction to prevent runoff of silts and loss of soil fertility;
- Avoiding reworking of soils during wet weather and in winter where possible;
- Appropriate zoning of the Site such that soils are returned close to where they originated;
- Use of hardstanding and hardcore in high traffic areas to prevent rutting and soil compaction; and
- Covering or seeding stockpiles with grass to reduce erosion and windblown dust.

6.9 The cut/fill balance for the Proposed Development has been designed based on retention and re-use of all soils on-site.

6.10 The FEMMP and Proposed Development landscape design may prescribe additional measures in relation to the use of soils, specifically for delivering ecological mitigation measures in localised areas. These may differ in parts to the broad principles described above, for instance it may be preferential to use subsoils instead of topsoils for some landscaping due to the lower fertility to promote wildlflower growth, or to provide sandy substrate for invertebrate banks. The FEMMP/landscaping design will take precedence in such instance.

6.11 Adjacent agricultural land on-site will remain active during the first phases of construction. The Contractor will maintain relationships with adjacent landowners/tenant farmers and minimise any effects through the Considerate Constructors Scheme. This includes developing agreed access routes for construction personnel, machinery and equipment movements through all on-going areas of agricultural land use.

Inspection and Monitoring Activities

6.12 The Contractor's Environmental Manager will undertake weekly inspections of earthworks, bunds, subsoil and topsoil storage in order to monitor performance against the Soil Resource Plan. Any issues identified will be raised and addressed as appropriate.

Documentation

6.13 Records will be maintained by the Contractor of all site inspections and these will be made available to the Applicant on request.

7. TRANSPORT AND ACCESS

7.1 A full account of the baseline conditions and assessed effects for the Proposed Development is presented in Chapter 15: Transport and Access of the ES.

7.2 A Demolition and Construction Traffic Management Plan (DCTMP) has been prepared and is included as an appendix to the Transport Assessment (ES Technical Appendix 15.1) including routing, traffic volumes, access and parking. Transport and access issues are not considered further in this document as applicable mitigation and management measures are addressed in the DCTMP.

8. NOISE AND VIBRATION CONTROL

General

8.1 Specific noise management procedures will be developed by the Contractor. The provisions set out below will inform those procedures.

8.2 A full account of the baseline conditions and assessed effects for the Proposed Development is presented in Chapter 13 of the ES (Noise and Vibration).

Key potential issues identified during EIA process

8.3 Sensitive receptors identified for the Proposed Development comprise the following:

- Existing local residents:
  - Along the A5 to the north of the Site;
  - On and around Croft Lane to the north of the Site;
  - To the west of the A449, to the west of the Site;
  - On Station Drive, to the south of the Site;
  - In Calf Heath, to the south-east of the Site;
- Canal users that moor along the Staffordshire and Worcestershire Canal, close to the Croft Lane;
- Transient users of the canal towpath; and
- Ecological receptors on or in close proximity of the Site, including Calf Heath Reservoir

8.4 Potential effects and mitigation measures identified for noise and vibration are summarised as follows:

- Construction phase - noise generated by construction plant and traffic movements to and from the Site. The assessment predicts that this will give rise to temporary significant adverse effects at localised receptors that are located close to construction activities. Noise and vibration will be controlled by typical construction best practice and adoption of Best Practicable Means (BPM) in the selection of plant and methods to minimise noise and vibration generated at source.
- Construction phase - Vibration from the construction of the Proposed Development may give rise to moderate, temporary adverse effects at two receptors, when heavy groundworks are carried out close to them.

Noise Management Controls

8.5 The Contractor will implement all necessary management and Best Practicable Means (BPM) (as described in the Control of Pollution Act 1974) to reduce levels of noise from the Proposed Development, seek to maintain compliance with any set limits and thus minimise the potential for impacts on the local community from demolition and construction activities. Particular attention should be paid to the areas listed above. Noise management controls will be in accordance with the recommendations established in BS 5228: 2009+A1: 2014.

8.6 To minimise the potential noise impacts, the following measures, which are considered to be BPM, will be implemented:

- Giving consideration to temporary screening or enclosures for static noisy plant to reduce noise emissions;
- Adhere to agreed working hours;
- Not permitting off-site parking of Site traffic on the public highway;
- Implementing a traffic management system at Site access points to control the traffic into the Site and the discharge of trucks from the Site to avoid congestion;

- Minimising disturbance from reversing bleepers through measures such as Site layout, provision of screening, or use of broadband sound emitting reversing alarms;
- Using 'silenced' plant and equipment wherever possible;
- Switching off vehicle engines where vehicles are standing for a significant period of time;
- Operating plant at low speeds where possible and incorporating automatic low speed idling;
- Selecting electrically driven equipment where possible in preference to internal combustion powered, hydraulic power in preference to pneumatic, and wheeled in lieu of tracked plant;
- Maintaining all plant properly (greased, blown silencers replaced, saws kept sharpened, teeth set and blades flat, worn bearings replaced, etc);
- Certifying plant to meet any relevant EC Directive standards; and
- Making all sub-contractors familiar with the guidance in BS5228 (Parts 1 and 2) which should form a pre-requisite of their appointment.

8.7 Adopting a neighbourly approach to the demolition and construction works will be key to maintaining good relations with occupants of neighbouring properties. In particular, the local population should be given advance warning of any noisy or intensive operations. The Site will be registered with the Considerate Constructors scheme, which will require best practice measures to be adopted in relation to maintaining good neighbourly relationships, minimising noise nuisance and responding appropriately to resident's concerns and complaints.

8.8 The provision of noise attenuation screening as described in the first bullet point above will be on an as needed basis, dependent on the plant used and the location. The requirement for this will be refined at the detailed design stage.

