

A428 Black Cat to Caxton Gibbet improvements

TR010044

Volume 9

9.48 Pre-commencement Plan

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Rule 8(1)(k)

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**The Infrastructure Planning
(Examination Procedure) Rules 2010**

**A428 Black Cat to Caxton Gibbet
improvements
Development Consent Order 202[]**

9.48 Pre-commencement Plan (Rev 3)

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Author	A428 Black Cat to Caxton Gibbet improvements Project Team, National Highways

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1. Overview

1.1 Introduction

- 1.1.1 This document describes the proposed pre-commencement works (as defined by the dDCO **[REP6-003]**) to be undertaken by the Principal Contractor (PC) and details the Mitigation Measures required to appropriately control those works.
- 1.1.2 This document responds to the submission made at Deadline 1 by Cambridgeshire County Council, Huntingdonshire District Council and South Cambridgeshire District Council (the Cambridgeshire Authorities) called the 'Cover Letter and ISH1 Action Point response' **[REP1-103]**.
- 1.1.3 Within the Deadline 1 submission made by the Cambridgeshire Authorities, **[REP1-103]** the pre-commencement activities are listed as follows:
- a. Archaeological investigations and mitigation works.
 - b. Environmental surveys.
 - c. Pre-construction mitigation works.**
 - d. Investigations for the purpose of assessing and monitoring ground conditions and levels.
 - e. Remedial work in respect of any contamination or other adverse ground conditions.**
 - f. Erection of any temporary means of enclosure.
 - g. Temporary hardstanding.**
 - h. Receipt and erection of construction plant and equipment.**
 - i. Diversion and laying of underground apparatus and utilities.
 - j. Protection works.**
 - k. Demolition .**
 - l. Site clearance.**
 - m. Construction compound set up.**
 - n. The temporary display of site notices or advertisements.
- Those highlighted in bold were indicated as the activities that brought the most concern to the Cambridgeshire Authorities.

- 1.1.4 This document has been further revised to address comments made in Cambridge County Councils 'Comments on Applicant's updated Pre-commencement Plan' [REP6-061].
- 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 bold in paragraph 1.1.3 above. 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 will apply to all pre-commencement works as defined in the dDCO and as listed in paragraph 1.1.3 above.
- 1.1.6 This document, together with the Biodiversity pre-commencement plan **[TR010044/APP/6.13v2]** and the Archaeological Mitigation Strategy (AMS) **[REP4-030]** will apply to all pre-commencement works as defined in the dDCO and as set out in paragraph 1.1.3 of this document.
- 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, with 1hr before and after for setting up and closing down in accordance with Requirement 19 of the DCO.
- 1.1.8 Where this is not possible authorisation will be requested from the appropriate authorities to enable work 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) will 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 type and magnitude of the proposed 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. This means that that while the specific details of each method may change, the overarching tasks will not.

- 1.2.2 In any event, all pre-commencement works will 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 of this document together with the controls contained in the Biodiversity pre-commencement plan **[TR010044/APP/6.13v2]** and the AMS **[REP4-030]**.
- 1.2.3 The final design of the pre-construction works will not give rise to materially greater environmental effects than those outlined indicatively in this pre-commencement plan.
- 1.2.4 An indicative scope and methods set out in Section 2 have been provided for the activities of most concern to the Cambridgeshire Authorities (highlighted bold in 1.1.3) in order to provide some context. However, all pre-commencement works listed in 1.1.3 are controlled by the general mitigation measures in section 3 of this document, together with the Biodiversity pre-commencement plan **[TR010044/APP/6.13v2]** and the AMS **[REP4-030]**.
- 1.2.5 Activities not in bold in 1.1.3 do not require any specific mitigation measures but will still be subject to the general mitigation measures detailed in Section 3 as required.

