

A12 Chelmsford to A120 widening scheme TR010060

6.5 First Iteration Environmental Management Plan Appendix D: Contaminated Land Management Plan

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6.5 First Iteration Environmental Management Plan Appendix D: Contaminated Land Management Plan

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Appendix D Contaminated Land Management Plan

D.1 Background to the plan

- D.1.1 The proposed scheme comprises improvements to the A12 between junction 19 (Boreham interchange) and junction 25 (Marks Tey interchange), a distance of approximately 24km, or 15 miles. The proposed scheme involves widening the A12 to three lanes throughout (where it is not already three lanes) with a bypass between junctions 22 and 23 and a second bypass between junctions 24 and 25. It also includes safety improvements, including closing off existing private and local direct accesses onto the main carriageway, and providing alternative provision for walkers, cyclists and horse riders (WCH) to existing routes along the A12, which would be removed. A detailed description of the proposed scheme can be found in Chapter 2 of the Environmental Statement [TR010060/APP/6.1].
- D.1.2 Contamination of geological and soils resources can affect residential receptors, businesses and commercial facilities, users of the road and public rights of way network, users of open space, and sensitive ecological sites and habitats. This Contaminated Land Management Plan, in outline, sets out the measures that will be used by the Principal Contractor (PC) to manage potential impacts during construction, such as the disturbance of potentially contaminated land and creation of new pollution pathways (i.e. routes by which pollutants can reach environmental receptors that are vulnerable to their effects).
- D.1.3 This management plan will be updated by the PC and included within the second iteration Environmental Management Plan (EMP), as appropriate and necessary, prior to commencement of works in accordance with the relevant Requirements in Schedule 2 of the draft Development Consent Order (DCO) [TR010060/APP/3.1] and the requirements of the first iteration EMP [TR010060/APP/6.5].

D.2 Responsibilities

- D.2.1 In relation to the control and management of potential areas of contaminated land, the PC must establish the appropriate roles and responsibilities for site staff in accordance with the roles and responsibilities set out in Chapter 2 of the EMP.

D.3 Encountering unexpected contamination

- D.3.1 Contaminated land, including groundwater, could be encountered in areas where it is not anticipated during the construction of the proposed scheme.

- D.3.2 Unexpected contamination may include the unexpected discovery of hazardous building materials, such as asbestos containing materials, or the unexpected discovery of contaminants in addition to the types already identified onsite, such as surface or buried material with visual or olfactory evidence of contamination.
- D.3.3 To address the potential risk from encountering unexpected contamination, works involving excavating, soil stripping, or similar operations would be monitored, by way of observation, to check for unexpected or unusual materials with a contaminative potential. Site staff need to be vigilant for such areas to ensure that risks to the environment are controlled.
- D.3.4 Contaminated land may be indicated by areas of:
- Discoloured soil (e.g. chemical residues)
 - Odours (e.g. hydrocarbon odour)
 - Fibrous texture to the soil (e.g. asbestos)
 - Presence of foreign objects (e.g. chemical/oil containers/asbestos)
 - Evidence of previously worked soil
 - Evidence of underground structures, such as tanks
 - Waste pits
 - Redundant drain runs, tanks, flues
 - Redundant oil pipes
 - Evidence of liquids or solid wastes
 - Evidence of oils in gravels
 - Japanese knotweed contaminated soil (rhizomes/roots/stems)
 - Marker sheets from previous remediation works
- D.3.5 Where unexpected contamination is encountered, the PC must implement measures onsite, in accordance with the Construction Industry Research and Information Association (CIRIA) publication Environmental Good Practice (fourth edition) (2015) where practicable, to assess and control risks to humans, for example construction workers, site visitors and nearby residents, resulting from the disturbance of potential contamination. The PC is to quantify the extent of the potential risk from the contamination and follow a risk-based approach in accordance with Land contamination: risk management (Environment Agency 2021b).
- D.3.6 In accordance with best practice, work in the immediate area of concern would be made safe and secure and stopped until a suitably qualified specialist (in

consultation with the Environment Agency and relevant planning authority) is able to make an assessment. The assessment may involve the sampling and testing of the suspected contaminated material, as deemed necessary by the qualified specialist. The mitigation plan for contaminated land encountered is included in Section D.4.

- D.3.7 Further, in accordance with Requirement 6 of the DCO, as soon as reasonably practicable after finding the unexpected contamination, the qualified specialist must report this to the Secretary of State for Transport, the Environment Agency and the relevant planning authority.
- D.3.8 Upon completion of the assessment by a suitably qualified specialist, if remediation is considered necessary, then, in accordance with Requirement 6 of the DCO for the proposed scheme, a written scheme and programme for the remedial measures to be taken to render the land fit for its intended purpose must be submitted to and agreed in writing with the Secretary of State for Transport, following consultation with the Environment Agency and the relevant planning authority. Remediation must be carried out in accordance with the approved scheme.
- D.3.9 Where identified contaminated materials have been, or are to be, disturbed, the following measures must be adhered to:
- The provision of Personal Protective Equipment (PPE) to construction personnel. PPE shall be proportionate to the risk and may include items such as gloves, barrier cream, overalls, dust masks and respirators to minimise direct contact exposure with contaminated materials. The precise PPE requirements would be identified following an appropriate hazard assessment.
 - The provision of suitable hygiene facilities and clean welfare facilities for all construction site workers.
 - The monitoring of confined spaces for the potential accumulation of ground gases, and the restricting of access to confined spaces to suitably trained personnel and use of specialist PPE where necessary. These measures must also be implemented where concentrations of ground gases have been recorded above long-term and/or short-term workplace exposure limits.