8.9 Construction of the perimeter landscaping bunds as part of the embedded mitigation for the Proposed Development (see Chapter 4 of the ES - Proposed Development), would, where practicable, take place early on in the construction programme, or within each construction phase, so as to provide mitigation for visual and noise effects during construction.

8.10 Local residents will be informed by letter of the likely proximity and duration of potentially noisy works. In the event of any night-time working, local residents will be informed in advance of the dates and the duration of those night-time works. The letter will include a 24-hour contact number so that residents can contact the works manager in the event of issues.

8.11 Particularly noisy features such as concrete batching/crushing will be sited away from sensitive receptors.

Vibration Management Controls

8.12 Potentially significant adverse effects from vibration were identified in the ES for demolition and construction at six locations. In line with general construction best practice Site demolition and construction measures would be designed and planned to avoid the generation of vibration, or where vibration is unavoidable, to control vibration at source. As is the case for noise, the Contractor would be required to ensure that works are carried out in accordance with BPM as stipulated in the Control of Pollution Act 1974. This includes the following considerations:

- Replacing plant and/or work methods producing significant levels of vibration by less intrusive plant or techniques;
- Locating stationary plant, such as generators, pumps and compressors away from sensitive receptors and installed on resilient mountings;
- Locating vibrating equipment as far from sensitive receptors as possible;
- Providing cut-off trenches to interrupt the direct transmission path of vibrations between the source and receiver, where necessary;
- Certifying plant to meet any relevant EC Directive standards;
- Undertaking awareness training for all subcontractors with regard to BS 5228 (Parts 1 and 2) which would form a prerequisite of their appointment; and

- Maintaining a mitigation plan, to include justification for siting of plant, types of plant selected, periods of use, working hours, access points, schedule of works likely to cause complaints (if not pre-notified), as and when required.

Inspection and Monitoring Activities

8.13 The Contractor would be required to demonstrate that noise and vibration levels are maintained at acceptable levels and comply with the agreed maximum levels, throughout the duration of the works.

8.14 Where demolition activities are considered to give rise to significant levels of vibration, monitoring would be carried out by a suitable qualified individual. Vibration measurement would be conducted in accordance with Clause 9 of BS5228: 2009+A1: 2014 Part 2.

Documentation

8.15 Details of incidents associated with noise and/or vibration and remedial action taken would be kept by the Contractor. Complaints received would also be recorded and investigated. The Contractor would be required to maintain records of all correspondence with the Applicant / SSDC and neighbours regarding noise and vibration issues for the duration of the works.

8.16 The Contractor would maintain records of demolition and construction plant and equipment maintenance and these would be made available to the Applicant as required.

9. AIR QUALITY

General

9.1 During the demolition and construction phase, the potential exists for the generation of coarse and fine dust including from excavation, earthmoving, materials storage and movement of vehicles over unpaved surfaces. Specific dust management procedures will be developed by the Contractor. The provisions below will inform those procedures.

9.2 A full account of the baseline conditions and assessed effects for the Proposed Development is presented in Chapter 7: Air Quality of the ES.

Key potential issues identified during EIA process

9.3 Air quality impacts during the demolition and construction phase have been assessed following the Institute of Air Quality Management's (IAQM) guidance for assessing impacts from demolition and construction activities by providing a qualitative assessment of the potential sources and effects, together with a risk assessment to identify those receptors that may experience impacts.

9.4 Chapter 7: Air Quality of the ES presents the assessment of effects on the following receptors from construction dust and traffic emissions:

- Residential receptors close to the Site; and
- Ecological receptors including nearby Sites of Special Scientific Interest (SSSIs) and Local Wildlife Sites (LWS).

9.5 The Air Quality ES chapter identifies negligible effects from traffic during construction.

9.6 Dust has been identified as a potential effect during construction of the Proposed Development, due to the large scale of earthworks to be undertaken at the Site and the proximity of residential properties within 20m of the Site boundary. When considered as a whole the Site was identified as a 'High Risk' site in relation to air quality effects during construction, in line with IAQM guidance.

Dust Management Controls

9.7 The control of dust emissions from demolition and construction sites relies upon good site management and mitigation techniques to reduce emissions of dust and limit dispersion. A summary of the mitigation measures recommended in the IAQM guidance to reduce impacts from high-risk sites is provided below:

Table 9.1: Recommended Dust Mitigation Measures to be implemented by the Contractor

Phase/task	Highly Recommended	Desirable (where applicable)
Communications	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site. Display name and contact details of responsible person for dust issues on site boundary in addition to head/regional office contact information. Display the head or regional office contact information.	

Table 9.1: Recommended Dust Mitigation Measures to be implemented by the Contractor		
Phase/task	**Highly Recommended**	**Desirable (where applicable)**
Dust Management Plan	Develop and implement a Dust Management Plan (DMP) as part of the DCEMP, to be approved by SSDC.	
Site Management	Record all complaints and incidents in a site log. Take appropriate measures to reduce emissions in a timely manner, and record the measures taken within the log. Make the complaints log available to SSDC if requested. Hold regular liaison meetings with other high-risk construction sites within 500m of the site boundary.	
Monitoring	Undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust. Carry out regular inspections to ensure compliance with the DMP and record results in the site log book. Increase the frequency of inspections during activities with a high potential to create dust or in prolonged dry weather.	
Preparing and Maintaining the Site	Plan site layout to locate dust generating activities (e.g. concrete batching/crushing) as far as possible from receptors. Use solid screens around dusty activities and around stockpiles. Avoid site runoff of water and mud. Fully enclose the site or specific operations where there is a high potential for dust production and the site is active for an extensive period. Keep site fencing barriers and scaffolding clean using wet methods. Remove dusty materials from site as soon as possible. Minimise emissions from stockpiles by covering, seeding, fencing or damping down.	

