

Southampton to London Pipeline Project

Deadline 4

Appendix F: Outline Soil Management Plan
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Contents

Acronyms and Abbreviations	ii
1 Introduction	1
1.1 Overview of the Project	1
1.2 Purpose of the Outline Soil Management Plan	1
1.3 Aims and Objectives.....	2
1.4 Applicable Guidance.....	2
1.5 Roles and Responsibilities	2
1.6 Structure of the Outline Soil Management Plan	3
2 Geographical Context	4
3 Outline Soil Management Plan	5
3.1 Good Practice Measures	5
3.2 Construction Programme.....	6
3.3 Description of Works	6
3.4 Soils within Statutory Designated Sites.....	11
3.5 Potential Contaminated Land	11
4 Site Checks and Reporting	13
4.1 Site Checks	13
4.2 Complaints.....	13
References	14



Acronyms and Abbreviations

Acronym	Definition
CEMP	Construction Environmental Management Plan
CoCP	Code of Construction Practice
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
ECoW	Environmental Clerk of Works
LEMP	Landscape and Ecological Management Plan
MAFF	Ministry of Agriculture, Fisheries and Food
RoFSW	Risk of Flooding from Surface Water
SEP	Suitably experienced person
SMP	Soil Management Plan



1 Introduction

1.1 Overview of the Project

- 1.1.1 Esso Petroleum Company, Limited (Esso) is making an application for development consent to replace 90km (56 miles) of an existing pipeline to transport aviation fuel between Boorley Green in Hampshire and the Esso West London Terminal storage facility in Hounslow. The replacement pipeline is 97km long taking into account that it cannot follow the line of the existing pipeline along its whole length due to new developments and environmental constraints.
- 1.1.2 Esso has already replaced 10km of pipeline between Hamble and Boorley Green in Hampshire. The replacement pipeline starts near Boorley Green at the end point of the previously replaced pipeline. The route runs generally in a northeast direction via Esso's Pumping Station in Alton. It terminates at the Esso West London Terminal storage facility. The areas of land to be permanently or temporarily used for the project are known as the Order Limits.
- 1.1.3 Works to install and commission the pipeline are expected to start from grant of Development Consent Order (DCO) and be completed by early 2023. Certain advance works may take place prior to development consent where consented under alternative regimes, for example, the Town and Country Planning Act 1990.

1.2 Purpose of the Outline Soil Management Plan

- 1.2.1 This Outline Soil Management Plan (SMP) has been produced as an appendix to the Outline Construction Environmental Management Plan (CEMP). The final SMP will be in accordance with the Outline SMP. The final CEMP and appendices will be produced prior to construction and will be submitted and approved by the relevant planning authorities in accordance with Requirement 6 in the DCO. Esso and its supply chain of contractor(s) will adopt the control measures set out in the final SMP when undertaking the construction of the pipeline and ancillary works.
- 1.2.2 The outline SMP should be read alongside the following plans:
- Outline CEMP Appendix B: Outline Water Management Plan – which contains details about locations of stockpiles of soil in terms of reducing flood risk and silt runoff.
 - Outline CEMP Appendix C: Outline Site Waste Management Plan – which contains details about how waste, including contaminated soil will be managed during construction of the project and how it should be disposed of.
 - Outline Landscape and Ecological Management Plan (LEMP), which contains additional information relating to soils in ecologically important habitats, measures relating to the control of invasive species and other biosecurity risks and aftercare arrangements.

1.3 Aims and Objectives

- 1.3.1 The overarching aim of the SMP is to set out the principles and procedures for general good practice for soils including the handling, storage and reinstatement of soil to reduce adverse effects on the nature and quality of the soil resource.
- 1.3.2 The aim of the outline SMP is to define:
- the contents and scope of the final SMP;
 - existing good practice measures in relation to soil management, as set out within the Register of Environmental Actions and Commitments (REAC) in ES Chapter 16 (**Application Document [APP-056](#)**);
 - guidance documents that will be considered when producing the final SMP; and
 - where details will be set out in the final Dust Management Plan(s) (DMP).
- 1.3.3 The controls and management measures presented in the Outline SMP apply to all soils potentially affected by the authorised development within the Order Limits, unless otherwise stated.

