

# M5 Junction 10 Improvements Scheme

**Environmental Management Plan**  
**Annex B.1 Materials Management Plan**  
**TR010063 - APP 9.1**

Regulation 5 (2) (q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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# Infrastructure Planning Planning Act 2008

## Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

### M5 Junction 10 Improvements Scheme Development Consent Order 202[x]

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#### Environmental Management Plans

#### Annex B.1 - Materials Management Plan

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# B.1. Materials Management Plan

## B.1.1. Introduction

### Purpose

- B.1.1.1. This document forms Annex B.1 of the Environmental Management Plan (EMP) (Application document TR010063/APP/7.3). Annex B.1 is a Materials Management Plan (MMP) (1st iteration) for the M5 Junction 10 Improvements Scheme (the Scheme). This MMP (1st iteration) will be updated by the appointed Principal Contractor (PC) into a MMP (2nd iteration), as required by Requirement 3 of the DCO, prior to commencement of works.
- B.1.1.2. The purpose of this MMP (1st iteration) is to provide outline requirements to be considered in relation to materials management for the Scheme, comprising:
- the procedures by which material resources in the ground will be managed during the construction of the Scheme;
  - details for processing of waste materials which may arise from construction/demolition in accordance with the Waste and Resource Action Programme Quality Protocol (WRAP QP); and
  - requirements for materials which may be imported.
- B.1.1.3. Topsoil, subsoil and other soil arisings will be managed in accordance with the Definition of Waste: Development Industry Code of Practice (DoWCoP) published by Contaminated Land: Applications in Real Environments (CL:AIRE)<sup>1</sup>. The MMP will be developed in collaboration with the PC and in accordance with the CL:AIRE Definition of Waste: Code of Practice; and (2) a Qualified Person registered with CL:AIRE will submit a declaration of the MMP's compliance with the DoWCoP.
- B.1.1.4. This MMP sets out a framework that defines the materials to be re-used, their suitability for re-use, including any defined remediation strategy and/or design statement, and how the PC will demonstrate the adherence to the requirements of the DoWCoP where applicable.
- B.1.1.5. The PC will take all reasonable steps to ensure that materials are handled efficiently and managed appropriately in accordance with this MMP. Procedures will be adopted by the PC during construction to control the use of materials and further reduce potential impacts to the environment.
- B.1.1.6. A DoWCoP verification report will be produced by the PC and submitted to CL:AIRE to demonstrate compliance with the MMP and to document all necessary regulatory authority approvals should a deviation occur.

### Structure of the Materials Management Plan

- B.1.1.7. This MMP includes:
- Section B.1.1: provides an introduction, description of the purpose of this document and roles and responsibilities in its implementation.
  - Section B.1.2: details the estimated quantities of earthworks materials expected to be generated by the Scheme and the material resources required for construction.
  - Section B.1.3: details the regulatory mechanisms for material re-use.

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<sup>1</sup> CL:AIRE. (2011). The Definition of Waste: Development Industry Code of Practice Version 2.

- Section B.1.4: presents the materials management strategy which outlines how materials will be managed and assessed to confirm they are suitable for use in the Scheme.
- Section B.1.5: details the requirements for monitoring and traceability of material movements.
- Section B.1.6: details procedures for the management and tracking of materials and the requirements of the Verification Report which is needed to be compiled and submitted to CL:AIRE upon completion of the works.
- Project Team Roles and Responsibilities.

B.1.1.8. Key roles and those responsible are summarised in Table B1-1 below.

