

## 16.0 SUMMARY OF MITIGATION AND MONITORING

### Introduction

16.1 This chapter of the ES presents a summary of the mitigation and monitoring measures identified by the specialist environmental studies in the ES. Full details can be found in the respective ES chapters.

16.2 Schedule 4, part 1 of the EIA Regulations (Ref. 16.1) require an ES to include:

*“...a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.”*

16.3 The mitigation and enhancement measures included in this ES fall into one of four categories:

- 1) Measures to be incorporated into the detailed design;
- 2) Measures to be applied during construction; and
- 3) Measures to be applied during operation of the Proposed Development; and
- 4) Measures to be applied during decommissioning and restoration.

16.4 **Table 16.1** outlines a topic by topic summary of the key issues addressed by the ES and the mitigation measures identified. The mitigation measures are separated into the above categories.

### Implementation of Mitigation Measures

16.5 The Applicants anticipate that, where appropriate, NYMNPA and/or NYCC will attach conditions on the planning permission to ensure commitment to these mitigation measures.

### Review Procedure

16.6 The construction programme is expected to take place during 2015 and 2016, subject to gaining planning permission. It is recognised that environmental standards and legislation that currently apply to the Proposed Development may change during this period. In light of this, the Applicants intend to undertake regular reviews of the Proposed Development, to ensure that best practice is being followed. The review process will be iterative and ongoing,

so that new information is identified at an early stage and incorporated into the Proposed Development.

- 16.7 Construction techniques will be incorporated into the works which, where practicable, will be updated when new techniques are devised. This will also apply to monitoring of the works, ensuring that effective mitigation measures are used to minimise disturbance to surrounding receptors.
- 16.8 The Applicants have committed to preparing a Construction Environmental Management Plan (CEMP) which will clearly set out the methods of managing environmental issues during the construction works. The CEMP will be implemented prior to works commencing on the Assessment Site and will be updated regularly, thus ensuring it reflects and incorporates current legislation as outlined within this ES.

**Table 16.1: Summary of Mitigation and Monitoring Measures**

Topic	Effect	Measures
<b>1) Measures incorporated into the Detailed Design</b>		
Landscape and Views	Effects on landscape and views	<ul style="list-style-type: none"> <li>The height of equipment and structures has been minimized where practicable i.e. tanks positioned horizontally rather than vertically.</li> <li>Landscape features such as woodlands, tree belts and hedgerows will be retained along the pipeline route.</li> <li>New planting will reinforce and enhance the existing landscape framework and compensate for limited areas of vegetation loss.</li> <li>Planting to be included within the overall landscape strategy is to include predominately native and locally endemic species with reference to the Supplementary Planning Document Design Guide (Ref. 16.2).</li> <li>A recessive colour/material pallet for permanent built elements or structures will be established as part of the Proposed Development. Dark colours (dark green, brown, or dark grey) are generally more acceptable as they complement the natural environment throughout the seasons and the different characteristics of daylight during the year. Consideration will also be given to the general colour of the backdrop against which the building will be seen.</li> </ul>
Air Quality	Emissions to air from natural gas refining	<ul style="list-style-type: none"> <li>The gas facility will include isolation valves to enable the isolation of relatively small, discrete sections of plant to minimise quantities of gas requiring venting.</li> </ul>
Noise	Effects of noise on sensitive receptors	<ul style="list-style-type: none"> <li>At the equipment procurement stage the design team will confirm that all plant operating together can achieve the proposed noise limit of 60dB <math>L_{Aeq,5min}</math> at any point on the Assessment Site boundary.</li> </ul>
Flood risk, hydrology and drainage	Effect on flood risk and contamination of ground and surface water	<ul style="list-style-type: none"> <li>The drainage regime on the well site will be modified to ensure rainwater will be gathered in the ditches surrounding the well site and either used on site or discharged through an oil interceptor and soakaway into the ground.</li> <li>All tanks will be bunded to provide 110% of the capacity of the largest tank.</li> </ul>
Ground Conditions and Contamination	Effects from oil, hydrocarbon and process waste contamination	<ul style="list-style-type: none"> <li>The provision of securely bunded areas with interceptors in areas where oil, fuel and process wastes are stored, handled or transferred.</li> </ul>
<b>2) Measures to be applied during Construction</b>		
Ecology	Effects from pollution events close to water courses	<ul style="list-style-type: none"> <li>Pollution control measures will be implemented during the construction phase to minimise the risk of a pollution event in the working area close to the River Derwent and the ditches in accordance with national guidelines and legislation.</li> </ul>
	Effects on habitats	<ul style="list-style-type: none"> <li>Dust emissions arising from the topsoil stripping during construction will be controlled through standard dust suppression measures set out in the CEMP to minimise dust deposition.</li> </ul>

