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Construction Environmental Management Plan (CEMP)

Branston Locks Development phase 1 road construction

[COSTCDX8620] / [CEMP] Rev. 01

February 2016

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1.0 Introduction

- 1.01 The aim of the Construction Environmental Management Plan (CEMP) is to set out the responsibilities with regard to compliance with legislation and to implement any mitigation measures.
- 1.02 This CEMP details management measures to minimise environmental impact from the construction phase of the development.
- 1.03 Further, it provides a framework within which the measures will be implemented throughout the project.
- 1.04 The CEMP provides project-specific management measures and is a dynamic document which should be reviewed if activities or conditions onsite change that may influence management measures.
- 1.05 This document has been developed to avoid, minimise and mitigate against any construction effects on the environment and surrounding community. It should be considered a living document with reviews being undertaken at set intervals and new information added as appropriate.
- 1.06 For the purposes of this document, the working area is defined as any area where there will be a requirement for temporary or permanent works to facilitate the construction of the development. This includes areas required for access, temporary construction and temporary storage areas.

2.0 Regulatory Framework & Planning Conditions

- 2.01 The proposed scheme aims to create a new access route from the A38 roundabout to Branston Locks Development including a new Canal Bridge and junction back onto Branston Road. This includes widening the existing Branston Road and implementing a new footway, cycleway and street lighting. Additional improvements to the north bound off-slip road include sufficient retaining structures and implementing traffic signals at three of the roundabout arms.
- 2.02 The primary requirements of the planning consent are the implementation of the core document; the Construction Environmental Management Plan (CEMP). The CEMP is required to encompass environmental controls when required with due consideration to relevant environmental legislation.
- 2.03 The CEMP provides the framework for which commitments made in the Environmental statement (ES) or any requirements of planning conditions can be realised. The CEMP outlines the contractors approach to environmental management throughout the construction phases with the primary aim of reducing any adverse impacts from construction on local sensitive receptors.
- 2.04 The Planning Permission conditions with environmental implications applicable to the Branston Locks development are given below, however we will be reflecting these as best practice in the general environmental management principles;
(Numbered as per planning confirmation letter)

9. No development shall take place until a Protected Species Mitigation Strategy has been submitted and approved in writing by the Local Planning Authority, and the development shall thereafter be completed in accordance with the approved strategy unless otherwise agreed in writing with the Local Planning Authority. For each part, or all, of the development, the Protected Species Mitigation Strategy will refer to:-

- *The scope and methodology for updated Ecology and Tree Surveys, covering:*
 - *Statutory protected species, and*
 - *Species of conservation priority (e.g. invertebrates and / or wild birds), where suitable habitat is present*
- *The objectives and key principles of mitigation strategy to be applied to future detailed applications;*
- *The key principles of post-construction monitoring of key species; and*
- *The mechanism to update the Strategy in future, if required.*

Reason: To ensure the development does not harm protected species, or their habitats in accordance with the National Planning Policy Framework (particularly Section 11).

28 *Each Landscaping and Public Open Space Scheme shall include (in so far as applicable) details of:-*

- *Overall layout and design, including a statement of compliance with the principles of the approved Open Space Strategy;*
- *The management and protection of existing trees, hedges and other landscape features to be retained;*
- *A list of protected species known to require mitigation (as described in the Protected Species Mitigation Scheme);*
- *The proposed planting of new trees, including details of the size, species, and positions or density of all trees to be planted, and the proposed time of planting;*
- *Proposed hard landscaping works, including changes in ground levels, pedestrian and cycle access and circulation, hard surfacing materials, park furniture, children's play areas, fencing, walls, gates, lighting, and other appropriate works;*
- *Proposed soft landscape works, with reference to planting plans, written specifications for plant and grass establishment, schedules of plants, programme of implementation, and the requirements of any Protected Species Mitigation Scheme;*
- *Landscape and ecological management plans, including long term design objectives, management responsibilities and maintenance schedules.*

Reason: To safeguard the character and appearance of the development and its surroundings, and to ensure that open space is provided to serve the development in accordance with East Staffordshire Local plan Saved Policy BE1, the East Staffordshire Design Guide and the National Planning Policy Framework (particularly Section 7 and Paragraph 17).

37 *No development of any phase shall take place until an Ecological Survey, taking into account key features and habitats within that phase of development and mitigation in accordance with the principles in the approved Protected Species Mitigation Strategy, has been submitted to and approved in writing by the Local Planning Authority. The development of that phase is to be completed thereafter in accordance with any mitigation measures (a Protected Species Mitigation Scheme) required by the submitted survey.*

Reason: As recommended by Staffordshire Wildlife Trust to ensure the development does not harm protected species in accordance with the national Planning Policy Framework (particularly Section 11).

38 *No works for the demolition of the bungalow, and associated barns and outbuildings to lawns Farmhouse shall take place until updated Bat Roost Surveys, in accordance with the approved Protected Species Mitigation Strategy, have been submitted to and approved in writing by the Local Planning authority, with the works for demolition to be completed thereafter in accordance with any mitigation measures required by the update surveys.*

Reason: As recommended by Staffordshire Wildlife Trust to ensure the development does not harm protected species in accordance with the national Planning Policy Framework (particularly Section 11).

- 2.05 For the purpose of this planning application, Development does not refer to any of the following enabling works;
- Any work or demolition or site clearance

- Installation of services
- Earthworks
- Drainage/ Flood attenuation works
- Roadworks
- Landscape maintenance measures
- Construction access
- Site investigations
- Ecological Management Measures
- Archaeological Investigations
- Mineral Investigations and extraction

2.06 If work on site is related to clearing of the site it would not be considered as commencement or development.

3.0 Site Location & Project Description

- 3.01 This CEMP has been produced on behalf of Staffordshire County Council to support a planning application (ref P/2012/01467) to create a new access route from the A38 roundabout to Branston Locks Development including a new Canal Bridge and junction back onto Branston Road. This includes widening the existing Branston Road and implementing a new footway, cycleway and street lighting. Additional improvements to the north bound off-slip road include sufficient retaining structures and implementing traffic signals at three of the roundabout arms. UK grid ref: E 421741, N321377
- 3.02 The site extents of the proposed scheme are shown below and the land is within the ownership of East Staffordshire Borough Council (ESBC) and they have been formally notified of this planning application.

In Figure 1 below this document refers to phase 1 of the proposed work which is highlighted in dark blue.

Figure 1: Site Location.

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Overview of site location.

Figure 2: Aerial image of the footprint of the development

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- 3.03 The site falls in East Staffordshire, Near Burton upon Trent, measuring approximately 6ha (phase 1 only) in area and centres on approximate National Grid Reference (NGR) SK21741 21377. E, 421741, 321377
- 3.04 The surrounding area is rural in nature with a small area of residential properties adjacent to the roundabout. The area is primarily made up of agriculturally improved fields and boundary hedges. On the opposite side of the A38 lies Centrum Business Park, this comprises of a mix of office, industrial and distribution uses.
- 3.05 The site to the north boundary is occupied by Shobnall Road which comprises of residential, commercial and community buildings. Lawns Farm and The Bungalows are located within the works area, featuring residential and agricultural/farm buildings.
- 3.06 There are no schools, hospitals or care homes within 200m of the development boundary including the A38.
- 3.07 Habitat is dominated by arable farmland but also includes species rich hedgerow dominated by hawthorn *Crataegus monogyna*, open water that is part of the Trent and Mersey Canal, species poor semi-improved grassland and a linear strip of scrub dominated by field maple *Acer campestre* and sycamore *Acer pseudoplatanus*. A broadleaved semi-natural woodland is present close to the proposed works site but just outside
- 3.08 The project entails the creation of a new vehicular and pedestrian and cycle access from the A38 roundabout to the Branston Locks development/ Branston Road,

- 3.09 The scheme includes a new Canal Bridge and junction back onto Branston Road. This includes widening the existing Branston Road and implementing a new footway, cycleway and street lighting
- 3.010 Additional improvements to the north bound off-slip road include sufficient retaining structures and implementing traffic signals at three of the roundabout arms.
- 3.011 The works include:
- Advanced ecological mitigation works (removal and trimming of woodland; vegetation clearance: Document ref CDX8620-R00-01A - Enabling Works - Clearance);
 - Creation of a new access road to Branston Locks site
 - Permanent land take from arable land
 - A small complex of residential properties is located south east of Branston Road/west of the A38 on Tatenhill Road. An industrial area runs adjacent south west of the eastern extent of the site, just off the A38 southbound
 - The works will involve the demolition of buildings and removal of hedgerows to facilitate the creation of a new road and to allow for the construction of a new canal bridge
- 3.012 It comprises of:
- Site clearance;
 - Fencing & Road Restraint Systems;
 - Drainage and service ducts;
 - Earthworks (excavation and fill);
 - Highway construction;
 - Structures construction;
 - Pavements;
 - Kerbs, footways and paved areas;
 - Traffic signs & road markings;
 - Street Lighting;
 - Statutory Undertaker's service diversions;
 - Landscaping works; and
 - Accommodation Works
- 3.013 Site Hours of Work:
07:30 - 18:00 Monday to Friday
07:30 – 18:00 Saturday (when required)
- No construction will take place on Sundays and Bank Holidays
- 3.014 In order to maintain these working hours, contractor(s) will require a period of 30 minutes before and at the end of the working shift to start up and close down the works activities.
- 3.015 During the construction period it may be necessary in exceptional circumstances to work outside the prescribed working hours. Should this occur, the hours and duration of these works will be subject to consultation with Staffordshire County Council.

