

A46 Newark Bypass

TR010065/APP/6.9

6.9 Environmental Statement Pre-Commencement Plan

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(Applications: Prescribed Forms
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A46 Newark Bypass

Development Consent Order 202[x]

**ENVIRONMENTAL STATEMENT
PRE-COMMENCEMENT PLAN**

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1 Overview

1.1 Introduction

- 1.1.1 This document describes the pre-commencement works (as defined by the draft Development Consent Order (DCO) **(TR010065/APP/3.1)** and included in Section 2.6 of Chapter 2 (The Scheme) of the Environmental Statement **(TR010065/APP/6.1)** for the A46 Newark Bypass (the “Scheme”) and details the mitigation measures required to appropriately control those works.
- 1.1.2 The 'pre-commencement works' are listed as follows:
- archaeological investigations and mitigation works;
 - utilities works comprising utilities protection works or fencing and protection slabs or diversions;
 - baseline monitoring and investigations for the purpose of assessing and monitoring ground and water conditions and levels;
 - construction compound establishment including welfare facilities and temporary buildings;
 - construction of the temporary bridge over the River Trent;
 - site clearance;
 - preparation work for flood compensation areas;
 - laying down of haul roads and access works;
 - environmental surveys, mitigation and monitoring;
 - diversion of public rights of way;
 - demolition;
 - erection of temporary fencing;
 - establishment of vehicle recovery areas;
 - installation of temporary CCTV and speed enforcement cameras;
 - vegetation planting;
- 1.1.3 Those highlighted in bold in the above list are those activities that the Applicant considers will require specific mitigation in addition to the general mitigation as set out in Section 3.
- 1.1.4 The impact of all pre-commencement works is assessed as part of the Environmental Statement **(TR010065/APP/6.1)**. In accordance with Requirement 17 of the draft DCO **(TR010065/AP/3.1)**, the Pre-Commencement Plan is a further control document that will ensure that the pre-commencement works are sufficiently controlled and mitigated.
- 1.1.5 This document is organised into two main sections:
- a) “Pre-commencement Activities” – this section of the plan is broken down by pre-commencement work type and describes the types of activities the Applicant envisages undertaking for each of the pre-

commencement works highlighted in bold in paragraph 1.1.2. The descriptions provided in this plan are indicative of the type and magnitude of operations required.

This section also contains the more specific mitigation measures required for each activity which will be applied, where necessary, in addition to the General Mitigation Measures contained in Section 3.

- b) “General Mitigation Measures” - this section of the plan sets out the general mitigation measures that would apply to all pre-commencement works.
- 1.1.6 This document, together with any required site specific archaeological Written Schemes of Investigation (WSIs) along with the Phase 3 Archaeological Management Plan (Archaeological Mitigation Strategy) as secured by Requirement 9 of the Draft Development Consent Order, would apply to all pre-commencement works.
- 1.1.7 It is the intention to restrict the activities detailed in this document to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays.
- 1.1.8 Where this is not possible, authorisation may be requested from the local authorities to take place outside of these hours and days. Details of the activities, days and times and locations will be included in this request.
- 1.1.9 All appropriate and applicable mitigation (detailed in this document) would be employed for all work, both within and out of the hours and days listed above.

1.2 Limitations

- 1.2.1 As the detailed design of the Scheme has not been completed at the time of producing this document, the construction programme and methods have not yet been fully determined. Therefore, the scope and methods described in this document are provided on an indicative basis only, to give an indication of the types and magnitude of the operations. The scope and methods described have therefore been determined as a best estimation using all information available at the time of preparing the pre-commencement plan and are considered to be representative of the worst case. This means that while the specific details of each method may change, the overarching tasks would not.
- 1.2.2 In any event, all pre-commencement works be subject to the general mitigation measures set out in Section 3 of this document and, to the extent they are relevant, to the specific mitigation measures for each pre-commencement work set out in Section 2 together with the controls contained in the Archaeological Mitigation Strategy (AMS) and associated Written Schemes of Investigation (WSIs)(to be

developed based on the principles contained in Chapter 6 of the Archaeological Management Plan (AMP) (TR010065/APP/6.8).

- 1.2.3 The final design of the pre-commencement works would not give rise to materially greater environmental effects than those outlined indicatively in this pre-commencement plan.

1.3 Predicted HGV movements

- 1.3.1 The following table summarises the estimated number of HGVs arriving on the Scheme for each of the pre-commencement works. The detailed design for the Scheme is not complete and thus the scope and construction programme has not been finalised.
- 1.3.2 It is not planned that any of the pre-commencement works would be ongoing for the full duration of the pre-commencement period or that all of these works would be progressed at the same time. Some of these works would however be progressed in parallel. The numbers provided in Table 1-1 are indicative based on the information available at the time of writing this document.

Table 1-1 Estimated HGV numbers for pre-commencement works

Pre-commencement activity	Estimated HGV number
Archaeological investigations and mitigation works	10
Utilities works comprising utilities protection works or fencing and protections slabs or diversions.	10
Baseline monitoring and investigations for the purpose of assessing and monitoring ground and water condition and levels.	2
Construction compound establishment including welfare facilities and temporary buildings.	20
Construction of the temporary bridge over the River Trent.	15
Site Clearance.	25
Preparation work for floodplain compensation areas.	10
Laying down of haul roads and access works.	50
Environmental surveys, mitigation and monitoring.	0
Diversion of public rights of way.	0
Demolition.	10
Erection of temporary fencing.	5
Establishment of vehicle recovery areas.	10
Installation of temporary CCTV and speed enforcement cameras.	5
Vegetation planting.	5

2 Pre-commencement activities

2.1 Utilities works comprising utilities protection works or fencing and protection slabs or diversions

Scope

- 2.1.1 Existing overhead and underground utilities have been identified within the Order Limits, including but not limited to: gas mains, electricity cables, oil pipelines, water, and communication cables. For the majority, the utilities would be left uninterrupted and unaffected by the Scheme. If this is not possible, the services would be protected. The specific protection measures would be agreed with the respective statutory undertakers. In some instances, protection will not be feasible, and as a last resort, diverting the services would be implemented.
- 2.1.2 The specification of the protection would be dictated by the asset owner, closely following their requirements. For buried services, this is usually in the form of a reinforced concrete protection slab to spread the load applied by construction traffic passing over it. The concrete protection slab would be constructed in-situ and would be in the region of 10m x 6m typically. The precise dimensions of slabs would be subject to detailed design.
- 2.1.3 For overhead services, protection would be in the form of a demarcated exclusion zone to segregate the main construction works from hazards. The Energy Networks Association (ENA) and Health and Safety Executive (HSE) GS6 guidance would be followed in the establishment of exclusion zones. The precise type of fencing would be determined on a case-by-case basis dependent on the potential risk to the service or the workforce and the duration of main construction works programmed for that area. Longer term protection would likely be in the form of timber post and rail fencing, whereas shorter term protection would likely be formed by temporary anti-climb mesh fencing e.g. Heras fencing.
- 2.1.4 Temporary fences would also be used to segregate the main construction operations from public areas and public rights of way. The type of fence adopted would be determined by the duration of requirement and risk to the public/workforce.
- 2.1.5 Fencing and protection slabs would be adopted site wide wherever the Scheme borders or interacts with a service or the public.