1.4 Applicable Guidance

- 1.4.1 Effective management of the soil resource through the construction process is required to maintain good soil quality. This is recognised in the following documents which will be considered by the contractor when producing the final SMP in accordance with Commitment G150:
- Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Department for Environment, Food and Rural Affairs, 2009);
 - Good Practice Guide for Handling Soils (Ministry of Agriculture, Fisheries and Food, 2000);

1.5 Roles and Responsibilities

- 1.5.1 Overall roles and responsibilities for the project will be presented in the final CEMP. The main roles and responsibilities specific to the Outline SMP are set out in Table 1.1 along with the specification for the roles where applicable. The final SMP(s) will include further details in relation to organisational structure and the individuals with specific responsibilities.

Table 1.1: Roles and Responsibilities (*Illustration only*)

Roles and specification	Responsibilities
Environmental Manager	Responsible for producing the final SMP and for producing the methodologies for handling soil on the project. Also responsible for obtaining the approval of the relevant planning authority.
Environmental Clerk of Works	Responsible for ensuring the mitigation set out in the final DMP is implemented, for undertaking periodic checks on site, and for investigating dust issues or complaints.
Soil suitably experienced person	This person would be expected to have the relevant experience to supervise the relevant aspects of the SMP. They would be employed to



Roles and specification	Responsibilities
	oversee the management of soil during soil stripping, handling, storage and reinstatement.
Land contamination suitably experienced person	This person would be expected to have the relevant experience to identify contamination risks and to identify suitable working methods and mitigation as appropriate based on desk study and field observations.
Land Agent	The Land Agent would provide the main liaison role between the contractor and the relevant landowner. They will agree preconstruction conditions and sign off completion and handover.

1.6 Structure of the Outline Soil Management Plan

1.6.1 The Outline SMP includes:

- Section 2: This contains a summary of the baseline environment for soil, taken from Environmental Statement (ES) Chapter 11 (**Application Document [APP-051](#)**);
- Section 3: This includes the main body of the SMP, with the generic commitments and details about how soils will be protected, stored and reinstated as part of the works; and
- Section 4: This outlines the site checks and reporting that will be undertaken in respect of soils.

2 Geographical Context

- 2.1.1 ES Chapter 11 (**Application Document [APP-051](#)**) set out the assessment for soils in relation to the project. Details in relation to the different geographical sections can be found in Section 11.3 of ES Chapter 11. Details about published soils types can also be found at Soilscales (2020) and should be considered when developing the final SMP.
- 2.1.2 The predominant soils are freely draining slightly acid to acid loamy and sandy soils, with more limited areas of freely draining lime-rich soils and seasonally waterlogged loamy and clayey soils. Peat soils (1024b - Adventurers' 2) are confined to the section between Bisley and Pirbright Ranges to the M25 and constitute approximately 1% of the overall Order Limits.
- 2.1.3 The soil associations within the section from Boorley Green to Bramdean are mainly freely draining loamy soils, but seasonally waterlogged loamy and clayey soils are mapped around the south of the section. The section from Bramdean to South of Alton is characterised by freely draining loamy soils – mainly slightly acid over superficial deposits, interspersed with shallow lime-rich soils often directly over chalk. Freely draining lime-rich loamy soils over chalk are dominant between the area South of Alton to Crondall, but freely draining slightly acid loamy soils are also common.
- 2.1.4 The most frequently occurring soil types in the area between Crondall and Farnborough are very acid sandy and loamy soils with variable soil-water regimes. Seasonally waterlogged loamy and clayey soils are also common between Crondall and Farnborough. The section from Farnborough to Bisley and Pirbright Ranges contains mostly acid sandy and loamy soils of variable soil-water regimes. Very acid sandy and loamy soils with variable soil-water regimes are widespread from Bisley and Pirbright Ranges to the M25 with a mix of other soils present such as seasonally waterlogged loamy and clayey soils. This section also contains all of the mapped peat soils, which are situated to the east of Lightwater and southeast of Windlesham.
- 2.1.5 The area between the M25 and the M3 comprises mainly seasonally waterlogged loamy and clayey soils, and from the M3 to the West London Terminal storage facility the area contains only freely draining slightly acid loamy soils.
- 2.1.6 The provisional Agricultural Land Classification (ALC) data only provide a broad indication of potential ALC grades. However, they show Best and Most Versatile land to be potentially present for over half of the Order Limits, mostly Grade 3 (undifferentiated), in the areas between Boorley Green and Aldershot. For the remainder of the route, non-agricultural and urban land are most common with pockets of Grades 1, 2, 3 and 4.

