



Frodsham Solar

Outline Soil Management Plan

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1.0 INTRODUCTION

1.1 Purpose of this Document

- 1.1.1 This Outline Soil Management Plan (oSMP) sets out the framework and principles for managing soil resources and excavated materials during the construction, operation, and decommissioning of the Frodsham Solar project (“the Proposed Development”).
- 1.1.2 This oSMP is a control document that will be certified as part of the DCO and implemented via a Requirement in Schedule 2 of the **draft DCO [EN010153/DR/3.1]**. Should the Proposed Development be consented, the DCO will require that a final Soil Management Plan (SMP) is prepared prior to construction.
- 1.1.3 The oSMP describes how soils will be protected, handled, stored, reused and restored in accordance with best practice, and how materials (including any potentially contaminated soils) will be managed or disposed of in compliance with relevant legislation. The aim is to avoid and minimise adverse effects on soil quality, agricultural land, and the environment throughout the project lifecycle.
- 1.1.4 The oSMP is informed by industry guidance including the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and MAFF’s Good Practice Guide for Handling Soilsⁱ, as well as the CL:AIRE Definition of Waste: Development Industry Code of Practice (DoWCoP) for material reuse^{vii}. Other relevant guidance documents are referenced throughout this report. The oSMP also aligns with relevant Environment Agency (EA) guidance on land contamination and waste.

1.2 Document Structure

- 1.2.1 This oSMP is structured as follows:

- i) **Introduction** – provides an introduction to the document and defines the structure of the oSMP.
- ii) **Baseline Soil Conditions and Characteristics** – provides an overview of the existing soil types at the Site, and context as to the ground conditions present.
- iii) **Regulatory Context** – provides an overview of the relevant statutory and regulatory regimes and guidance that relate to soil management and contaminated land.
- iv) **Overarching Soil Management Measures** – sets out good practice measures that will be adopted project-wide across all phases of the project in handling soils and materials.
- v) **Soil Management by Project Phase** – sets out specific good practice measures that will be adopted at different phases of the project in handling soils and materials.
- vi) **Contaminated Land and Materials Management Strategy** – sets out how excavated materials, especially those that might be contaminated or considered “waste,” will be managed in accordance with relevant legislation and EA guidance.
- vii) **Site-Specific Management Measures** – sets out other measures to be adopted in relation to site-specific constraints.
- viii) **Implementation of Management Plan** – provides a summary of the key requirements that must be within the final Soil Management Plan to ensure successful implementation of this oSMP.
- ix) **Monitoring** – sets out the procedures for monitoring and ensuring compliance with the Construction Environmental Management Plan (CEMP), as well as requirements for record keeping.

2.0 BASELINE SOIL CONDITIONS AND CHARACTERISTICS

2.1 Site Overview

2.1.1 The Order Limits or 'Site' comprises approximately 337.5 ha of largely low-lying former marshland on the north-west side of Frodsham, Cheshire. The Site's elevation is generally flat, with a gentle fall from a high point of around 13 metres above ordnance datum (mAOD) in the west of the Site, to 5 mAOD in the east.

2.1.2 The current land use across the Site varies; the eastern portion of the Site (to the east of Brook Furlong) is arable farmland with some fallow areas for wildfowl with scrapes and ponds for wildfowl shooting, the western area (to the west of Brook Furlong) includes Frodsham Wind Farm and is grassland used for sheep grazing on a former dredging deposit ground. A network of drainage ditches is present, particularly in the eastern half of the Site which drain to the River Weaver via an Environment Agency pumping station.

2.1.3 The Site is bordered by the M56 motorway to the south / east, the Manchester Ship Canal and River Weaver to the north and north-west, and by other marshland and dredging deposit areas to the south-west.

2.1.4 As set out in *Appendix 17.2 Agricultural Land Classification and Soil Resources Survey of ES Vol 2 Appendix 1-1: Frodsham Solar Scoping Report [EN010153/DR/6.2]*, meteorological data indicates at the Site is warm and moist, with moderate moisture deficits. On average there are approximately 177 Field Capacity Days per year, indicating soils can be waterlogged or unworkable for a substantial period. There are no overriding climatic limitations to agriculture at the Site, but high rainfall and poor drainage strongly influence soil wetness.