D.4 Mitigation plan

Procedure for unexpected contaminated land encountered

- D.4.1 Should unexpected contamination be identified during excavation works, the following mitigation procedures must be implemented and adhered to:
- Works within the immediate area of concern should be made safe and secure to prevent the spread of contamination and stopped immediately.

- Report the discovery to the PC Project Manager and PC Environmental team, who would then inform the Secretary of State for Transport, the Environment Agency and the relevant local authority, and seek expert advice from a suitably qualified specialist.
- Notify other construction workers in adjacent working areas to prevent their contact with the suspected contaminated material.
- Undertake a risk assessment to minimise the risk to health and safety of site workers, including the identification of suitable PPE to mitigate any potential exposure and acceptable working methods.
- As deemed necessary by the qualified specialist, undertake an assessment of the suspected contaminated material, for example via chemical testing to characterise the suspected contaminated material. As required, agree changes to the existing site proposals and method statements.
- All excavated materials proposed for reuse would be required to meet site-specific material acceptability criteria. Contaminated materials that cannot be reused onsite would be disposed offsite. A hazardous waste assessment would be undertaken to first classify the waste material in accordance with Technical Guidance WM3 (Environment Agency, 2021a). Once classified, further Waste Acceptance Criteria (WAC) testing would be undertaken, as required, to assist landfill operators to determine if they can accept the waste. The disposal of contaminated materials must comply with all relevant waste management regulations.
- Should remediation be required, a written scheme and programme for the remedial measures must be produced outlining the appropriate measures to be taken to render the land fit for its intended purpose. This must be submitted to and approved in writing by the Secretary of State for Transport in consultation with the Environment Agency and the relevant planning authority.
- Inform the landowner and occupier of the identification of contamination.
- The location of any such contamination encountered shall be recorded, including the results of chemical testing, the volumes sentenced for treatment by remediation, and where relevant the validation data showing compliance with the relevant site-specific material acceptability criteria, and the location of the area of use of any remediated material within the proposed scheme.

D.5 Measures to protect geological and soils resources

D.5.1 As identified within Chapter 10: Geology and soils, of the Environmental Statement [TR010060/APP/6.1] there are known contaminated soils. An infilled gravel pit has been identified in borrow pit J which is understood to have been backfilled with waste materials, including suspected asbestos-containing

materials (ACM). Cement-bound asbestos was identified within the Made Ground in BH3045 located at Old London Road, near Marks Tey roundabout.

D.5.2 In the borrow pit J and BH3045 locations the following measures would be taken during construction of the proposed scheme:

- An exclusion zone would be set up around the area of infilled land containing suspected ACM in borrow pit J and at BH3045 (close to Marks Tey roundabout) where chrysotile asbestos was identified. No works would be undertaken in this area including excavation, vehicle movements and storage to avoid ground disturbance and potential release of airborne asbestos fibres.
- Appropriate signage would be secured to exclusion zone fencing displaying the potential risks of the area.
- If due to design requirement ground disturbance cannot be avoided within exclusion zones (particularly at BH3045), then further risk assessment would be undertaken to determine if remediation is required.

D.5.3 Potential impacts on geological and soils resources from contaminated land and materials would be avoided or minimised through the implementation of the following measures during construction of the proposed scheme:

- The routine testing of soils during earthworks, in order to confirm suitability for reuse against site-specific material acceptability criteria and to identify potentially contaminated materials.
- The sheeting of lorries when transporting excavated materials offsite and the use of dust suppression equipment onsite, to reduce potential migration dust that might contain potentially contaminated materials.
- The provision of adequate fuel/chemical storage facilities, such as bunded tanks, hardstanding and associated emergency response/spillage control procedures.
- The temporary onsite storage of contaminated material in designated areas, with materials placed on impermeable surface, for example sheeting or concrete to minimise the potential for leachate to contaminate the underlying substrate.
- Where practical, contaminated material would be covered, for example with plastic sheeting, or another method of control to prevent runoff from stockpiles to prevent infiltration of precipitation and the spread of soluble contaminants.
- Control surface drainage from stockpiled area. Water draining from a stockpile may be contaminated and require controlled offsite disposal.
- Employing good construction working practices and the correct reuse or disposal of contaminated arisings, in order to minimise the creation of pollution pathways.

- The use of protective measures to prevent pathways between contaminants and groundwater and surface water bodies.

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