4.0 Construction Programme

4.01 The detailed Construction Programme will be made available for review in the site office.

4.02 The key dates presented in the programme are as follows:

Key Outcomes	Date
Project Start	May 30th 2016
Site Access	May30th 2016
Set Up Site Compound	May 30 th 2016
Decommissioning of the site compound	29th June 2017
Project Completion Date	29th June 2017

4.03 A full copy of the construction programme is available from the site manager.

5.0 Roles and Responsibilities

Contracts Manager: Richard Farmer - 07800 625366

5.01 The Contract Manager is responsible for:-

- Ensuring that the CEMP is developed & held on site and that it is implemented throughout all phases of the project. Ensuring the CEMP details are updated as and when relevant information is provided by the stakeholders associated with each section of the CEMP; e.g. further consent conditions, pre-construction surveys, etc.
- Maintaining the CEMP and ensuring that all contractors and visitors comply with it.
- Ensuring that environmental issues identified within the Pre-Construction Information and the pre-construction site surveys and relevant information gathered from agencies, local councils etc are addressed.
- Producing environmental project specific controls for all significant risks identified and implementing control measures to minimise the risk of damage to the environment.
- Communicating the CEMP and other related document to employees, contractors and client representatives.
 - The Contracts Manager shall nominate and appoint an experienced Environmental Advisor.

Contractors and Visitors

5.02 Contractors and visitors to the project will be responsible for:-

- Ensuring that the control measures identified from environmental surveys are implemented as they are relevant to their work / visit.
- Ensuring that the project management team are notified of any non-conformance of control measures or environmental incident where the environment has been put at risk.

Site Manager – Chris Charnley 07970 487 418

5.03 The site manager is responsible for:

- Ensure the site and all stored materials and chemicals are safe and secure;
- Ensure F10 notice, Amey Principal Contractor Sign, and signage indicating where and whom visitors should report to are clearly displayed,
- The site is kept in a tidy and orderly fashion. Waste will be managed in conjunction with the Amey local or group procedure as applicable.
- Controlled access arrangements as so those entering site may avoid hazards.
- Emergency egress arrangement so those leaving site in the event of a pollution or spillage incident may do so safely.
- There are First Aid Facilities and appropriately trained First Aid staffs, spill kits are available and appropriately trained staff.

Ensure all those that work on site:

- Have Amey Site Induction including briefing on environmental issues pertinent to the project and relevant toolbox talks.

- Understand and obey the Site Rules.
- Are made aware of the Emergency egress arrangements, Muster points, First Aid facilities and First Aiders, spill and clean up procedures.
- Read and understand the site hazard board.
- Have current certification for activities as required.
- Are aware of all environmental matters which arise on site.

Ensure the activities on site:

- When necessary are carried out under Client Operational Safety Rules .
- Have, task specific risk assessments and method statements (RAMS) in place identifying any environmental issue which may be applicable.
- Are carried out in accordance with the requirements of any associated RAMS.

Site HSEQ Advisor – Adam Cooper 07872 867 429

5.04 The site HSEQ Advisor is responsible for:

Ensuring work is carried out:

- In a safe manner
- In accordance with any manufacturers' instructions etc., good standards of workmanship.
- Ensure site staff are working in accordance with agreed Risk Assessments and Method Statements (RAMS) particularly where activities have the potential to cause environmental harm.
- Health and safety advisor to complete the site waste management plan and ensure it is followed.
- Ensuring that the CEMP is implemented throughout all phases of the project.

Monitoring HSEQ issues by:

- Carrying out daily checks on site to ensure the site is secure and tidy
- Weekly checks and "toolbox talks" carried and recorded. Weekly site audits.
- Consulting workers on the effectiveness of measures to reduce risk to the environmental, reviewing and improving conditions or methods/procedures where appropriate.
- Keeping records of and reporting any incidents and close calls (near misses).

Site Environmental Advisor – Michael Peile - 07791 470205

The environmental advisor shall ensure work is carried out:

- In accordance with legislation & consents, objectives, targets and the Construction Environmental Management Plan with regards to any Environmental activities on site.
- Ensure site staff operates in accordance with agreed Risk Assessments and Method Statement (RAMS) and in accordance with the Amey induction and tool box talk training with regards to environmental risk.

Monitor/Report Environmental Issues by:

- Ensuring compliance with Environmental legislation & consents, objectives, targets and the Construction Environmental Management Plan.
- Carrying out Inspections, Audits and Non – conformance.
- Responsible for delivering environmental training.
- Environmental Advisor to liaise with Health and Safety advisor to complete the site waste management plan and ensure it is followed.
- Environmental performance data reporting.
- Ensure work is carried out in accordance with the Environmental Statement.
- Compliance with environmental legislation, consents, objectives,
- Targets and other environmental commitments

Public Contact Officer – via SCC Highways Public Communications

5.06 Is responsible for:

- Acting as the first point of contact for members of the public.
- Arrange and manage public forums and open days for the project and address any concerns. Ensure all local residents and stakeholders are kept informed of progress and key issues.
- Establish and maintain relationships with key stakeholders.
- Responsible for the dissemination of the construction programme to all interested parties including any work generating high levels of noise, large vehicles/traffic disruption etc.
- Carry out door-to-door home visits with local residents, as appropriate
- Coordinating work, questionnaires, providing works information, dealing with queries, responding to complaints and resolving concerns
- Production of newsletters, bulletins, posters etc. and display of same throughout site offices and the local area on a regular basis to raise awareness of current issues both within the project team and throughout the local community.

6.0 Information for Contractors and Visitors

- 6.01 All contractors and visitors to the site will be made aware of the Environmental policy and the controls applicable to their presence and activities on site including but not limited to:
- Method statements
 - Risk Assessments
 - Site induction which include Environment briefings
 - Tool box talks.
- 6.02 The Project Manager will be responsible for monitoring communications between all relevant parties to the project ensuring that all environmental matters to the project are discussed and managed and observation of the communications will be documented in the weekly site meetings and sent by e-mail. In addition a copy of all correspondence will be held in this file.
- 6.03 Relevant site layout and location plans/ CDM drawing detailing the location and construction of the site compound, storage locations and car parking are to be displayed on an information board at the site entrance.

7.0 Environmental Assessment

- 7.01 An environmental scoping assessment to identify potential environmental impacts of the project has been carried out. This assessment was undertaken in a number of ways including a formal risk assessment process or a comprehensive site assessment.
- 7.02 The CEMP does not require all components of the environmental scoping assessment depending upon the outcomes of the assessment.
- 7.03 The assessment gives consideration to each work activity to be undertaken and the potential for them to impact on the environment. The assessment provides details on the rating system used to determine the level of consequence and likelihood.
- 7.04 Environmental Statement was co-ordinated on behalf of Nurton Developments (Quintus) Ltd by Jones Lang LaSalle. The Environment Statement was submitted in support of the planning application to provide ESBC with independent, factual information about the proposals and the potential significance of likely environmental effects on the locality.