Topic	Effect	Measures
		<ul style="list-style-type: none"> <li>• Topsoil and subsoil will be stored separately to ensure retention of the natural seed bank and to promote re-instatement of the natural habitat.</li> <li>• All habitats will be reinstated post construction, with any affected sections of ditch re-graded to reflect the 'natural' profile and hedgerows replanted with native species of stock originating and grown in Britain in accordance with the canopy species present in undisturbed sections of each hedgerow.</li> </ul>
	Effects on breeding birds	<ul style="list-style-type: none"> <li>• The following measures will be incorporated into the CEMP: <ul style="list-style-type: none"> <li>- Vegetation clearance (including tree felling and topsoil stripping) will be undertaken outside the breeding bird season where possible (typically March to September inclusive).</li> <li>- If vegetation clearance is unable to be undertaken outside the breeding bird season, all areas of vegetation should be checked by an ecologist prior to clearance. In the event that active nest sites are found, an appropriate buffer zone (c. 5m) should be established around the nest and works suspended in this zone until the nest has become unoccupied and any young have fledged.</li> <li>- Liaison will be undertaken with the Forestry Commission during the 2013 goshawk survey season to establish whether any additional goshawk nest sites within 400m of the Assessment Site have been identified.</li> <li>- In the event that active goshawk nest sites are identified prior to the commencement of construction, the following measures are likely to be required: <ul style="list-style-type: none"> <li>- Maintenance of a 400m disturbance-free zone between February and July inclusive; and</li> <li>- All tree felling works will be undertaken outside the breeding bird season where practicable (which will be extended to include February due to early nesting habits of goshawk).</li> </ul> </li> </ul> </li> </ul>
	Effects on bats	<ul style="list-style-type: none"> <li>• Lighting (both permanent and temporary columns) will be directed and focused downwards with appropriate lantern designs to reduce light spillage onto habitats outside construction areas.</li> <li>• In the event that any of the identified trees or tree groups with bat roost potential will be impacted (either directly or indirectly) by the Proposed Development, further surveys will be undertaken to determine whether bats are present prior to felling. This will comprise dusk emergence/ dawn re-entry surveys at an appropriate time of year in accordance with standard survey methodologies.</li> <li>• Should bats be identified as roosting in any trees to be felled or otherwise pruned as a result of the construction of the Proposed Development, a licence may be necessary to enable works to proceed. Where necessary, licence applications including detailed mitigation and roost compensation provisions would be made to Natural England prior to any works to the trees commencing, to ensure compliance with the Habitats Regulation.</li> <li>• Mitigation is likely to require the provision of alternative roost sites (e.g. bat roost boxes),</li> </ul>