2. Pre-commencement activities

2.1 Pre-construction mitigation works

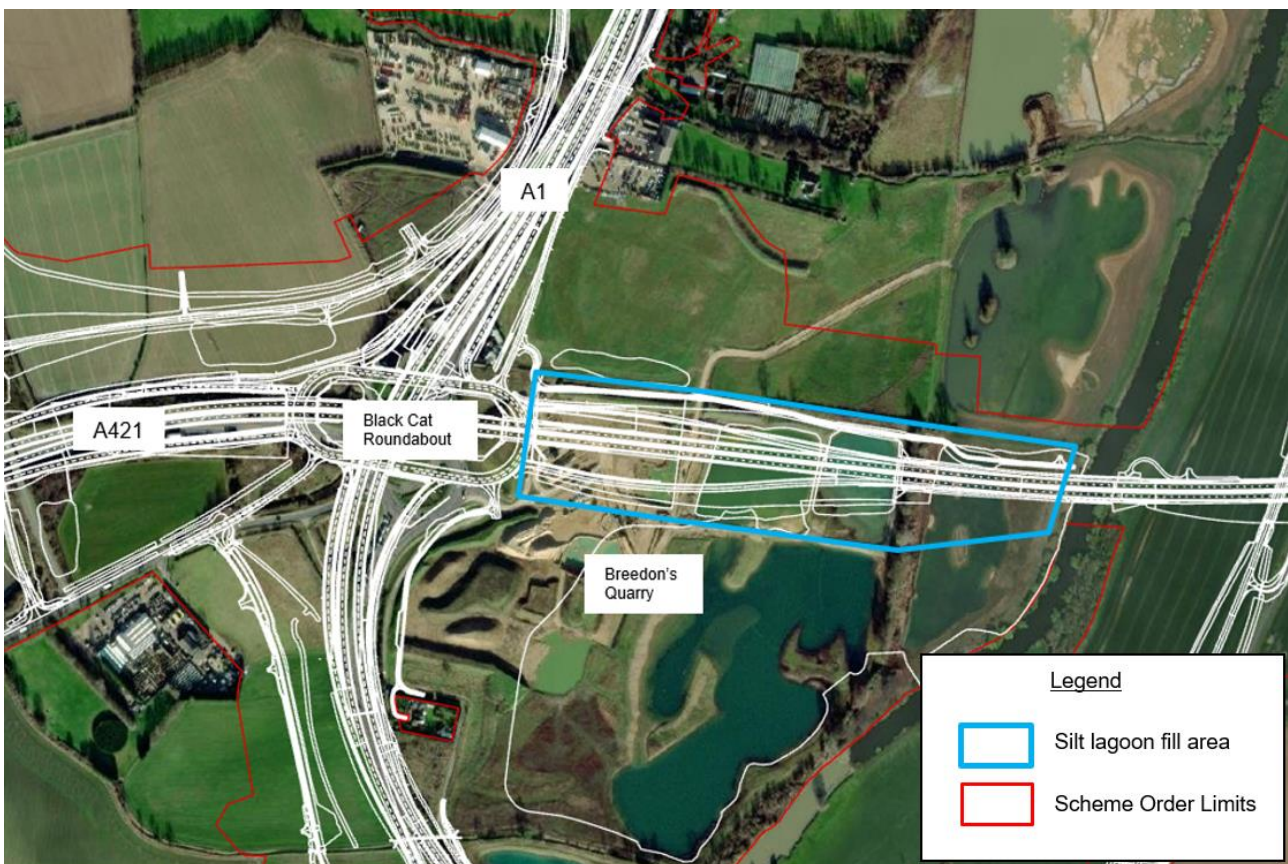
Scope

- 2.1.1 In order to minimise the impact to ecology caused by the main construction phase, a number of activities will be required within the pre-commencement phase. These are stated within 2.1.3 - 2.1.10.
- 2.1.2 Pre-commencement phase activities shall be informed by the preliminary works surveys for Biodiversity pre-commencement plan [TR010044/APP/6.13v2] and method statement for any Natural England species mitigation licences (e.g. bats, Great Crested Newt, badger, Barn Owl) for activities that would otherwise be illegal. There will be no commencement prior to approval of the relevant licenses from Natural England.
- 2.1.3 Temporary fencing will 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.
- 2.1.4 Silt mitigation may be installed along watercourses where any pre-commencement works are taking place.
- 2.1.5 Bat boxes of various designs will be installed in retained woodlands within the Order Limits together with any other appropriate bat mitigation measure.
- 2.1.6 Bird nest boxes will be installed on selected retained trees designed to be suitable for a range of species.
- 2.1.7 Fencing and hoarding will, as far as is reasonably practicable, be located such that it does not damage sensitive habitats, trees or hedgerows.
- 2.1.8 In locations where construction works are in proximity to Public Rights of Way (PRoW) the Principal Contractor (PC) will fence off works areas using temporary fencing panels to segregate the site work areas from the public.
- 2.1.9 Clear sight lines will 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.
- 2.1.10 Adequate fencing and hoardings will be erected and maintained to prevent unwanted access to the site, to provide noise attenuation, screening and site security – this will include providing viewing points at relevant locations, where appropriate.

2.2 Remedial works in respect of any contamination or other adverse ground conditions

Scope

- 2.2.1 Within Black Cat Quarry on the alignment of the new dual carriageway lie a number of silt lagoons that create unfavourable ground conditions on which to construct. This is of key importance for the River Great Ouse Viaduct structure that is to be built here during the main construction phase, and which will require a firm platform to safely operate large cranes, plant and equipment.
- 2.2.2 The silt lagoons will be filled with clean imported stone material to create a foundation suitable for the construction of the new dual carriageway across this area. The platform will be designed to satisfy all environmental, safety and technical constraints concerning levels, material properties and compaction. The material used will be subject to design and has not yet been specified.
- 2.2.3 The fill of the lagoons will be permanent under the footprint of the new dual carriageway, as its purpose is to provide a stable base on which to construct the permanent embankments. The lagoon fill will be placed during the pre-commencement phase however, any construction on top of the lagoon fill will proceed within the main works only.