2.2 Soil Types and Agricultural Land Classification

2.2.1 The Site is underlain by drift geology of tidal flat deposits (unconsolidated silty clay and sands) over solid geology of the Sherwood Sandstone Group (pebbly

sandstones). Soils across the Site are predominantly heavy textured, poorly drained and often waterlogged.

2.2.2 As set out in *Appendix 17.2 Agricultural Land Classification and Soil Resources Survey of ES Vol 2 Appendix 1-1: Frodsham Solar Scoping Report [EN010153/DR/6.2]*, the majority of the agricultural land is classified as Grade 4 (poor quality) due to wetness and soil structure limitations. These soils typically have heavy clay loam or clay topsoils (approximately 35–40 cm depth) that become easily waterlogged (Wetness Class IV/V), impeding agricultural use.

2.2.3 Where drainage is slightly better or textures lighter (e.g. patches of loamy medium sand or sandy clay loam topsoil), land achieves Subgrade 3b (moderate quality) but is still limited by seasonal wetness or droughtiness.

2.2.4 The Manchester Ship Canal Dredged Deposit Ground (MSCDDG) cells 1, 2, 3, and 5 cover portions of the Site – these are areas where canal/river dredgings were historically placed behind man-made earth bunds. They are raised approximately 8 m above surrounding ground and enclosed by artificial bunds up to about 13 mAOD. These cells have become vegetated with scrub and grass, and are largely unused except for grazing.

2.2.5 Overall, the Site's soil resource can be summarised as heavy silty clay loams and clays with poor natural drainage, and no presence of higher quality "best and most versatile" (BMV) agricultural land (Grades 1, 2, 3a). However, whilst soils are of a lower agricultural quality they still require careful handling to preserve their structure for future use (e.g. returning land to agriculture or biodiversity post-decommissioning).

2.2.6 The baseline soil chemistry is generally neutral to slightly alkaline (pH ~7.2–8.2) and organic matter content moderate (5–8%) in topsoil, based on sample analysis, indicating fertile alluvial soils. Site investigations for contamination have been undertaken across the Site (see **ES Vol 2 Appendix 10-1: Stage 1 Geo-Environmental Assessment [EN010153/DR/6.2]**). The results show

that some areas of the Site to the east of Brook Furlong, where dredgings have been deposited, are subject to contamination, to the east of Book Furlong no contamination was found.

2.3 Dredged Deposit Ground

- 2.3.1 The presence of historical dredged material within the Site requires specific soil management measures during each phase of the Proposed Development. The dredge deposit cells are unlined, meaning any contaminants within them could leach into groundwater or surface water. Consequently, there exist potential risks to controlled water waters from these materials.
- 2.3.2 The bunds that contain the dredge deposit cells are currently understood to be in a good structural condition. However, they could be sensitive to construction or decommissioning activities and so, as set out in **ES Vol 1 Chapter 2: The Proposed Development [EN010153/DR/6.1]**, development has been avoided within 10m of the toe and crests of these bunds to preserve their stability.
- 2.3.3 One of the dredged areas, MSCDDG Cell 3 and adjacent land to its north, is proposed as a Non-Breeding Bird Mitigation Area (NBBMA) as part of the Proposed Development's ecological mitigation strategy. The NBBMA (about 64 ha) will involve regrading of existing dredged soils to create shallow pools, wet grassland and other habitats for birds.
- 2.3.4 Construction of the NBBMA will entail excavation and movement of soils (roughly the upper 0.5–1.0 m of material) within the central area of Cell 3 to form the required landform. The works to create the NBBMA will therefore be the largest earthmoving activities on the project and will be carefully managed to meet both habitat objectives and the soil/material management standards in this oSMP^{iv}.

2.3.5 A *Non-Breeding Bird Mitigation Strategy* forms Appendix B of the **outline Landscape and Ecology Management Plan [EN010153/DR/7.13]** and sets out the works required to construct the NBBMA.