Topic	Effect	Measures
		which must be installed prior to tree felling.
	Effects on reptiles	<ul style="list-style-type: none"> <li>• Areas of deadwood piles and loose heaps of soil/pine needles suitable for reptile hibernation will be cleared outside the winter period to avoid the reptile hibernation season (i.e. between November and February to avoid the bird breeding season) where practicable.</li> <li>• If woodland is cleared during the winter months habitats potentially suitable for reptiles will be fenced with temporary reptile exclusion fencing as the forestry felling progresses, to prevent further migration of reptiles into working area upon emergence from hibernation. The tree stumps will be left in situ until March to avoid disturbing reptiles that may be hibernating below ground in and amongst tree roots. Stumps will be grubbed out from March onwards under an ecological watching brief. The felled areas will then be subject to capture and translocation exercise using artificial refuges.</li> <li>• The potential presence of reptiles will be highlighted to site personnel as part of the site induction package.</li> <li>• Any reptiles encountered incidentally during the construction works will be immediately moved to a place of safety if they are unable to escape unaided, and the advice of an ecologists sought.</li> </ul>
	Effects on water voles	<ul style="list-style-type: none"> <li>• Prior to construction, all of the identified ditches with water vole potential will be re-surveyed for water vole.</li> <li>• Those ditches that do not have any evidence of water vole occupation will not be subject to any further constraints during the construction phase.</li> <li>• Where water vole occupation is confirmed at any ditch/river crossing, exclusion of water voles using the 'displacement technique' will be undertaken. This involves the removal of suitable bankside cover by directional strimming to encourage the passive movement of water voles away from affected areas followed by a destructive search.</li> </ul>
Landscape and Views	Effects on landscape and views	<ul style="list-style-type: none"> <li>• The following measures will be incorporated into the CEMP: <ul style="list-style-type: none"> <li>- Retention of existing hedgerows and woodland between the boundary of the well site and Eberston Common Lane to keep an established screen between activity within the well site and adjacent sensitive receptors, all trees to be retained will be protected in accordance with BS5837:2012 - Trees in Relation to Construction;</li> <li>- Restoration of the agricultural landscape, through which the pipeline route passes once the pipeline has been completed to equivalent quality to that prior to construction;</li> <li>- Establishment of the landscape proposals at an early stage of the construction phase where possible -i.e. reinstate hedgerows and field boundaries immediately following construction;</li> <li>- Location of contractor's compound, pipeline laying and material stockpiles away from nearby sensitive receptors i.e. mature trees;</li> <li>- Control of the security lighting of construction compound and machinery to minimise upward and outward light pollution. In addition, ensure that the minimum area only is</li> </ul> </li> </ul>

Topic	Effect	Measures
		<p>lit, for the minimum period of time;</p> <ul style="list-style-type: none"> <li>- Limit movements of material between stockpiles so that these do not shift over time thereby adding to the sense of fragmentation and instability of the landscape;</li> <li>- Minimisation of the duration of construction activities which require cranes, scaffolding, and use of designated routes within and around the Assessment Site; and</li> <li>- Agreeing appropriate working hours as proposed (07:00 to 18:00 Monday to Friday and 07:00 to 13:00 on Saturdays) with NYMNP and NYCC to ensure that adverse visual effects of construction experienced by the closest residential receptors are minimised at times when they could reasonably expect a cessation of construction activity, for example evenings, weekends and bank holidays.</li> </ul>
Air Quality	Effects from release of construction dust	<ul style="list-style-type: none"> <li>• Construction dust will be controlled through the application of a series of measures incorporated into the CEMP including (where appropriate): <ul style="list-style-type: none"> <li>- Regular inspection and, where necessary, wet suppression of material/soil stockpiles (including wind shielding, storage away from site boundaries, and restricted height of stockpiles);</li> <li>- Appropriate orientation of material stockpiles to minimise wind dispersion;</li> <li>- Provision of wheel washing and wet suppression during loading of wagons/vehicles;</li> <li>- Covering vehicles carrying dry spoil and other wastes;</li> <li>- Shielding of dust-generating construction activities;</li> <li>- Provision of suitable site hoarding;</li> <li>- Restricting vehicle speeds on access roads and other unsurfaced areas of the Assessment Site; and</li> <li>- Inspection of unsurfaced haulage routes, and wet suppression as necessary, during prolonged dry periods.</li> </ul> </li> </ul>
Noise and Vibration	Effects from construction noise	<ul style="list-style-type: none"> <li>• Good practice as recommended in BS 5228-1:2009 (Ref. 16.3) will be implemented. Measures include maintaining good relations with people living and working in the vicinity of site operations by keeping people informed of progress.</li> <li>• Quiet working methods will be adopted and implemented through the CEMP including: <ul style="list-style-type: none"> <li>- The use of most suitable plant;</li> <li>- Reasonable hours of working for noisy operations;</li> <li>- Noise will be controlled at source;</li> <li>- On-site noise levels will be monitored regularly;</li> <li>- Avoidance of unnecessary revving of engines;</li> <li>- Switch of equipment when it is not required;</li> <li>- Minimise the drop height of materials;</li> <li>- Starting up plant and vehicles sequentially rather than all together; and</li> <li>- Audible reversing alarms should be of types that have a minimum noise effect on persons outside the site.</li> </ul> </li> <li>• The local authority may consider it appropriate to lay down or agree work programmes and</li> </ul>