3 Outline Soil Management Plan

3.1 Good Practice Measures

3.1.1 Esso has made a number of commitments which relate to reducing the impact of the project on the environment. These were set out in the REAC in ES Chapter 16 (**Application Document APP-056**). The commitments are indicated by a reference number, for example (G13). The ones relevant to the outline SMP are listed in Table 3.1 and will be included in the final SMP. The following sections of the Outline SMP set out further details in addition to the commitments, about how the construction works will be undertaken.

Table 3.1 Project Commitments Relevant to the Outline SMP

Commitment number	Commitment
G13	Protection of earthworks and soil would be managed by methods such as covering, seeding or using water suppression where appropriate.
G29	Topsoil would be returned to its final location at the earliest suitable time of year.
G71	<p>For all areas, the following strategic approach would be taken for the management of both known and unknown land contamination:</p> <ul style="list-style-type: none"> • a desk-based qualitative risk assessment would be undertaken on the basis of available information to ascertain areas of known and unknown contamination; • working methodologies would be produced based on the assessment; and • contingency plans would be developed for dealing with various forms of known or unknown contamination to allow work to progress with limited delay. These procedures would clearly define methods for dealing with any areas of unexpected contamination to manage immediate risks and prevent any contamination, ground gas, airborne contaminants or odour spreading from the affected area, and for appropriate disposal. Measures would contain protocols for dealing with areas of potential asbestos-containing materials, should they be encountered. <p>For areas where potential contamination is known or strongly suspected to be present as a result of past activities, the following would also be undertaken:</p> <ul style="list-style-type: none"> • ground investigation information would be shared and developed as appropriate; • risks to receptors would be assessed, and mitigation and working methods to control those risks would be developed. Risks would include: encountering contaminated dust, soils and groundwater; and where the presence of ground gas and/or vapours may lead to confined space risks, such as in excavations; • a Suitably Experienced Person (SEP) would ensure that risk areas are identified, working methods followed and mitigation carried out appropriately; • made ground and materials known or strongly suspected of being contaminated would be segregated from natural and inert materials; and • ground arisings deemed unsuitable for re-use within the project would be disposed of appropriately for example to a soil treatment centre or landfill.
G72	A Land Contamination SEP would be appointed. They would have practical experience in brownfield earthworks and be able to use their professional judgement to take a proportionate approach to the assessment of potential for ground contamination based on the desk study information and field observations. Their work would be on a targeted basis.
G74	Excavation materials identified by the Watching Brief as being potentially contaminated and unsuitable for re-use within the project would be segregated from other material and transported off-site in suitable vehicles for off-site testing and subsequent disposal. Vehicles would contain and cover the materials to prevent loss of leachate, dust or other material during transport.



Commitment number	Commitment
G75	Where the route passes through areas where there are active Environmental Permits (for example authorised landfill sites), the contractor(s) would work with the permit holder to comply with the permit requirements. This could include: <ul style="list-style-type: none"> • seek agreement from permit holders and regulators to allow works to proceed; • reinstatement of surface restoration materials; • reinstatement of artificial geological barriers (where present); and • if applicable to the site, work in accordance with relevant quality assurance procedures.
G148	Where identified in the Soil Management Plan, a Suitably Experienced Person (SEP) would be employed to oversee the management of soil during soil stripping, handling, storage and reinstatement.
G151	A methodology would be produced for stripping, handling, storage and replacement of all soils to reduce risks associated with soil degradation. This would include: <ul style="list-style-type: none"> • identification of appropriate plant to strip, reinstate and otherwise handle soils; • methods for compaction and grading of stockpiles; • methods for working in naturally wet soils; and • specification of appropriate decompaction measures to be used during reinstatement.
G154	Where topsoil stripping is required, the normal working practice (where not otherwise specified within a methodology document) would be to strip full depth of topsoil (where present) from: <ul style="list-style-type: none"> • construction compounds and logistics hubs; • access roads; • across the working width; and • any other areas to be trafficked. The topsoil would be reinstated above the subsoil.
G155	Topsoils and subsoils intended for reinstatement would be temporarily stockpiled as close to where they were stripped from as practicable.
G157	Appropriate techniques would be used when necessary to provide protection for subsoils from compaction and smearing in areas subject to heavy trafficking. The specific protection measures and their required locations would be set out in the appointed contractor's methodology document and agreed between the contractor(s) and overseeing Suitably Experienced Person (SEP) prior to construction commencing.
G158	Stripping and reinstatement of topsoils would only be carried out when topsoils are in a reasonably dry state.
G159	Different soil types and made ground would be stripped and stored separately where applicable.