Table 9.1: Recommended Dust Mitigation Measures to be implemented by the Contractor		
Phase/task	**Highly Recommended**	**Desirable (where applicable)**
Operating Vehicle/Machinery and Sustainable Travel	Ensure vehicles switch off engines when stationary. Avoid use of generators where possible. Enforce an on-site speed limit of 15 mph on surfaced roads and 10 mph on unsurfaced areas.	
Measures Specific to Demolition	Soft strip inside buildings before demolition. Ensure effective water suppression is used during demolition. Avoid explosive blasting. Bag and remove any biological debris or damp down such material before demolition.	
Measures Specific to Earthworks	Re-vegetate earthworks and exposed areas/stockpiles. Use hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil. Only remove the cover in small areas during work and not all at once.	
Measures Specific to Construction	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless required by a particular process.	Avoid scabbling. Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos. For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately.

Table 9.1: Recommended Dust Mitigation Measures to be implemented by the Contractor		
Phase/task	**Highly Recommended**	**Desirable (where applicable)**
Measures Specific to Trackout	Use water-assisted dust sweepers to clean access and local roads. Avoid dry sweeping of large areas. Ensure vehicles entering and leaving the site are appropriately covered. Inspect on-site haul roads for integrity and repair as necessary. Inspections of haul roads to be recorded in site log, including action taken. Implement a wheel washing system. Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit. Access gates to be located at least 10m from receptors.	

Inspection and Monitoring Activities

9.8 For demolition or construction works which meet the definition of 'High' risk as per IAQM Guidance[7], dust monitoring will be undertaken prior to and during demolition / construction at the Site. This will comprise use of 'sticky pad' dust monitors, used and monitored in line with the manufacturers/laboratory guidance. Where applicable, dust monitoring will be commenced at least 6 months prior to the start of demolition / construction so as to set a pre-activity baseline. A record of dust monitoring will be kept and reviewed on a regular basis by the Contractor's Environmental Manager and made available to the Applicant on request.

9.9 Dust and dust activities would also be monitored visually by the Contractor's Environmental Manager during construction, and included as a component of inductions and tool box talks so that all staff are aware of dust issues and so that any instances of dust generation and dispersion can be resolved as soon as possible.

Documentation

9.10 The Contractor will maintain a record of all environmental incidents that result in dust nuisance, and all complaints from local residents relating to dust including any remedial action taken.

9.11 Records will be maintained by the Contractor and will be made available to SSDC on request.

[7] Institute of Air Quality Management. Guidance on the Assessment of dust from demolition and construction. 2016. v1.1.

10. MANAGEMENT OF LIGHT POLLUTION

General

10.1 Specific light pollution management procedures will be developed by the Contractor. The provisions below will inform those procedures.

Key potential issues identified during EIA process

10.2 The main sensitive receptors are listed below:

- Residents – including principally those in properties within or surrounding the Site. This will include residents of properties:
  - on Croft Lane;
  - along both sides of the A5 (T) (along the northern boundary of the Site);
  - close to the south-west corner of the Site on Station Drive and the A449;
  - along and around Vicarage Road and the Straight Mile;
  - at Calf Heath to the south-east; and
  - other residents of properties in the wider area with potential views towards the Proposed Development.
- Users of the canal and the canal towpath;
- Users of Calf Heath Reservoir (including sailors and anglers);
- Users of Public Rights of Way (PROW) (including that within the north-west part of the Site) and any others with potential views towards the Proposed Development;
- Users of existing employment and commercial facilities; Users of the surrounding roads;
- Visitors/ users of the Cannock Chase AONB; and
- Ecological receptors on and adjacent to the Site including bats (see ES Chapter 10: Ecology and Nature Conservation).

Management Controls

10.3 Measures will be put in place to control light pollution both within the Site and in the surrounding area and would be in accordance with Guidance Notes for the Reduction of Obtrusive Light[8] and the guidelines provided by the Bat Conservation Trust: Bats and Lighting in the UK[9]. As a minimum the following will be implemented during the demolition and construction phase of the Proposed Development:

- Works to be undertaken within the agreed working hours as described above which will limit the need for lighting to early morning/evening during winter and during adverse weather only;
- Use of lighting on a task orientated basis and avoidance of flood lighting or non-targeted use of lighting across the Site;
- Use of timers and motion activated security lighting where applicable (e.g. for site offices/compounds) to reduce light pollution outside construction working hours;
- Directing Site lighting away from sensitive receptors and towards where it is needed, to avoid light spillage;
- Ensuring all main beam angles of light as below 70 degrees to reduce the effects of glare;

[8] Institution of Lighting Professionals (2011) GN01: Guidance Notes for the Reduction of Obtrusive Light. Available at https://www.theilp.org.uk/documents/obtrusive-light/.

[9] Bat Conservation Trust and Institution of Lighting Professionals. Guidance Note 08/18. Bats and artificial lighting in the UK – Bats and the Built Environment series. Online. Available at: https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

- Directing lighting downwards; where this is not possible installing shields or baffles above the lamp to reduce the amount of wasted upward light;
- Where lighting will be sited in the vicinity of roads, railways or navigable waterways, care will be taken to avoid creating a hazard through glare from a light source and the possibility of signals being misinterpreted due to distracting lights;
- Avoiding the use of lighting equipment which spreads light above the horizontal;
- Turning Site lighting off outside of normal working hours, with the exception of required security lighting; and

Situation of well-lit areas such as site compounds/offices away from sensitive receptors

10.4 Measures will be put in place to control light pollution close to ecologically sensitive areas and as a minimum the following will be implemented during the demolition and construction phase of the Proposed Development:

- Lighting will comply with the Institute of Lighting Professionals (ILP) Guidance Notes recommendations for Environmental Zone E2 and, where possible, will meet the stricter recommendations for Environmental Zone E1;
- Luminaires (lighting units or fittings) will be of the directional type that emit all their light below the horizontal; and
- Light sources will be LED with no UV content. Colour temperature will be warm white (3000K) LED as this has low blue light content.