Topic	Effect	Measures
		<p>periods of use of certain equipment.</p> <ul style="list-style-type: none"> <li>• Noise from construction will be controlled primarily by the restriction of working hours. In this case, 07.00 to 18.00 Monday to Friday and 07.00 to 13.00 Saturday.</li> </ul>
Traffic and Transportation	Effects from traffic along Ebberston Lane and Ebberston Common Lane	<ul style="list-style-type: none"> <li>• Route cards will be issued to all drivers to ensure that they use the designated access route to the Assessment Site.</li> <li>• All vehicle speeds along Ebberston Lane and Ebberston Common Lane will be restricted to 30 mph.</li> <li>• Large loads being moved along any minor road will be escorted by an escort vehicle to avoid conflict with oncoming traffic.</li> <li>• Road traffic signs, temporary traffic lights and a speed restriction will be put in place between Wilton and Allerston to reduce the potential for delays during construction.</li> <li>• Access to the Assessment Site along Malton Lane/Wilton Ings Lane will be normally limited to private cars and light goods vehicles and a temporary 30mph speed restriction will be applied.</li> <li>• Access by essential HGVs to the Assessment Site from Malton Lane/Wilton Ings Lane will be permitted only from the east and Penniston Lane and will be escorted.</li> <li>• Traffic management including signage and traffic lights will be required between the road junction at Penniston Lane and the Assessment Site to avoid conflict between vehicles passing in different directions.</li> <li>• Access to the Assessment Site from Marishes Lane will only be from the east, off the B1258 and speed restricted to 30mph.</li> <li>• Traffic management will be in force between the B1258 and the Assessment Site to ensure that the risk of two vehicles meeting is minimised.</li> <li>• Access along Allerston Lane will be prohibited for HGVs because articulated lorries will not be able to avoid over-running the verges when turning into or out of Malton Lane.</li> </ul>
Flood Risk, Hydrology and Drainage	Effects on surface and groundwater	<ul style="list-style-type: none"> <li>• The CEMP will include the following measures in compliance with the Environment Agency Prevention Pollution Guidelines especially PPG 6 (Ref. 16.4): <ul style="list-style-type: none"> <li>- The construction compound will be located within the limits of the well site, which has an impermeable membrane passing under the well site and into the perimeter ditches;</li> <li>- The ditch lining that is currently exposed will be protected to ensure that it retains its water retaining qualities;</li> <li>- During the adaptation of the existing perimeter ditch at the well site, the ditches will be temporarily blocked to the side of the working area to prevent accidental discharge of water or contaminants into the partly construction system or the ground;</li> <li>- All fuel tanks brought onto site for construction machinery will be kept locked when not being used, and sat within a containment tray in the bunded section of the well site where practicable and shall be double-skinned in accordance with PPG2 (Ref. 16.4);</li> <li>- The fuel store will be located in appropriate areas away from water-courses and where it is not at risk of site vehicles colliding with it;</li> </ul> </li> </ul>