Methodology

- 2.1.6 The methodology would depend on the type of protection selected in each case. Generally, the two main types that are likely to be implemented are described below as an example.
- a) Protection Slabs
 - i. The design and construction methodology of the slab would be agreed and approved by the asset owner in advance of the works.
 - ii. Generally small plant and hand tools are favoured when working around buried assets.
 - iii. The ground would be prepared using mechanical plant (e.g. a small excavator) where permitted.
 - iv. Reinforcing steel would be placed as per the design and timber shutters would be erected to create the form of the slab.
 - v. The form would be filled with concrete, delivered using a concrete wagon, directly placed within the slab.
 - vi. The surface would be finished in accordance with the design and left to cure.
 - vii. The timber shutters would be removed and the ground around the slab would be prepared to match the top level of the slab.
 - viii. Following a temporary works inspection/asset owner's inspection, the slab would be approved for use and subject to an ongoing inspection routine in line with Temporary Works requirements.
 - b) Temporary Fencing
 - i. The type of fencing would be determined by the Applicant in liaison with all relevant stakeholders and landowners.
 - ii. Light duty fencing e.g. Heras fencing, crowd barriers and cone/chain, would be set out by an engineer and would be placed manually by a small gang of operatives using standard assembly procedures.
 - iii. Heavier duty fencing e.g. post and rail, wire mesh, site hoarding, would be set out by an engineer and installed using post drivers or concreted in.
 - iv. The infill panels, e.g. timber rails, wire mesh, wire strands, would be attached using simple hand tools by a small gang of operatives.

Specific Mitigation Measures

- 2.1.7 This section sets out the specific mitigation measures for this pre-commencement work which would be applied in addition to the general mitigation measures found in Section 3 of this document as necessary.
- 2.1.8 This activity would be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays.

- 2.1.9 Concrete that would be used in the construction of protection slabs is controlled under *The Control of Substances Hazardous to Health Regulations 2002* (COSHH) and would be managed accordingly.
- 2.1.10 Concrete would be ordered in precise quantities to reduce waste as much as possible. Any waste concrete would be stored on an impermeable surface and allowed to harden. This can then be broken up for use as a recycled aggregate for use in temporary works applications during the main construction phase.
- 2.1.11 Concrete 'washout' produced during the cleaning of delivery wagons would be in a designated area into an impermeable container. This would be removed from site as a waste as described in paragraphs 3.1.24.
- 2.1.12 Access to private property, businesses, community land and facilities and walker, cyclist and horse-rider (WCH) routes as well as access to green and designated open spaces would be maintained and disruption would be minimised as far as possible to minimise impacts upon WCH and the local community.

2.2 Construction compound establishment including welfare facilities and temporary buildings

Scope

- 2.2.1 The scope, methodology and mitigation measures detailed below would apply to all temporary construction compounds.
- 2.2.2 The scope for the main construction compound is at the site of the now disused Nottinghamshire County Council Highway Maintenance Depot site. The site has been selected as a suitable location due to its existing infrastructure and previous use as a maintenance depot.
- 2.2.3 There would be pre-commencement work to establish this compound that would include:
 - a) Upgrading the existing substation.
 - b) Potential widening of the existing access from the Great North Road and creating a new access from the Cattle Market roundabout.
 - c) Vegetation clearance not being retained on site.
 - d) Installation of a new drainage and sewerage system, where required, and connecting to the existing infrastructure.
 - e) Installation of new ducts and cables to provide power, telecoms and data network services to the office units.
 - f) Installation of new road surfacing for internal roads and car parking in areas where the existing is not in a suitable condition.
 - g) Installation of lighting to the site.
 - h) Erection of office cabins and welfare facilities.
 - i) Installation of a vehicle recovery base.

- j) Installation of electric vehicle charging facilities.
 - k) Installation of boundary fencing and/or timber hoarding around all compounds.
 - l) Installation of tree protection barriers for retained trees.
- 2.2.4 There would also be a number of smaller 'satellite' compounds on the Scheme. These sites would also incorporate modular buildings and all other provisions mentioned previously but on a smaller scale and sited on the temporary hard standing described in Section 2 within Temporary haul roads and hardstanding. The mitigation measures listed in Section 3 of this document would be applied for the installation of all satellite compounds.

Methodology

- 2.2.5 Utilities: installed using standard installation techniques, laying ducting, pipework, cables and connections.
- 2.2.6 Culverts: These would be in accordance with all appropriate consents, permits and temporary works designs.
- 2.2.7 Earthworks: all of the compound areas would first have the topsoil layer stripped and stockpiled in a designated bund. The bund would be sealed and seeded. The formation would be trimmed to the required level and the subsoil stockpiled separately from the topsoil. All earthworks would be undertaken in accordance with the measures detailed in Section 3.
- 2.2.8 Hard standing: would be installed as described in Section 2.7.
- 2.2.9 Drainage: would be installed using standard pipe laying and connection techniques.
- 2.2.10 Foundations: if required, the footings would be installed in the form of a small concrete pad or proprietary product in accordance with a temporary works design.
- 2.2.11 Cabins: cabins would be delivered on flatbed/low loader transport, potentially with access directly from the A46 Cattle Market roundabout and lifted into position using a mobile crane or similar. Alternatively, this would be delivered using the access located on the Great North Road. Once in their correct location they would be connected, assembled and commissioned.
- 2.2.12 Paved areas: where practicable, the car park and footways would be paved using standard paving techniques.
- 2.2.13 Landscaping: the area immediately surrounding the offices that is not paved would be prepared using an excavator and seeded where practicable.

Specific Mitigation Measures

- 2.2.14 This section sets out the specific mitigation measures for this pre-commencement work which would be applied in addition to the general mitigation measures found in Section 3 as necessary.
- 2.2.15 The delivery vehicles and any other HGVs would be prohibited from using local roads and would be restricted to the strategic road network in order to access the construction compound. This would predominantly involve the A1 and A46. Where this is physically not possible i.e. if a site entrance is located on a local road, then the distance travelled on the local road network would be minimised to the shortest practical route from the strategic road network and only for authorised vehicles.
- 2.2.16 The maximum number of HGVs used for this task would be revised at the detailed design stage.
- 2.2.17 Wheel washing facilities would be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
- 2.2.18 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, the procedures detailed in Appendix 9.2 (Contaminated Land Risk Assessment) of the ES Appendices (**TR010065/APP/6.3**) would be adhered to.
- 2.2.19 All crane lifts would be planned by a Lifting Appointed Person in accordance with BS7121:1-2016 who would assess all aspects of the lifting operations and mitigate any environment, health and safety risks.
- 2.2.20 This activity would be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays.
- 2.2.21 Temporary acoustic barriers would be constructed for mitigation of noise that block line-of-sight between the affected receptors and clearance activities at the main construction compound and the compounds at Windmill Viaduct and the Nether Lock area.
- 2.2.22 Controlling the quantity and/or on-time of strimmers and chainsaws (the main contributors of noise during this activity) operating within 300 metres of noise sensitive receptors on Sandhills Park or limiting active construction within 300 metres of noise sensitive receptors on Sandhills Park to fewer than 10 days in any 15 consecutive days and a total number of days fewer than 40 in any 6 consecutive months.
- 2.2.23 Where possible, cabins and other site facilities would be elevated using stilts to raise them above the modelled 1 in 30 annual probability event level.
- 2.2.24 Site drainage, including for site compounds and material storage areas, would be designed to connect to existing roads/mains drainage

network. Construction drainage network would incorporate measures (i.e. interceptors and silt traps) to prevent the discharge of hydrocarbons, silt and other pollutants to surface or groundwater systems.