10.5 In addition, the following measures will be implemented at service yards during demolition and construction works:

- Lighting for service yards will be provided from column mounted luminaires around the perimeter of the yard and directed towards the building. Maximum column height will be 18 metres;
- Additional luminaires will be located over loading bays/lorry dock areas and aimed downwards directing Site lighting away from sensitive receptors and towards where it is needed, to avoid light spillage; and
- Lighting will comply with the recommendations given in BS EN 12464 'Light and lighting – Lighting of work places – Part 2: Outdoor work places' and the target average illuminance will be 20 lux.

10.6 At lorry parks and car parks the following measures will be implemented during demolition and construction works:

- Lorry parks and car parks will be lit by luminaires mounted on standalone lighting columns. Maximum column height will be 15 metres; and
- The lighting will comply with the recommendations given in BS EN 12464 'Light and lighting – Lighting of work places – Part 2: Outdoor work places'. The target average illuminance will be 20 lux for lorry parks and 10 lux for car parks.

Monitoring Activities

10.7 The aforementioned provisions and requirements would be subject to regular inspection and recording by the Contractor's Environmental Manager as a component of weekly inspections. Any nuisance reported by local residents in relation to lighting, and relevant mitigation, will be recorded and all records made available on request to the Applicant.

Documentation

10.8 Records of correspondence would be maintained by the Contractor.

11. DEMOLITION AND CONSTRUCTION WASTE

Introduction

11.1 The Site Waste Management Plans Regulations 2008 (hereafter referred to as the SWMP Regulations) have been repealed. However, the principles of preparing a Site Waste Management Plan (SWMP) is typically still adopted as good practice.

11.2 A SWMP is intended to define roles and responsibilities for the project, specifically with respect to waste management and minimisation. The SWMP must identify waste streams and re-use, recycling and reduction targets. It is an active document that must be updated regularly and is used to establish key aims and targets for waste management sustainability and to govern the means by which waste management will be monitored and recorded during construction.

11.3 This chapter presents waste management principles and identifies the likely nature of waste arisings from demolition and construction stages. This information will be used by the Contractor to develop a SWMP.

Waste Management Principles

11.4 The following principles will inform the approach to waste management during the demolition and construction works, and will form the basis of the subsequent SWMP.

- Legal compliance with the appropriate legislation and regulations, including:
    - Hazardous Waste (England and Wales) Regulations 2005 SI 894;
    - Hazardous Waste (England and Wales) (Amendment) Regulations 2009 SI 507;
    - List of Wastes (England) Regulations 2005 SI 895;
    - List of Wastes (England) (Amendment) Regulations 2005 SI 1673;
    - Control of Pollution (Amendment) Act 1989 c.14;
    - Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991 SI 1624;
    - Controlled Waste (Registration of Carriers and Seizure of Vehicles) (Amendment) Regulations 1998 SI 605;
    - Environmental Protection Act 1990;
    - Environmental Protection (Duty of Care) Regulations 1991 SI 2839;
    - Environmental Protection (Duty of Care) (England) (Amendment) Regulations 2003 SI 63;
    - Waste Electrical and Electronic Equipment (WEEE) Regulations 2006;
    - Site Waste Management Plans Regulations 2008 SI 314; and
    - Environmental Permitting (England and Wales) Regulations 2010 SI 675 (as amended).
- Re-use and recycling of materials, where possible; and
- Safe disposal of waste or surplus materials.

11.5 It will be the responsibility of the Contractor to demonstrate that these objectives and targets are incorporated into the SWMP and are met during the demolition and construction phases.

Waste Management

11.6 Waste will be managed on-site in accordance with the Waste Hierarchy, summarised as follows:

- Prevention/reduction;
- Re-use;
- Recycling;
- Other recovery (e.g. energy recovery); and

- Disposal (e.g. landfill).

Prevention/Reduction and Re-use

11.7 The generation of waste during demolition and construction will primarily be prevented/reduced by consideration of waste through the design process. Of most significance in terms of waste volumes is the earthworks and cut/fill balance. As outlined in earlier in this ODCEMP, the earthworks for the Proposed Development has been designed to achieve a cut/fill balance and minimise the generation of waste soils that will need to be taken off site. Management of soils in line with the DEFRA 'Code of Practice for the Sustainable Use of Soil on Construction Sites' as outlined earlier in this ODCEMP will also maximise the soil resource that can be used appropriately on-site and minimise waste.

11.8 Vegetation arisings from vegetation strip, tree felling and similar works will be retained on site where possible and either mulched/chipped for use in landscaping or used to create ecological enhancement features such as log piles/brash piles, in preference to removing the materials from Site.

11.9 Also of significance will be the use where possible of pre-fabricated construction methods to reduce waste generated through cutting and re-sizing of materials on-site. Concrete waste is a significant waste stream in construction, and this will be minimised by careful planning of concrete pours and by batching on site to reduce the risk of spoilage. Waste concrete and aggregate materials will be crushed and re-used on Site wherever possible.

Waste Recycling, Recovery and Disposal

11.10 Where re-use is not possible, the waste will be recycled or disposed of in accordance with relevant legislation.

11.11 The Contractor will ensure that removal and disposal of all demolition arisings will be carried out in strict accordance and compliance to the relevant statutory documents.

11.12 All waste arisings that will be leaving Site will be segregated into five main waste streams. This will be inert waste, hazardous waste (including contaminated soils if applicable), excavated spoil, timber and metal. If contaminated soils are found then the procedures set out in Section 5: Contaminated Land of this document will be followed.