Plan of Proposed Silt Lagoon Fill Area – Breedon's Quarry

Methodology

2.2.4 Significant Plant/Materials expected include:

- a. 360° tracked excavators
- b. Tracked dozers
- c. Rollers
- d. Stone delivery vehicles (road-going)
- e. Imported stone material

2.2.5 Proposed Sequence:

- a. Access will be gained via the existing quarry entrance, direct from the Black Cat Roundabout. This requires no temporary traffic management and therefore will not place an additional burden on the traffic flow of the surrounding road network.
- b. Temporary welfare cabins will be established within the quarry area.
- c. The required construction plant will be delivered on flatbed vehicles/low loaders and offloaded within the quarry area.
- d. Stone delivery vehicles will arrive via road through the existing quarry entrance and tip the imported stone.
- e. The stone will be placed and spread using a combination of excavators and dozers. Generally, the dozers will spread the bulk of the material and the excavators will complete the trimming of the surface and edges.
- f. The surface, once filled to the designed level, will be compacted using a roller.
- g. The works will progress in a linear fashion from the west heading east (away from the quarry entrance) enabling the construction plant to be positioned on the newly laid platform, placing new material ahead of itself until the eastern limit is reached.

Specific Mitigation Measures

- 2.2.6 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.
- 2.2.7 This activity will be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays with 1hr before and after for setting up and closing down.
- 2.2.8 The stone delivery vehicles, plant delivery vehicles and any HGVs will be prohibited from using local roads and will be restricted to the strategic road network in order to access the Quarry site at Black Cat roundabout. This will involve the A1 Great North Road and the A421 as the sole access to the Quarry is direct from the Black Cat Roundabout.

- 2.2.9 The estimated number of HGVs accessing the Quarry will be 300 per week for this operation.
- 2.2.10 Monitoring of any outfalls from the lagoons will occur and suitable mitigations will be put in place if the water quality is found to decrease (i.e. silt fences, earth bunds etc.) as described in paragraph 3.1.32.
- 2.2.11 Wheel washing facilities will be available at the exit of the quarry to mitigate the risk of mud being transported onto the public highway.
- 2.2.12 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, in accordance with best practice, work in the area of concern will be halted until a suitably qualified specialist (in consultation with the relevant local authorities) is able to make an assessment.
- 2.2.13 The assessment may involve the sampling and testing of the suspected contaminated material, as deemed necessary by the qualified specialist.
- 2.2.14 Upon completion of this assessment, if remediation is considered necessary, then a remediation method statement will be produced, following consultation with the Environment Agency and/or the relevant local authorities.
- 2.2.15 Dust will be controlled on site using water suppression systems.

2.3 Temporary hardstandings

Scope

- 2.3.1 The detailed design of the temporary hardstandings proposed has not been developed at this stage, though they will be essential in enabling other pre-commencement tasks and in preparation for the main construction phase.
- 2.3.2 Temporary hardstanding areas are required at various locations site wide for the purpose of temporary access points, temporary welfare/compound areas, temporary working platforms (e.g. for cranes to operate safely), temporary laydown areas and temporary haul roads for use in the main construction phase.
- 2.3.3 Their dimensions will vary greatly depending on their purpose and each will be subject to a design to ensure they fulfil their performance requirements.
- 2.3.4 All the temporary hardstanding areas will be constructed from a granular stone material that will be permeable to avoid any issues involving surface runoff.
- 2.3.5 Haul routes will be required to form a suitable travelling surface for vehicles to access areas remote from the public highways. They will be approx. 6m wide and will also be constructed from a granular stone material.
- 2.3.6 The sites detailed in the AMS [REP4-030] will be cleared and mitigated prior to installing the haul route, hardstanding or any other temporary works.
- 2.3.7 Hardstanding areas may be required for parking/compound/storage to facilitate the archaeological mitigation works – where these are required they will be located adjacent to or away from the relevant archaeology such that archaeological mitigation is not required prior to their installation.

Methodology

2.3.8 Significant Plant/Materials expected include:

- a. 360° tracked excavators
- b. Tracked dozers
- c. Rollers
- d. Stone delivery vehicles (HGVs)
- e. Granular stone material

2.3.9 Proposed Sequence:

- a. Access will be gained via designated site access points, direct from public highways.
- b. The required construction plant will be delivered on flatbed vehicles/low loaders and offloaded within the site bounds. Alternatively, if a site haul route previously established is available, access will be prioritised within and through site and away from the public highway.
- c. Stone delivery vehicles will arrive via road through the site access point, travel to the work area and tip the imported stone.
- d. The stone will be placed and spread using a combination of excavators and dozers. Generally, the dozers will spread the bulk of the material and the excavators will complete the trimming of the surface and edges.
- e. The surface, once filled to the designed level, will be compacted using a roller.
- f. Haul routes will 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

- 2.3.10 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.
- 2.3.11 This activity will be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays with 1hr before and after for setting up and closing down.
- 2.3.12 The routes of the stone delivery vehicles, plant delivery vehicles and any HGVs will be planned to prioritise the use of the strategic road network in order to access the site. This will predominantly involve the A1 Great North Road, the existing A428 and the A421. 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 will be minimised to the shortest practical route from the strategic road network and only for authorised vehicles.

- 2.3.13 The maximum number of HGVs accessing the Scheme for this operation will be dictated by the design of the temporary hardstanding proposed.
- 2.3.14 Wheel washing facilities will be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
- 2.3.15 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, in accordance with best practice, work in the area of concern will be halted until a suitably qualified specialist (in consultation with the relevant local authorities) is able to make an assessment.
- 2.3.16 The assessment may involve the sampling and testing of the suspected contaminated material, as deemed necessary by the qualified specialist.
- 2.3.17 Upon completion of this assessment, if remediation is considered necessary, then a remediation method statement will be produced, following consultation with the Environment Agency and/or the relevant local authorities.
- 2.3.18 Dust will be controlled on site using water suppression systems.