- 2.2.25 Access to private property, businesses, community land and facilities and WCH routes as well as access to green and designated open spaces would be maintained and disruption would be minimised as far as possible to minimise impacts upon WCH and the local community.

2.3 Construction of the temporary bridge over the River Trent

Scope

- 2.3.1 Access to the land parcels to the southern side of the River Trent at Nether Lock is currently limited and restricted. Currently access to the land between the Nottingham to Lincoln railway line and the A46 carriageway is via a narrow stone track between the Kings Marina and the hydroelectric power station at Nether Lock Weir.
- 2.3.2 This track is unsuitable for large construction plant as there are several constraints including low bridges and access through an operating marina. Therefore, a temporary bridge over the River Trent to provide a suitable construction traffic route would be constructed. Access to the temporary bridge crossing would be via Trent Lane, Maltkins Lane and through the temporary compound area to the southern side of the River Trent.
- 2.3.3 The existing access track between the Kings Marina and the hydroelectric power station would need to be utilised in the advanced and pre-commencement works phases to facilitate the construction of the west abutment of the temporary bridge.
- 2.3.4 The temporary bridge design is yet to be determined but would take the form of a Bailey style bridge that would be launched from the embankments of the River Trent.

Methodology

- 2.3.5 A temporary access road and material laydown area would be constructed on either side of the River Trent and would be installed as per the description in Section 2 within Temporary haul roads and hardstanding.
- 2.3.6 Reinforced earth bank seats would be constructed either side of the River Trent. Depending on ground conditions, this may require excavation of each seat location.
- 2.3.7 A concrete plinth and bridge bearings would be installed on the reinforced bank seats.

- 2.3.8 A reinforced earth embankment approach ramp would be installed against the earth bank seats.
- 2.3.9 The temporary bridge would need to be fabricated in sections on the temporary laydown area on the east side of the River Trent.
- 2.3.10 The River Trent would be temporarily closed for access and the bridge would be launched in sections across the river.
- 2.3.11 The bridge launching nose would then be dismantled.
- 2.3.12 Final granular fill and completion of the stone accesses would then be undertaken.

Specific Mitigation Measures

- 2.3.13 This section sets out the specific mitigation measures for this pre-commencement work which would be applied in addition to the general mitigation measures found in Section 3 as necessary.
- 2.3.14 This activity would be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays.
- 2.3.15 Access would be maintained and disruption would be minimised as far as possible to minimise impacts upon WCH and the local community.
- 2.3.16 Access to private property, businesses, community land and facilities and WCH routes as well as access to green and designated open spaces would be maintained and disruption would be minimised as far as possible to minimise impacts upon WCH and the local community.
 - Eastern embankment of the River Trent – Access would be via the A46 at Brownhills Roundabout and continue south along Lincoln Road before turning onto Trent Lane and Maltkin Lane.
 - Western embankment of the River Trent - Access would be via the A46 Cattle Market Roundabout and continue south along Great North Road before turning onto Ossington Way followed by Mather Road.
- 2.3.17 Vehicles would be prohibited from using any other local roads and would be restricted to the aforementioned routes and the strategic road network. Where it is not possible to access the temporary bridge installation areas via these routes i.e. emergency road closures, then the distance travelled on the local road network would be minimised to the shortest practical route from the strategic road network, and only for authorised vehicles.
- 2.3.18 The maximum number of HGVs used for this task would be revised at the detailed design stage.
- 2.3.19 Wheel washing facilities would be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.

- 2.3.20 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, the procedures detailed in Appendix 9.2 (Contaminated Land Risk Assessment) of the ES Appendices (**TR010065/APP/6.3**) would be adhered to. Any required temporary hard standing and laydown areas would be installed as described in Section 2 within Temporary haul roads and hardstanding.
- 2.3.21 The bridge installation activities would be installed in accordance with all appropriate consents, permits and temporary works designs.
- 2.3.22 Reinforced earth bank seats and any other associated embankments can only be constructed when equivalent floodplain compensation has been provided, see applicable general mitigation on flood risk in Section 3 of this document.

2.4 Preparation works for Floodplain Compensation Areas

Scope

- 2.4.1 Works would be undertaken at the Kelham and Averham FCA and the scope detailed in the respective sections below.

Kelham and Averham FCA

- 2.4.2 Work would be undertaken along the A617 to divert the existing gas main so that it avoids a new piped flood conveyance culvert.
- 2.4.3 Works accesses would be constructed on the east and west side of the A617 to access the works area for the new culvert and the floodplain compensation areas.
- 2.4.4 The new culvert would be constructed in two phases utilising temporary traffic lights and lane closures on the A617. Access to the east side of the culvert would be via a works access off the southbound carriageway of the A617. The land on the east side of the A617 is an active airfield. A secure fence will be erected around the works area.
- 2.4.5 The existing ditch between the culvert and the River Trent would be inspected and cleared where required.
- 2.4.6 Other works at this location would include site clearance, tree protection barrier installation, archaeological investigation and construction of haul road routes, including modifications to the existing access to the existing access from the A617, which would be completed in accordance with the mitigation detailed in Section 3 of this document.

Methodology

- 2.4.7 Works access would be constructed on the east and west side of the A617 to access the works area for the new culvert.
- 2.4.8 The medium pressure gas main would be diverted to raise the main above the soffit of the new culvert.
- 2.4.9 The new culvert would be constructed in two phases, utilising temporary traffic lights and lane closures on the A617. Access to the east side of the culvert would be via a works access of the southbound carriageway. Traffic management would then be switched to allow access to construct the west side of the culvert crossing. The land on the east side of the A617 is in an active airfield and a secure fence would be erected around the works to delineate the airfield from the works area.
- 2.4.10 The carriageway would be planed out and a trench excavated to the width of the new culvert.
- 2.4.11 The excavation would be benched or have trench sheets installed to support the sides of the excavation.
- 2.4.12 Pipe bedding would be placed at the base of the excavation and the concrete pipes placed to the correct level. Concrete surround would then be placed around the pipes.
- 2.4.13 The carriageway would be reinstated and a new headwall would be constructed.
- 2.4.14 The existing ditch between the culvert and the River Trent would be inspected and cleared where required using hand tools or with a small 3 tonne excavator.

Specific Mitigation Measures

- 2.4.15 This section sets out the specific mitigation measures for this pre-commencement work which would be applied in addition to the general mitigation measures found in Section 3 of this document as necessary.
- 2.4.16 This activity would be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays.
- 2.4.17 Access to private property, businesses, community land and facilities and WCH routes as well as access to green and designated open spaces would be maintained and disruption would be minimised as far as possible to minimise impacts upon WCH and the local community.
- 2.4.18 Temporary acoustic barriers would be constructed for mitigation of noise around Kelham and Averham FCA during its construction that block line-of-sight To avoid significant effects, temporary acoustic barriers would be constructed for mitigation of noise around Kelham

and Averham FCA during its construction that block line-of-sight between the affected receptors and construction activities.