**Table B 1-1 - MMP Roles and Responsibilities During Construction**

Position	Name and Contact Number	Responsibility
<b>Client Project Manager</b>	GCC	Approval of methods and procedures implemented by the Principal Contractor
<b>Principal Contractor Project Manager</b>	TBC	Approval for sign-off of the MMP for the relevant phase of works. Ensures that all controls specified within the MMP are implemented by employees and sub-contractors.
<b>Principal Contractor Environmental Manager</b>	TBC	Undertakes site inspections to monitor compliance with the environmental licences/consents for the works and the measures within the MMP. Ensures that the Scheme complies with all environmental legislation, consents, objectives, targets and other environmental commitments including those arising from the ES through the relevant project phase.
<b>Principal Contractor Site Materials and Waste Specialist</b>	TBC	EMP Responsibilities: <ul style="list-style-type: none"> <li>- Review of relevant sections of the EMP;</li> <li>- Ensure that all materials and waste elements of the EMP are complied with during construction; and</li> <li>- Ensure that the MMP is updated.</li> </ul> Overall responsibilities: <ul style="list-style-type: none"> <li>- Implement the MMP throughout the construction of the Scheme; and</li> <li>- Implement the SWMP throughout the construction of the Scheme (1<sup>st</sup> iteration SWMP provided in Annex B.12 of the EMP (Application document TR010063/APP/9.9).</li> </ul> Responsible for the production of the MMP and for production of the Verification Report.  Responsible for providing supporting evidence to submit a signed declaration to CL:AIRE.
<b>Qualified Person</b>	TBC	Registered with CL:AIRE ("Qualified Person") (to be completed at least six weeks prior to construction)
<b>External Earthworks Contractor</b>	TBC	Provision of Factory Production Control and Method Statement of Production of materials to be imported to the site under the WRAP quality protocol, if required.

## Register of Environmental Actions and Commitments

B.1.1.9. The following are the Register of Environmental Actions and Commitments (REAC) (Application document TR010063/APP/7.4) as they relate to the MMP.

Table B 1-2 - Materials Management Plan REAC

REAC	Commitment Text	Implementation mechanism
GS2	To reduce soil erosion and compaction during construction works.	EMP (1st iteration) (Application document TR010063/APP/7.3) Annex B1 – Materials management plan Annex B2 – Soil handling management plan (Application document TR010063/APP/9.2)
GS3	To prevent adverse risks to on-site and off-site human health, controlled waters, property and ecological receptors from the potential disturbance/ mobilisation of existing contaminated soil or groundwater and/or introduction of new sources of contamination (i.e. from spillages and leaks) during construction works.	EMP (2nd iteration) Annex B1 – Materials management plan Annex B2 – Soil handling management plan
GS5	To manage the re-use of waste soils/materials across the Scheme effectively.	EMP (2nd iteration) Annex B1 – Materials management plan
MS1	Minimising consumption of primary materials or other resources.	EMP (1st iteration) Annex B1 – Materials management plan Annex B12 – Site waste management plan (Application document TR010063/APP/9.9)
MS2	Minimising consumption of primary materials or other resources.	EMP (1st iteration) Annex B1 – Materials management plan Annex B2 – Soil handling management plan Annex B7 – Pollution prevention and control management plan (Application document TR010063/APP/9.7) Annex B12 – Site waste management plan
MS3	Minimising consumption of primary materials or other resources.	EMP (1st iteration) Annex B1 – Materials management plan
MS4, MS5	Generation and management of waste.	EMP (1st iteration) Annex B1 – Materials management plan Annex B12 – Site waste management plan
MS6	Reduce impacts associated with importing materials and exporting waste.	EMP (2nd iteration) Annex B1 – Materials management plan Annex B12 – Site waste management plan
MS7	Minimise material use and impact of material use from the Scheme.	EMP (1st iteration) Annex B1 – Materials management plan

## B.1.2. Estimate of Material Resources

## Design Decisions

- B.1.2.1. In general, the following measures will be implemented during the construction phase of the Scheme, where technically and financially practicable and where they protect both human health and the environment:
- Design out and prevent waste arising.
  - Reuse excavated earthworks materials within the Scheme.
  - Recycle demolition materials arising from the construction of the Scheme.
  - Divert unwanted material from landfill through off-site recycling and recovery.
  - Use recycled and secondary materials in the construction of the Scheme.
- B.1.2.2. Construction of the Scheme will require excavation in places to form cuttings for the highway and this material will then be used to form embankments and for general fill. The design aims to balance these 'cut and fill' requirements as far as practicable.
- B.1.2.3. Opportunities will be sought to maximise the use of site won materials through the reuse, recycling and recovery of site won materials in line with the requirements of the waste hierarchy<sup>2</sup>.
- B.1.2.4. The method for managing the earthworks and Scheme design allow for suitable materials which will be excavated on-site, to be reused at areas of the site where materials are required. This sustainable use of site derived materials avoids and reduces the amount of material that is required to be imported from off-site sources and minimises the amount of material to be disposed off-site.