3.0 REGULATORY CONTEXT

3.1 Industry Best Practice for Soil Management

3.1.1 This oSMP adopts relevant best practice guidance for soil handling, including:

- DEFRA's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009)ⁱ;
- MAFF's Good Practice Guide for Handling Soils (sheet material) and its update for mineral workingsⁱⁱ; and
- Natural England's Good Practice for Soil Handling (Technical Information Note 049)ⁱⁱⁱ.
- British Society of Soil Science Guidance Note 'Benefitting from Soil Management in Development and Construction'^{iv}

3.1.2 The above guidance provides methods to strip, store and replace soils in a manner that maintains their viability. Key principles from these documents (which are reflected in Section 4.0 of this plan) include only handling soils when they are dry enough to avoid damage, using appropriate machinery (e.g. excavator and dump truck method) to prevent compaction, separating topsoil and subsoil, limiting stockpile heights and durations, and reinstating soils carefully with subsequent aftercare.

3.2 Waste and Environmental Permitting Regulations

3.2.1 Excavated material is subject to waste management controls under the Environmental Protection Act 1990^v and Environmental Permitting (England and Wales) Regulations 2016^{vi} if it cannot be reused on site in accordance with an approved scheme.

3.2.2 The Waste Framework Directive (2008/98/EC) as implemented in England^{vi} provides that reuse of materials on their site of origin can be excluded from the definition of waste if the materials are certain to be used, are suitable for use without further processing, and that the use is a part of the development (the "suitable for use" criteria).

- 3.2.3 The CL:AIRE Definition of Waste: Development Industry Code of Practice^{vii} (DoWCoP) is a recognised protocol in England for managing excavated materials in compliance with these requirements. Under the DoWCoP, developers can reuse site-won materials without an environmental permit, provided a Materials Management Plan (MMP) is prepared and signed off by a Qualified Person. The reuse must also pose no pollution risk to human health or the environment, must be suitable for its intended purpose, must have certainty of use, and must be limited to the quantity necessary.
- 3.2.4 This self-regulatory approach streamlines reuse and recovery on site, but it is voluntary. The DoWCoP will guide the reuse of clean excavated soils on site (Section 6.0 of this oSMP outlines how this will be applied).

4.0 OVERARCHING SOIL MANAGEMENT MEASURES

4.1 Soil Management Measures

- 4.1.1 A core objective of this oSMP is to ensure that soil physical characteristics (structure, texture, organic content) are preserved as far as practicable when soils are removed and reinstated, so that the land can retain its productivity or ecological function.
- 4.1.2 Key threats to soils during construction are compaction, smearing, and erosion from poor handling or vehicle movements. The following overarching good practice measures will be implemented to mitigate these risks.

Pre-construction planning of soils

- 4.1.3 Soil types or “soil units” will be identified and mapped across the Site. Topsoil from one area will not be mixed with that of another area with different characteristics. This ensures that during restoration each area’s soil is replaced like-for-like in the appropriate location.

Minimise vehicle movements on soil

- 4.1.4 Movement of the construction plant on unstripped ground will be limited. The following measures will be adopted:
 - i) Define and use designated haul routes or temporary access tracks to avoid random vehicle movements across soils.
 - ii) Vehicular movement on areas of reinstated soil (after backfilling) will also be minimised to prevent re-compaction.
 - iii) Where feasible, a grass cover will be established over working areas (particularly the solar array fields) prior to heavy vehicle access – for example, allowing existing grassland to grow or seeding grass cover early on arable land to help protect the topsoil structure.

Avoid handling soils when wet or frozen

- 4.1.5 No stripping, heavy vehicle movements across unstripped ground, or tipping of soil will take place when soil moisture is at or above its plastic limit (too wet) or when the ground is waterlogged, frozen, or snow-covered.
- 4.1.6 The plastic limit can be assessed via simple field tests (e.g. roll test as per MAFF guidanceⁱⁱ – if a soil roll of approximately 3 mm can be formed without crumbling, the soil is too wet). If heavy rainfall occurs, soil handling will be halted and not resumed until the soil has had time to drain and pass a field moisture test.
- 4.1.7 Seasonal programming will seek to ensure major soil movements occur in drier periods if possible (spring/summer), recognising that some wet-season work may be unavoidable given the scale of the Proposed Development. Accordingly, the work to create the NBBMA, which would be the most significant earthworks activity on the Site, would be undertaken outside the winter period.