- 2.4.19 Additional control measures would be provided including:
- Controlling the quantity and/or on-time of the excavators and dozers (the main contributors of noise during this activity);
 - Fitting the excavators and dozers with efficient exhaust reduction equipment and keeping manufacturers' enclosure panels closed;
 - Or limiting active construction to fewer than 10 days in any 15 consecutive days and a total number of days fewer than 40 in any 6 consecutive months.
- 2.4.20 Concrete that would be used in the construction of the culvert surround is controlled under *The Control of Substances Hazardous to Health Regulations 2002* (COSHH) and will be managed accordingly.
- 2.4.21 Concrete would be ordered in precise quantities to reduce waste as much as possible. Any waste concrete would be stored on an impermeable surface and allowed to harden. This can then be broken up for use as a recycled aggregate for use in temporary works applications during the main construction phase.
- 2.4.22 Concrete 'washout' produced during the cleaning of delivery wagons would be in a designated area into an impermeable container. This would be removed from site as a waste as described in paragraphs 3.1.24.
- 2.4.23 Any required temporary hard standing and accesses would be installed as described in Section 2 within Temporary haul roads and hardstanding.
- 2.4.24 The culvert would be installed in accordance with all appropriate consents, permits and temporary works designs.
- 2.4.25 Clearance of the ditch between the culvert at Kelham and the River Trent would be completed in accordance with all appropriate consents, permits and temporary works designs.
- 2.4.26 Arisings removed from the ditch between the culvert at Kelham and the River Trent would be spread along the top of the embankments of the ditch and allowed to naturally revegetate.
- 2.4.27 In order to access the FCA's, delivery vehicles and HGVs would use the following routes:
- Kelham and Averham FCA – Access would be via the A46 at Cattle Market Roundabout, heading west along the A617.
 - Farndon East and West FCA's - Access would be via the A46 utilising temporary haul road from the A46 carriageway.
- 2.4.28 Vehicles would be prohibited from using local roads and would be restricted to the aforementioned routes and the strategic road network. Where it is not possible to access the FCA's via these routes

i.e. emergency road closures, then the distance travelled on the local road network would be minimised to the shortest practical route from the strategic road network and only for authorised vehicles. The maximum number of HGVs used for this task would be revised at the detailed design stage.

- 2.4.29 Wheel washing facilities would be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
- 2.4.30 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, the procedures detailed in Appendix 9.2 (Contaminated Land Risk Assessment) of the ES Appendices (**TR010065/APP/6.3**) would be adhered to. Dust would be controlled on site using water suppression systems.
- 2.4.31 The culvert would be capped following installation to prevent flooding of the land at Kelham and Averham prior to the FCA being completed.

Laying down of haul roads and access works

- 2.4.32 The detailed design of the temporary haul roads and access works have not been developed at this stage, though they would be essential in enabling other pre-commencement tasks and in preparation for the main construction phase.
- 2.4.33 Haul road and access works areas are required at various locations site wide for the purpose of temporary access point, temporary welfare/compound areas, temporary working platforms (e.g. for cranes to operate safely), temporary laydown areas, temporary bridge fabrication area and temporary haul roads for use in the main construction phase.
- 2.4.34 Their dimensions would vary greatly depending on their purpose and each would be subject to a design to ensure they fulfil their performance requirements.
- 2.4.35 All the haul roads and access areas would be constructed from a granular stone material that would be permeable to avoid any issues involving surface water runoff.
- 2.4.36 Haul routes would be required to form a suitable travelling surface for vehicles to access areas remote from the public highways and will be approximately 6m wide.
- 2.4.37 Sites with known or potential below ground archaeological remains would be mitigated prior to installing the haul route, hard standing or any other temporary works. This would be done in accordance with the approved archaeological Site Specific Written Scheme of Investigation and Phase 3 Archaeological Management Plan (Archaeological Mitigation Strategy).

- 2.4.38 Areas where haul roads and hardstanding are to be installed would be stripped of vegetation before topsoil is stripped and stored.
- 2.4.39 Hardstanding areas may be required for parking / compound / storage to facilitate the archaeological mitigation works – where these are required they would be located adjacent to or away from the relevant archaeology such that archaeological mitigation is not required prior to their installation.
- 2.4.40 Where haul roads and access areas can be excluded from tree root protection areas (RPA), barriers in accordance with *BS 5837:2012* should be erected to create a construction exclusion zone. Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, ground protection in accordance with *BS 5837:2012* and capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil must be installed.

Methodology

- 2.4.41 Significant Plant/Materials expected include:
- 360° tracked excavators
 - Tracked dozers
 - Rollers
 - Stone delivery vehicles (HGV's)
 - Granular stone material
- 2.4.42 Proposed sequence:
- a) Access would be gained via designated site access points, direct from public highways.
 - b) The required construction plant would be delivered on flatbed vehicles/low loaders and offloaded within the site bounds. Alternatively, if a site haul route previously established is available, access would be prioritised within and through site and away from the public highway.
 - c) Stone delivery vehicles would arrive via road through the site access point, travel to the work area and tip the imported stone.
 - d) The stone would be placed and spread using a combination of excavators and dozers. Generally, the dozers would spread the bulk of the material and the excavators would complete the trimming of the surface and edges.
 - e) The surface, once filled to the designed level, would be compacted using a roller.
 - f) Haul routes would progress in a linear fashion heading away from the designated access point enabling the construction plant to be positioned on the newly laid platform, placing new material ahead of itself.

Specific Mitigation Measures

- 2.4.43 This section sets out the specific mitigation measures for this pre-commencement work which would be applied in addition to the general mitigation measures found in Section 3 of this document as necessary.
- 2.4.44 This activity would be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays.
- 2.4.45 Vegetation removal and topsoil stripping would be undertaken in accordance with the mitigation measures detailed in Section 3.
- 2.4.46 The routes of the stone delivery vehicles, plant delivery vehicles and any HGVs would be planned to prioritise the use of the strategic road network in order to access the site. This would predominantly involve the A1 and A46. Where this is physically not possible i.e. if a site entrance is located on a local road, then the distance travelled on the local road network would be minimised to the shortest practical route from the strategic road network and only for authorised vehicles.
- 2.4.47 The maximum number of HGVs accessing the Scheme for this operation would be dictated by the design of the temporary hard standing.
- 2.4.48 Access to private property, businesses, community land and facilities and WCH routes as well as access to green and designated open spaces would be maintained and disruption would be minimised as far as possible to minimise impacts upon WCH and the local community.
- 2.4.49 Wheel washing facilities would be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
- 2.4.50 A localised area of the Scheme identified a hotspot of soil hydrocarbon and PAH contamination (GI locations WS46 and S3BH05, and borehole BH11 at Nether Lock in the centre of the Scheme). At the hotspot location, and at Nether Lock, a haul road and general temporary work area would be provided. Appendix 9.2 (Contaminated Land Risk Assessment) of the ES Appendices **(TR010065/APP/6.3)** details specific mitigation measures for these locations:
- The location of the contamination hotspot (WS46 and S3BH05) would be recorded and documented by the detailed design. Before construction commences, the Principal Contractor would install fencing and signage, clearly identifying and restricting access to the area.
 - Toolbox talks are to be provided for site staff prior to working at Nether Lock.
 - The Principal Contractor would ensure standard health and safety procedures are in place and best practices are followed during construction works.