3.2 Construction Programme

3.2.1 The construction schedule has yet to be developed in detail, as this would be undertaken during the detailed design stage. The high-level construction programme will be included within the final CEMP. Details in relation to soil management will be added to this section in the final SMP, for example the main timings for soil stripping and reinstatement in terms of seasonal working.

3.3 Description of Works

1.1.1 A project description is set out within Environmental Statement Chapter 3 (**Application Document APP-043**). This describes the main works that would be undertaken before, during and after installation.

- 3.3.1 This section of the final SMP will contain additional details based on the appointed contractor's final construction design and methodology. In accordance with Commitment G151, the contractor will produce a methodology for stripping, handling, storage and replacement of all soils to reduce risks associated with soil degradation. This will be based on the information provided within the outline SMP and will include:
- Identification of appropriate plant to strip, reinstate and otherwise handle soils;
 - Methods for compaction and grading of stockpiles;
 - Methods for working in naturally wet soils; and
 - Specification of appropriate decompaction measures to be used during reinstatement.
- 3.3.2 In accordance with Commitment G157, the methodology will be agreed between the contractor(s) and the SEP prior to construction commencing.

Site Planning and Preparation

- 3.3.3 Site preparation will include the clear marking and signposting of access tracks and all areas that will remain undisturbed during construction activities. Areas of soil that are not to be stripped will be protected. This will either be by total exclusion with the use of fencing or other barriers or by the provision of ground protection, for example track matting, geomembrane etc. No trafficking of vehicles/plant or materials storage will occur outside demarcated working areas.
- 3.3.4 Soil storage areas for different types of topsoil and subsoil will be identified prior to construction activities to avoid the mixing of these resources. The locations identified will take into account the following project commitments:
- G155: *'Topsoils and subsoils intended for reinstatement would be temporarily stockpiled as close to where they were stripped from as practicable'*; and
 - G159: *'Different soil types and made ground would be stripped and stored separately where applicable'*.
- 3.3.5 The stockpile locations should take into account other site constraints such as flood zones (see Flood Risk Assessment (**Application Document [APP-134](#)**)), archaeologically sensitive features (see ES Chapter 9 (**Application Document [APP-049](#)**)) and habitat areas (see ES Chapter 7 (**Application Document [APP-047](#)**)).
- 3.3.6 The final SMP will set out how areas of vegetation will be stripped to reduce the presence of excessive amounts of plant material in the stockpile, which could affect the soil quality due to its putrefaction (rotting) in anaerobic conditions. Cuttings must not be added to or mixed with the stripped soil.

Soil Stripping

- 3.3.7 The soil stripping method will follow the guidance set out in Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009).
- 3.3.8 This section of the final SMP will set out the contractor(s) method and machinery for undertaking the topsoil and subsoil stripping. The size of the earthmoving plant to be

used should be tailored to the size of the area to be stripped and the space available within the working area. The use of a long-reach excavator could reduce the need for movement across the soil surface, and the use of tracked vehicles will reduce soil compaction. All plant and machinery will be maintained in good working condition so that the soil is stripped correctly and to reduce the risk of contamination through spillages.