Use appropriate machinery and methods

- 4.1.8 Soils will be stripped and handled using techniques that minimise compaction. The preferred method is the excavator-and-dump-truck method (sometimes called the “strip and haul” method) rather than bulldozers or scrapers, especially on heavy soils. 360° excavators will gently scrape off topsoil in shallow layers, and dump trucks or tractors/trailers will transport soils to stockpile, running on designated routes.
- 4.1.9 Low ground pressure (LGP) machines or tracked vehicles will be employed for earthworks on soil surfaces where possible. Machinery will be well maintained and fitted with GPS or depth control where practicable to ensure accurate stripping depths and avoid over-stripping. It may also be appropriate to use tracked conveyors where disturbance of soils should be minimised – this may be applicable when undertaking the earthworks in Cell 3.

- 4.1.10 Wheel washing facilities at site exits will prevent soil being tracked off-site.

Segregation of topsoil and subsoil

- 4.1.11 Topsoil (the upper fertile layer, typically 25–40 cm) contains most of the organic matter and nutrients and will be stripped and stored separately from subsoil. Likewise, different topsoil types (if identified) will be stored separately.
- 4.1.12 The stripping depth for topsoil will be based on the ALC/soil survey logs (generally up to the plough layer or change in colour/textural). Subsoil will only be excavated where required for deeper works (e.g. cable trenches, foundations, drainage features) and will be stockpiled separately.
- 4.1.13 There will be no mixing of topsoil with subsoil. If any underlying substrate (e.g. sand or rock) is excavated, it will be stored separately from the topsoil.

Stockpile management

- 4.1.14 Designated areas for soil storage will be established on-site, ideally on level ground and 10m away from watercourses.
- 4.1.15 Topsoil stockpiles will not exceed 3m in height, and subsoil stockpiles will not exceed 5m, to avoid excessive compaction of the material. Stockpiles will have gentle side slopes (e.g. 1:2 gradient) and will be tracked over by an excavator to compact lightly only enough to stabilise the pile (prevent slumping). Long-term stockpiles (to be in place >3 months) will be seeded with a grass mix to aid stability and prevent weed encroachment.
- 4.1.16 Each stockpile will be clearly signposted (e.g. “Topsoil from Field A”) to prevent any inadvertent mixing or removal.
- 4.1.17 No vehicles will be allowed to drive over or park on stockpiled soil.
- 4.1.18 During construction, stockpiles will be inspected after heavy rains or wind to check for any signs of erosion; if found, additional silt fencing, bunding or covers will be applied.

4.1.19 In the event stockpiles need to remain for over a year (which could trigger regulatory concerns under DoWCoP timing), the project will review whether a permit or additional management is required (see Section 6.0).

Protection of soil from contamination

4.1.20 All machinery will be checked for fuel/oil leaks and maintained to avoid spills onto soil. Refuelling and equipment maintenance will occur on hardstanding or dedicated impermeable areas with spill kits available. If any accidental spill of fuel, oil or other chemicals on soil occurs, the contaminated soil will be excavated and removed for appropriate off-site disposal, or remediated in situ if appropriate (in line with the Spill Response and Pollution Prevention measures as set out in the **Outline Construction Environmental Management Plan [EN010153/DR/7.5]**).

4.1.21 No construction materials (e.g. concrete, chemicals) will be stored directly on the ground without membrane protection. Concrete washout will be in lined skips or pits, not on bare soil. These measures will ensure that the soil to be re-used is not polluted by construction activities.

Erosion and sediment control

4.1.22 Although the Site is generally flat, exposed soil surfaces can be prone to erosion by runoff or wind. Temporary drainage and runoff control will be implemented, such as silt fences or straw bales along downslope edges of stripped areas, to capture sediment. Ditches will be protected from infill by keeping a setback or installing sediment traps where necessary. A 10m buffer from watercourses has been provided within the design, with the exception of where watercourse crossings are proposed (see **Outline Landscape and Ecology Management Plan [EN010153/DR/7.13]**)

4.1.23 If earthworks expose large areas, those areas will be broken into smaller phases or re-vegetated quickly to reduce the duration of exposure.