- 2.4.51 If unexpected contamination is identified, the procedures detailed in Appendix 9.2 (Contaminated Land Risk Assessment) of the ES Appendices (**TR010065/APP/6.3**) would be followed.
- 2.4.52 Dust would be controlled on site using water suppression systems.
- 2.4.53 Haul roads above existing ground level and any other associated embankment can only be constructed when equivalent floodplain compensation has been provided. This does not apply to haul roads outside of flood zones 2 and 3, or for haul roads at or below existing ground level. See applicable general mitigation on flood risk in Section 3 of this document.

Demolition

- 2.4.54 The pre-commencement demolition works are limited to:
 - a) The A46 Mint Leaf Restaurant at the Friendly Farmer roundabout to enable the construction of the new dual carriageway for the new A1/A46 crossing.
 - b) Old Nottinghamshire County Council Highway Maintenance Depot site which would be the main construction compound.

Methodology

- 2.4.55 The precise methodology and sequence of demolition / dismantling would be developed with a specialist demolition contractor to minimise the impact on the surrounding area and to remove the buildings using the safest possible methods.
- 2.4.56 Generally, the demolition of the Mint Leaf restaurant and the Maintenance Hangar would involve the use of specially equipped excavators and other similar plant to carefully deconstruct the buildings in small sections. The demolition methodology for these properties would be agreed with the demolition contractor in advance of the works and would be based on distance to other residential properties and the type of building being deconstructed. The demolition waste would be removed from site on HGV's and recovered/recycled/disposed as appropriate.
- 2.4.57 Access to the two locations would be direct from/to the strategic road network.

Specific Mitigation Measures

- 2.4.58 This section sets out the specific mitigation measures for this pre-commencement work which would be applied in addition to the general mitigation measures found in Section 3 of this document as necessary.

- 2.4.59 This activity would be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays.
- 2.4.60 Temporary acoustic barriers that block line-of-sight between the affected receptors and demolition would be constructed at site works visible from Sandhills Park and Alexander Avenue.
- 2.4.61 Demolition works associated with both structures would include the following additional control measures:
- Controlling the on-time of the excavator with breaker attachment (the main contributor of noise during this activity);
 - Fitting an appropriate muffler or sound reduction equipment, ensuring all leaks in the air line are sealed, and using a dampening bit to eliminate ringing;
 - Limiting active construction within 300 metres of affected receptors to fewer than 10 days in any 15 consecutive days and a total number of days fewer than 40 in any 6 consecutive months.
- 2.4.62 A bat licence would be required from Natural England for the demolition of the Mint Leaf Restaurant which would be applied for by the Ecological Clerk of Works (ECoW). Prior to any demolition works to the Mint Leaf Restaurant, a bat box would be installed on a nearby tree, over 100 metres from any heavy construction works (e.g., pile driving). An inspection of the building would also be required by the licensed ecologist or accredited agent prior to demolition. Where no roosts are identified, any suitable roosting features would be made unsuitable by soft stripping of materials or backfilling crevices. Where a roost is identified, the bat(s) would be translocated to the nearby bat box by the licensed ecologist or accredited agent, under the terms of the licence. Soft stripping will be undertaken in March to April and/or October to November inclusive, where possible, outside of the active bat season (subject to weather conditions at the time) to reduce the risk of injuring or killing a bat.
- 2.4.63 Where necessary effective water suppression for dust would be used during demolition operations with handheld sprays being preferred as they are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
- 2.4.64 No ambient air quality monitoring would be required for dust or particulates; however, visual inspections would be undertaken daily for dust deposition on and off site.
- 2.4.65 Explosive blasting would be avoided where possible, using appropriate manual or mechanical alternatives.
- 2.4.66 The Applicant would comply with measures set out in any required Asbestos Management Plan which would be prepared for the Scheme by a competent and experienced specialist contractor, in advance of

the demolition activities, and any hazardous materials encountered would be managed in line with legislation and safe practice.

- 2.4.67 Noise and vibration monitoring would be undertaken where necessary and after risk-assessing the activities and/or receptors. Noise and vibration mitigation would be implemented as required, as described in Section 3.
- 2.4.68 The removal vehicles, plant delivery vehicles and any HGVs would be prohibited from using local roads and would be restricted to the strategic road network in order to access the demolition sites. This would predominantly involve the A1 and the A46.
- 2.4.69 The maximum number of HGVs used for this task is unknown at this stage.
- 2.4.70 Wheel washing facilities would be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
- 2.4.71 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, the procedures detailed in Appendix 9.2 (Contaminated Land Risk Assessment) of the ES Appendices (**TR010065/APP/6.3**) would be adhered to.

3 General Mitigation Measures

- 3.1.1 This section details the general mitigation measures that would be implemented to control the pre-commencement works. It covers all relevant sections of the First Iteration EMP (**TR010065/APP/6.5**).
- 3.1.2 For each pre-commencement activity, the construction methods would be reviewed in-line with this document and all applicable general mitigation measures would be implemented. For example, any operations involving construction plant would be controlled by the Fuels and Oils section (paragraphs 3.1.83 - 3.1.85). If that operation also involved an interaction with a watercourse, it would additionally be controlled by the section on water quality (paragraphs 3.1.66 - 3.1.82).
- 3.1.3 Mitigation measures can be considered as:
- a) Source control (i.e. to prevent fine sediment-laden runoff forming and to treat contaminated runoff close to where it forms).
 - b) Barriers and conveyance measures (i.e. to prevent site runoff draining uncontrolled into water bodies and to direct and treat it en-route to storage areas).
 - c) Storage and final treatment areas (i.e. where water is stored on site and treated to the required quality prior to it being discharged from the site).
- 3.1.4 The mitigation measures set out in this document are considered sufficiently detailed to control the pre-commencement works and as such, would not be subject to further consultation or approval as part of the discharge of requirements.

Air quality

- 3.1.5 Dust would be controlled on site using water suppression systems.
- 3.1.6 Stockpiles of materials would be appropriately managed to protect from any dust or particles migrating in the wind. Soil stockpiles would be designed to be lower, sealed (smoothing and compacting the surface) and/or seeded to encourage vegetation growth and minimise dust generation.
- 3.1.7 Site speed limits would be strictly enforced so that less dust is generated from the slower travelling vehicle speed.
- 3.1.8 Materials would be handled appropriately to reduce the creation of dust. This can include pretreating dry materials with water and using lifting and transport methods that generate less dust.