11.13 All arisings and waste will be removed from the Site area and delivered to a licensed waste disposal facility. All assignment notes and disposal facility receipts will be kept as proof that the correct method of disposal has been strictly adhered to. Additionally:

- The Contractor will aim to recycle as much of the demolition arisings as possible. This will include timber, metals, plasterboard, fluorescent lamps, cables, waste electrical and electronic equipment (WEEE) Waste, concrete and brick;
- All timber, metals, plasterboard, fluorescent lamps and cables & WEEE Waste will be segregated into separate waste bins and will be taken to the appropriate licensed recycling facility;
- The Contractor will only use Environment Agency registered recycling and waste facilities;
- All recyclable materials and waste will be placed in skips as it is generated. It may be locally stockpiled for a short time until it is re-handled into the waste bin;
- All waste bins will be placed as close to the working areas as the Site confines allow; and
- All waste bins will be removed from Site when full. Ideally on the same day.

11.14 The burning of wastes or materials of any kind on-site will be strictly prohibited.

11.15 Waste material would only be deposited at authorised waste treatment and disposal sites. Deposition of waste would be in accordance with the requirements of the Environmental Protection Act 1990,

the Controlled Waste Regulations 1992 (as amended), the Hazardous Waste Regulations 2005, the List of Waste Regulations 2005 and the Duty of Care Code of Practice.

Waste Recycling

11.16 Where waste must be disposed of this will be recycled where practicable and diversion from landfill will be a priority. The Contractor will aim to achieve at least 50% waste diverted from landfill, and will consider signing up to the Waste and Resources Action Programme (WRAP) Halving Waste to Landfill Commitment where possible.

Training and Competence

11.17 As part of the implementation of the SWMP, a training programme will be developed for all site personnel. It will be the responsibility of the Contractor to deliver the training in respect of the SWMP. In general, however, the aim of the training will be to ensure that all personnel are fully conversant with:

- The SWMP, the objectives and targets set in the SWMP, and its on-site implementation;
- The procedures in place on the Site for waste segregation and materials storage;
- The procedures in place on-site for waste removal;
- The role of the Site Manager and each individual with respect to waste segregation, storage and removal; and
- The requirements for legal compliance.

11.18 Records will be kept of the training given to individual staff. Additional tool-box talks will be given as necessary. Assessment of the effectiveness of the training programme will form part of the audit procedures for the SWMP.

11.19 The Contractor will appoint only appropriately qualified, experienced and licensed waste management sub-contractors.

Additional measures

11.20 In addition, the following waste management measures would be followed within the materials supply chain:

- Avoiding over-ordering of materials;
- Determining when and where materials are required and requesting 'just in time' deliveries;
- Selecting products with minimal packaging and requiring suppliers to use returnable transit packaging (e.g. return of storage pallets) where possible;
- Where possible and appropriate to do so, using prefabrication off-site;
- Having appropriate storage areas ready - these should be covered to protect against rain and ideally have a hardstanding surface;
- Determining where special handling is required;
- Securing the Site to avoid theft and vandalism; and
- Ensuring good on-site segregation of wastes.

Monitoring Activities and Documentation

11.21 A key element of a SWMP is monitoring the implementation of the materials re-use and waste reduction measures, auditing against specific targets, and amending the SWMP to reflect changes in objectives, targets, or where more effective waste management measures are identified. The following will be undertaken by the Contractor as a minimum:

- A record of all Waste Transfer Notes will be kept by the Contractor and made available on request to the Applicant;
- All waste movements will be logged in the Contractor's "Waste Outwards Log"; and

- A record of volumes and destination of all waste streams will be managed and maintained by the Contractor for auditing purposes. This will be presented on a monthly basis as part of the monthly environmental report.

12. WATER RESOURCES

General

12.1 The Contractor will ensure that demolition and construction is managed to prevent pollution or risk to surface and groundwater resources. Specific management procedures and method statements will be developed by the Contractor prior to the commencement of works. The provisions below will inform these procedures.

12.2 Flood risk will be a key consideration for the Contractor and appropriate planning and contingencies measures will be required for all phases of demolition and construction.

12.3 A full account of the baseline conditions and assessed effects for the Proposed Development is presented in Chapter 16: Water Environment of the ES.

Key potential issues identified during EIA process

12.4 There are numerous surface water features situated within close proximity of the Site. These include but are not limited to:

- River Penk, Saredon Brook (both defined as Main Rivers so managed by the Environment Agency) and tributaries;
- Calf Heath reservoir and Gailey reservoirs (canal feeder reservoirs with recreational use);
- Staffordshire and Worcestershire Canal and Hatherton Canal;
- Several ordinary watercourses, drainage ditches and land drains within and adjacent to the Site; and
- A number of ponds located on and near to the Site.

12.5 According to the EA indicative flood maps, the Site is situated within Flood Zone 1, at less than a 0.1% (1 in 1000 annual probability of tidal/ fluvial flooding), however the Environment Agency maps also show that some parts of the Site may be susceptible to surface water flooding in discreet areas. A small part of the northern boundary of the Site is shown to be at risk of reservoir flooding.

12.6 The demolition and construction stages of the Proposed Development have the potential to generate potential significant direct and indirect water environment impacts that may be both temporary and permanent. The potential impacts could include:

- Risk of surface water pollution from silt-laden runoff as a result of demolition and construction activities;
- Release of sediment into watercourses for any works close to or crossing a watercourse;
- Risk of surface water pollution from accidental spills of fuels and chemicals and other wastes;
- Risk of surface water pollution from mobilisation of existing contaminants, if applicable;
- Risk of physical damage to the banks and beds of watercourses as a result of activity in close proximity of or crossing a watercourse;
- Risk that surface water pollution from the Site may adversely affect water quality of watercourses and water bodies;
- Risk of increased surface water flood risk to the Site and Site occupants as a result of increased surface water runoff within the Site due to construction activity;
- Risk of increased surface water flood risk to downstream receptors, including people and property, as a result of increased surface water runoff within the Site due to demolition or construction activity; and
- Risk of flooding due to changes in groundwater levels as a result of excavations within the Site.