## Material Volumes

- B.1.2.5. A variety of different materials will be required for the Scheme. The Scheme has been and will continue to be, designed to reduce the volumes of both the waste materials generated and the importation of construction materials, where practicable, by reusing or recycling the available existing materials within the Scheme in line with the requirements of the waste hierarchy.
- B.1.2.6. The ES Chapter 12: Material and Waste (Application document TR010063/APP/6.10), estimated the forecasted types and quantities of materials expected to be generated through construction of the Scheme. This was done using design information that was available at the time of the assessment (contained in the Bill of Quantities). These quantities have been included in Table B 1-3 below, showing only the materials to be managed through the MMP. However, the quantities will be updated at the Detailed Design stage as the design and construction programme becomes more advanced.

Table B 1-3 - Estimates of Waste Material Volumes

Earthworks	Total forecast material volume (t)	Recycled / Reused on-site (t)	Disposal off-site (t)
<b>Asphalt</b>	35,555	36,555	-
<b>Concrete</b>	3,806	3,806	-
<b>Excavated Soil</b>	230,577	161,404	69,173

- B.1.2.7. The PC will provide a detailed mass balance calculation for the Scheme and review, update and monitor these estimates throughout the construction. This will be updated in the MMP during the delivery of this Scheme. The PC will also ensure all required authorisations are obtained.

<sup>2</sup> UK Government. (2011). The Waste (England and Wales) Regulations.



- B.1.2.8. The PC will adopt good practice approaches to maximise the recycled content of material used in the Scheme.
- B.1.2.9. Materials will be imported for construction of the Scheme, including pavement, concrete and manufactured products. The regional recycled aggregates target outlined in the Design Manual for Roads and Bridges (DMRB) LA 110 Material assets and waste standards<sup>3</sup>, states that the recycled content target for alternative materials in the south-west is 22%.
- B.1.2.10. The PC will ensure that reused, recycled and secondary aggregates imported to site comply with all relevant technical and regulatory requirements. Imported aggregates, asphalt, concrete and manufactured products will be sourced locally, where possible.

### B.1.3. Regulatory Background

- B.1.3.1. Management of materials at the site will be undertaken in accordance with the sustainable waste management principles (in order of preference) of waste reduction, reuse, recovery and disposal.
- B.1.3.2. Excavated material generated by the development of land may be designated waste and subject to waste regulatory controls, which ensures that waste does not cause harm to human health or the environment. In certain circumstances, excavated material reused in the development of land may not be waste, and hence not subject to waste regulatory control provided that the aims and objectives of the Waste Framework Directive (WFD) are not undermined and that its use will not cause harm to human health or the environment. As such it is critical to understand the nature of the soils being excavated, their intended reuse and the regulatory regime in which they may be managed.
- B.1.3.3. The inappropriate re-use of site won soils or transfer of materials between sites without an exemption or MMP could render the operation as being classed as illegally importing and storing waste which could attract fines imposed by the Environment Agency, the requirement by HM Revenue and Customs (HMRC) to pay Landfill Tax duty or, potentially, a criminal prosecution.
- B.1.3.4. The use of excavated materials within the Scheme will be undertaken in line with the CL:AIRE DoWCoP.
- B.1.3.5. The following materials are within the scope of the CL:AIRE DoWCoP:
- soil, both topsoil and subsoil, parent material and underlying geology.
  - soil and mineral based dredgings.
  - ground based infrastructure suitable for re-use within earthworks projects e.g. road subbase, concrete floors.
  - Made Ground.
  - source segregated aggregate material arising from demolition activities, such as crushed brick and concrete, to be re-used on the site of production within earthworks projects or as subbase or drainage materials.
  - stockpiled excavated materials that include the above.
- B.1.3.6. The following materials cannot be reused under the CL:AIRE DoWCoP:
- soils which have been contaminated with invasive weeds.
  - specific excavated infrastructure material such as pipework and storage tanks.
  - general construction wastes, for example plasterboard, glass, wood.

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<sup>3</sup> Design Manual for Roads and Bridges. (August 2019). LA 110 Material Assets and Waste (Revision 0).