Noise and vibration

- 3.1.9 Best practicable methods would be implemented to reduce noise as far as possible. This may include acoustic barriers, agreement of suitable permitted working hours with the local authority, and the use of new and well-maintained plant and equipment.
- 3.1.10 All plant and equipment to be used on site would be modern and well maintained and inspected regularly.
- 3.1.11 Equipment, including vehicles, would be shut down when not in use and parked as far away as reasonably practicably from the closest residential property.
- 3.1.12 Vehicles shall not wait or idle on public roads or at access points with their engines running.
- 3.1.13 The team would, as far as reasonably practicable, ensure that the noise from reversing alarms is controlled and limited through either use of a banksman or through use of white noise reversing alarms.
- 3.1.14 Shouting and raised voices would be kept to a minimum and no foul/offensive language would be used.
- 3.1.15 Noise and/or vibration monitoring would be carried out, if required. The location and duration of this monitoring would be designed to record noise and/or vibration from construction activities experienced by a representative sample of the local population.
- 3.1.16 Where required for the works, Section 61 agreements would be sought from the Local Planning Authority.

Waste

- 3.1.17 Any waste generated during the pre-commencement works would be managed to ensure that all duty of care requirements are complied with.
- 3.1.18 Green waste arisings from vegetation clearance would be chipped on-site and reused in the landscaping, or sent off-site for processing, likely to be composted.
- 3.1.19 Waste arisings from demolition works would be sorted and managed as high up in the waste hierarchy as possible; reuse on site would be the first option (i.e by crushing, blending and subsequent reuse as an aggregate), or sent to a recycling/recovery facility.
- 3.1.20 On-site facilities would be provided to separate waste to enable the recovery of material through recycling.
- 3.1.21 Where waste must be taken to a recycling or disposal site, the Principal Contractor would ensure that the site has the appropriate permits and that it is located as close to the works as possible.

- 3.1.22 Potential hazardous waste would be identified and separated from other waste streams to avoid contamination. Any asbestos identified would require specialist disposal.
- 3.1.23 Other schemes in close proximity to the Scheme would be offered surplus soils for reuse on land.
- 3.1.24 All reasonable steps would be taken to:
- a) Prevent unauthorised or harmful deposit, treatment or disposal of waste.
 - b) Prevent a breach (failure) by any other person to meet the requirement to have an environmental permit, or a breach of a permit condition.
 - c) Prevent the escape of waste.
 - d) Ensure that waste is transferred by and to an authorised person.
 - e) Provide an accurate description of the waste when it is transferred to another person, by using a compulsory system of Waste Transfer Notes (WTN) that control the transfer of waste between parties.

Biodiversity and landscaping

- 3.1.25 To enable the main construction works, clearance of vegetation (trees, hedgerows and ground vegetation) site wide within the Order Limits would be required.
- 3.1.26 A Permit to Clear is a procedure adopted by the Principal Contractor that ensures all aspects including archaeological remains are checked pre-clearance. Vegetation clearance only commences once the vegetation has been inspected by the Ecological Clerk of Works (ECoW). Once the ECoW is satisfied that there would be no detriment to ecology, they would issue a permit to the responsible person for that task, permitting the clearance works to proceed. The Permit to Clear would also record the type and quantity of vegetation being cleared.
- 3.1.27 The vegetation clearance would be completed using powered tools and equipment including strimmers, flails, and chainsaws. Vegetation clearance is required site-wide wherever vegetation would obstruct the construction of the new dual carriageway.
- 3.1.28 The vegetation would be removed in accordance with the Permit to Clear using specialist equipment, e.g. strimmers, flails and chainsaws.
- 3.1.29 Areas of vegetation clearance and top-soil strip would be limited as much as practicable. Where possible, vegetation clearance across the Scheme would be phased to minimise the areas of exposed ground and reduce the potential risk for runoff.
- 3.1.30 Access for site clearance works would be gained via authorised site accesses and temporary haul routes through site.

- 3.1.31 Any vegetation requiring protecting or retaining as listed in Appendix 7.4 (Arboricultural Impact Assessment) of the ES Appendices **(TR010065/APP/6.3)**, which includes all trees to be retained, veteran trees and associated root protection areas, and any trees under Tree Protection Order.
- 3.1.32 All cleared vegetation would be loaded onto a transport vehicle and removed from site for processing, reuse or disposal.
- 3.1.33 Where possible, vegetation would be removed outside of bird nesting season (March-August inclusive) and night time hours, under the supervision of the ECoW. If vegetation removal is not possible outside of bird nesting season a nesting bird check / pre-construction check of the vegetation to be removed and immediately adjacent, by a suitably experienced ecologist, no more than 48 hours in advance of proposed clearance works to check for bird nesting activity. The ECoW will provide actions for implementation based on the findings of the survey, which may include species specific buffer zones of no construction or vegetation removal activity, and compensation should any losses of Schedule 1 species nest be required.
- 3.1.34 Vegetation clearance would be phased outside the hibernation period for all amphibians and reptiles so as to render the habitat unfavourable for them to shelter, which would encourage dispersal into adjacent areas of suitable habitat.
- 3.1.35 All trees to be felled for the Scheme with potential for a bat roost would be re-inspected for roosting bats prior to felling. Where a feature cannot be fully inspected, trees would be soft-felled where a licensed ecologist can undertake tree inspection at ground level.
- 3.1.36 Pre-construction monitoring surveys and inspections for the following species would be undertaken in advance of any works; badger, barn owl, bat, breeding bird and water vole.
- 3.1.37 Pre-commencement phase activities would be informed by the preliminary works surveys, should the presence of protected species be confirmed (e.g. bats, badger, barn owl, water vole) as described in method statements for any Natural England species mitigation licences for activities that would otherwise be illegal. Survey results so far indicate the need for a bat licence which has been produced by the project bat specialist and would be applied for by the Applicant. There would be no commencement of works to any structures used by bats prior to the approval of any necessary licences from Natural England.
- 3.1.38 Temporary fencing would be erected, prior to construction, to protect ecological species and habitats from construction working areas where there is considered to be a risk from the construction activities.
- 3.1.39 One bat box would be installed prior to daytime soft-stripping of bat building F004 (prior to demolition), beyond the Zone of Influence (beyond 100m from areas of heavy construction e.g. piling), in

proximity to bat building F004 in retained adjacent semi-mature woodland or trees, together with bat mitigation measures detailed within the First Iteration EMP **(TR010065/APP/6.5)**.

- 3.1.40 Further provision of bat boxes would be installed in suitably mature retained woodland or trees (as selected by a suitability experienced bat ecologist) to provide alternative roosting opportunities to compensate for the loss of suitable bat roosting features. A compensation ratio (suitable roosting feature lost: bat box provision) of 1:1 would be provided for 'moderate' and 'high' potential trees lost and 2:1 for 'low' potential trees.
- 3.1.41 A minimum of two kestrel nest boxes (i.e. one breeding territory) would be installed on retained trees or posts (as selected by a suitability experienced ornithologist) within the Order Limits where possible, one year prior to the loss of one confirmed kestrel nest site. If pre-commencement surveys confirm presence of a barn owl nest site within 175 metres of the works, provision of two barn owl nest boxes (i.e. one breeding territory) would compensate for the closure of each barn owl nest site. These would need to be installed at least one year prior to the closure of a confirmed barn owl nest site.
- 3.1.42 Natural England have been consulted in regard to the proposed ratio of bat boxes, barn owl and kestrel boxes. Indicative locations for provision of bat, barn owl and kestrel boxes are detailed on Figure 2.3 (Environmental Masterplan) of the ES Figures **(TR010065/APP/6.2)**.
- 3.1.43 All excavations would be kept covered overnight or have mammal ladders installed to prevent animals becoming trapped.
- 3.1.44 Any night-time working required would be minimised to reduce the need for artificial lighting to be used on site. If required, task and directional lighting with cowls would be used to avoid illumination, direct or light spill, of sensitive ecological receptor e.g. the River Trent.
- 3.1.45 The ECoW would be responsible for ensuring construction environmental mitigation measures are correctly implemented, monitored and maintained.
- 3.1.46 Stockpiles would be sealed and covered or seeded to prevent dust or particles migrating in the wind. Stockpiles would also be checked by the ECoW to ensure fences are intact and there has been no badger incursion.
- 3.1.47 Where required, advanced vegetation planting would be in accordance with the Scheme design and all species would be selected based on local provenance. Monitoring and maintenance of planting would be undertaken.
- 3.1.48 Trees to be retained would be protected from construction works in accordance with the best practice measures contained in the following British Standards:

- a) *BS 5837:2012 – Trees in relation to design, demolition and construction.*
 - b) *BS 3998:2010 – Tree Work: Recommendations.*
- 3.1.49 Further advice would be sought, and considered, from the Local Authority regarding the protection of trees.
- 3.1.50 The temporary protection barriers, erected in accordance with *BS 5837:2012*, would be installed prior to commencement of any construction and positioned to enclose the defined RPA and ‘above ground’ structure of the trees.
- 3.1.51 The temporary ground protection, in accordance with *BS 5837:2012*, would be installed prior to commencement of any construction and positioned to protect the defined RPA.
- 3.1.52 The temporary protection measures would be inspected after installation and maintained for the duration of the construction phase and checked on a regular basis.
- 3.1.53 In the event that an RPA cannot be maintained at 12 times the diameter at breast height, advice from the Scheme arboriculturist would be sought and the appropriate mitigation such as bog matting, flotation tyres, and hand digging would be utilised.
- 3.1.54 Fencing and hoarding would, as far as reasonably practicable, be located such that it does not damage sensitive habitats, trees or hedgerows. Where required, ecological fencing would be installed to prevent access to sensitive habitats, protected species and their resting places.
- 3.1.55 Himalayan balsam has been identified at several locations across the Scheme. An Invasive Non-Native Species Management Plan would be implemented in advance of the pre-commencement works to prevent any spread. All mitigation measures would be in accordance with best practice guidance and biosecurity measures.
- 3.1.56 Toolbox talks on protected species and control of invasive non-native species would be delivered prior to any pre-commencement activities.

Soil

- 3.1.57 Pre-commencement works requiring the removal and storage of soil would be undertaken in accordance with best industry standards and best practice guidance.
- 3.1.58 Vegetation would be cleared prior to stripping to ensure it is not incorporated within stockpiled soils.
- 3.1.59 Stripping would be undertaken during the driest possible conditions.
- 3.1.60 Soils stripped with comparatively wetter profiles or horizons would be stockpiled separately, where applicable, to allow for subsequent reconditioning prior to reinstatement.

- 3.1.61 Soil stripping would be stopped during or directly after heavy rain, or when water is pooled on the surface.
- 3.1.62 To reduce soil structural damage through compaction, tracked/low ground pressure vehicles would be used for soil stripping and haulage. Wheeled vehicles would be kept off topsoil where possible.
- 3.1.63 Vehicles required for stripping and haulage would stay on designated routes to avoid additional compaction.
- 3.1.64 Removal of soils would require designated areas in the immediate vicinity of the excavation in which to stockpile the soil.
- 3.1.65 Stockpiles would be segregated to ensure that the topsoil and subsoil are not mixed or contaminated. Stockpiles would be sealed at the end of each working shift to minimise dust creation, avoid migration/mixing of different soil types, protect the soil from degradation due to weather, and to ensure the stockpiles remain stable.

Flood Risk

- 3.1.66 Pre-commencement works would be undertaken in accordance with industry standards and best practice guidance. A pre-commencement works Emergency Response Plan for Flood Events would be prepared and implemented prior to pre-commencement works beginning.
- 3.1.67 Above ground structures in Flood Zones 2 and 3 can only be constructed where equivalent volume for volume floodplain compensation has been provided within the three Floodplain Compensation Area sites, on a level for level basis where possible.

Water Quality

- 3.1.68 Pre-commencement works would be undertaken in accordance with industry standards and best practice guidance.
- 3.1.69 A pre-commencement works Pollution Prevention Plan would be developed by the Principal Contractor. The specific silt management techniques to be incorporated within this plan would be determined by the Principal Contractor following a risk assessment-based approach to the circumstances and applying suitable control measures in order to avoid detriment to water quality and being exposed to potential prosecution. The techniques would be adapted throughout the works depending on the need and circumstances at any given time, and ensuring the same outcomes are achieved. However, measures that may be used include (but are not limited to):
 - a) Fabric silt fences, sandbags and straw bales.
 - b) Earth bunds and settlement lagoons.
 - c) Settlement tanks.

- d) Drainage cut-off ditches with check dams and/or sediment traps.
 - e) Baffle pads or other measures to dissipate flow energy on any temporary outfalls to water bodies.
- 3.1.70 Pre-construction water quality, level and flow monitoring would be conducted before, during and after construction in accordance with the criteria outlined in Appendix 13.5 (Surface Water Quality Monitoring Report) of the ES Appendices (**TR010065/APP/6.3**), to ensure no adverse impact on surface water.
- 3.1.71 Waterbodies would be monitored and the scope of monitoring would be based on a risk assessment but would include all waterbodies that could be adversely impacted during the pre-commencement works.
- 3.1.72 Groundwater monitoring would be conducted before, during and after construction as outlined in Chapter 13 (Road Drainage and the Water Environment) of the ES Document (**TR010065/APP/6.3**) to ensure no adverse impact on groundwater.
- 3.1.73 The monitoring programmes, both surface water and groundwater, would be sufficiently comprehensive to ensure there is a robust baseline against which the monitoring during construction works can be compared.
- 3.1.74 All construction workers would be briefed on the importance of maintaining water quality, the location of surface water features, and the location and use of spill kits as part of the site induction.
- 3.1.75 Any stockpiled materials would be stored away from watercourses, and within enclosed areas to enable the runoff to be stored and treated where required.
- 3.1.76 All materials would be stored a minimum of 8 metres away from a watercourse, except where permits are acquired, to avoid unnecessary pollution runoff into the watercourses.
- 3.1.77 Any concrete works would be carefully controlled and, where required, any concrete tankers would be washed out in controlled, designated areas.
- 3.1.78 All plant and machinery would be maintained in a good condition and any maintenance required would be undertaken within controlled, safe areas.
- 3.1.79 Establishment of dedicated plant and wheel washing areas a minimum of 8 metres from any watercourse or surface water drains.
- 3.1.80 A Pre-commencement Pollution Prevention Plan would be developed by the Principal Contractor. The Pollution Prevention Plan would include an Incident Control Plan, as well as detailing the methodology for correct storage and disposal of wastewater and pollutants. Spill kits and clean up equipment would be maintained on site, and manually operated penstocks would be provided immediately prior to

all outfalls leading to a watercourse, and upstream of attenuation pond flow control devices.