Management Controls

12.7 Without appropriate management controls there is the potential for demolition and construction to cause permanent damage to the hydrology, water quality and aquatic ecology of the area. The Contractor will ensure that the development is managed to prevent pollution or risk to surface and groundwater resources. All work will be carried out in accordance with the relevant guidance including the relevant EA Pollution Prevention Guidance (PPG) Notes and CIRIA guidance documents 'Report 156: Control of water pollution from construction sites – a guide to good practice' (2001).

12.8 The Contractor would ensure that the Site is managed to prevent pollution or risk to surface and groundwater resources. All site activities would be undertaken in accordance with the requirements of the following legislation / guidance:

- Water Resources Act 1991[10];
- Water Framework Directive 2000;
- Water Act 2003[11];
- Control of Pollution (Oil Storage) (England) Regulations 2001; and
- EA's Pollution Prevention Guidelines 1 (PPG1)[12], PPG2, PPG3 and PPG6.

12.9 The Contractor will include within their DCEMP as a minimum details of the following measures in relation to water pollution and flood risk:

- Working in accordance with all UK Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPP) documents (see under Section 5 above);
- The Contractor will be required to ensure that any hazardous substances used on-site, including oil drums or containers, are used and stored in accordance with Control of Substances Hazardous to Health (COSHH) Regulations, as amended, and general compliance with Control of Pollution (Oil Storage) (England) Regulations 2001[13] to ensure that oil or other contaminants are not allowed to reach watercourses or groundwater sources including aquifers;
- All oils and chemicals will be stored in bunded areas in order to contain any spillages, should these occur (bunding would be specified to ensure secondary containment of at least 110% of the volume of the largest tank within the bund, or 25% of the aggregate volume of the containers within the bund (whichever is greater)). All filling points, gauges and vents would be situated within the bund. The drainage system of the bund would be sealed with no discharge to any watercourse, land or underground strata. Associated pipework would be located above-ground and protected from accidental damage. This would ensure that all oil storage is properly bunded, and this in conjunction with good working practices, would substantially reduce the risk that oil or other contaminants are allowed to reach watercourses or groundwater);
- Tanks would be placed on impermeable bases to reduce the risk of spillage to groundwater (integral or self-bunded tanks would be favoured). All mobile tanks/fuel bowsers will be of double skin integral bunded type;
- Effluents from wheel washing facilities and pumped discharges from excavations will either be diverted to settlement ponds/tanks to reduce silt loads and treated in line with an Environment Agency approved system or removed by tanker as a waste; and
- Consents will be applied for from Severn Trent or Environment Agency/SCC to discharge to foul sewer or surface watercourses respectively.

[10] Secretary of State, 1991. Water Resources Act. HMSO.

[11] Secretary of State, 2003. The Water Act. HMSO.

[12] Environment Agency, 2001. Pollution Prevention Guidelines 1: General Guide to the Prevention of Pollution. Environment Agency.

[13] The Control of Pollution (Oil Storage) (England) Regulations 2001 Statutory Instrument 2001 No. 2954, Crown Copyright.

12.10 Management of soils in line with the DEFRA 'Code of Practice for the Sustainable Use of Soil on Construction Sites' will minimise issues with silt runoff in surface waters and help to minimise surface water flood risk on Site by minimising soil compaction and ponding.

Surface Water Runoff

12.11 It will be necessary during demolition and construction to manage the volume and quality of surface water on Site. The principle of design would be to ensure compliance with any discharge consent requirements. Volumes and silt load for water discharged from the Site to watercourses will be expected to meet baseline levels or lower.

12.12 Whilst the design of any temporary surface water management system will need to be developed in more detail and agreed with the Environment Agency and Staffordshire County Council as the Lead Local Flood Authority (LLFA), it will typically comprise the following:

- Temporary swales, filter drains and similar conveyance measures to route surface water runoff from the Site via the appropriate storage and discharge points;
- Temporary storage and attenuation features, typically a detention basin with a permanent minimum level of water within in, to control the volume of water discharged from the Site during peak flows, provide silt settlement and biological control of pollutants;
- Use of straw bales, booms, silt traps and filter drains to control silt and pollution from construction runoff;
- Use of slot drains or similar in all car/lorry parking areas to receive runoff and discharge via a petrol interceptor (or equivalent alternative biological treatment measures);
- Concrete batching plant to be located away from existing and proposed surface water features and situated on hardstanding with a dedicated temporary surface water drainage system to prevent runoff of concrete fines into surface waters, vegetation and soils; and
- Segregation of fuel/chemical storage areas from the surface water management system.

Surface Water Discharges

12.13 Discharges to surface water would only be permitted with prior consent from the relevant authority (Environment Agency or Canal & River Trust for any discharges to the canal).

12.14 The Contractor would consult the Applicant prior to any activity resulting in discharges to the aquatic environment. As such detailed method statements for water management, which incorporates treatment and consents would be prepared. The Contractor would maintain a register of all discharge consents and would be responsible for complying with discharge consent conditions.

12.15 No sewage or trade effluent, including vehicle wash waters, steam cleaning, pressure wash or other effluents would be discharged to the surface water system. The Contractor will operate a designated concrete washout facility from which effluents will be tankered away for licensed disposal.

12.16 It is possible that groundwater may be encountered during excavations. In the event that drainage and effluents arise and require discharge, these would be treated in accordance with Environment Agency requirements e.g. through suitably sized settlement lagoons or tanks to remove the suspended solids (or removed by tanker as a waste). If unsuspected, (i.e. not previously identified from proposed intrusive site investigation works) potentially contaminated groundwater is identified during excavation works, the same principles should be applied.