Environmental Scoping Assessment the Branston Locks Feasibility Study was produced by Amey to provide a scoping opinion under the Town and Country Planning (Environmental Impact Assessment) (England) Regulations 2011 with respect to the proposed infrastructure to support the planning approved development

- 7.05 The assessment examined the following:
- Noise & Air Quality
 - Archaeology & Cultural Heritage
 - Landscape & Land Use
 - Ecology
 - Geology & Soils
 - Materials
 - Community Effects & Vehicular Travellers
 - Drainage & Water Environment
 - Waste
 - Sustainability
- 7.06 Where applicable, elements of the ESA are utilised in the CEMP to produce a practical outline of the management of environmental risks of the projects construction phase.

8.0 Ecology

- 8.01 Desktop and Field surveys of the site have been completed by qualified and experienced ecologists. All habitats within the proposed works area and immediately adjacent to the proposed scheme footprint were noted, and the potential for protected or otherwise notable species was assessed. Where any incidental sightings or indirect evidence of species presence were seen, this was recorded, but no detailed survey for any single species was undertaken.

One statutory site is present within 2km of the proposed scheme. This is Branston Water Parks and is approximately 200m south of Phase 1. It is designated for the presence of a lake surrounded by woodland, wetland and wildflower meadow.

- 8.02 The hedgerow sections within Phase 1 part of Branston Road Biodiversity Alert Site (BAS) that is designated for the presence of hedgerows.
- 8.03 Sections of this hedgerow will be directly impacted by the scheme.
- 8.04 The new canal bridge will be constructed over this BAS but no works are anticipated within it. Branston Locks BAS is designated for the presence of open water, marginal and emergent vegetation.

The A38 interchange works have the potential to impact upon the A38 Dual Carriageway BAS; this site near Branston is designated for its floral diversity including common fumitory which is uncommon in Staffordshire.

- 8.05 No notable protected plants were seen during the field surveys. Further, due to the habitat type on site it is considered unlikely for notable plant species to be present.
- 8.06 The habitats within the site are very common and therefore the potential for notable invertebrate species is considered to be low.
- 8.07 The habitat is unlikely to support badger sett excavation or foraging activities, no evidence of badger activity was found during the survey.
- 8.08 Young trees and saplings may be removed during vegetation clearance however none were considered suitable for bats and are considered to have negligible potential for roosting bats.

8.1 Bats

- 8.1.1 All bat species, their breeding sites and resting places are fully protected by law, namely the Conservation Regulations 2010 (as amended), Wildlife & Countryside Act 1981 (as amended), Natural Environment & Rural Communities Act 2006 (NERC).

- 8.1.2 Young trees and saplings may be removed during vegetation clearance however none were considered suitable for bats and are considered to have negligible potential for roosting bats.
- 8.1.3 A scoping survey of the trees across the Site was also undertaken, to assess their potential to support roosting bats. None of the trees within Phase 1 have potential to contain a bat roost and are considered to have negligible potential. One building is present within Phase 1, a residential building and this is considered to have negligible potential to support bats.
- 8.1.4 Habitat on site including the linear scrub/trees and hedgerows on both phases are suitable for commuting and foraging bats.
- 8.1.5 Incorporation of bat bricks within new canal bridge structure as a biodiversity enhancement. It is recommended that the new access road is not lit to minimise impacts upon commuting and foraging bats.
- 8.1.6 All works and the design of the street lighting will be undertaken in accordance with best practice guidelines relating to bats and lighting¹ and ensure light spill is minimised.
- 8.1.7 If bats are encountered during construction, contractors are to be advised to stop work immediately and contact Amey ecologists for advice and the production of a suitable revised method statement.
- 8.1.8 Risk assessments & method statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

8.2 Badgers

- 8.2.1 Badgers and their setts are protected by the Protection of Badgers Act (1992) and as such it is an offence to intentionally kill or injure a badger or to damage or destroy their setts or sett entrances.
- 8.2.2 Suitable habitat for badger sett building and foraging is present in Phase 1 however no signs of badger activity were found and are considered absent. If any new animal excavations are found to be present on site during construction it is recommended that ecological advice is sought to confirm the presence of a badger sett.
- 8.2.3 If a badger sett is confirmed a mitigation strategy will need to be devised and possibly a Natural England license will need to be obtained prior to construction.
- 8.2.4 Natural England advice recommends that heavy machinery and excavation work be kept away from setts and suggests a working distance of 30m.

¹ Anon. 2009. Bats and Lighting in the UK: Bats and the built environment series. BCT and ILE. London and Rugby.

- 8.2.5 If badgers are encountered during construction, contractors are to be advised to stop work immediately and contact Amey ecologists for advice and the production of a suitable revised method statement.
- 8.2.6 Risk Assessments and Method Statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

8.3 Reptiles

- 8.3.1 Phase 1 has negligible potential to support reptiles.
- 8.3.2 It is noted that there is a risk in injuring and / or killing a reptile when vegetation clearance is carried out within rough grassland, tall ruderal vegetation and / or scattered scrub.
- 8.3.3 If the rough grassland, tall ruderal vegetation and / or scattered scrub areas are to be disturbed then a mitigation strategy will be required to minimise the risk of disturbing reptiles. This will involve taking reasonable avoidance measures under ecological supervision prior to construction.
- 8.3.4 As part of the site induction process, all staff working on site will be made aware of the potential presence of reptiles on site and their status as a UK and European Protected Species. The Tool Box Talk for reptiles is to be displayed in the site office so that staff are aware of what these animals look like.
- 8.3.5 In the event that a reptile is identified, an Amey ecologist is to be contacted.
- 8.3.6 For the initial stages of the development, when vegetation clearance is to be undertaken, an Ecological Clerk of Works will be employed to oversee the works.
- 8.3.7 Vegetation clearance will be undertaken in a phased manner and supervised by the Ecological Clerk of Works as required to protect reptiles.
- 8.3.8 In collaboration with the sub-contractor who will be carrying out the vegetation clearance works on site, the following measures will be adopted, as detailed below:
- 8.3.9 If the rough grassland, tall ruderal vegetation and / or scattered scrub areas are not being impacted no further survey or mitigation for reptiles are required.
- 8.3.10 If the habitat is to be disturbed then a mitigation strategy will be required to minimise the risk of disturbing reptiles. Most likely this will involve strimming of the work area under ecological supervision prior to construction.
- 8.3.11 If a reptile is identified during any of the above operations, development may need to be suspended until a development licence is obtained.

8.3.12 Risk Assessments and Method Statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

8.4 Great Crested Newts (GCN)

8.4.1 Great Crested Newts (*Triturus cristatus*) are protected by the Conservation Regulations 2010 (as amended), Wildlife & Countryside Act 1981 (as amended) and Natural Environment & Rural Communities Act 2006.

8.4.2 There are no ponds within 500m of either phase and great crested newts are considered to be absent.

8.4.3 Risk Assessments and Method Statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

8.4.4 If GCNs are encountered during construction, contractors are to be advised to stop work immediately and contact Amey ecologists for advice and the production of a suitable revised method statement.

8.5 Birds

8.5.1 All birds, their nests and eggs are protected by Wildlife and Countryside Act (1981) under which it is an offence to intentionally kill, injure, disturb or take any wild bird. This legislation and its requirements should be highlighted in staff inductions, tool box talks and signed by all contractors, operators and sub-contractors.

8.5.2 The hedgerows and linear scrub/trees in Phase 1 throughout provide suitable nesting habitat. Ground nesting birds (e.g. Lapwing *Vanellus vanellus*) may also breed / nest in the arable habitat on site. Vegetation clearance during the period March to August can be damaging to active bird nests during the main breeding season.

8.5.3 Vegetation clearance of the scattered scrub should ideally take place in the months September-February, outside of the main bird breeding season.

8.5.4 Where this is not possible, then an inspection by a qualified Amey ecologist for active nests must be made within 48 hours prior to cutting. If a nest is found, works will need to be delayed at this location until the chicks have fledged.

8.5.5 If nesting birds are encountered during construction, contractors are to be advised to stop work immediately and contact Amey ecologists for advice and the production of a suitable revised method statement.