- demolition wastes not included in the list of allowed materials in B1.3.6.
  - extractive wastes within the scope of the Mining Waste Directive (2006)<sup>4</sup> for which alternative regulatory provisions have been made.
- B.1.3.7. The CL:AIRE DoWCoP applies to both uncontaminated and contaminated material from anthropogenic and natural sources which have been excavated.
- B.1.3.8. If soils can be demonstrated to be clean naturally occurring, through appropriate description and chemical testing, they can be reused on the site of origin without requirement for waste legislation. However, evidence should be recorded, such as in the MMP, to demonstrate suitability and that this is an applicable approach. Direct transfer of naturally occurring soil would need to be undertaken in accordance with the Annex B.2 Soil Handling Management Plan (SHMP) and Appendix 2 of the CL:AIRE DoWCoP. Topsoil and subsoil should be appropriately classified as suitable for use and verified.
- B.1.3.9. The CL:AIRE DoWCoP presents four scenarios for the reuse of materials as summarised below:
- for use on the site from which it has been excavated, with or without treatment (i.e. Site of Origin scenario).
  - for use directly without treatment at another development site subject to the material meeting the requirements set out in Appendix 2 of the CL:AIRE DoWCoP (i.e. Direct Transfer scenario).
  - for use in development of land other than the site from which the material has been excavated, following treatment at an authorised hub site which is covered by an Environmental Permit including a fixed Soil Treatment Facility (STF) acting in this capacity (i.e. The Hub and Cluster scenario).
  - a combination of the above.
- B.1.3.10. The PC should confirm the relevant scenarios to be used when developing their design and updating the MMP.
- B.1.3.11. In the context of excavated materials used on sites undergoing development, the CL:AIRE DoWCoP includes four factors that need to be demonstrated to determine if it is a waste:
- Protection of human health and protection of the environment.
  - Suitability for use, without further treatment.
  - Certainty of use.
  - Confirmation of the quantity of material to be used.
- B.1.3.12. Excavated materials that are to be treated on or off site are generally considered to be a waste therefore treatment must be done under an environmental permit, but that a declaration can be made under the CL:AIRE DoWCoP for materials requiring treatment under on the assumption that treatment will be successful (Watchpoint 2 of the DoWCoP).
- B.1.3.13. Construction activities carried out on uncontaminated soil solely for the purpose of improving geotechnical properties are not generally considered a waste treatment operation - e.g. lime stabilisation, vibro compaction.
- B.1.3.14. The four criteria above need to be supported by relevant documentation and regulatory authority agreements in relation to the proposed sources and a risk assessment undertaken on the basis of either material importation criteria or for each specific source once known.
- B.1.3.15. Compliance to the CL:AIRE DoWCoP scheme enables reuse of materials such that the Environment Agency and HMRC would be unlikely to consider that materials are waste. Projects can be, and are, subject to spot-checks by CL:AIRE, the Environment Agency and HMRC. Inappropriate and / or undocumented transfer and reuse of materials could

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<sup>4</sup> European Commission. (2006). The Mining Waste Directive 2006/21/EC.

render the operation as being classed as illegally storing and using waste. This is a criminal offence which could attract fines imposed by the Environment Agency, together with application of landfill tax by HMRC.

- B.1.3.16. Where materials will be stockpiled in excess of one year duration, the maximum allowable duration will be agreed with the Environment Agency. Supporting information may be requested in the form of site plans, cross sections and stockpile management methodology.
- B.1.3.17. Where the project produces construction and demolition waste that is considered to be inert and acceptable for the production of recycled aggregates, as defined in the Waste and Resource Action Programme Quality Protocol (WRAP QP): Aggregates from Inert Waste<sup>5</sup> it will be processed in accordance with the WRAP QP to make a recycled aggregate that is no longer considered to be a waste. The WRAP QP sets out end of waste criteria for the production and use of aggregates from inert waste (for example demolition materials). If the criteria set out are met, the resulting outputs will normally be regarded as having been fully recovered and to have ceased to be a waste (i.e. can be used without an environmental permit or exemption).