Topic	Effect	Measures
		<ul style="list-style-type: none"> <li>- Machinery shall be re-fuelled in the site compound where practicable where the existing site construction will provide protection to the aquifer complying with the procedures stipulated in PPG7 (Ref. 16.4);</li> <li>- Any routine maintenance of machinery shall be carried out within the Ebberston Moor 'A' Well Site to contain spillages of oil, fuel or hydraulic oil;</li> <li>- All cement and grout shall be stored within a contained area and all washing out of cement mixers or concrete delivery lorries must be carried out so that the discharge flows into a lined settlement pond. All tools will also be washed in a suitable area where the discharge cannot flow into the ground as specified in PPG6 (Ref. 16.4);</li> <li>- Avoid storage of large volumes of potential contaminants such as fuel and waste water that will have a much more significant effect than smaller volumes; and</li> <li>- All static machinery located outside the bunded containment area of the well site during construction shall have drip trays placed under them.</li> </ul> <ul style="list-style-type: none"> <li>• All pipework shall be pressure-tested prior to being commissioned.</li> <li>• All fluids used during testing shall be drained into a prepared sump/tank with a capacity 110% of the pipeline capacity and all waste fluids arising from the testing or construction works will be taken off site by road tanker and disposed of at a suitably licensed facility.</li> </ul>
Archaeology and Cultural Heritage	Effects on unknown archaeology beyond the existing made ground	<ul style="list-style-type: none"> <li>• In those areas where the Proposed Development crosses or closely approaches cultural heritage resources of low sensitivity, or is further away from cultural heritage features of medium-high sensitivity, a programme of archaeological monitoring and recording will be carried out of the initial construction work within the Proposed Development working corridor across these areas.</li> <li>• In those areas where the Proposed Development crosses or closely approaches cultural heritage resources of medium sensitivity, or of uncertain significance, a programme of archaeological trial trench evaluation will be undertaken area prior to the commencement of development. Subject to the results of the trenching, a programme of archaeological monitoring and recording will be carried out of the initial construction work within the Proposed Development working corridor across these areas.</li> <li>• At a few locations in the northern part of the Proposed Development, the pipeline route will cross prehistoric linear features which are protected as Scheduled Monuments. At these locations it is proposed that directional drilling or a suitable alternative installation technique is used to carry the pipeline beneath the Scheduled Monuments.</li> <li>• Any archaeological recording of potential remains should meet the specific requirements of the Archaeological Curators.</li> </ul>
Ground Conditions and Contamination	Oil and Hydrocarbon contamination	<ul style="list-style-type: none"> <li>• To mitigate the risk of pollutants entering the controlled waters, handling and storage of fuels and oils will adhere to Environment Agency guidance: PPG1, PPG2, PPG5, PPG6, PPG8, PPG18 and PPG21 (Ref. 16.4). Measures to be implemented through the CEMP will comprise: <ul style="list-style-type: none"> <li>- Fuels will be handled on securely bunded areas;</li> <li>- Oils and hydrocarbons will be stored in designated locations with specific measures to</li> </ul> </li> </ul>