- 8.5.6 General habitat enhancement to include provision of nest boxes at suitable locations around the site / within landownership boundary.
- 8.5.7 Method statements and risk assessments from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

8.6 Trees & Woodland

- 8.6.1 All trees on site have been subject to an Arboricultural Impact Assessment, in CDX8620 Revision 0 November 2015
- 8.6.2 The trees have been inspected visually only. No investigation has been carried out into their internal condition.
- 8.6.3 The report does not concern the possible influence of tree root activity on the proposed final development. Further investigations can be made and will be recommended where necessary.
- 8.6.4 The area within the boundary of the canal is designated as a conservation area. Therefore the trees on the site are protected by law.
- 8.6.5 There are no tree preservation orders within the site.
- 8.6.6 A number of trees will be directly impacted by the works. Where trees are to be retained, tree protection areas will be fenced using an approved fencing system. Protective fences are to comply with BS 5837 2012 – Trees in relation to design, demolition and construction.
- 8.6.7 The fencing is to have all weather notices attached, marked as 'Construction Exclusion Zone – No Access'.
- 8.6.8 No materials are to be stored in this area and no activity to take place.
- 8.6.9 Care should be taken storing materials whose accidental spillage could damage protected trees due to the topography of the site. Such materials should be stored and handled away from the root protection area.
- 8.6.10 Any branches that extend over this protective fencing can be pruned by a competent arborist.
- 8.6.11 If any roots over 25mm diameter are found outside the root protection area an Arme arbiculturist should be contacted.
- 8.6.12 Compensatory Planting - Any replanting should be done in accordance with BS 8545 2014. This should only be undertaken when there is no possibility of damage from the housing development. If areas are planned for replanting, protection of the planting areas should be considered at this stage.

8.7 Invasive & Injurious Plant Species

- 8.7.1 Section 14(2) of the Wildlife and Countryside Act 1981 (WCA 1981) states that "...if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence".
- 8.7.2 Site visit did not identify any species relevant to Schedule 9, and as such it is not considered at risk at this site.
- 8.7.3 Should injurious and invasive plants become suspected during works, cease work and contact the environmental manager immediately.
- 8.7.4 The significance of these invasive species will be highlighted in the induction and tool box talks.
- 8.7.5 Risk Assessments and Method Statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

9.0 Air Quality

- 9.01 It is recognised that a key concern for the local community and the surrounding areas will be any disturbance to air quality caused by traffic generated during the construction stages associated with the Highway Infrastructure.
- 9.02 A desk top air quality assessment was conducted to identify the locations of any AQMA'S and sensitive receptors.
- There are no schools, hospitals or care homes within 200m of the development boundary including the A38
- 9.03 A quantitative assessment of pollutant concentrations at sensitive receptor locations in proximity to the proposed site and access was also undertaken in line with Highways England's Design Manual for Roads and Bridges, section HA207/07 and Institute of Air Quality Management (IAQM) guidance.
- 9.04 In terms of the construction phase of the project, mitigation measures will be implemented as part of a construction traffic management plan.
- 9.05 The construction traffic management plan (CTMP) considers the effect of:
- Changes to the existing highway network through road closures and regulation orders required by the scheme.
 - Vehicular activity generated by the construction process
 - Public Traffic accessing the site during the construction process
 - Designated haul routes and restricted routes for construction traffic.
- 9.06 The Amey site management team will be based on-site during the construction period to ensure all contractors and material suppliers are safely implementing the CTMP.
- 9.07 All sub-contractors, operatives and suppliers will be made aware of the CTMP.
- 9.08 It also lays out the Traffic Management Principles and areas of storage and construction vehicles.
- 9.09 The primary access to the site compound and works area for all construction traffic will be from the existing highway network. Access to the site compound will be from A38 where a high percentage of materials/plant will be delivered. The site compound plan also highlights main site offices, skip locations, storage areas and vehicle parking. Drawing: CDX8620-R01-04 – Compound and Storage.
- 9.010 In addition, the following traffic management principles should be observed:
- i. Delivery vehicles will supply and remove materials from site using the A38. In circumstances to reduce vehicular movements, deliveries will be made direct to the work zone to mitigate double handling and double vehicular movements.

- ii. Delivery vehicles whenever practical will avoid 'peak public traffic hours' to reduce traffic congestion and nuisance to the existing road and highway network.
 - iii. To avoid construction traffic congestion and nuisance to the surrounding area all suppliers and contractors will be made aware of traffic routes.
 - iv. Site entrances will be maintained and kept clean and clear. There will be a road sweeper in operation when required and in line with the works activities to ensure no mud is left on the live highway as a direct result of the works.
 - v. All materials will be loaded within the site compound/boundary of the working zone to minimise congestion.
 - vi. For environmental and road safety all materials containers leaving site will be appropriately covered to avoid soiling of the roads and highway. Engines of all vehicles, mobile and fixed plant on site are not left running unnecessarily.
 - vii. Using low emission vehicles and plant fitted with catalyts, diesel particulate filters or similar devices.
 - viii. Using ultra low sulphur fuels in plant and vehicles where possible.
 - ix. Plant will be well maintained, with routine servicing of plant and vehicles to be completed in accordance with the manufacturer's recommendations and records maintained for the work undertaken.
 - x. All project vehicles, including off-road vehicles, will hold current MOT certificates, where applicable and where required due to the age of the vehicle and that they will comply with exhaust emission regulations for their class.
 - xi. Ensure all vehicles switch off engines when stationary - no idling vehicles.
 - xii. Avoiding the use of diesel or petrol powered generators and using mains electricity or battery powered equipment where available.
 - xiii. All commercial on road vehicles used in construction must meet the European Emission Standards pursuant to the EC Directive 98/69/EC (commonly known as Euro standards) of Euro 3 during any works.
- 9.011 A construction traffic co-ordinator will be employed during the construction period to monitor heavy goods vehicle deliveries and collections of construction materials to and from the site to ensure compliance so far as practicable by contractors with the above requirements.
- 9.012 Only a limited number of car and HGV construction movements typically occur during the peak hours. The working hours of most operatives would not coincide with the network peak, construction processes would be programmed to avoid reliance on deliveries of concrete and bituminous materials during the more congested periods and delivery drivers would wish to avoid being on the network at congested times of the day when drivable hours used are disproportionate to the quantities of goods deliverable.
- 9.013 A list of Plant to be used on site is provided below:
- Earth Moving Equipment
 - Dozer
 - Tracked Loader
 - Hydraulic Excavator
 - Vibratory Compactor
 - Road Making Equipment
 - Roller
 - Road Paver

- Hauling Equipment
- Tractors/trailers
- Trucks
- Tipper
- Crane
- Concreting Equipment:
- Mixers
- Dumpers

- 9.014 Only trained, certified, competent operatives will be allowed to operate the plant machinery. A record of all operatives' certificates should be kept in the site office.
- 9.015 All plant should come to site with a current and up to date record of service and an annual inspection sheet. An onsite weekly inspection will be carried out by the Site Agent of all operated plant and recorded. All plant maintenance is to take place in the site compound only. Refuelling of all plant is to take place in the compound and drip trays are to be employed during the fuelling process (ref PPG 7).
- 9.016 **Management of Dust** - The application of standard dust control measures included in the British Research Establishment guidance (Building Research Establishment, 2003) are normal working practice on all well managed construction sites in the UK. Standard measures will be applied to the construction areas within the Site as agreed with the local authority air quality/pollution control officer or Environmental Health Officer.
- i. Staff will be trained in the control of dust and will ensure the site is monitored for levels of surface dust. Should dust build up this will be damped down with hosepipes.
 - ii. Record all dust and air quality complaints, identifying cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
 - iii. Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book.
 - iv. The access road into and out of the site will be monitored for excessive dust build up. Should surface dust build up the road will swept.
 - v. The name and contact details of person(s) accountable for air quality and dust issues will be displayed on the site boundary. This may be the environment manager/engineer or the site manager.
 - vi. Avoid bonfires and burning of waste materials.

10.0 Construction Site Waste

- 10.01 It is Amey policy that all construction projects will comply with the current and applicable waste regulations. To assist Project and Site Managers in achieving this requirement a number of Amey Best Practice Guidance documents are available for reference at the location:

<http://ameydocuments.ameygroup.int/BrowseFolders.aspx?fn=Environment&cf=%2fWaste+Management&pf=%2fPanAmey%2fHSEQ%2fEnvironment&rs=&Settings=1>

Ref	Title
ENVT-Waste-ES-01	Waste Management Executive Summary
ENVT-WASTE-FO-01	Waste Transfer Note Template
ENVT-WASTE-FO-02	Consignment Note Template England & Wales
ENVT-WASTE-FO-03	Duty of Care Template
ENVT-Waste-GD-01	Site Waste Management Plans
ENVT-Waste-PL-01	Site Waste Management Template
ENVT-Waste-PR-01	Management of Waste
ENVT-WASTE-RE-01	Waste Stream Assessment
ENVT-Waste-RE-02	Hazard Waste Producing Premises
ENVT-Waste-RE-04	Register of Non-ASL Waste Suppliers

- 10.02 The Construction Site Waste Management Plan (SWMP) will be completed and maintained on site by the Project/Site Manager. It should be made available to all personnel on site as appropriate. The SWMP data sheet template to be used can be found on the Amey document storage portal (link provided above).
- 10.03 In addition Highways England Design Manual for Roads and Bridges Volume 7 Part 2 HD35/04 'Conservation and Use of Secondary and Recycled Materials' specifies where materials can be reused within a road construction project.
- 10.04 Other industry guidance such as the CIRIA Waste Minimisation in Construction will be utilised as required. This is available online at www.ciria.org.