- 3.3.9 In accordance with Commitment G154, where topsoil stripping is required, the normal working practice (where not otherwise specified within a construction methodology within the CoCP (**Document Reference 6.4 Appendix 16.1 (3)**), would be to strip full depth of topsoil (where present) from:
- construction compounds and logistics hubs;
 - access roads;
 - across the working width; and
 - any other areas to be trafficked.
- 3.3.10 The soil handling methodology will be determined based upon soil moisture content. Where practicable, soil handling when soil moisture content is above the lower plastic limit (the moisture content at which soil begins to behave as a plastic material and the soil is deemed too wet to handle without causing damage to the soil structure), should be avoided. All handling will cease when the ground is frozen and only restarted when soils are in a reasonably dry and friable state (Commitment G158).
- 3.3.11 In some cases, it may be necessary to handle soils when they are wet, for example due to programme, engineering or due to the specific nature of the soil, for example in wetland areas. In these cases, location-specific methods will be agreed with the SEP prior to work commencing.
- 3.3.12 Topsoil will be recovered to the full width of the working area without contamination with the subsoil. The boundary between the topsoil and subsoil is usually very clearly visible through a change in colour (the topsoil being much darker due to greater organic matter content). Where it is not clear the SEP will advise on the appropriate depth.
- 3.3.13 Topsoil can be stored either on topsoil (of the same type) or on subsoil. Subsoil can only be stored on subsoil and therefore the topsoil must be stripped from subsoil storage areas. In most cases, the soil will be stored locally within the Order Limits. The exception will be in some reduced width working locations (see Annex A of the CoCP for more details (**Document Reference 6.4 Appendix 16.1 (3)**). In these cases, due to the limited working space, any soil will generally be stored at the nearest available space within the order limits.
- 3.3.14 ES Chapter 9 (**Application Document [APP-049](#)**), identifies a number of areas of known archaeological significance or high archaeological potential. Some of these areas will be subject to 'Strip, Map and Sample' archaeological investigation prior to the commencement of main construction activities as set out in the Archaeological Mitigation Strategy (**Application Document [APP-113](#)**). The specific locations will be identified in a Written Scheme(s) of Investigation (WSI). In these areas, the soils will be stripped under archaeological supervision following the methodology set out within the WSI(s).

Creation of Stockpiles

- 3.3.15 Soil stockpiling will be required during construction activities to enable the reuse of the soil resource, limit soil damage from weather and other construction activities and soil loss. Stockpiles will be designed and positioned to reduce the risk of: causing pollution to surrounding watercourses; dust generation; and increasing flood risk to the surrounding area. Stockpiles should not be positioned where they are vulnerable to compaction or erosion (see CEMP Appendix C).
- 3.3.16 The following commitments will apply in relation to stockpiles with further details included in CEMP Appendix B Outline Water Management Plan (**Document Reference 8.51**):
- G184: Stockpiles would not be located within 10m of any main rivers or ordinary watercourses;
 - W5: Topsoil and subsoil would be stockpiled for as short a duration as practicable within Flood Zone 3 and areas of High and Medium Risk of Flooding from Surface Water (RoFSW);
 - W6: Stockpiles in Flood Zone 3 or areas of High or Medium RoFSW would not exceed 10m between breaks. Breaks in between stockpiles would be at least 1m. Breaks would be located opposite each other on either side of the excavation where practicable; and
 - W7: Stockpiles would not be stored within Ively Brook Flood Zone 3, east of A327.
- 3.3.17 The contractor(s) will insert details here in the final SMP about the maximum height of topsoil and subsoil stockpiles. Topsoil stockpiles should not exceed 4m in height and subsoil stockpiles should not exceed 5m in height. In accordance with Commitment G13, protection of earthworks and soil will be managed by methods such as covering, seeding or using water suppression where appropriate. For all soils, records will be made of the stripping locations to assist in the reinstatement.
- 3.3.18 Soil will be stored in an area of the site where it can be left undisturbed and will not interfere with site operations. Ground to be used for storing the topsoil should be cleared of excessive vegetation. Topsoil can be stored either on topsoil (of the same type) or on subsoil. However, as subsoil should only be stored on subsoil, topsoil should first be stripped from any land to be used for subsoil storage.
- 3.3.19 Stockpiles will be formed by loose-tipping into heaps. During formation, the top and sides will be smoothed with the bottom of the excavator bucket along the stockpile surface so that they can shed water more easily down a uniform gradient. This will reduce the risk of water entering into the stockpile and ensure that the stored soil remains dry, helping to reduce erosion and ponding.
- 3.3.20 The contractor(s) will insert details about the maximum gradient of stockpiles in this section of the final SMP. The natural angle of repose of a soil, and hence the maximum gradient of the stockpile sides, depends upon its texture and moisture content.