Topic	Effect	Measures
		<p>prevent leakage and release of their contents, including locating the storage area away from the surface water drainage system and watercourses on an impermeable base, with an impermeable bund that has no outflow and is of adequate capacity to contain at least 115% of the contents;</p> <ul style="list-style-type: none"> <li>- Machinery will be refuelled using a transfer hose and valves. Trigger guns will also be protected from vandalism and kept locked when not in use;</li> <li>- Plant and machinery will have drip trays beneath oil tanks/engines/gearboxes/hydraulics where appropriate that will be checked and emptied regularly via a licensed waste disposal operator;</li> <li>- Any potential contaminated soils will be kept separate from natural soils in the vicinity of the roads and railway during the roads and railway crossings by temporary placement of soils on geotextile fabric, chemical testing to confirm if soils are contaminated and disposal to a suitable licensed waste facility if necessary. Dust suppression measures will also need to be incorporated when working in or near to these materials; and</li> <li>- An emergency spillage action plan will be produced, which site staff will have read and understood. On-site provisions will be made to contain a serious spill or leak through the use of spill kits, booms, bunding and absorbent material. Site staff will be trained in the use of emergency spill response equipment.</li> </ul>
	Loss of ground support due to dissolution, sliding caused by adverse bedrock structure, collapse and running sands.	<ul style="list-style-type: none"> <li>• Appropriate geotechnical investigation will be undertaken in key areas of the Proposed Development and construction activities especially where the pipeline route crosses beneath roads, the railway and the river or where the pipeline route could be subject to landslides or running sands. The ground conditions encountered will need to be logged and geotechnical testing of the soils will need to be undertaken: <ul style="list-style-type: none"> <li>- Appropriate stability analyses should be undertaken to confirm if there is a risk; and</li> <li>- If required, temporary excavation support and temporary dewatering could be designed to prevent collapse of the excavation while it is open.</li> </ul> </li> </ul>
<b>3) Measures to be applied during Operation</b>		
Landscape and Views	Effects on landscape and views	<ul style="list-style-type: none"> <li>• A landscape maintenance programme will be adopted to ensure the long-term survival of existing and proposed features in order to enhance their biodiversity and amenity value. The details of the landscape maintenance programme will be agreed with the North York Moors National Park Authority.</li> </ul>
Noise and Vibration	Effects of noise on nearby sensitive receptors	<ul style="list-style-type: none"> <li>• The noise limit to ensure that there is no audible noise above background at the nearest noise-sensitive receptor to the well site, Eberston Common Farm, is 60dB <math>L_{Aeq,5min}</math> at any point on the Assessment Site boundary.</li> </ul>
Traffic and Transportation	Effects from traffic along Eberston Lane and	<ul style="list-style-type: none"> <li>• Route cards will be issued to all drivers to ensure that they use the designated access route to the Assessment Site.</li> </ul>

Topic	Effect	Measures
	Eberston Common Lane	<ul style="list-style-type: none"> <li>All vehicle speeds along Eberston Lane and Eberston Common Lane will be restricted to 30 mph.</li> </ul>
Flood Risk, Hydrology and Drainage	Effects on flood risk	<ul style="list-style-type: none"> <li>Rainwater on the well site will be gathered in ditches and either used on site or discharged through an oil interceptor into the soakaway.</li> </ul>
	Effects on quality of surface and ground water	<ul style="list-style-type: none"> <li>The oil interceptor will provide control on all discharge and a monitoring point will permit sampling to check the discharge.</li> <li>Valves fitted to the outflow pipe from the Assessment Site will enable isolation of the interceptor.</li> <li>Rainwater collecting within the new tank bunds and other bunded areas will be taken off site in tankers to be processed at an off-site facility.</li> </ul>
Ground Conditions and Contamination	Oil, hydrocarbon and process waste contamination	<ul style="list-style-type: none"> <li>To mitigate the risk of pollutants entering the controlled waters, handling and storage of fuels and oils will adhere to Environment Agency guidance: PPG1, PPG2, PPG5, PPG6, PPG8, PPG18 and PPG21 (Ref. 16.4). Measures will comprise: <ul style="list-style-type: none"> <li>Oils and hydrocarbons will be stored in designated locations with specific measures to prevent leakage and release of their contents, including locating the storage area away from the surface water drainage system and watercourses on an impermeable base, with an impermeable bund that has no outflow and is of adequate capacity to contain at least 115% of the contents;</li> <li>An emergency spillage action plan will be produced, which site staff will have read and understood. On-site provisions will be made to contain a serious spill or leak through the use of spill kits, booms, bunding and absorbent material. Site staff will be trained in the use of emergency spill response equipment.</li> </ul> </li> </ul>
<b>4) Measures to be applied during Demolition and Restoration</b>		
Ecology	Effects on habitats resulting from dust emissions	<ul style="list-style-type: none"> <li>Dust emissions arising from the topsoil stripping during decommissioning and restoration regardless of whether future planning permission is secured for the well site will be controlled through standard dust suppression measures set out in the CEMP to minimise dust deposition.</li> </ul>
Landscape and Views	Effects on landscape and views	<ul style="list-style-type: none"> <li>The following measures will be incorporated into the CEMP: <ul style="list-style-type: none"> <li>Retention of existing hedgerows and woodland between the boundary of the well site and Eberston Common Lane to keep an established screen between activity within the well site and adjacent sensitive receptors, all trees to be retained will be protected in accordance with BS5837:2012 - Trees in Relation to Construction;</li> <li>Location of contractor's compound, pipeline laying and material stockpiles away from nearby sensitive receptors i.e. mature trees;</li> <li>Control of the security lighting of construction compound and machinery to minimise upward and outward light pollution. In addition, ensure that the minimum area only is lit, for the minimum period of time;</li> </ul> </li> </ul>