Construction and Demolition Waste

- 10.05 The principal types of material to be disposed of will be aggregate, blacktop, concrete, soil, stones, sand, woody plant material, some landfill materials (bound within soils) and vegetation.
- 10.06 In addition to excavation material quantities of other waste types will be generated during construction of the proposed development.

10.07 Quantities of general construction and demolition wastes are made up of waste such as wood, packaging, metals, plastics, bricks, blocks, canteen waste, hazardous waste (e.g. oils, paints and adhesives), site clearance and residual waste which are generated during the construction phase.

10.08 A review of these wastes including their respective European Waste Catalogue (EWC) Codes are outlined below:

EWC Code	Waste Description
17 01 07	Concrete, bricks, tiles and ceramics
17 02 01/02/03	Wood, glass, plastic
17 03 01/02	Bituminous mixtures, coal tar and tarred products
17 04 07	Metal
17 05 03	Soil (incl. excavated soils from contaminated sites), stones and dredging spoil
17 06 05	Insulation materials and asbestos containing construction materials
17 08 02	Gypsum-based construction materials
17 09 04	Other construction and demolition waste
16 02 13/14	WEEE
16 06 04/01	Batteries
13 07 01	Liquid Fuels
17 05 03	Soils and stones containing hazardous substances
17 05 04	Soils and stones other than those mentioned in 17 05 03

10.09 The Waste Hierarchy which should be implemented on site is as follows:

- Prevention/Reduction:
- Re-use: Products and material can sometimes be used again, for the same or a different purpose.
- Recycling and composting- Resources can often be recovered from waste.
- Energy recovery- Value can also be recovered by generating energy from waste.
- Disposal- Only if none of the above options offer an appropriate solution should waste be disposed of.

Site Waste Management Plan (SWMP)

10.010 A SWMP should identify the personnel and their roles and responsibilities. This includes maintaining records of waste transfers. The appointed site manager should also ensure compliance within any permits and record keeping.

10.011 Amey must ensure all controlled waste is managed in accordance with the following Duty of Care requirements:

- Ensure all waste is correctly assessed and categorised;
- Prevent the illegal deposit or handling of controlled waste by any other person;
- Prevent waste material from escaping our control;

- Only transfer controlled waste to an “authorised person” (Waste Collection Authority, the holder of an Environmental Permit, Registered Water Carrier or Waste Disposal Authority).
- Ensure that non-hazardous waste is transferred under a Waste transfer Note which must be retained for two years.
- Hazardous waste is moved under a waste consignment note that provides a clear description of the waste material. The consignment note must be retained for three years.
- The waste is the responsibility of the company until it has been fully recovered or finally disposed of.

10.012 All suppliers on the approved supplier list will have undergone an initial desktop duty of care audit and will be risk rated. Risk is determined based on spend with any one supplier and local knowledge or expertise. Higher risk suppliers will then be subject to site audit and sample inspections. Group HSEQ will maintain an audit plan for suppliers and will undertake audits on pan-Amey Suppliers with the divisions and accounts responsible for resourcing audits on suppliers to their area of operations.

Roles and Responsibilities

10.013 Site manager, and their appointees, responsibilities include:

- Maintaining records of waste transfers for the operations under their control.
- Written Information/Waste Transfer Notes (non-hazardous waste) - two years under environmental legislation but up to six years under commercial requirements.
- Consignment Notes (hazardous/special waste) – three years
- Maintaining records required for the Waste Stream Assessment and Environmental Plans
- Maintaining compliance with any exemptions/permits for their sites
- Ensuring all wastes are stored securely
- Communicating Amey requirements to direct staff and subcontractors
- Checking this information during subcontractor reviews and audits
- Only using waste suppliers from the preferred supplier list (where this is not possible inform procurement who will provide suitable options)
- When transferring waste to companies not on the approved supplier list ensure that duty of care checks have been carried out and recorded
- Ensuring Purchase Orders for waste service procurement require fully completed waste records to be provided
- Will notify Group HSEQ if a site requires hazardous waste premises code

Waste Segregation

10.014 Wherever possible, different types of waste should be segregated as they are produced to allow for correct disposal. Each type must be stored separately and securely to prevent pollution and cross-contamination and each waste container should be clearly labelled. Waste limits include:

- Waste must not be stored for longer than 3 months
- No more than 50 cubic metres of non-liquid waste can be stored at any one time
- The total quantity of liquid waste must not exceed 1,000 litres at any one time.

10.015 Waste Electrical and Electronic Equipment (WEEE) includes battery powered items and must be recycled by an authorised recycling centre. Some WEEE can be considered hazardous and must be moved under hazardous waste such as fluorescent tubes and Lithium batteries.

Re-use

10.016 Possibilities for re-use of clean non-hazardous excavation material as infill on the site or in landscaping works will be considered following appropriate testing to ensure material is suitable for its proposed end use.

10.017 In the event of excavation material which may not be re-used being found, the sub-contractor will endeavour to send material for recovery or recycling so far as it is reasonably practicable. The sub-contractor will ensure that any off-site interim storage facilities for excavated material have the appropriate waste licences or waste facility permits in place.

Material Management

10.018 The amount of waste material on site will be reduced as far as reasonably practicable, through waste-minimisation, re-use and recycling. This shall be implemented by the following measures:

- Storage- material shelf life is not exceeded, damage and contamination is prevented including loss, theft and vandalism.
- Delivery- Damage during unloading, delivery to the correct location on site, acceptance of materials and components only in accordance with the order
- Handling- Materials and components are handled using correct methods, in minimal fashion
- Protection- Damage is avoided by provision of temporary protection where applicable.

Waste Auditing

10.019 The contractor will record the quantity in tonnes and types of waste and materials leaving the development site during the construction phase. The name, address and authorisation details of all facilities and locations to which and materials from the construction phase are delivered will be recorded along with the quantity of waste in tonnes delivered to each facility. Records will show material which is recovered and disposed of.

Waste Types

Excavated clay, soil and stones

10.020 This will be loaded directly to vehicles for use within the project as appropriate. Where short term temporary storage is unavoidable topsoil will be stored separately from other soil types and where possible clay mounds will not be more than two metres in height as they may damage the soil structures and limit its future use.

Concrete

10.021 Waste is to be sent back to the supplier for re-use. Where this is not possible, the concrete may be crushed and screened out and used within the project such as in the sub-base. The necessary permission for any crushing and screening activities required will be discussed within the environmental department of the local authority prior to any works being undertaken. There is an anticipation that approximately 10,000t of recycled Type 1 and 6F5 Capping will be used throughout the entire scheme (all phases).

Metals

10.022 One of the primary sources of metal waste is rebar and this will be reduced by ordering made to measure rebar from the manufacturer and detailed scheduling of all Reinforced Concrete (RC) structural elements. Skips may be provided and when full should be sent to a metals recycling facility.

Timber

10.023 This will be stored separately as it is readily contaminated by other wastes so any pallets will be returned to the supplier for re-use. Off cuts and trimmings will be used in formwork where at all possible. A container for waste wood will be covered by a waste contractor who will forward it to a wood recycling facility for chipping.

10.024 Treatment of timber with chemicals and the over use of nails will be minimised and avoided as this will make it difficult to reuse/recycle the timber afterwards. The utilisation of reclaimed timber products will also be investigated.

Packaging and Plastic

10.025 Double handling will be avoided by segregating packaging wastes immediately after unwrapping. It is intended that where possible materials with recycled packaging will be purchased. Waste packaging will be segregated and stored in separate containers, preferably covered for collection and /or returned to the supplier.