## Supporting Documentation

- B.1.3.18. The following documentation will support the MMP for the Scheme:
- Contaminated land risk assessments undertaken e.g. desk study, ground investigation reports including human health and controlled waters generic quantitative risk assessments.
  - Design Statement (to be prepared as a supplementary document as part of the MMP declaration) summarising the pertinent ground conditions and land contamination assessment supported by the Ground Investigation Report<sup>6</sup> and other information sources as may be available. A verification plan will also be included to detail how material will be monitored, traced and verified.
  - Evidence of regulatory agreement (Local Authority and Environment Agency) for use of DoWCoP and planning conditions discharge which is required to be obtained. Material will not be excavated until agreement of the MMP from the regulator has been obtained. The MMP will be reviewed and updated by the PC during Scheme construction.
  - Earthworks specifications detailing geo-environmental and geotechnical criteria suitable for reuse.
  - Cut and fill mass balance calculations to confirm the quantity of material to be reused.
  - Declaration by a qualified person registered with CL:AIRE (“Qualified Person”) (to be completed at least six weeks prior to construction).
  - Verification Report (to be completed at the end of construction).
  - Soil Handling Management Plan (Annex B.2 of the EMP) (Application document TR010063/APP/9.2).
- B.1.3.19. The following documentation supports the WRAP QP for the Scheme:
- The WRAP QP requires recycled aggregate to be produced in accordance with a Factory Production Control and Method Statement of Production. It will be the responsibility of the Earthworks Contractor producing the recycled aggregate to produce these documents and obtaining the appropriate authorisation prior to the start of any treatment.
  - Any treatment of inert waste (e.g. screening and crushing) to make recycled aggregates must be undertaken with an appropriate authorisation in place (e.g. Environmental

<sup>5</sup> Environment Agency and WRAP, “WRAP Quality Protocol: Aggregates from Inert Waste,” 2013

<sup>6</sup> Appendix 10.7 Ground Investigation Report (application document TR010063 APP 6.15).

Permit) and the Earthworks Contractor will be responsible for obtaining the appropriate authorisation prior to the start of any treatment.

- Pre-demolition audits and records are also required prior to work commencing to ensure any demolition materials not suitable to make aggregate (e.g. asbestos) are management appropriately.

## B.1.4. Materials Management Strategy

### Classification of materials

- B.1.4.1. The PC will develop an Earthworks Specification for suitable material to be used in construction, in accordance with the Specification for Highway Works<sup>7</sup>. Where appropriate, testing will be undertaken during construction to confirm that the materials used meet the specification requirements. This will apply to both site derived materials and imported materials.
- B.1.4.2. The Scheme will reuse as much material as possible on-site and reused material will be classified in accordance with the Earthworks Specification. Any material that does not meet this specification will be disposed of appropriately.
- B.1.4.3. The procedure for how unacceptable materials (waste) which may be present are to be managed is to be documented within the Site Waste Management Plan (SWMP) (Annex B.12 of the EMP) (Application document TR010063/APP/9.9).
- B.1.4.4. The acceptability criteria (defined in the Earthworks Specification) should ensure that materials to be reused are suitable for their intended use and do not pose a significant risk to human health or the environment. As required by the Earthworks Specification, materials should be verified as suitable for use.
- B.1.4.5. Any materials which are not deemed geotechnically suitable in accordance with the Earthworks Specification will be deemed unsuitable for reuse.
- B.1.4.6. Chemically unsuitable material will not be imported to the site. Any identified source materials shall be tested to confirm that they are suitable for reuse from a geotechnical and geo-environmental perspective in accordance with the Earthworks Specification.
- B.1.4.7. Where off-site disposal in relation to site won materials is required, the material will be characterised in accordance with the Environment Agency Technical Guidance WM3<sup>8</sup>. The management of such waste will be governed by the requirements of the SWMP (Annex B.12 of the EMP) (Application document TR010063/APP/9.9) and relevant waste management legislation.

### Land Contamination Assessment

- B.1.4.8. A ground investigation report (GIR) was undertaken for the Scheme in 2022<sup>9</sup>. The GIR report includes a land contamination assessment interpreting the site-specific soil, groundwater and surface water quality on-site against relevant generic assessment criteria protective of human health, controlled waters and property receptors.
- B.1.4.9. Based on the investigation and assessment presented within the GIR, the overall contamination risk associated with the site is considered to be low for human health receptors, controlled waters and very low for property receptors under the current and

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<sup>7</sup> Standards for Highways. (2017). Manual of Contract Documents for Highway Works Volume 1 Specification for Highway Works Series 600 Earthworks.

<sup>8</sup> Environment Agency. (September 2021). Technical Guidance WM3. Waste Classification. Guidance on the classification and assessment of waste (1st Edition v1.2 GB).

