

# **M60/M62/M66 Simister Island Interchange**

**TR010064**

## **6.5 FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN APPENDIX J: OUTLINE CONTAMINATED LAND MANAGEMENT PLAN**

APFP Regulation 5(2)(a)

Planning Act 2008

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(Applications: Prescribed Forms and  
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**FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN  
APPENDIX J: OUTLINE CONTAMINATED LAND MANAGEMENT PLAN**

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# Outline Contaminated Land Management Plan

## J.1 Background to the plan

J.1.1 Contamination of geological and soil 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 Outline Contaminated Land Management Plan (Outline CLMP) sets out the measures that will be used by the Principal Contractor (PC) to manage the potential impacts during construction of the M60/M62/M66 Simister Island Interchange (the "Scheme"), 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).

## J.2 Responsibilities

J.2.1 In relation to the control and management of areas of contaminated land within the Scheme boundaries, the PC will establish the appropriate roles and responsibilities for individual site staff in accordance with the roles and responsibilities set out in this First Iteration Environmental Management Plan (EMP) (TR010064/APP/6.5).

J.2.2 The Outline CLMP will be developed into a Contaminated Land Management Plan (CLMP) in the Second Iteration EMP.

J.2.3 The PC will be responsible for ensuring that all people working on the site, including sub-contractors, are working in line with the requirements of the CLMP, where appropriate.

## J.3 Encountering Contamination

J.3.1 Potential sources of contamination include soil, ground gas and groundwater. Initial assessments have been completed based on the ground investigations (GIs) undertaken on the Scheme to date and are reported in the ground investigation report (GIR) (Appendix 9.3 of the Environmental Statement Appendices (TR010064/APP/6.3)). There is the potential for soil contamination to impact human health, groundwater, and surface water quality. This includes asbestos fibres in made ground (engineered fill and Pulverise Fuel Ash (PFA)) between Sandgate Road and Haweswater Aqueduct Underpass, as well as analytes above water quality standards across the sites. There is also the potential for unexpected, contaminated materials to be present which were not identified during the GIs.

- J.3.2 The Scheme GIs and historical records have highlighted localised deposits of peat and three historical landfill sites. Whilst peat deposits are present within the Order Limits, the potential for the generation and migration of ground gases toward residential properties is assessed to be low. The landfills are similarly expected to have a low potential for gas generation due to the inert nature of the originally deposited materials and the age of the landfills. The nature of the construction is not expected to change the existing gas regime on or near the Order Limits, and so no further gas monitoring is required.
- J.3.3 Disturbance of contaminated soils within the Order Limits may cause an increase in the leaching of soils and mobilisation of contaminants along new or existing surface or sub-surface pollution pathways. This may lead to the quality of surface waters and groundwater aquifers being impacted through runoff, infiltration, and sub-surface movement.
- J.3.4 It is noted that there is always a risk of encountering unexpected contamination. Construction operations will be monitored by way of observation, to check for unexpected or unusual materials. Contaminated land may be highlighted by the following properties:
- 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.
- J.3.5 Note that loose asbestos fibres cannot be seen by the naked eye.
- J.3.6 If unexpected contamination is encountered, then the work area will be made safe and secure. Measures to control contamination will be in accordance with the Construction Industry Research and Information Association (CIRIA) publication 'Environmental Good Practice (fourth edition)' (CIRIA, 2015). 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 (LCRM) guidance (Agency, 2020).

J.3.7 Risk assessments and method statements (RAMS) for completing construction works within an area of contamination will consider the following:

- Contaminants – types, lateral and vertical extent, chemical form, concentrations, potential for contaminant leaching and migration, and background levels.
- Pathways – location, type, number, and extent.
- Ground type and geology.
- Receptors – location, types, relationship to site, vulnerability to substances, existing condition, and history.
- Personal Protective Equipment (PPE) – appropriate to the risk assessment.
- Hygiene facilities – location in relation to the work area.
- Monitoring – monitoring the work area during the construction works.

## J.4 Mitigation Plan

J.4.1 Where known contamination has been identified, the removal and remediation / disposal of this material will take place prior to construction works. The Contractor should note that these works may cause harm to human health and the environment, and suitable mitigation measures (such as damping down of asbestos contaminated materials) should take place.

J.4.2 As described in 'Section J.3 – Encountering Contamination', if contamination is found unexpectedly then works must be stopped immediately. Prior to recommencing works the following steps will be followed by the PC:

- Contamination is to be reported to the PC Project Manager and PC Environmental Lead. The PC will then be responsible consulting with the Environment Agency, the relevant planning authority, and seeking expert advice from a suitably qualified specialist on the contamination. After the consultation the PC will be responsible for seeking approval from the Secretary of State on the management of contamination
- Notify all site staff of the presence of the contamination.
- Make sure that the work area is safe and secure while an investigation is undertaken by a suitably qualified person.