Blocks, Bricks and Tiles

10.026 The most likely wastes produced will be off-cuts, trimmings and waste arising from breakages. Every effort will be made to use broken bricks and off cuts.

Final quantities of these wastes generated will be stockpiled (possibly crushed and/or screened) and used at the site as sub base material for roads, hardstanding etc.

Hazardous Wastes

10.027 Hazardous wastes will be identified, removed and kept separate from other construction and demolition waste materials in order to avoid cross contamination. Specific method statements detailing the necessary mitigation measures required during excavation, handling transportation and disposal of hazardous wastes encountered on the site will be prepared as required.

10.028 The likely disposal/treatment options for any hazardous wastes will depend on the nature of the material and the concentration of parameters of concern.

Hazardous Liquids

10.029 Oils, paints, bitumen, adhesives and chemicals will be kept in a separate contained storage area which will be locked when not in use. Lids will be kept on containers in order to avoid spillage or waste by evaporation. These will be stored in a containment tray with a capacity to contain 110% of the volume of the largest container.

10.030 Fuels and chemicals will be stored in double skinned containers or within a bund i.e. an impervious structure with the capacity to contain 110% of the volume of the largest tank stored within it. All containers will be carefully labelled.

Canteen Wastes

10.031 Staff canteens have the potential to generate food waste and packaging waste. Designated receptacles will be provided at the canteen to allow for the segregation and storage of individual waste streams. These will include receptacles for food waste (e.g. brown bin for waste foods, peelings etc.) dry recyclables (e.g. green bin for packaging, plastics, metals, wood, paper, cardboard, tetrapack, etc) and residual bin (e.g. black bin for mixed food and packaging waste). Separate receptacles for the recyclable fractions may be provided such as plastics, metals, glass.

Other Wastes (Residual)

10.032 This waste is normally made up of residual non-recyclable waste such as soiled paper, cloth, cardboard or plastics as well as canteen waste to include food as above and general waste found on the sites including plastic bottles, bags, cans etc. Given the heterogeneous nature of this material it is most important that residual waste is kept separate from the other waste streams to avoid contamination. This material will be stored in a dedicated container in the Waste Segregation Area.

10.033 Container size and collection frequency will be assessed with waste management contractors as works proceed. All residual wastes will be dispatched to a suitably licensed facility for disposal. Other construction and

demolition waste material will be collected in receptacles with mixed construction and demolition waste materials for subsequent separation and disposal at a segregation facility.

11.0 Heritage

- 11.01 The proposed development site has remained in predominantly agricultural (fields and farmland) use since at least 1888. No potentially contaminated activities were identified.
- 11.02 With the sensitivity of the area being high for cultural features it is recommended that further surveys are required for the new infrastructure as there is a high potential for presence of previously unrecorded and significant archaeological remains across the site to be identified. As part of the National Planning Policy Framework (NPPF) (para 128) a desk based and field evaluation by a suitable qualified archaeologist or cultural heritage consultant is required.
- 11.03 Mitigation to be undertaken as a strip, map and record (excavation) shall be undertaken in accordance with the Chartered Institute for Archaeologist's 'Standard and guidance for archaeological excavation' (2014)– this should be carried out sufficiently in advance of the start of construction to enable any features revealed to be fully understood and recorded.

A Written Scheme of Investigation (WSI) has been produced by a suitably qualified Archaeologist.

- 11.04 There are currently no Scheduled monuments or Listed Buildings on the development ground.
It is noted from Staffordshire Historic Environment Record (HER) data there are 34 designated assets within 1km. Notably, two are located within close proximity to the proposed works area (however, please note that there are no listed buildings/structures directly within the site boundary itself):
- The "Canal milepost located at SK 217 212 (10 metres south of Bridge 34)" Grade II listed, is located within 10m of the existing Trent and Mersey Canal Bridge.
 - The "Shobnall Grange and gate piers" Grade II listed feature is located within the north-east part of the site (outside of the application site boundaries).
- 11.05 Tatenhill Conservation Area bounds the western extent of the site. The Trent and Mersey Canal Conservation Area runs south west to north east, within the east of the site, following the line of the watercourse.

Although the geophysical survey identified some features which coincide with the alignment of the new road mitigation is agreed to be adequate if undertaken as a strip, map and record (excavation) – the archaeological monitoring of the topsoil strip - providing that this is carried out sufficiently in advance of the start of construction to enable any features revealed to be fully understood and recorded.

It is therefore envisaged that there is no threat to heritage from the project.

- 11.06 Contractors will be advised that whilst carrying out ground-breaking activities such as piling, trenching, tunnelling etc., if items or materials are encountered not in keeping with the expected nature of the site soils that may represent site heritage, work is to be stopped.

- 11.07 Risk Assessments and Method Statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

12.0 Water Consumption

12.01 Effective construction management can deliver major savings in water use and the associated costs of energy, water supply and wastewater treatment. This can be achieved without compromising the performance and user acceptability of the project.

12.02 Typically, the use of water will take place in the following areas.

12.03 Dust suppression

- Vehicular dust suppression
- Stockpiles of soil

12.04 Cleaning

- Road sweepers
- Boot wash
- Drive-on wheel wash
- High pressure washing

12.05 Domestic and Welfare facilities

- Toilets
- food preparation
- canteens
- offices
- Drinking water

12.06 Construction

- Bentonite mixing
- Mortar mixing
- Crushing operations
- block work
- screeding
- plastering

12.07 The project should where appropriate utilise the following examples of best practice, or equivalent.

12.08 Enable monitoring of water use: e.g. install meters which are easy to read, e.g. pulsed meters for connecting to a Building Management System; or sub-metering (pulsed) of areas of major water consumption.

12.09 Ensure all areas of site water consumption are quantified.

- Consider splitting welfare and “site-based” water consumption.
- Record site water consumption on a regular basis for review at project progress meetings
- Regular meter readings should be taken from all meters, sub-meters and metered standpipes (weekly is recommended)

- 12.010 Reduce the risk of uncontrolled water use: e.g. sensor-actuated devices (such as infra-red actuated taps and occupancy sensors).
- 12.011 Minimise the risk of leakage: leak detection equipment (including pulsed meters for regular monitoring); ensure valves and overflows are visible for early detection of water loss and easy to access for maintenance.
- 12.012 Influence user behaviour: Creating a culture that changes attitude and behaviour to accepting ownership of water efficiency is fundamental to improving the use of water in an efficient manner.
- 12.013 Good housekeeping (e.g. reporting/repairing leaks, turning off taps which are not in use, and generally using water in an efficient manner) can assist the site reduce its overall water use. The provision of information on appropriate use of fittings and appliances; awareness raising of the costs and environmental importance of water efficiency via Tool Box Talks; guidance on processes for identifying and reporting water leakage / poorly-performing fittings; method for providing feedback to building occupants on water.

13.0 Pollution Prevention and Hazardous Material Storage

- 13.01 Chemicals and hazardous materials such as fuels and lubricants are to be stored on site during the construction phase of the project.
- 13.02 These include but are not limited to:
- Fuels
 - Oils
 - Lubricants
 - Paint and Coating
 - Adhesives and resins
 - Solvents
 - Compressed gases
 - Cements and binders
- 13.03 Measures will be developed, implemented, maintained and monitored in order to comply with the Water Resources Act (1991) section 85 and associated regulations.
- 13.04 The site layout plan (available from the site manager) and shows the storage location of the 3000 litre bunded fuel store and the store for small volume packaged chemicals and materials.
- 13.05 The following list shows measures that will be put in place to prevent pollution and would conform to the best practice policy proposed by the Environment Agency (EA) via the Pollution Prevention Guidelines (PPGs):
- i. the handling, use and storage of hazardous materials to be undertaken in line with the EA's Pollution Prevention Guidelines (e.g. PPG2 Above Ground Oil Storage Tanks);
 - ii. adequately bunded and secure areas with impervious walls and floor for the temporary storage of fuel, oil and chemicals on site during construction;
 - iii. drip trays to collect leaks from diesel pumps or from standing plant;
 - iv. oil interceptor(s) fitted to all temporary discharge points and for discharge from any temporary oil storage/ refuelling areas;
 - v. development of pollution control procedures in line with the EA's Pollution Prevention Guidelines, and appropriate training for all construction staff;
 - vi. Provision of spill containment equipment such as absorbent material on site.
- 13.06 Surface Water Management - The perceived risks to surface water in the form of silt will be managed:
- i. Wheel wash facilities should be provided for vehicles moving to and from the Site at all entry and exit points. Silty water from wheel-wash facilities

will require appropriate disposal to prevent unacceptable levels of suspended solids entering any nearby surface water bodies. Any disposal of surface water generated on site during construction to controlled waters will require consent from the EA. Wheel wash facilities should not be located too close to surface waters.