<sup>9</sup> AtkinsRéalis. (2022). M5 Junction 10 Improvements Scheme Ground Investigation Report (GIR) Ref: GCCM5J10-ATK-HGT-ZZ-RP-CE-000006.

future end use as a road. No unacceptable risks associated with land contamination were identified and no further ground investigation or remediation was considered necessary.

- B.1.4.10. It should be noted that appropriate sampling of the actual material excavated will be required with concentrations compared to appropriate site-specific reuse criteria within the Earthworks Specification to confirm suitability for reuse or otherwise, specific to the required end use.
- B.1.4.11. Made Ground soils, asphalt/sub-base and natural soils should be handled and stockpiled separately to avoid cross contamination and to facilitate reuse or disposal.
- B.1.4.12. Vigilance is to be maintained throughout the works for potential asbestos containing material at surface or other unexpected contamination during site clearance and earthworks in areas not previously investigated.

### Protection of Construction Workers

- B.1.4.13. The specification and provision of appropriate methods of work, personal protective equipment (PPE) and suitable hygiene facilities will be the responsibility of the PC.
- B.1.4.14. Measures to be adopted include:
- Informing the site workers of known or suspected contamination and the potential health effects from exposure through site induction and toolbox talks.
  - The provision of appropriate PPE to be worn by site workers.
  - The adoption of best practice for hygiene during construction.
  - Selection of appropriate methods of working to limit the potential for air-borne dust to arise associated with the excavation and disturbance of the soils present on the site.

### Protection of Neighbours

- B.1.4.15. Neighbours may be exposed to soil derived dusts during excavation works. Appropriate monitoring and control measures will be required during the works to control and minimise the potential for dust generation. Pollution prevention and control measures specifically relating to the generation of dust are provided within the Air Quality Management Plan (AQMP) for the Scheme (Annex B.4 of the EMP) (Application document TR010063/APP/9.4).
- B.1.4.16. The PC will take all reasonable measures to prevent any soil or dust being deposited upon any public or private highway or any surface watercourse. Where any such material does fall onto the highway, the PC will remove the material at their own expense and clean the surface of the highway to the satisfaction of the Client, Project Manager or Highway Authority. Pollution prevention and control measures are detailed within the Pollution Prevention Control Management Plan (PPCMP) for the Scheme (Annex B.7 of the EMP). (Application document TR010063/APP/9.7).

### Material Sources

- B.1.4.17. If materials are to be reused, consideration will be given to the suitability in accordance with the Earthworks Specification. Furthermore, excavation, handling and storage will be carefully managed in order to minimise deterioration of the material.
- B.1.4.18. Stockpiled materials will be classified in accordance with the Earthworks Specification and shall be maintained such that the suitability for reuse is not compromised in order to meet the requirements of an appropriate engineered fill.

### Filling

- B.1.4.19. To maximise the use of material, the following considerations and mitigation will be adopted:

- Correct compaction plant assessment.
- Removal of any wet material before continuation of placement and compaction / or cover the completed works.
- Avoidance of mixing suitable and unsuitable material, as well as suitable granular and suitable cohesive material.
- Avoid wet weather filling.

### Outline Proposals for Storage / Stockpiling

- B.1.4.20. The materials excavated on-site will remain in their respective stockpiles until completion of the construction of the development. Materials that are to be stockpiled over 12 months will require approval from the Environment Agency.
- B.1.4.21. The soils will be stored and managed in accordance with the Soil Handling Management Plan (SHMP) (Annex B.2 of the EMP) (Application document TR010063/APP/9.2).
- B.1.4.22. For the entire period during which the soil is stored, the following principles should be followed:
- All stockpiles will be clearly labelled and protected from being trafficked by plant or vehicles.
  - Stockpiles will not be positioned adjacent to ditches and not within 10 m of a watercourse.
  - Topsoil and subsoil stockpiles will be seeded with a neutral grassland seed mix to maintain slope stability and to prevent erosion or dust generation.
  - Soil stockpiles will be managed and monitored throughout their lifetime so that they can be maintained in relation to stability and integrity and any weed growth can be managed in a timely manner.
  - To ensure that during the quality of the soil materials is not detrimentally affected during stripping, stockpiling, reuse, or restoration works, monitoring by suitably trained and experienced staff will be undertaken.
- B.1.4.23. The monitoring of the stockpiled material will ensure that:
- Materials remain suitable for their intended use (i.e. via visual inspections and testing, if required).
  - Necessity / certainty of use for those materials remains (i.e. still required for its purpose).
  - The quantity being stored does not exceed design requirements (i.e. what is required to restore the Scheme).
  - Any stockpiled excavated materials that fail to meet all of these requirements may be considered waste and will be managed in accordance with relevant legislation.
  - Where clean naturally occurring topsoil and subsoil are stockpiled for reuse on the site, these will conform to Series 600<sup>10</sup> and 300<sup>11</sup> of the Specification for Highway Works and the Earthworks Specification.