Stockpile and Subsoil Maintenance

- 3.3.21 This section of the final SMP will set out how stockpiles will be maintained. It will include details of when and where seeding would be applied to stockpiles based on the likely duration that the stockpile would be in place, and/or other measures, such as covering, to reduce the risk of runoff and colonisation of weeds. Where practicable, soils will not be stored for longer than 18 months and a programme of maximum storage periods will be provided within the final SMP (as per Commitment G150).
- 3.3.22 This section of the final SMP will also set out how stockpiles will be maintained to reduce the risk of dust. For example, implementing spraying with water during dry weather to prevent wind erosion (generation of dust).
- 3.3.23 The condition of the stockpiles should be regularly monitored. If rainwater gathers on the stockpile surface or in areas directly adjacent to them, drainage pathways to soakaway areas away from the stockpile should be provided.
- 3.3.24 In accordance with Commitment G157, appropriate techniques will be used when necessary to provide protection for subsoils from compaction and smearing in areas subject to heavy trafficking. The specific protection measures and their required locations will be set out in the final SMP. The final SMP will also set out the specific controls on the use of machinery in areas where soils have not been stripped, in accordance with Commitment G150.

Reinstatement

- 3.3.25 Soil replacement will follow the methodology set out by Defra (2009). In accordance with Commitment G158, reinstatement of topsoil will only be carried out when topsoil is in a reasonably dry state. Also, in accordance with Commitment G29, topsoil will be returned to its final location at the earliest suitable time of year.
- 3.3.26 In accordance with Commitment G94, land used temporarily will be reinstated to an appropriate condition relevant to its previous use. This will be achieved primarily by reinstating the full soil profile in the correct sequence of horizons, and in a state where good soil profile drainage and plant root development are achieved.
- 3.3.27 Soil reinstatement is the reverse of soil stripping with topsoil being replaced over subsoil (Commitment G154). Soil horizons will be replaced to the correct thickness. The contractor(s) will provide details of the methodology for reinstating the soils and how the works will avoid compaction of soils and also avoid trafficking of machinery over reinstated soils (topsoil or subsoil).
- 3.3.28 Prior to topsoil placement, subsoil decompaction may be required and details will be provided in the final SMP about how this will be achieved. Unless otherwise agreed, the top 305mm or a greater depth not exceeding 610mm of subsoil will be loosened with an agricultural cultivator before the replacement of any topsoil removed. For the decompaction to be effective, the moisture content of the soil must be below the lower plastic limit, so that the soil is dry enough to shatter and for fissures to be created.
- 3.3.29 Agricultural land will be reinstated to a condition as nearly as possible equivalent to that subsisting before the commencement of the works and free of introduced litter of

any kind; and reasonably practicable steps will be taken so that topsoil will be left in a loose friable and workable condition to its original full depth over the working area.

- 3.3.30 The aftercare period will commence after soil characteristics required to achieve the reinstatement standard have been achieved. This means that the land is brought as close as practically possible to its physical state before construction. Further details about aftercare and handover are contained within the Outline LEMP.

3.4 Soils within Statutory Designated Sites

- 3.4.1 The heathland habitats within statutory designated ecological sites, such as at Chobham Common Special Area of Conservation and the Thames Basin Heath Special Protection Area, will be reinstated using natural regeneration. This section of the final SMP will set out the specific methodology in relation to these areas and additional measures that may be required to protect the quality and structure of the soil. This is likely to include:

- classification of soils based on the habitat present; and
- stripping topsoil and subsoil from specific habitat areas and marking the source locations on a plan so that the soil can be replaced *in situ* to preserve the seedbank contained within the soil.