- ii. if dewatering is required along any part of the construction corridor, pumped groundwater should be disposed of appropriately according to EA Pollution Prevention Guidelines;
 - iii. the early re-seeding of cleared land, where practicable, to minimise exposed land and the entrainment of sediment by overland flow; and this can be managed by ensuring construction plant/ materials are stored on hard-standing surfaces where possible. Where this is unavoidable, we will ensure any compacted topsoil is loosened as soon as possible following completion of the works;
 - iv. Attenuation ponds within each identified drainage catchment to be constructed first and used to attenuate and store run-off from the site during construction to prevent contamination of the surface and groundwaters.
- 13.07 The Trent and Mersey Canal runs though the east of the Nurton Development site, west of the A38. The Environment Agency classifies this watercourse as hosting “moderate” ecological potential.
- 13.08 The Tatenhill Brook is located within the scheme extents, to the east of Anglesey Street.
- 13.09 There are also a number of surface water drainage ditches, which carry runoff within the development area. These only flood in times of extreme rainfall.
- 13.010 Groundwater is noted to be present at shallow depths beneath the site surface; therefore, interaction is present between infiltrating water and groundwater.
- 13.011 There is a potential that hazardous waste will be stored on the site and therefore it must be stored in accordance with the Environment Agency Pollution Prevention Guidance (PPG2) so as not to cause any further water/land contamination.
- 13.012 Pollution Prevention Guidelines (PPGs) are based on relevant legislation and reflect current good practice. The project construction phase will adhere to the following Environment Agency Pollution Prevention guidance listed below.

PPG2: Above ground oil storage tanks: Provides information about storing oil in above-ground storage tanks, for new installations and existing tanks. The guidance is for small to medium size commercial oil storage. It gives advice on choosing, installing, using and maintaining oil tanks and how to deal with spills.

PPG3: Use and design of oil separators in surface water drainage systems: provides information about choosing and using oil interceptors to comply with environmental law and prevent pollution. It gives information about choosing,

installing and maintaining an oil separator. Oil separators can be fitted to surface water drains to protect the aquatic environment.

PPG7 Refuelling facilities: It includes guidance on planning, designing, operating and maintaining refuelling facilities, plus information on storing other related, non-fuel products and dealing with environmental incidents.

PPG13: Vehicle Washing & Cleaning: provides information on how to comply with the law and prevent pollution when washing and cleaning vehicles. It includes advice on dealing with effluent, waste management and storing and using chemicals.

PPG26 Drums and intermediate bulk containers: gives information to store and handle drums and intermediate bulk containers (IBCs). It provides advice on choosing drums and IBCs, designing storage areas, delivery and handling, maintenance, dealing with spills and waste management.

The Pollution Prevention Guidelines are available to view on <http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx>

13.013 All contractors will be familiar with and apply the relevant best practice listed in the above guidance documents. It is recommended that copies are available in the site office.

14.0 Soil & Geology

- The proposed development site has remained in predominantly agricultural (fields and farmland) use since at least 1888. No potentially contaminated activities were identified;
- The proposed development site does not lie within an area affected by historic shallow coal mining;
- Ground water was encountered during the formation of the boreholes;
- Landfills historic and present have been identified in the area within 1km;
- Widespread Chromium and Selenium contamination was identified in the shallow soils across the site and a small area of hydrocarbon impacted soils were identified in the vicinity of the fuel storage tank associated with the existing farm.

However, the site investigation identified the site to pose a low risk to future developments.

- 14.01 The majority of the new works are raised on embankments. They will return to grade where they tie into the existing road layout.
- 14.02 Contractors will be advised that whilst carrying out ground-breaking activities such as piling, trenching, tunnelling etc., if items or materials are encountered not in keeping with the expected nature of the site soils and geology, work is to be stopped.
- 14.03 Risk Assessments and Method Statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.
- 14.04 Imported Soil Materials: all imported soil materials used for landscaping or ground stabilisation will be certified to BS3882:2007.
- 14.05 For material certified under BS3882:2007 – a copy of the analysis certificate (comprising of the specified requirements, plus an appropriate list of contaminants, including hydrocarbons) should be submitted to the LA for approval before the material is imported.
- 14.06 After approval and placement of material, the chemical quality should be analysed, with the frequency of analysis being one sample per 100m³.
- 14.07 **Material not certified under BS3882:2007** - Full details of the location of material source(s), accompanied by representative chemical analysis (including a comprehensive set of parameters, for example: pH, particle composition, and contaminants – including hydrocarbons), at a frequency not less than one sample per 5000m³ (with a minimum of at least one sample per source site) submitted to LA for approval before material is imported.
- 14.08 After approval and placement of material, the chemical quality should be analysed, with the frequency of analysis being one sample per 50m³.

15.0 Construction Lighting

- 15.01 In determining the lighting arrangement on site, consideration will be given to residents and other sensitive receptors that may experience a nuisance by light.
- 15.02 Where appropriate, measures will be implemented to reduce obtrusive light.
- 15.03 Where possible a daylight only construction schedule will be adopted to minimise adverse lighting. It is unavoidable that construction work may require work during the hours of darkness in consideration of shorter daylight availability during winter months.
- 15.04 Where appropriate the following measures will be considered for implementation
- Dim or switch off lights where it is safe to do so
 - Use specifically designed equipment
 - Position lights sensibly
- 15.05 It is not anticipated that any construction works will be carried out at night
- 15.06 Habitats on site including the linear scrub/trees and hedgerows on both phases are suitable for commuting and foraging bats. As such the bats and lighting in the UK Bats and the Built Environment Series –guidance should be observed.
- 15.07 It is recommended that the new access road is not lit to minimise impacts upon commuting and foraging bats.

16.0 Noise & Vibration

16.01 Noise and vibration statutory nuisance are controlled under the Environmental Protection Act 1990.

16.02 A desktop assessment of the likely effects of noise and vibration on the surrounding area was carried out using the MAGIC Map application (<http://magic.defra.gov.uk/>), as well as the Google Maps application (<https://www.google.co.uk/maps>).

16.03 The main source of noise pollution within the area is from the A38 which hosts HGVs amongst other vehicles. Other sources of noise within the area include traffic on local roads (including farm traffic) and pedestrian associated noise

The following noise and vibration sensitive receptors are located within 300m of the proposed development area:

- Residential properties (including the Lawns Farm and The Bungalows located within the works area)
- 2 educational buildings – located north of the site boundary.
- 1 place of worship – located north of the site boundary.

16.04 There are no medical buildings or care homes located within 300m of the Branston Locks development area

16.05 The potential noise disturbance from the site may result from vehicle movements,

16.06 Before works on site are commenced, all contractors should make available for inspection a method statement (in accordance with the principle described in BS 5228: 2009: Part 2: Code of practice for noise and vibration control on construction and open site) stating precisely the type of plant to be used and the proposed noise control methods

16.07 The contractors will also be required to comply with other relevant provisions of the Control of Pollution Act 1974. The contractor should also comply with the recommendations set out in BS 5228:1997 AMD 1 Code of practice for noise control on construction and demolition sites.

16.08 Muffling should be in accordance with the recommendations set out in BS 5228:1997, Code of practice for noise control on construction and demolition sites:

- compressors should be fitted with properly lined and sealed acoustic covers, which should be kept, closed whenever in use
- pneumatic percussive tools should be fitted with mufflers or silencers of the type recommended by the manufacturers
- machines in intermittent use should be shut down in the intervening periods between work or throttled down to a minimum
- care should be taken when loading or unloading vehicles or dismantling scaffolding or moving materials etc. to reduce impact noise

16.09 The contractor will follow best practicable means to reduce the noise effect on the local community including the following:

- i. Materials will be handled with care e.g. material such as scaffolding and steelwork will be placed rather than dropped.
- ii. Drop heights of materials from lorries and other plant will be kept to a minimum.
- iii. With regards to the piling of foundations, to ensure where possible, that noise and vibration effects during these works are minimised.
- iv. Fixed and semi-fixed ancillary plant such as generators, compressors and pumps liable to create noise and/or vibration whilst in operation will, as far as reasonably practicable, be located away from sensitive receptors.
- v. The use of barriers to absorb and/or deflect noise away from noise sensitive areas will be employed where required and reasonably practicable.
- vi. All plant used on site, paying particular attention to the integrity of silencers and acoustic enclosures will be maintained in good and efficient working order and operated such that noise emissions are minimised as far as reasonably practicable.
- vii. As far as reasonably practicable, any plant, equipment or items fitted with noise control equipment found to be defective should not be operated until repaired.
- viii. Where reasonably practicable, fixed items of construction plant should be electrically powered in preference to diesel or petrol driven.
- ix. Vehicles and mechanical plant, where reasonably practicable, will be fitted with effective exhaust silencers and will be maintained in good working order and operated in a manner such that noise emissions are controlled and limited as far as reasonably practicable.
- x. Machines in intermittent use should be shut down or throttled down to a minimum during periods between works.