2.4 Receipt and erection of construction plant and equipment

Scope

- 2.4.1 The Scheme will make use of on-site concrete batching plants for the main construction phase. The on-site concrete batching plants will be established as part of the pre-commencement works in Wintringham (at the location of the Schemes main construction compound) and at the Black Cat Quarry.
- 2.4.2 Each site will require a hardstanding area that may incorporate a concrete base/foundation for larger elements of the plant. The precise design and layout of the two sites is to be confirmed as it will be to the specification of the suppliers to enable them to achieve the Scheme's demands for concrete.
- 2.4.3 The plants will be modular and delivered by road via the existing quarry entrance (for the Quarry) and via the newly constructed Wintringham Junction (see paragraph 2.8.3) for the main construction compound. Larger elements of the plant will be offloaded and positioned using a crane.

Methodology

- 2.4.4 Significant Plant/Materials expected include:
- Delivery vehicles (road-going, mainly flat-bed lorries and low-loaders).
 - Cranes.
 - Modular batching plant elements (eg silo, pipework, precast concrete elements, etc.).
- 2.4.5 Proposed Sequence:
- The hardstanding areas will be established as per section 2.3.9 (Methodology for Temporary Hardstandings).

- b. Access will be gained via designated site access points, direct from trunk road network – i.e. the A1 at the Black Cat Roundabout for the Quarry or the existing A428 for the main construction compound at Wintringham.
- c. The necessary construction plant including mobile cranes, will drive directly to the work area and mobilise.
- d. The modular elements of the concrete plants will be delivered to site on flat-bed lorries and low-loaders.
- e. The crane will offload and lift the elements into place to the specification of the plant supplier.
- f. The plant will be commissioned and tested.

Note: This sequence does not include the operation of the plant other than that required to complete any testing and commissioning.

Specific Mitigation Measures

- 2.4.6 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.
- 2.4.7 This activity will be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays with 1hr before and after for setting up and closing down.
- 2.4.8 The stone delivery vehicles, plant delivery vehicles and any HGVs will be prohibited from using local roads and will be restricted to the strategic road network in order to access the sites. This will predominantly involve the A1 Great North Road, the existing A428 and the A421. 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 will be minimised to the shortest practical route from the strategic road network and only for authorised vehicles.
- 2.4.9 The maximum number of HGVs accessing the Scheme is unknown at this stage.
- 2.4.10 Wheel washing facilities will be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
- 2.4.11 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, in accordance with best practice, work in the area of concern will be halted until a suitably qualified specialist (in consultation with the relevant local authorities) is able to make an assessment.
- 2.4.12 The assessment may involve the sampling and testing of the suspected contaminated material, as deemed necessary by the qualified specialist.
- 2.4.13 Upon completion of this assessment, if remediation is considered necessary, then a remediation method statement will be produced, following consultation with the Environment Agency and/or the relevant local authorities.

- 2.4.14 All crane lifts will be planned by a Lifting Appointed Persons in accordance with BS7121 Part 1 2006 (REF 1-1) who will assess all aspects of the lifting operations and mitigate any environment, health and safety risks.

2.5 Protection works

Scope

- 2.5.1 There are approximately 122,000m of existing overhead or underground utilities within the Order limits, including but not limited to: gas mains, electricity cables, oil pipelines, water, communication cables. For the majority, the utilities will be left uninterrupted and unaffected by the Scheme. If this is not possible, the services will be protected. The protection measures will be agreed with the respective statutory undertakers. In some instances, protection will not be feasible, and as a last resort, diverting the services will be implemented.
- 2.5.2 The specification of the protection will 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 will be constructed in-situ and will be in the region of 10m x 6m typically. The precise dimensions of slabs will be subject to design.
- 2.5.3 For overhead services, protection will 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 will be followed in the establishment of the exclusion zones. The precise type of fencing will 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 will likely be in the form of timber post and rail fencing, whereas shorter term protection will likely be formed by temporary anti-climb mesh fencing eg Heras fencing.
- 2.5.4 Temporary fences will also be used to segregate the main construction operations from public areas and public rights of way. The type of fence adopted will be determined by the duration of requirement and risk to the public/workforce.
- 2.5.5 Fencing and protection slabs will be adopted site wide wherever the Scheme borders or interacts with a service or the public.

Methodology

- 2.5.6 The methodology will depend on the type of protection selected in each case. Generally, the two main types that the PC is likely to implement are described below as an example.