- 3.4.2 Further details relating to the methodology for works within designated sites and natural regeneration proposals can be found within the Outline LEMP (**Document Reference 8.50**).

3.5 Potential Contaminated Land

- 3.5.1 ES Chapter 11 (**Application Document APP-051**) identified a number of sites where there are existing data sources identifying potential contamination risks. These include for example former landfill sites or former industrial uses. As part of the design evolution, potentially contaminated sites were avoided where practicable. However, a residual risk remains that unidentified sites are present. Commitment G71 sets out the process that will be followed in relation to areas of both known and unknown contamination.

- 3.5.2 Commitment G71 states *'for all areas, the following strategic approach would be taken for the management of both known and unknown land contamination:*

- *a desk based qualitative risk assessment would be undertaken on the basis of available information to ascertain areas of known and unknown contamination;*
- *working methodologies would be produced based on the assessment;*
- *contingency plans would be developed for dealing with various forms of known or unknown contamination to allow work to progress with limited delay. These procedures would clearly define methods for dealing with any areas of unexpected contamination to manage immediate risks and prevent any contamination, ground gas, airborne contaminants or odour spreading from the affected area, and for appropriate disposal. Measures would contain protocols for dealing with areas of potential asbestos-containing materials, should they be encountered.*



For areas where potential contamination is known or strongly suspected to be present as a result of past activities, the following would also be undertaken:

- *ground investigation information would be shared and developed as appropriate;*
- *risks to receptors would be assessed, and mitigation and working methods to control those risks would be developed. Risks would include: encountering contaminated dust, soils and groundwater; and where the presence of ground gas and/or vapours may lead to confined space risks, such as in excavations;*
- *a Suitably Experienced Person (SEP) would ensure that risk areas are identified, working methods followed and mitigation carried out appropriately;*
- *made ground and materials known or strongly suspected of being contaminated would be segregated from natural and inert materials; and*
- *ground arisings deemed unsuitable for re-use within the project would be disposed of appropriately for example to a soil treatment centre or landfill.'*

3.5.3 This section of the final SMP will set out the working methodologies that have been developed based on the assessment and the contingency plan for dealing with known or unknown contamination. This will link with CEMP Appendix C; the Outline Site Waste Management Plan which will contain details of how ground arisings deemed unsuitable for re-use within the project will be disposed of appropriately, for example to a soil treatment centre or landfill.



4 Site Checks and Reporting

4.1 Site Checks

- 4.1.1 The contractor(s) will be responsible for record keeping and site checks during the construction period. The contractor will undertake regular audits and inspections as part of the compliance with the requirements of the final SMP. This will be in addition to the regular environmental inspections undertaken by the Environmental Clerk of Works (ECoW).
- 4.1.2 Table 4.1 in the final SMP will set out the site checks that will be undertaken during construction. Examples are provided in Table 4.1.
- 4.1.3 As set out in Commitment G148, where identified in the final SMP, a SEP will be employed to oversee the management of soil during soil stripping, handling, storage and reinstatement. The final SMP will contain details as to where the SEP will oversee the works (soil watching brief). This will be based on the sensitivity of the site and the proposed working methodology.

Table 4.1: Proposed Checks for Illustration

Action	Responsibility	Frequency
<i>Visual inspections to check soil stockpiles for example checking for signs of erosion, water ponding, loss of protective vegetation and signs of invasive species.</i>	<i>Contractor</i>	<i>Once a month and after rainfall exceeding 10mm in 24h.</i>
<i>Monitoring weather conditions during soil works and identifying problems and undertaking corrective actions.</i>	<i>Contractor</i>	<i>Daily during soil handling.</i>
<i>Checking conformance with the SMP</i>	<i>ECoW (with support from the SEP where required)</i>	<i>Typically once a week</i>

4.2 Complaints

- 4.2.1 The complaints procedure will follow the process set out within the final CEMP. A record would be made of the complaint or incident for audit purposes.



References

Cranfield Soil and Agrifood Institute (2020) Soilscales. Accessed January 2020.

Department of Environment, Food and Rural Affairs (2009) *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites*

Ministry of Agriculture, Fisheries and Foods (2000) *Good Practice Guide for Handling Soils*