4.1.24 Soil stockpiles will be covered or seeded if left for long periods (as noted above).

Monitoring and record-keeping

4.1.25 A soil handling log will be maintained by the Environmental Clerk of Works. Daily records will note weather and soil condition, areas stripped or filled, volumes moved, and any incidents (e.g. wet soil stop conditions, spills). This record will support compliance with this oSMP and provide evidence for the Material Management Plan.

4.1.26 Photographic records of soil conditions (before stripping, after stripping, and after reinstatement) will be taken for key areas. Any non-conformance with the oSMP (e.g. inadvertent mixing of soil layers) will be reported and remedial actions recorded as part of the project Environmental Management System (EMS) as described in Section 9.2. These records will feed into the verification report required under the CL:AIRE DoWCoP process (if applicable) and demonstrate that soil resources have been handled correctly.

4.2 Summary

4.2.1 These overarching principles will apply across all works. In essence, the Proposed Development will treat soil as a valuable resource, not a waste product for disposal, and will undertake all practicable measures to conserve its quality. The next section describes how these principles are applied during the distinct project phases (construction, operation, decommissioning).

5.0 SOIL MANAGEMENT BY PROJECT PHASE

5.1 Construction

Preliminary Works and Soil Stripping

- 5.1.1 Prior to main construction, any required preliminary works such as creating temporary access roads, drainage, or site compounds will follow the soil stripping principles set out in Section 4.0. For example, where a construction compound or access track is to be placed, the topsoil will first be stripped and stockpiled for later reinstatement.
- 5.1.2 Topsoil stripping will typically be to a depth of approximately 300 mm (adjusted if site-specific data shows different topsoil thickness).
- 5.1.3 If unexpected obstructions or contamination (e.g. oily stained soil) are encountered during stripping, works will pause and the procedures in Section 6.0 will be followed, which may involve sampling the soil and segregating it for special handling.

Excavation and Trenching

- 5.1.4 The Proposed Development involves installing cabling, and foundations for inverters, transformers, battery containers, or substation equipment.
- 5.1.5 Cable trenches will be dug to a maximum depth of 1.2m. The trench excavation will produce subsoil material which will be placed adjacent to the trench separate from topsoil (the topsoil having been stripped and set aside first). For linear trenching operations, a common practice of “strip, excavate, lay, backfill, reinstate” in sequence will be used to minimise the duration soil is out of the ground. Excavated subsoil will be reused as backfill in the same trench after cables are laid. The stockpiled topsoil will then be respread on top. This way, cable trenching does not generate surplus soil needing disposal.

- 5.1.6 If the trench material is found unsuitable for direct backfill (e.g. very wet or containing large lumps), it may be conditioned (dried or crushed) or replaced with suitable material and the excess managed as per Section 6.0.
- 5.1.7 Pile driving for panel supports (if using driven piles) typically does not require excavation – in that case, soil disturbance is minimal, limited to the pile itself displacing soil. If screw piles or drills are used and spoil is brought to surface, these minor arisings will be spread thinly on surrounding ground or collected as appropriate.
- 5.1.8 The foundations for inverters, transformers, battery containers, or substation equipment will require deeper excavation and a concrete footing. In these locations, the topsoil and subsoil will be excavated and stored separately; upon backfilling around foundations, subsoil will be replaced and then topsoil on top so that any adjacent landscaping can be reinstated.
- 5.1.9 Throughout excavation works, temporary storage durations will be kept short – wherever possible, excavated soil will be returned to its original position within a week. If any excavated material cannot be immediately reused and must be stockpiled for longer than approximately one year, the project will review compliance with CL:AIRE DoWCoP rules on stockpile time limits. The DoWCoP states that material stockpiled in excess of one year requires a justification or may be deemed waste without a permit, so the aim is to avoid long-term stockpiling unless part of an approved plan.
- 5.1.10 The only potential long-term stockpiles might be if surplus material is set aside for eventual use in the final site restoration; if so, that will be accounted for in the Materials Management Plan such that the reuse is still considered a certainty.