(a) Protection Slabs

- (i) The design and construction methodology of the slab will 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 will be prepared using mechanical plant (e.g. a small excavator) where permitted.
- (iv) Reinforcing steel will be placed as per the design and timber shutters will be erected to create the form of the slab.
- (v) The form will be filled with concrete, delivered using a concrete wagon, directly placed within the slab.
- (vi) The surface will be finished in accordance with the design and left to cure.
- (vii) The timber shutters will be removed and the ground around the slab will be prepared to match the top level of the slab.
- (viii) Following a temporary works inspection/asset owner's inspection, the slab will 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 will be determined by the Scheme in liaison with all relevant stakeholders.
- (ii) Light duty fencing i.e. Heras fencing, crowd barriers and cone/chain, will be set out by an engineer and placed manually by a small gang of operatives using standard assembly procedures.
- (iii) Heavier duty fencing i.e. post and rail, wire mesh, site hoarding etc. will be set out by engineer and installed using post drivers or concreted in.
- (iv) The infill panels i.e. timber rails, wire mesh, wire strands will be attached using simple hand tools by a small gang of operatives.

Specific Mitigation Measures

- 2.5.7 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.
- 2.5.8 This activity will be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays with 1hr before and after for setting up and closing down.
- 2.5.9 Concrete that will be used in the construction of protection slabs is controlled under the Control of Substances Hazardous to Health Regulations (COSHH) 2002 and will be managed accordingly.
- 2.5.10 Concrete will be ordered in precise quantities to reduce waste as much as possible. Any waste concrete will 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.

- 2.5.11 Concrete 'washout' produced during the cleaning of delivery wagons will be in a designated area into an impermeable container. This will be removed from site as a waste as described in paragraphs 3.1.16 and 3.1.17

2.6 Demolition

Scope

- 2.6.1 The pre-commencement demolition works are limited to:
- The A1 Service Area and the Travelodge at the Black Cat Roundabout which are to be demolished to enable the construction of the new dual carriageway.
 - The controlled dismantling of Brook Cottages for the purpose of recording and condition survey as detailed in the Brook Cottages Heritage Strategy [TR010044/EXAM/9.104].

Methodology

- 2.6.2 The precise methodology and sequence of demolition / dismantling will 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.
- 2.6.3 Generally, the demolition of the A1 Service Area and the Travelodge will involve the use of specially equipped excavators and other similar plant to carefully deconstruct the buildings in small sections. The works in Brook Cottages will involve the use of small hand held plant to carefully strip the building and reveal the structure. The demolition waste will be removed from site on HGVs and disposed/recycled as appropriate.
- 2.6.4 At both proposed locations, access will be direct from/to the strategic road network without requiring any additional temporary traffic management.

Specific Mitigation Measures

- 2.6.5 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.
- 2.6.6 Where necessary effective water suppression shall 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.
- 2.6.7 Air quality monitoring will be undertaken where necessary and after risk-assessing the activities and/or receptors.
- 2.6.8 Explosive blasting will be avoided where possible, using appropriate manual or mechanical alternatives.
- 2.6.9 The Scheme will comply with measures set out in any required Asbestos Management Plan prepared for the Scheme and deal with any hazardous materials encountered in line with legislation and safe practice.

- 2.6.10 Noise and vibration monitoring will be undertaken where necessary and after risk-assessing the activities and/or receptors. Noise and vibration mitigation will be implemented as required, as described in section 3.
- 2.6.11 The removal vehicles, plant delivery vehicles and any HGVs will be prohibited from using local roads and will be restricted to the strategic road network in order to access the demolition sites. This will predominantly involve the A1 Great North Road (access is direct from the A1 to the demolition site), the existing A428 and the A421.
- 2.6.12 The maximum number of HGVs used for this task is unknown at this stage.
- 2.6.13 Wheel washing facilities will be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
- 2.6.14 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, in accordance with best practice, work in the area of concern will be halted until a suitably qualified specialist (in consultation with the relevant local authorities) is able to make an assessment.
- 2.6.15 The assessment may involve the sampling and testing of the suspected contaminated material, as deemed necessary by the qualified specialist.
- 2.6.16 Upon completion of this assessment, if remediation is considered necessary, then a remediation method statement will be produced, following consultation with the Environment Agency and/or the relevant local authorities.

2.7 Site clearance

Scope

- 2.7.1 To enable the main construction works, clearance of vegetation (trees, hedgerows and ground vegetation) site wide within the Scheme Order limits is required.
- 2.7.2 A Permit to Clear is a procedure adopted by the PC that ensures all aspects including archaeology 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 will be no detriment to ecology, they will issue a permit to the responsible person for that task, permitting the clearance works to proceed.
- 2.7.3 The permit to clear includes checks of all areas and habitats, including bare ground and areas of land left undisturbed for a period during the bird breeding season.
- 2.7.4 The vegetation will be completed using powered tools and equipment including trimmers, flails, and chainsaws. Vegetation clearance is required site-wide wherever vegetation will obstruct the construction of the new dual carriageway.

Methodology

- a. Access for site clearance works will be gained via authorised site accesses and temporary haul routes through site.

- b. All the required surveys, inspections and ecological mitigation will be completed by an ECoW who will issue a Permit to Clear vegetation.
- c. Any vegetation requiring protecting or retaining including but not limited to 'veteran elm and the protected road verge S8 (Brockley Road)' and any trees under Tree Protection Order, will be protected from damage.
- d. The vegetation will be removed in accordance with the Permit to Clear vegetation using specialist equipment, e.g. strimmers, flails and chainsaws.
- e. All cleared vegetation will be loaded onto a transport vehicle and removed from site for processing, reuse or disposal.