### Management of Unsuitable Materials

- B.1.4.24. If site won materials are not suitable for reuse and cannot be treated to make them suitable for reuse, they shall be managed as a waste. All parties involved with the management of unsuitable materials will need to ensure waste arising from the project is

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<sup>10</sup> Standards for Highways (2016) Manual of Contract Documents for Highway Works Volume 1 Specification for Highway Works Series 600 Earthworks.

<sup>11</sup> Standards for Highways. (2009). Manual of Contract Documents for Highway Works Volume 1 Specification for Highway Works Series 300 Fencing.

managed in accordance with current waste legislation and guidance and any project specific requirements, as described in the SWMP (Annex B.12 of the EMP) (Application document TR010063/APP/9.9).

- B.1.4.25. Waste that cannot be recycled or recovered will be identified, segregated, and kept separate from other construction wastes, to avoid contamination. The waste would then be removed from site by a licensed contractor and taken to a licensed facility for appropriate management.

### Management of Asphalt Containing Materials

- B.1.4.26. It is assumed that asphalt waste generated through demolition activities will be treated and reused within the Scheme. However, there are two regulatory position statements (RPS) that apply to the treatment and use of asphalt waste and asphalt waste containing coal tar as listed below. These need to be adhered to for any treatment and reuse of asphalt to occur without an environmental permit.

- RPS 157 for storing and treating asphalt waste<sup>12</sup>.
- RPS 075 the movement and use of treated asphalt waste containing coal tar<sup>13</sup>.

- B.1.4.27. The PC should ensure that the conditions of these RPS statements are adhered to in order for any treatment and reuse of asphalt to occur without an environmental permit. The PC should ensure that actual quantities of asphalt that are reused are captured and recorded in order to compared with forecasted figures.

### Unforeseen Materials

- B.1.4.28. There is the potential for unforeseen materials to be encountered such as, but not limited to:

- Unexpected Made Ground in areas of expected clean naturally occurring materials.
- Contaminated materials such as:
  - fuel/oil contamination (including free phase hydrocarbon product).
  - tar and tarry wastes.
  - putrescible waste materials.
  - drums, tanks, underground structures, redundant services, canisters or other containers containing unknown materials.
  - asbestos containing materials (ACM)
  - other visually or olfactory impacted material, including contaminated liquids or sludge.
  - Soils contaminated with invasive weeds.

- B.1.4.29. Made Ground may only be reused on the site of origin under an MMP in accordance with the CL:AIRE DoWCoP or a registered waste exemption, if appropriate.

- B.1.4.30. Where contaminated materials are encountered, these shall be managed in accordance with the EMP. Where the contaminated materials are identified as unsuitable materials for reuse they shall be managed as a waste.

- B.1.4.31. Soils contaminated with invasive species must only be treated and used on site in accordance with the RPS 178: Treatment and Disposal of Invasive Non-Native Plants<sup>14</sup>.

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<sup>12</sup> GOV.UK, Storing and treating asphalt waste: RPS 157,

<https://www.gov.uk/government/publications/storing-and-treating-asphalt-waste-rps-157>

<sup>13</sup> GOV.UK, The movement and use of treated asphalt waste containing coal tar: RPS 075,

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/419686/LIT\\_10118.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/419686/LIT_10118.pdf)

<sup>14</sup> Environment Agency. (August 2023). Treatment and Disposal of Invasive Non-Native Plants: RPS 178.

If the conditions of RPS 178 cannot be met an environmental permit will be required to treat and use any soils contaminated with invasive species or the material will need to be managed as a waste and transferred off-site. If the PC encounters soils contaminated with invasive species they shall stop works and contact the Client to discuss and agree the way forward.