Soil Storage and Bunds

- 5.1.11 During construction, some soil may be used to create temporary bunds (e.g. perimeter bunds for screening or runoff control). Any such bunds will be made

from subsoil where possible (to reserve topsoil for reuse in planting). If topsoil is used in temporary bunds for screening, it will be treated as a stockpile (seeded if standing for long) and will be reinstated to its original area afterward.

5.1.12 Soil storage areas will be monitored and if signs of erosion appear, mitigation (cover, silt fencing) will be applied promptly. Should any stockpiled soil become excessively compacted or waterlogged, it will be remedied prior to reuse (e.g. turning the pile or allow drying). All topsoil stockpiles will be sampled (especially if stored over a year) for nutrients and contaminants prior to reuse in restoration, to inform any amelioration needed (fertiliser or lime, etc.).

Restoration and Reinstatement

5.1.13 Once construction activities in an area are complete (e.g. a solar array has been installed and cables laid), the stored soils from any excavations will be re-spread to restore the land surface.

5.1.14 Reinstatement will follow the reverse order of stripping: subsoil (if excavated) will be placed back and lightly compacted as needed (taking care not to over-compact), and then topsoil will be placed on top to the original depth. Where the original topsoil is excess (for example, if subtle land re-grading was done or foundations occupy volume), the surplus topsoil will be used elsewhere on site in landscaping or thinly spread so as not to significantly raise ground levels.

5.1.15 The restored soil surface will be left in a roughened state (not smooth rolled) to help it re-aerate and receive rainwater. Any large clods will be broken down, and if the soil structure has been compacted, appropriate loosening will be undertaken – e.g. use of a winged tine subsoiler or deep ripper, especially in wheel track areas, to alleviate compaction in subsoil before topsoil replacement. Stones brought up (if any) will be collected to approximately match original stoniness.

5.1.16 Finally, the topsoil will be cultivated in accordance with the **outline Landscape and Ecology Management Plan [EN010153/DR/7.13]** and will be sown to establish permanent grassland under and around the solar arrays. This rapid revegetation will protect the soil from erosion and provide a stable condition for the operational phase. Where agricultural use (e.g. grazing) is to continue in the solar farm, the soil will be restored to a condition capable of supporting that use.

5.1.17 In arable fields converted to solar use, the soil will be sown to grass and not cultivated annually during operation, which helps build structure and organic matter. Any areas of habitat creation will use the Site's topsoil but possibly with some modification; specific measures are set out in the **outline Landscape and Ecology Management Plan [EN010153/DR/7.13]**.

5.2 Operation

5.2.1 During the operational phase of the Proposed Development, ground disturbance will be minimal. The solar arrays are a largely passive use of the land, and vegetation (grassland) will be maintained by periodic mowing or grazing set out in the **outline Landscape and Ecology Management Plan [EN010153/DR/7.13]**. However, the oSMP principles still apply to any maintenance that involves soil work and this is secured via the **Outline Operational Environmental Management Plan (oOEMP) [EN010153/DR/7.6]**.

5.2.2 If underground cables need to be accessed for repair, the excavation and backfilling will follow the same segregation and handling rules (and any removed soil will be stored and reinstated).

5.2.3 Routine maintenance of access tracks might involve grading or adding stone; any spoil generated from re-grading track shoulders will be thinly spread on adjacent land or collected for reuse.

5.2.4 It is not anticipated that there would be any major soil disturbance arising from periodic replacement campaigns of panels / PCUs / BESS units. However, it is possible that during these operations that soils could become compacted by tracking from machinery. If the soil structure has been compacted, appropriate loosening will be undertaken e.g. use of a winged tine subsoiler or deep ripper, and the area re-seeded.