- 3.1.81 A Pre-Commencement INNS Management Plan would be prepared to reduce the risk of spreading INNS within watercourses or through surface water run-off.
- 3.1.82 The Scheme will apply for necessary consents from the relevant statutory bodies to enable pre-commencement activities.
- 3.1.83 If necessary, a "no derogation" agreement would be made with the owner/operator of any private groundwater supply potentially impacted by dewatering. This legal agreement would ensure that measures would be taken to maintain a supply throughout the period in which the groundwater source was affected.

Fuels and oils

- 3.1.84 The storage, dispensing, containment and use of all fuels, oils and COSHH materials and waste would be undertaken in accordance with regulatory and good practice guidance.
- 3.1.85 For COSHH materials and waste, relevant control and management measures would include:
 - a) Storage would be in a secure, bunded and sheltered area.
 - b) Waste would be segregated.
 - c) COSHH liquids would not be stored in flood zones.
 - d) Areas would be supervised, and records of materials and waste stored and removed from the area recorded.
 - e) The handling, storage and disposal must be undertaken as described in the COSHH Assessment and any Material Safety Data Sheet (MSDS).
- 3.1.86 Fuel and oil (including mould oil) would be stored in accordance with *The Control of Pollution (Oil Storage) (England) Regulations 2001*, with fuels and oil handled in such a way that risk of pollution is minimised. Specifically:
 - a) Fuel and oil storage tanks must comply with *The Control of Pollution (Oil Storage) (England) Regulations 2001* and must be locked outside working hours.
 - b) Storage areas would not be located within 20m of watercourses, ponds, site drainage or within any areas of flood zones or on a gradient.
 - c) Refuelling would not be permitted within 20m of a watercourse/pond, within 20m of a highway drainage gully/site drainage, or within areas of flood zones.

- d) Mobile bowzers would be integrally bunded and must comply with *The Control of Pollution (Oil Storage) (England) Regulations* and must be secured outside working hours.
- e) Trained operatives would carry out refuelling of plant and equipment.
- f) Plant nappies would be used during refuelling.
- g) Drums would be stored in bunded areas with a minimum capacity of 25% of the total volume contained within the bund, or 110% of the largest container, whichever is the greater. Where possible, these bunds must be fitted with roofs to prevent the collection of rainwater. Individual drums in use would be stored on a drip tray sufficient to contain 25% of the full capacity of the drum.
- h) Storage tanks and drums would be maintained in a good condition, fitted with lids and labelled to indicate the contents.
- i) Static combustion engine plant (e.g. compressors, lighting sets) would be integrally bunded or placed on plant nappies.
- j) Bunds, tanks pipework and plant would be regularly checked for signs of damage or leaks and must be regularly maintained.
- k) Spill kits would be provided within close proximity to fuel and oil storage areas, with plant that is operating in isolated areas, and in welfare facilities. Drivers, operators and stores personnel would be trained in fuel security and the use and safe disposal of spill kits.

Energy

- 3.1.87 Opportunities to implement measures and techniques to provide more efficient and cost-effective use of energy and resources, and thereby reduce carbon and water footprints, would be investigated during the pre-commencement works.
- 3.1.88 Examples of this include the potential use of low energy eco-cabins, hybrid and solar power generators and the use of low carbon fuel options such as substituting diesel for Hydrotreated Vegetable Oil (HVO).
- 3.1.89 Low carbon materials and those with recycled content would be considered to be used as a priority.

Materials

- 3.1.90 All pre-commencement activities would be undertaken in accordance with industry standards and best practice guidance.
- 3.1.91 Locally sourced suppliers would be used where possible and materials would be delivered on a just-in-time basis, and critical materials stored on site where appropriate.
- 3.1.92 The intention is not to reuse and instead dispose of the materials that would be encountered during the pre-commencement works.

- 3.1.93 Should this change, all appropriate guidance would be followed. This includes:
- a) Contaminated Land: Applications in Real Environments (CL:AIRE), *The Definition of Waste: Development Industry Code of Practice (Version 2)*, March 2011 (DoWCoP).
 - b) *The Environmental Permitting (England and Wales) Regulations 2016* (as amended).

Contaminated land

- 3.1.94 With exception to the locations at Paragraph 2.1.103, no contaminated land is anticipated at any other locations for the pre-commencement works.
- 3.1.95 Where contamination is encountered during excavation works, the procedures detailed in Appendix 9.2 (Contaminated Land Risk Assessment) of the ES Appendices (**TR010065/APP/6.3**) would be adhered to.

Archaeological works

- 3.1.96 Mitigation measures for the archaeological pre-commencement works would be detailed in the Site Specific Written Schemes of Investigation (SSWSIs) and the Phase 3 Archaeological Management Plan (Archaeological Mitigation Strategy).
- 3.1.97 All pre-commencement archaeology would be carried out in close coordination with the County and District Archaeologist.

Traffic management and public interface

- 3.1.98 None of the pre-commencement works require long-term traffic management i.e. short-term continuous traffic management would be required for installation of the culvert and diversion of the gas main at the Kelham and Averham FCA. All other traffic management required to complete pre-commencement works would be erected at the start of a shift and removed at the end of the same shift.
- 3.1.99 The use of traffic management systems would be avoided where possible and only used where absolutely necessary. If there are more suitable, safe systems of work that do not require traffic management then they would be prioritised.
- 3.1.100 Where traffic management is required, it would be designed and implemented by a specialist traffic management contractor, only in accordance with any consents necessary.
- 3.1.101 In advance of any temporary traffic management being implemented, the specialist traffic management contractor would submit applications to the applicable Local Authorities for the relevant highway licences

and permits. These include but are not limited to Temporary Traffic Regulation Orders, road space bookings and temporary traffic lights.

- 3.1.102 Where traffic management is complex in nature, advice and coordination would be sought from the Local Highway Authority, to avoid any conflict with other works on the network.
- 3.1.103 Traffic management on the strategic road network would also be avoided where possible during pre-commencement works and would also be subject to all applicable roadspace bookings, permits and licences.
- 3.1.104 No traffic management would commence without all applicable permits and consents in place. If the application for the licence or permit is denied, the traffic management and therefore the affected element of the pre-commencement work would not proceed until an alternative suitable licence or permit is approved.
- 3.1.105 In locations where construction works are in proximity to Public Rights of Way (PRoW) the Principal Contractor would fence off areas using temporary fence panels to segregate the site work areas from the public and temporary signage installed advising of diversions, including wayfinding, and notifying users of the duration of the works.
- 3.1.106 Clear site lines would be maintained around hoardings and fencing with no hidden corners in order to avoid, where reasonably practicable, opportunities for anti-social behaviour and crime and to ensure the safety of vehicles.
- 3.1.107 Adequate fencing and hoardings would be erected and maintained to prevent unwanted access to the site, to provide noise attenuation, screening and site security – this would include providing viewing points at relevant locations, where appropriate.
- 3.1.108 Engagement with local people and businesses (including bus companies) about how construction may impact them will take place in advance of pre-commencement works taking place.

Weather

- 3.1.109 Contingency plans would be put in place for extreme weather during pre-commencement activities. This plan would cover impacts from extreme weather including, storms, high winds and flooding. In addition, provision of health safety and welfare plans for employees to reduce impacts from weather.