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		<ul style="list-style-type: none"> <li>- Limit movements of material between stockpiles so that these do not shift over time thereby adding to the sense of fragmentation and instability of the landscape;</li> <li>- Minimisation of the duration of activities which require cranes, scaffolding, and use of designated routes within and around the Assessment Site; and</li> <li>- Agreeing appropriate working hours as proposed (07:00 to 18:00 Monday to Friday and 07:00 to 13:00 on Saturdays) with NYMNP and NYCC to ensure that adverse visual effects of construction experienced by the closest residential receptors are minimised at times when they could reasonably expect a cessation of construction activity, for example evenings, weekends and bank holidays.</li> </ul>
Air Quality	Effects from release of dust	<ul style="list-style-type: none"> <li>• Dust produced during decommissioning and restoration regardless of whether future planning permission is secured for the well site will be controlled through the application of a series of measures incorporated into the CEMP including (where appropriate):                             <ul style="list-style-type: none"> <li>- Regular inspection and, where necessary, wet suppression of material/soil stockpiles (including wind shielding, storage away from site boundaries, and restricted height of stockpiles);</li> <li>- Appropriate orientation of material stockpiles to minimise wind dispersion;</li> <li>- Provision of wheel washing and wet suppression during loading of wagons/vehicles;</li> <li>- Covering vehicles carrying dry spoil and other wastes;</li> <li>- Shielding of dust-generating construction activities;</li> <li>- Provision of suitable site hoarding;</li> <li>- Restricting vehicle speeds on access roads and other unsurfaced areas of the Assessment Site; and</li> <li>- Inspection of unsurfaced haulage routes, and wet suppression as necessary, during prolonged dry periods.</li> </ul> </li> </ul>
Noise and Vibration	Effects from noise	<ul style="list-style-type: none"> <li>• Good practice as recommended in BS 5228-1:2009 (Ref. 16.3) will be implemented regardless of whether future planning permission is secured for the well site. Measures include:                             <ul style="list-style-type: none"> <li>- Maintaining good relations with people living and working in the vicinity of site operations by keeping people informed of progress.</li> </ul> </li> <li>• Quiet working methods will be adopted and implemented through the CEMP regardless of whether future planning permission is secured for the well site including:                             <ul style="list-style-type: none"> <li>- The use of most suitable plant;</li> <li>- Reasonable hours of working for noisy operations;</li> <li>- Noise will be controlled at source;</li> <li>- On-site noise levels will be monitored regularly;</li> <li>- Avoidance of unnecessary revving of engines;</li> <li>- Switch of equipment when it is not required;</li> <li>- Minimise the drop height of materials;</li> <li>- Starting up plant and vehicles sequentially rather than all together; and</li> <li>- Audible reversing alarms should be of types that have a minimum noise effect on</li> </ul> </li> </ul>