## B.1.5. Monitoring and Traceability

### Experienced and Competent Persons

- B.1.5.1. The PC shall ensure they have experienced and competent persons that are responsible for:
- Managing earthworks.
  - Identifying and describing different types of materials.
  - Identifying and managing Made Ground / unforeseen contamination including asbestos.
  - Adhering to the requirements of MMPs in accordance with the CL:AIRE DoWCoP.
  - Adhering to the requirements of the WRAP QP.
  - Treatment of materials (if required).
  - Tracking of materials.
  - Obtaining samples.
  - Assessing suitability of material.
  - Production of verification reports.
- B.1.5.2. The PC shall ensure that all employees who have a role associated with material re-use are made aware of the contents of this plan and the documentation associated with the relevant consent routes applicable to the area of the site they are working in.

### Auditing

- B.1.5.3. The works shall be audited at regular intervals by the Client's delegate to ensure compliance with this MMP. The frequency of audits will vary depending on the programme of works.

### Managing Change in Quantities

- B.1.5.4. The earthworks volumes in this MMP will be verified once the project design is finalised. Once the MMP has been declared and there is found to be a significant volume variation or change in the nature of the material, a new declaration of the MMP by a Qualified Person will be made.

## B.1.6. Verification Plan

### Verification Sampling for Reuse

- B.1.6.1. Material that is to be reused on site must be suitable from a geo-environmental and geotechnical perspective. To confirm material is suitable for use, the PC will be responsible for sampling the material at the required frequency, submitting the samples to a UKAS and MCERTS accredited laboratory for analysis and assessing the results against the geotechnical and chemical reuse criteria provided in the Earthworks Specification.



- B.1.6.2. The geo-environmental testing results will be assessed against the limiting values for human health and the environment and controlled waters to ensure that the re-use of materials do not pose an unacceptable level of risk.

### Verification Record Keeping

- B.1.6.3. The PC shall be responsible for keeping and maintaining all verification records in an electronic format. Records for excavating and placement will be kept in order to support the verification report, and these shall include information such as:
- Material tracking forms (see Table B 1-4 for an example) which includes information on location, volume, material type, placement location and depth and laboratory reports.
  - Stockpile plans and surveys.
  - Laboratory analysis (geotechnical and geo-environmental).
  - Waste transfer documentation, where applicable.
- B.1.6.4. All records will be provided to the Client upon completion of the project.

### Verification Reporting

- B.1.6.5. Where an MMP is in place, the verification reports shall be produced in accordance with the requirements of the MMP and submitted to CL:AIRE (the administration body for DoWCoP) by the PC by the date specified in the MMP.
- B.1.6.6. The verification report will provide evidence that the works undertaken were in accordance with the volume of soil that the MMP states will be reused and the requirements of the Earthworks Specification.
- B.1.6.7. The Verification Report shall include, as a minimum:
- Appropriate site plans.
  - Experience and qualification of the person preparing the report in relation to the specific project.
  - Description of the project.
  - Description of how the use of materials links with the MMP.
  - Reference to site investigation data.
  - Reference to risk assessments.
  - Site surveys of excavation and filling operations.
  - Locations, including photos, of any verification sampling and testing locations.
  - Treatment or verification laboratory chemical test results.
  - Suitability for use / reuse criteria.
  - Waste transfer documentation / haulage tickets.
  - Waste Transfer Notes / Hazardous Waste Consignment Notes relating to movement of wastes to any off-site facilities/disposal sites.
  - Volumes of materials moved.
  - Details and records of tracking systems used.
  - Contingency measures.
  - Reference to the MMP and revisions.
  - Copies of confirmed Qualified Person Declarations.

Table B 1-4 - Material Tracking Form

**Materials Tracking**

<b>Materials Tracking</b>							
<b>Project Name</b>							
<b>Project Number</b>							
<b>Document Reference</b>							
<b>Date</b>	<b>Original Location (Grid Reference)</b>	<b>Type of Material (Description)</b>	<b>Volume (m<sup>3</sup>)</b>	<b>Location / Depth of placed material (grid reference and depth)</b>	<b>Environmental &amp; Geotechnical Lab Certificate Reference</b>	<b>Suitable for Use (Y/N)</b>	<b>Additional Comments</b>

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