Specific Mitigation Measures

- 2.7.5 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.
- 2.7.6 The transport vehicles, plant delivery vehicles and any other HGVs will be prohibited from using local roads and will be restricted to the strategic road network in order to access the vegetation clearance sites. This will predominantly involve the A1 Great North Road the existing A428 and the A421. 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 will be minimised to the shortest practical route from the strategic road network and only for authorised vehicles.
- 2.7.7 The maximum number of HGVs used for this task is unknown at this stage as the quantity of removed vegetation is unknown.
- 2.7.8 Wheel washing facilities will be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
- 2.7.9 Further information on how site clearance will be completed pre-commencement is provided in the Biodiversity Pre-Commencement Plan [TR10044/APP/6/13v2].

2.8 Construction compound set-up

Scope

- 2.8.1 The proposed location for the main construction compound is at Wintringham, adjacent to ongoing residential development projects.
- 2.8.2 There will be pre-commencement work to establish this compound that will include temporary modular buildings, carparks, footways, fencing, lighting, services/utilities and drainage.
- 2.8.3 It is anticipated that the access will be via a roundabout on the A428 that will be constructed by the residential developer under their own planning permission and will not form part of the Scheme's pre-commencement or main construction works. Once the roundabout is complete, the Scheme will access the main construction compound directly from it.
- 2.8.4 There will also be a number of smaller 'satellite' compounds on the Scheme. These sites will also incorporate modular buildings and all other provisions

mentioned previously but on a smaller scale and sited on the temporary hardstandings described in 2.3.

- 2.8.5 No construction compounds will be set up within any flood zone during pre-commencement works.

Methodology

- a. Utilities: installed using standard installation techniques, laying ducting, pipework, cables and connections.
- b. Culvert: to gain temporary access to the area (pre-completion of roundabout by others), Hen Brook requires a culvert to be installed enabling access from the north of the site. This will be in accordance with all appropriate consents (i.e. from the Environment Agency), permits (i.e. Permit to Clear) and temporary works designs.
- c. Earthworks: all of the compound areas will first have the topsoil layer stripped and stockpiled in a designated bund. The bund will be sealed and seeded. The formation will be trimmed to the required level and the subsoil stockpiled separately from the topsoil.
- d. Hardstanding will be installed as previously described in 2.3.
- e. Drainage: will be installed using standard pipelaying and connection techniques.
- f. Foundations: the footings for cabins will be installed where applicable in the form of a small concrete pad or proprietary product (for example, Wysebase footings or similar) in accordance with a temporary works design.
- g. Cabins: cabins will be delivered on flatbed/low loader transport, with access directly from the A428 access (roundabout) and lifted into position using a mobile crane or similar. Once in their correct location they will be connected, assembled and commissioned.
- h. Paved areas: where practicable, the carpark and footways will be paved using standard paving techniques.
- i. Landscaping: the area immediately surrounding the offices that is not paved will be prepared using an excavator and seeded where practicable.

Specific Mitigation Measures

- 2.8.6 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.
- 2.8.7 The delivery vehicles and any other HGVs will be prohibited from using local roads and will be restricted to the strategic road network in order to access the demolition sites. This will predominantly involve the A428, A1 and the A421. Access is direct from the A428 to the Wintringham Compound site.
- 2.8.8 The maximum number of HGVs used for this task will be revised at detailed design stage. See section 3.1.56.

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- 2.8.9 Wheel washing facilities will be available at the exit of the site to mitigate the risk of mud being transported onto the public highway.
 - 2.8.10 While no contaminated land is anticipated in this activity, in the unlikely event that contamination is encountered during excavation works, in accordance with best practice, work in the area of concern will be halted until a suitably qualified specialist (in consultation with the relevant local authorities) is able to make an assessment.
 - 2.8.11 The assessment may involve the sampling and testing of the suspected contaminated material, as deemed necessary by the qualified specialist.
 - 2.8.12 Upon completion of this assessment, if remediation is considered necessary, then a remediation method statement will be produced, following consultation with the Environment Agency and/or the relevant local authorities.
 - 2.8.13 All crane lifts will be planned by a Lifting Appointed Person in accordance with BS7121 Part 1 2006 (REF 1-1) who will assess all aspects of the lifting operations and mitigate any environment, health and safety risks.
 - 2.8.14 No compounds will be constructed within any flood zones during pre-commencement works.
 - 2.8.15 This activity will be restricted to the following working hours: 0700 – 1800hrs weekdays and 0700 – 1300hrs on Saturdays with 1hr before and after for setting up and closing down.

3. Mitigation measures

- 3.1.1 This section details the general mitigation measures that will be implemented to control the pre-commencement works. It covers all relevant sections of the First Iteration Environment Management Plan [REP6-008].
- 3.1.2 For each pre-commencement activity, the proposed construction methods will be reviewed in-line with this document and all applicable general mitigation measures will be implemented. For example, any operations involving construction plant will be controlled by the Fuels and Oils section (3.1.36 - 3.1.38). If that operation also involved an interaction with a watercourse, it would additionally be controlled by the section on water quality (3.1.32 - 3.1.34). All pre-commencement activities are also controlled by the biodiversity pre-commencement plan [TR010044/APP/6.13v2] and the AMS [REP4-030].
- 3.1.3 Mitigation measures can be considered as:
- Source control (i.e. to prevent fine sediment-laden runoff forming and to treat contaminated runoff close to where it forms).
 - 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).
 - 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 of the pre-commencement works and as such no further approval of this document, once consent is granted, will be needed.