Topic	Effect	Measures
		<p>persons outside the site.</p> <ul style="list-style-type: none"> <li>• The local authority may consider it appropriate to lay down or agree work programmes and periods of use of certain equipment regardless of whether future planning permission is secured for the well site.</li> <li>• Noise from construction will be controlled primarily by the restriction of working hours regardless of whether future planning permission is secured for the well site. In this case, 07.00 to 18.00 Monday to Friday and 07.00 to 13.00 Saturday.</li> </ul>
Traffic and Transportation	Effects from traffic along Eberston Lane and Eberston Common Lane	<ul style="list-style-type: none"> <li>• Route cards will be issued to all drivers to ensure that they use the designated access route to the Assessment Site.</li> <li>• All vehicle speeds along Eberston Lane and Eberston Common Lane will be restricted to 30 mph.</li> <li>• Large loads being moved up Eberston Lane and Eberston Common Lane will be escorted by an escort vehicle to avoid conflict with oncoming traffic.</li> <li>• Surface materials arising from the decommissioning and restoration of the well site will be dispersed on forestry roads where appropriate to reduce the effects of raised volumes of traffic travelling along Eberston Common Lane.</li> </ul>
Flood Risk, Hydrology and Drainage	Effects on surface and groundwater	<ul style="list-style-type: none"> <li>• The CEMP will include the following measures in compliance with the Environment Agency Prevention Pollution Guidelines especially PPG 6 (Ref. 16.4): <ul style="list-style-type: none"> <li>- The construction compound will be located within the limits of the well site, which has an impermeable membrane passing under the well site and into the perimeter ditches;</li> <li>- The ditch lining that is currently exposed will be protected to ensure that it retains its water retaining qualities;</li> <li>- During the adaptation of the existing perimeter ditch at the well site, the ditches will be temporarily blocked to the side of the working area to prevent accidental discharge of water or contaminants into the partly construction system or the ground;</li> <li>- All fuel tanks brought onto site for construction machinery will be kept locked when not being used, and sat within a containment tray in the bunded section of the well site where practicable and shall be double-skinned in accordance with PPG2 (Ref. 16.4);</li> <li>- The fuel store will be located in appropriate areas away from water-courses and where it is not at risk of site vehicles colliding with it;</li> <li>- Machinery shall be re-fuelled in the site compound where practicable where the existing site construction will provide protection to the aquifer complying with the procedures stipulated in PPG7 (Ref. 16.4);</li> <li>- Any routine maintenance of machinery shall be carried out within the Eberston Moor 'A' Well Site to contain spillages of oil, fuel or hydraulic oil;</li> <li>- All cement and grout shall be stored within a contained area and all washing out of cement mixers or concrete delivery lorries must be carried out so that the discharge flows into a lined settlement pond. All tools will also be washed in a suitable area where the discharge cannot flow into the ground as specified in PPG6 (Ref. 16.4);</li> </ul> </li> </ul>

Topic	Effect	Measures
		<ul style="list-style-type: none"> <li>- Avoid storage of large volumes of potential contaminants such as fuel and waste water that will have a much more significant effect than smaller volumes; and</li> <li>- All static machinery located outside the bunded containment area of the well site during construction shall have drip trays placed under them.</li> <li>• All pipework shall be pressure-tested prior to being commissioned.</li> <li>• All fluids used during testing shall be drained into a prepared sump/tank with a capacity 110% of the pipeline capacity and all waste fluids arising from the testing or construction works will be taken off site by road tanker and disposed of at a suitably licensed facility.</li> </ul>
Ground Conditions and Contamination	Oil, hydrocarbon and process waste contamination	<ul style="list-style-type: none"> <li>• To mitigate the risk of pollutants entering the controlled waters, regardless of whether future planning permission is secured for the well site, handling and storage of fuels and oils will adhere to Environment Agency guidance: PPG1, PPG2, PPG5, PPG6, PPG8, PPG18 and PPG21 (Ref. 16.4). Measures to be implemented through the CEMP will comprise: <ul style="list-style-type: none"> <li>- Oils and hydrocarbons will be stored in designated locations with specific measures to prevent leakage and release of their contents, including locating the storage area away from the surface water drainage system and watercourses on an impermeable base, with an impermeable bund that has no outflow and is of adequate capacity to contain at least 115% of the contents;</li> <li>- Machinery will be refuelled using a transfer hose and valves. Trigger guns will also be protected from vandalism and kept locked when not in use;</li> <li>- Plant and machinery will have drip trays beneath oil tanks/engines/gearboxes/hydraulics where appropriate that will be checked and emptied regularly via a licensed waste disposal operator; and</li> <li>- An emergency spillage action plan will be produced, which site staff will have read and understood. On-site provisions will be made to contain a serious spill or leak through the use of spill kits, booms, bunding and absorbent material. Site staff will be trained in the use of emergency spill response equipment.</li> </ul> </li> </ul>