- 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.
- Ensure all method statements for ongoing works in the area are aligned with the qualified specialists' recommendations to undertake assessments on the contaminated material (e.g. chemical testing during construction activities).
- Complete hazardous waste assessments to classify the waste material in accordance with the Technical Guidance WM3 (Environmental Agency, 2021). Waste Acceptance Classification (WAC) testing will be done throughout the operations to ensure that the landfill operators can accept the waste.
- The PC will record the location of any contamination and any testing or remediation undertaken. The landowner will be informed of any contamination that is identified.

## **J.5 Prevention of Harm**

- J.5.1 As discussed in 'Section J.3 – Encountering Contamination', Peat deposits have been recorded within the Order Limits at several locations: northeast of J18 (by the Northern Loop); north of M60 (west of J18); beneath the M60 west of J18; and, north of J18 immediately west of the M66. Due to its compressible nature, it is likely that peat deposits will need to be excavated and disposed of off-site as part of the works. The Order Limits also cover one historical landfill west of the M66 on Bridle Road, which is expected to be an inert landfill. Construction works are planned within this historical landfill site.
- J.5.2 Whilst peat deposits are present within the Order Limits, the potential for the release of ground gases toward residential properties is assessed to be low. Suitable risk assessments will be adhered to during the peat construction works. Construction work undertaken in areas of peat will be in line with the Health and Safety Executive (HSE) CDM regulations (Health and Safety Executive, 2015) and other guidance referenced in the CLMP.
- J.5.3 When working near peat areas, the following measures will be taken during construction activities:
- Appropriate tracked plant will be used for the removal of peat. Excavation will commence at the edge of the peat areas and work away from temporary access tracks due to the risk of instability. Where applicable, appropriate temporary works checks will be undertaken to apply specific working constraints during peat removal.
  - An exclusion zone will be set up around the peat excavation. No other works will be undertaken in the area while the excavation is ongoing and

any construction plant moving through the work area will travel only on constructed temporary access tracks.

- Appropriate signage will be secured to the exclusion zone demarcation to display the potential risks of the area.
- Site specific risk assessments will be undertaken for peat deposit removal in each section of the Scheme. The risk assessments will not only consider the work method of removing the peat, but also the transportation and disposal of the removed peat.

J.5.4 There is a potential risk to construction and maintenance workers in excavations and confined spaces from localised elevated ground gas, trapped in the made ground. To manage the risk appropriately, suitable risk assessments will be adhered to during the construction works in line with the Health and Safety Executive (HSE) CDM regulations (Health and Safety Executive, 2015) and other guidance referenced in the CLMP. When completing construction activities, there will be routine testing of soils during earthworks to identify potentially contaminated materials. If contamination is encountered, then all works will be stopped, and the procedure discussed in 'Section J.4 – Mitigation Plan' will be followed.

J.5.5 It is noted that there is always a risk of encountering contaminated materials on a construction site. General measures that will be put in place on-site to control contamination risks, should it be encountered, will include:

- The routine testing of soils during earthworks, 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 off-site and the use of dust suppression equipment on-site, to reduce potential migration of contaminated dust.
- The provision of adequate fuel/chemical storage facilities, such as bunded tanks, hardstanding and associated emergency response/spillage control procedures.
- The temporary on-site storage of contaminated materials in designated areas, with materials placed on impermeable surfaces, for example sheeting or concrete, to minimise the potential for leachate to contaminate the underlying substrate.
- Where practical, contaminated material would be covered to prevent runoff from stockpiles, and to prevent infiltration of precipitation and the spread of soluble contaminants.
- Controlled surface drainage from stockpiled area. Water draining from a stockpile may be contaminated and require controlled off-site disposal.



- Employing good construction working practices and the correct reuse or disposal of contaminated arisings.
- J.5.6 The use of protective measures on the edge of watercourses, stockpiles, and hard standing to prevent pathways between contaminants and groundwater / surface water bodies.
- J.5.7 It is noted that there are several watercourses in proximity to the Scheme and that there are planned construction works near these watercourses. Soils / materials should not be stockpiled within 250m of these watercourses to prevent runoff of potential contamination.

## J.6 References

- Land contamination risk management (LCRM)*. Retrieved from Gov.UK: <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>, Environment Agency Agency, (2020, October 8).
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