16.10 Risk Assessments and Method Statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

17.0 Housekeeping and Security

- 17.01 The Site comprises the land required to construct the new access route from the A38 roundabout to Branston Locks Development, including widening the existing Branston Road and implementing a new footway, cycleway and street lighting. Additional improvements to the north bound off-slip road include sufficient retaining structures and implementing traffic signals at three of the roundabout arms. This includes land required temporarily for construction access.
- 17.02 The site compound plan and the material storage plan highlight key areas such as:
- i. Main Office
 - ii. Tool stores
 - iii. Materials store
 - iv. Waste skips
 - v. Topsoil storage areas.
- 17.03 Security fencing consisting of 2.4m high welded mesh panels shall be provided.
- 17.04 Pollution Prevention Guidelines by Environment Agency set out basic environmental management guidance regarding housekeeping and will be used to set up stores etc.

PPG 6: Construction and Demolition Sites:

Section 4 Materials storage, stockpiles & exposed ground.

- Must prevent stockpiles on exposed ground from generating pollution as water run-off or dust.
- Locate stockpiles away from watercourses and on level ground to prevent any run-off from entering drains, ditches or watercourses.
- Contaminated material must be stockpiled on an impermeable surface, in a bunded area, at least 10m from a watercourse.

Section 9 Chemicals and hazardous substances.

- Store all chemicals and hazardous substances away from watercourses and drains in a contained, bunded area on an impermeable surface.
- Store all chemicals and hazardous substances away from areas where there is risk of damage from impact or collision e.g. site traffic.
- Ensure all chemicals and hazardous substances are labelled, containers are sealed when not in use and inspected regularly and fit for purpose.
- Dispose of any damaged/ old containers in line with the duty of care requirements; these may be considered hazardous waste.
- Train staff in use of spill kits/emergency procedure.
- Ensure there is a designated 'responsible person' on site at all times.
- Lock storage facilities when not in use.

- 17.05 Risk Assessments and Method Statements (RAMS) from contractors will be scrutinised and authorised before work commences to ensure the requirements above are understood, factored into working methods and adhered to.

18.0 Incident Response

- 18.01 All environmental incidents should be reported directly to Amey project manager and the Amey call centre on **0800 521 660** as soon as reasonably practicable.
- 18.02 An environmental incident can be:
- i. A fuel or chemical spillage onto ground, into drains or a watercourse;
 - ii. Damage to the habitat of protected species or nesting birds;
 - iii. Damage to protected species, either plants or animals;
 - iv. Incidents involving waste, such as fly-tipping or the illegal transfer of waste.
- 18.03 Amey document ENVT-PP-FO-01 Pollution Incident Response Plan will be completed by the Construction manager.
- 18.04 As a minimum, contractors will be required to complete a risk assessment in order to assess requirements for spillage equipment and pollution prevention storage. Any equipment should be clearly labelled, readily available in the area it is likely to be required – the locations and how the equipment is to be used should be detailed in an environmental Tool Box Talk to all contractors.
- 18.05 Where necessary in the event of a pollution incident the Environment Agency (EA) will be contacted and Amey and Client Environmental Project Manager notified. The EA pollution hotline number is 0800 807060. In addition, there may be the need to contact Natural England.
- 18.06 Amey Airsweb reporting policy and procedures shall be complied with at all times. For all direct reporting to Airsweb database the following contact number is to be used 0800 521 660.
- 18.07 If a workplace hazard is spotted a 'close call' must be raised to prevent any incidents or activity that could be potentially harmful to the environment or the community. Amey Close call hotline: 0800 521 660.
- 18.08 If an incident or event is likely to give rise to public concern and adverse media attention **or** involves significant spills, leaks of toxic substances, or pollution then Group Procedure HS-SigIncident-PR-01 Reporting Group Significant Incidents should be followed. The Group Significant Incident hotline is 0844 701 6515
- 18.09 The nearest urgent care facility is Queens Hospital, Belvedeer road, Burton on Trent DE13 0RB.

19.0 Internal Communication & Training

- 19.01 The CEMP will be distributed to the project team, including subcontractors, to ensure that the environmental requirements are communicated effectively. Key activities and environmental sensitive operations will also be briefed to staff and subcontractors. Project, client and company environmental policies shall be displayed on site.
- 19.02 A schedule of meetings will be developed to include weekly Safety, Health and Environment meetings, where any issues or incidents will be raised for the attention of the client, along with proposed remedial action and additional control if required. An environmental register must be signed and updated to confirm tool box talks, training and weekly meetings by the environmental team.
- 19.03 During the construction phase, internal communication will include reporting on the following: Inspections, audits and non-conformance, Environmental performance data including any incidents, near misses and progress on reaching targets. Group HSEQ and the account director will be informed of any visits by external bodies and the outcome or feedback from them.
- 19.04 Site staff will be competent to perform tasks that have potential to cause environmental impact. Competence is defined in terms of appropriate education, training and experience. Where project specific training is required, training will be appropriate to the role and seniority of staff.
- 19.05 Environmental awareness and training shall be achieved by:
- All managers and supervisors being briefed on the CEMP. All sub-staff and operators are to undergo an environmental induction and tool box talks and the CEMP will be signed and updated on the Environmental Register.
 - Site inductions, including relevant environmental issues, such as waste management, working near watercourses, noise & dust management and ecological risks;
 - Emergency preparedness and response briefings, including communication and reporting of incidents, use of spill kits and other equipment, learning lessons;
 - Method statement and risk assessment briefings including reference to environmental risk;
 - Toolbox talks to cover specific task related matters of environmental risk
 - Key project specific environmental issues and briefings.
- 19.06 Meetings provide the Project Manager and the team an opportunity to exchange information and receive immediate feedback.

20.0 External Communications

- 20.01 All complaints or information requests will be made aware to the Project Manager and will be logged promptly. A Public Contact Officer will be appointed from SCC and identified and will become the first point of contact for members of the public.
- 20.02 Noise may be a key subject of complaint where construction works take place close to a residential area. Working hours, plant types, construction methods and noise mitigation measures may be subject to Section 61 consent, under the Control of Pollution Act 1974 granted by the local authority. Close liaison with the local authority environmental health team may be required to develop mitigation measures.
- 20.03 The local authority environmental health team may also be a first point of contact by residents affected by noise or dust and may require to be kept apprised of progress, programme and upcoming phase of works that may give rise to disturbance in order that they can respond to complainants.
- 20.04 Careful monitoring of complaints received, including recording details of the location of the affected party, time of the disturbance and nature. This is to assist with managing the works to reduce the likelihood of further complaints.
- 20.05 Further external communication may arise or be initiated with the following consultees:

Organisation	Location	Contact no.	Role
Environment Agency Environment Officer	Sentinel House Wellington Crescent Fradley Park Fradley Staffordshire WS13 8RR	03708 506506	Advice on environmental regulation
Local Authority Council Environmental Officer	Stafford Borough Council	01785 619402	Local environmental health and planning conditions.
Natural England Local Office	Natural England Parkside Court, Hall Park Way, Telford TF3 4LR	0300 060 3900	Permits and advice on the natural environment.

21.0 Other Commitments

- 21.01 In addition to the mitigation measures, Amey maintains an Environmental Management System from which information will be extracted as required to complete method statements upon which operatives will be briefed.
- 21.02 A commitments register for the scheme will be maintained, including the commitments identified within the CEMP and include any survey, authorisations, consents, licences and permissions to undertake. The register will be updated with any new issues identified during the pre-construction or construction phase.