12.17 The Contractor would be prohibited from washing out tools or equipment or disposing of surplus materials to surface water drains.

Construction of the Permanent Surface Water Management System

12.18 Construction of the surface water management system for the Proposed Development will need to be planned and undertaken in a way that minimises the risks to downstream receptors. Generally, it is considered best practice to construct these features from downstream to upstream, beginning at the point of discharge to the receiving water body. This would be followed by the construction of

SUDS and conveyance features including pipes, swales, drains, gullies and attenuation ponds. The final element to be installed would be connection to the new drainage of hardstanding areas and above ground drainage for the proposed buildings. Construction in this order ensures that the necessary treatment and attenuation features are in place from the moment the Proposed Development or phase is complete.

12.19 It is proposed that construction of the permanent Site drainage features is undertaken during the first phase of construction, alongside the earthworks and creation of the community parks.

Discharges to Foul Sewer

12.20 Discharges to the foul sewer would only be permitted by prior consent of the Applicant and the statutory undertaker (Severn Trent Water). The Contractor would ensure that any consent limits (e.g. suspended solids content) are complied with.

12.21 The Contractor would also be required to demonstrate compliance with monitoring requirements attached to relevant discharge consents.

Wheel Washing

12.22 All waste aggregates, water and sludge type materials resulting from the necessary 'cleaning' process would be removed from site by a licensed waste carrier and taken to a licensed waste disposal facility.

Road Cleaning

12.23 The Contractor should provide an approved Mechanical Roadsweeper with vacuum facilities, spray facilities and on-board storage. This shall be used for the sweeping and cleaning of the roadway system and the public highway immediately adjacent to the Site, on a regular basis or as deemed necessary to prevent nuisance or hazards to other highway users and/or the Site. Arisings will be disposed of at a licensed waste disposal facility.

Fuel and Chemicals Storage

12.24 The Contractor will be responsible for the storage, or the management of storage of fuels and chemicals on-site, ensuring that all fuels and chemicals are properly stored in a dedicated fully protected secure storage area.

12.25 The fuel storage area would be surrounded by a secure impervious bund providing a containment capacity of at least 110 % of the largest tank, or 25 % of the total capacity of the tanks whichever is the greater. All associated valves and pipework are to be contained within the bund.

12.26 The fuel storage area would be inspected by the Contractor's Environmental Manager on a daily basis and records would be maintained. All refuelling would be by the use of an approved double skinned bowser operated by the Contractor. During the process of refuelling, a fuel spillage kit must be available in order to contain any spillage and to prevent contamination.

12.27 Areas used for waste or chemical storage are to be protected in a manner which also prevents the spread of contaminants and water pollution via the Site drainage and surface water systems.

Refuelling Protocol

12.28 The following Refuelling Protocol would apply to all deliveries of fuel and refuelling operations:

- Refuelling and all tank filling to be carried out in the designated protected refuelling area;
- Using remote filling points and suitably protected bowsers only where refuelling at protected area is impractical due to nature of machinery/equipment in use;
- Maintaining an emergency spill kit with sand or suitable absorbent materials in case of spillage in the main fuel storage area;
- Providing all bowsers with an emergency spill kit where mobile refuelling is necessary;

- Providing bowsers with an automatic cut-out mechanism;
- Supervising all refuelling operations by trained personnel;
- Avoiding leaving valves and taps open and unattended and locking these when not in use; and
- Raising awareness amongst personnel carrying out refuelling of this code of practice and refuelling protocol and providing training in the use of spill kits and emergency procedures.

Plant Maintenance Area

12.29 Plant maintenance would, in general, be carried out off-site. Daily inspections of plant by the plant operator would identify whether maintenance is required. Routine minor maintenance such as refuelling and oil top up would be carried out on-site. This would be carried out in the plant maintenance area of the Site compound(s), which will comprise hardstanding.

Monitoring Activities

12.30 The Site Environmental Manager will undertake inspection and monitoring as follows:

- Weekly inspections of all surface water management features, drains, gullies, pits and detention ponds to check they are functioning correctly and for visible signs of pollution;
- Weekly inspections of all chemical, fuel and oil storage to check that they are properly bunded, intact and that there are no visible signs of staining or leaks;
- Weekly inspection of all supply and waste pipes for site toilets, kitchens and other facilities to ensure there are no leaks; and
- Weekly inspections of all stationary plant to check that all are fitted with plant nappies and parked in the designated compounds.

Documentation

12.31 The Contractor would maintain records of all discharges to foul sewer and surface water systems and water abstractions (if applicable) from dewatering or other processes, and the results of periodic checks or monitoring, as appropriate. Such results would be made available to the Applicant upon request.

12.32 The Contractor would keep a record of any incidents that result in water contamination and of subsequent action taken. Records of correspondence with environmental regulators and copies of all discharge consents would also be maintained.

13. ECOLOGY

13.1 A full account of the baseline conditions and assessed effects for the Proposed Development is presented in Chapter 10: Ecology and Nature Conservation of the ES (which outlines identified ecological receptors).

13.2 An Ecological Management and Mitigation Plan (EMMP) will be produced which will cover the necessary measures required for mitigation of ecological impacts during construction, and the construction/implementation of ecological design measures for the Proposed Development, including habitat corridors, habitat enhancement and creation, ecological enhancement features and mitigation. A framework EMMP (FEMMP) has been created to provide the detail necessary at this stage. This is provided in Technical Appendix 10.4 of the ES. In addition, Phase specific EMMPs will be prepared and adopted to reflect any risks to the environment specific to that development area.

13.3 Ecological issues are not considered further in this document as applicable mitigation and management measures are addressed in the FEMMP.

14. ARCHAEOLOGY AND CULTURAL HERITAGE

General

14.1 Specific archaeological management procedures and a watching brief will be developed by the Contractor. The provisions set out below will inform those procedures.