Air Quality

- 3.1.5 Dust will be controlled on site using water suppression systems.
- 3.1.6 Stockpiles of materials will be appropriately managed to protect from any dust or particles migrating in the wind. Soil stockpiles will 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 will be strictly enforced so that less dust is generated from the slower travelling vehicle speed.
- 3.1.8 Materials will 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 will be implemented to reduce noise as far as possible. This may include acoustic panelling, 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 will be modern and well maintained.

- 3.1.11 Equipment, including vehicles, will 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 shall, 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 will be kept to a minimum and no foul/offensive language shall be used.
- 3.1.15 Noise and/or vibration monitoring will be carried, if required. The location and duration of this monitoring is designed to record noise and/or vibration from construction activities experienced by a representative sample of the local population.

Waste

- 3.1.16 Any waste generated during the pre-commencement works will be managed to ensure that all duty of care requirements are complied with.
- 3.1.17 All reasonable steps will 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

- 3.1.18 Areas of vegetation clearance and top-soil strip should be limited as much as practicable. Where possible, vegetation clearance across the Scheme will be phased to minimise the areas of exposed ground and reduce the potential risk for runoff.
- 3.1.19 Any vegetation removed will be assessed and recorded using a Permit to Clear form. The ECoW will decide all permits.
- 3.1.20 Where possible, vegetation will be removed outside of bird nesting season (March-August inclusive), under the supervision of the ECoW. If vegetation removal is not possible outside of bird nesting season the project will comply with the process detailed in 3.1.19 above.
- 3.1.21 Vegetation clearance will be phased outside the hibernation period for all amphibians and reptiles so as to render the habitat unfavourable for them to shelter, which will encourage dispersal into adjacent areas of suitable habitat.

- 3.1.22 The ECoW will be responsible for ensuring construction environmental mitigation measures are correctly implemented, monitored and maintained.
- 3.1.23 Stockpiles will be covered seeded or fenced to prevent wind whipping. Stockpiles will also be checked by the ECoW to ensure fences are intact and there has been no badger incursion.
- 3.1.24 Trees will 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 (REF 1-2).
 - b. BS 3998:2010 – Tree Work: Recommendations (REF 1-3).
- 3.1.25 Further advice will be sought, and considered, from the Local Authority regarding the protection of trees.
- 3.1.26 A Root Protection Area (RPA) will be set up around trees to be retained onsite prior to commencement of construction.
- 3.1.27 The RPA will be demarcated by a suitable physical barrier. The protective fencing will be maintained for the duration of the construction phase and checked on a regular basis.
- 3.1.28 In the event that an RPA cannot be maintained at 12 times the diameter at breast height, mitigation such as bog matting, flotation tyres and hand digging will be utilised.
- 3.1.29 Further biodiversity specific mitigation measures have been included in the Biodiversity Pre-commencement plan **[TR010044/APP/6.13v2]**.

Soil

- 3.1.30 Pre-commencement works requiring the removal of soil will require designated areas in the immediate vicinity of the excavation in which to stockpile the soil.
- 3.1.31 Stockpiles will be segregated to ensure that the topsoil and subsoil are not mixed or contaminated. Stockpiles will 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.

Water Quality

- 3.1.32 The specific silt management techniques will be determined by the PC 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 will 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.

3.1.33 Pre-construction water quality, level and flow monitoring will be conducted.

3.1.34 Water bodies shall be monitored and the scope of monitoring will be based on risk assessment but will include all watercourses that may be adversely impacted during the pre-commencement works.

3.1.35 The monitoring programme will be sufficiently comprehensive to ensure there is a robust baseline against which the monitoring during construction works can be compared.

Fuels and Oils

3.1.36 The storage, dispensing, containment and use of all fuels, oils and COSHH materials and waste shall be undertaken in accordance with regulatory and good practice guidance.

3.1.37 For COSHH materials and waste, relevant control and management measures shall include:

- a. Storage will be in a secure, bunded and sheltered area.
- b. Waste will be segregated.
- c. COSHH liquids will not be stored in flood zones.
- d. Areas will 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).

3.1.38 Fuel and oil (including mould oil) shall be stored in accordance with The Control of Pollution (Oil Storage) (England) Regulations 2001 (REF 1-4), 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* (REF 1-4) and must be locked outside working hours.
- b. Storage areas shall not be located within 20m of watercourses, ponds, site drainage or within any areas of flood zones or on a gradient.
- c. Refuelling shall 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 bowsers shall be integrally bunded and must comply with *The Control of Pollution (Oil Storage) (England) Regulations* (REF 1-1) and must be secured outside working hours.
- e. Trained operatives will carry out refuelling of plant and equipment.
- f. Plant nappies will be used during refuelling.

- g. Drums shall 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 shall be stored on a drip tray sufficient to contain 25% of the full capacity of the drum.
- h. Storage tanks and drums shall 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) shall be integrally bunded or placed on plant nappies.
- j. Bunds, tanks pipework and plant shall be regularly checked for signs of damage or leaks and must be regularly maintained.
- k. Spill kits will 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 shall be trained in fuel security and the use and safe disposal of spill kits.
- l. Drums shall 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 shall be fitted with roofs to prevent the collection of rainwater. Individual drums in use must be stored on a drip tray sufficient to contain 25% of the full capacity of the drum.

Energy

- 3.1.39 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, shall be investigated during the pre-commencement works.
- 3.1.40 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).

Materials

- 3.1.41 The intention is not to reuse and instead dispose of the materials that will be encountered during the pre-commencement works.
- 3.1.42 Should this change all appropriate guidance will be followed. This includes:
 - a. Contaminated Land: Applications in Real Environments (CL:AIRE), *The Definition of Waste: Development Industry Code of Practice (V2)*, March 2011 (DoWCoP) (REF 1-5).
 - b. *The Environmental Permitting (England and Wales) Regulations 2016* (REF 1-6) (as amended).

Contaminated Land

- 3.1.43 No contaminated land is anticipated at any of the locations for the pre-commencement works.

- 3.1.44 Where contamination is encountered during excavation works, in accordance with best practice, work in the area of concern will be halted until a suitably qualified specialist (in consultation with the relevant local authorities) is able to make an assessment.
- 3.1.45 The assessment may involve the sampling and testing of the suspected contaminated material, as deemed necessary by the qualified specialist.
- 3.1.46 Upon completion of this assessment, if remediation is considered necessary, then a remediation method statement will be produced, following consultation with the Environment Agency and/or the relevant local authorities.

Archaeology

- 3.1.47 Mitigation measures for the archaeological pre-commencement works are detailed in the AMS **[REP4-030]** and the Site Specific Written Schemes of Investigation (SSWSIs).
- 3.1.48 All pre-commencement archaeology shall be carried out in close coordination with the relevant County Archaeologist.

Traffic Management

- 3.1.49 None of the pre-commencement works require long-term traffic management i.e. It is expected that any traffic management required to complete pre-commencement works will be erected at the start of a shift and removed at the end of the same shift.
- 3.1.50 The use of traffic management systems will 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 will be prioritised.
- 3.1.51 Where traffic management is required, it will be designed and implemented by a specialist traffic management contractor, only in accordance with any consents necessary.
- 3.1.52 In advance of any temporary traffic management being implemented, the specialist traffic management contractor will 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 (TTRO), Road space bookings and temporary traffic lights.
- 3.1.53 Where traffic management is complex in nature, advice and coordination will be sought from the Local Highway Authority, to avoid any conflict with other works on the network.
- 3.1.54 Traffic management on the strategic road network will also be avoided where possible during pre-commencement works and will also be subject to all applicable roadspace bookings, permits and licences.
- 3.1.55 No traffic management will 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 will not proceed until an alternative suitable licence or permit is approved.

Predicted HGV Movements

- 3.1.56 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.
- 3.1.57 It is not planned that any of the pre-commencement works will be ongoing for the full duration of the pre-commencement period or that all of these works will be progressed at the same time. Some of these works will however be progressed in parallel. The numbers provided in the table below are indicative based on the information available at the time of writing this plan as we can reasonably foresee at this stage.

Pre-Commencement Task	Estimated number of HGVs per week	Comments
a. Archaeological investigations and mitigation works.	5	-
b. Environmental surveys.	0	-
c. Pre-construction mitigation works.	5	-
d. Investigations for the purpose of assessing and monitoring ground conditions and levels.	5	-
e. Remedial work in respect of any contamination or other adverse ground conditions.	300	All via the strategic road network.
f. Erection of any temporary means of enclosure.	5	-
g. Temporary hardstanding.	Unknown	Scope currently unknown.
h. Receipt and erection of construction plant and equipment.	15	All via the strategic road network.
i. Diversion and laying of underground apparatus and utilities.	Unknown	Scope reliant on utility companies.
j. Protection works.	10	-

Pre-Commencement Task	Estimated number of HGVs per week	Comments
k. Demolition.	10 (80 peak)	All will be via the strategic road network with the peak numbers for a three week period.
l. Site clearance.	5	-
m. Construction compound set up.	20 (60 peak)	20 HGVs per week generally which may rise to 60 per week for a three week period. All will be via the strategic road network.
n. The temporary display of site notices or advertisements.	0	-

4. References

- Ref 1-1. BS7121 Part 1 2006: Code of Practice of Safe Use of Cranes (2006)
- Ref 1-2. BS 5837:2012 Trees in relation to design, demolition and construction. British Standards Institution (2012).
- Ref 1-3. BS 3998:2010 – Tree Work: Recommendations. British Standards Institution (2010).
- Ref 1-4. The Control of Pollution (Oil Storage) (England) Regulations 2001
- Ref 1-5. The Definition of Waste: Development Industry Code of Practice (v.2). Contaminated Land: Applications in Real Environments (2011).
- Ref 1-6. The Environmental Permitting (England and Wales) Regulations 2016. Parliament: Government Legislation, UK Statutory Instruments (2016) No.1154.