Key potential issues identified during EIA process

14.2 The baseline environment at the Site is characterised as follows:

- No previous archaeological investigation known to have been undertaken on Site prior to the ES;
- There are no Scheduled Monuments, nationally Listed Buildings or other nationally designated heritage features located on-site;
- The history within the study area is characterised primarily by Romano-British occupation including features such as Watling Street, settlements and camps some of which are designated as Scheduled Monuments and other Roman roads. Following the Romano-British period land use is largely agricultural within the area characterised by minor settlements and evidence of Anglo-Saxon/Medieval agriculture, until the advent of the industrial revolution; and
- The majority of the Site has remained in agricultural use throughout the 19th Century and modern period with 19th Century farmsteads.

14.3 A full account of the baseline conditions and assessed effects for the Proposed Development is presented in Chapter 9: Cultural Heritage – Built Heritage and Chapter 8: Archaeology – Below Ground of the ES.

Archaeology

14.4 The following sensitive receptors were identified with respect to archaeology:

- Cropmark of ring ditch and linear feature of potential Neolithic date;
- Cropmark of ring ditch of potential Bronze Age date;
- Potential features of Romano-British date;
- Potential features associated with the Anglo-Saxon and medieval occupation of Gailey;
- Potential features derived from medieval cultivation associated with Gailey and neighbouring settlements;
- Potential features derived from post-medieval agricultural practices, such as former field boundaries;
- Remains associated with the construction and use of the Staffordshire and Worcestershire Canal and the Grand Junction Railway;
- Large curving ditch feature identified during LiDAR data assessment;
- Linear ditch feature representing possible continuation of post-medieval, or earlier, track/routeway;
- Anomalies identified from detailed gradiometer survey; and
- Other as-yet potentially unidentified buried archaeological remains.

Heritage (above ground)

14.5 The following sensitive receptors were identified with regard to above-ground heritage features:

- Sensitive Receptors identified within the Site boundary include:
  - Staffordshire and Worcestershire Canal Conservation Area;
  - Heath Farm (Locally Listed);

- Woodside Farm (Locally Listed);
- Straight Mile Farm (non-designated heritage receptor);
- Gravelly Way Bridge (non-designated heritage receptor);
- Historic hedgerows; and
- Historic landscape character corresponding to late 18th and 19th century Parliamentary period enclosures.

- Sensitive Receptors identified outside the Site include:
  - Staffordshire and Worcestershire Canal Conservation Area;
  - Six Roman Period Scheduled Ancient Monuments at Water Eaton;
  - Rodbaston Old Hall moated site and fishpond (Scheduled Ancient Monument);
  - Various Listed Buildings including a single Grade I Listed Building, five Grade II* Listed Buildings and three Grade II Listed Buildings;
  - Chillington (Grade II* Registered Park); and
  - Eight Locally Listed or non-designated features (including Calf Heath Bridge, Long Moll's bridge and Brick Kiln Lock).

14.6 No significant effects were identified relating to the setting of all off-site designated features and features related to the wider historic landscape primarily because of the distance and very limited intervisibility between the Site and the majority of receptors.

14.7 Direct and indirect effects have been identified during construction on the Staffordshire and Worcestershire Canal.

Management Controls

14.8 Should the Proposed Development physically impact any of the identified archaeological assets, preservation by record may be necessary. This may involve excavation of the known assets in advance of any construction activities and/or conducting a watching brief during demolition / construction. If archaeological assets of national importance are identified then in-situ preservation should be considered, especially in areas of green infrastructure.

14.9 An outline Written Scheme of Investigation (WSI) has been produced (Technical Appendix 8.4 of the ES). The purpose of this document is to provide an agreed methodology for any archaeological investigations required as the Proposed Development progresses. The WSI deals with all measures necessary for the mitigation of potential effects to buried archaeology at the Site. The WSI details that the proposed programme of archaeological evaluation will comprise additional geophysical survey, trial trench evaluation and archaeological watching brief during site investigation works (i.e. intrusive geotechnical surveys).

14.10 Potential minor adverse and negligible effects relating to the loss of locally listed Heath Farm and the non-designated Woodside Farm will be mitigated by Historic Building Recording prior to demolition to be planned in consultation with SSDC.

14.11 Potential effects on the Staffordshire and Worcestershire Canal Conservation Area will be mitigated during construction as follows:

- Careful design and construction planning of the new Gravelly Way road bridge so as to minimise the physical and setting impact to the Canal during construction, including sensitive design of scaffolding and other temporary construction features;
- Use of the proposed perimeter landscaping/embankments to screen the construction area from users of the canal and use of temporary screens (hoarding or fencing) where necessary to mitigate noise and visual impacts – to be agreed with SSDC prior to construction, as well as general consideration of the canal as a 'sensitive receptor' for noise and visual impacts as outlined in the previous sections of this ODCEMP;

- Sensitive planning and undertaking of the proposed demolition of existing bridges within the Staffordshire and Worcestershire canal corridor so as to minimise the physical and setting effects on the Conservation Area. These measures and methodologies will need to be agreed with Staffordshire County Council in advance of construction; and
- Undertake a survey of the current condition of the historic bridge structures in advance of any nearby works. In the unlikely event that the historic bridge sustains any damage as a result of the construction of the new road bridge the necessary remedial works will be undertaken.

Inspection and Monitoring Activities

14.12 The Contractor will be required to maintain an awareness of the findings of archaeological fieldwork during construction works and any suspected objects of archaeological interest uncovered during earthworks will be reported to Staffordshire County Council. These areas shall be clearly defined and fenced off to prevent accidental damage or disturbance until further consideration of these areas can be made.

Documentation

14.13 Records will be maintained by the Contractor and will be made available to the Applicant upon request.