5.2.5 A programme will be in place to monitor soil health in areas that are reinstated. This may involve periodic soil sampling or penetrometer testing to ensure that compaction has not reoccurred and that the soil is supporting the desired vegetation cover. If issues are identified (e.g. waterlogging in an area due to settling), remedial actions like additional drainage or soil loosening might be taken. Grazing (if employed for grass control) will be managed to avoid poaching of soil by livestock, unless intended for the purposes of conservation.

5.2.6 Overall, the operational phase is expected to have a benign impact on soils – the land will essentially lie fallow (under grass) which can improve structure and organic content over time. The key is to maintain the grass cover and prevent any localised damage; the appointed site operator will be responsible for this, guided by the **outline Landscape and Ecology Management Plan (oLEMP) [EN010153/DR/7.13]**.

5.3 Decommissioning

5.3.1 At the end of the solar farm's life, the Proposed Development will be decommissioned and the Site restored to a condition that enables its previous land use to continue.

5.3.2 Decommissioning will involve the removal of solar panels, frames, above ground cabling, inverter stations, the battery storage facility, and any hardstanding or foundations. The approach to soil management during decommissioning will mirror that of construction, with the added goal of final restoration.

5.3.3 The **outline Decommissioning Environmental Management Plan (oDEMMP) [EN010153/DR/7.7]** requires that a Decommissioning Soil Management Plan will be developed prior to decommissioning to account for prevailing site conditions in accordance with the principles set out in this oSMP.

5.3.4 Any excavation to remove cables or foundations will again separate topsoil and subsoil for reuse.

5.3.5 Access tracks composed of compacted stone will be dug out, and the soil beneath decompacted.

5.3.6 All hardstanding (concrete pads, etc.) will be broken up and taken off-site. Once structures are gone, the land will be regraded if needed to remedy any depressions or mounds and then topsoil re-spread uniformly. The target is to return the land as close as possible to its original soil profile and level.

5.3.7 At decommissioning, there may be an opportunity to further improve soil quality (for example, by adding organic matter or re-seeding with appropriate species) as part of an agricultural aftercare program if the land is to revert to farming.

5.3.8 Monitoring will also be done post-decommissioning to ensure the soil is stable (no erosion or settlement issues) and to demonstrate compliance with any restoration conditions.

5.3.9 In summary, decommissioning will be carefully managed so that the long-term legacy is a conserved soil resource that can support whatever post-solar land use is planned, be it resumption of arable farming, permanent pasture, or continued wildlife habitat.

6.0 CONTAMINATED LAND AND MATERIALS MANAGEMENT STRATEGY

6.1 Introduction

- 6.1.1 This section addresses how excavated materials, especially those that might be contaminated or considered “waste,” will be managed in accordance with relevant legislation and EA guidance.
- 6.1.2 The objectives are to ensure that: (a) no unacceptable risk from contamination is caused to people or the environment by the construction or presence of the Proposed Development, and (b) excavated materials are handled in a lawful manner, maximising beneficial reuse on site and minimising off-site disposal.

6.2 Identification of Potential Contamination

- 6.2.1 As noted in Section 2.0, the Site has areas of made ground (dredging deposits), and site investigations have identified the presence of contaminated soils in areas of the Site. A detailed description and assessment of the existing ground conditions is provided within **ES Vol 1 Chapter 10: Ground Conditions [EN010153/DR/6.1]** and supported by **ES Vol 2 Appendix 10-1: Stage 1 Geo-Environmental Assessment [EN010153/DR/6.2]**.
- 6.2.2 Prior to construction, further targeted ground investigation will be carried out in any areas planned for significant soil disturbance, notably within the dredging deposit cells and proposed NBBMA. This will include sampling and laboratory analysis of soils (and leachate tests) to determine contaminant levels. A risk assessment will then confirm the measures necessary for the management of that material, which, if required, could involve remediation or specific material handling requirements. The findings will inform the final materials management approach as set out in the **outline Construction Environmental Management Plan [EN010153/DR/7.5]**.

6.3 Handling of Potentially Contaminated Soils

- 6.3.1 During earthworks, if evidence of unexpected contamination is encountered, the Contractor will implement an unexpected contamination protocol as set out in the **outline Construction Environmental Management Plan [EN010153/DR/7.5]**. If analysis confirms contamination above relevant screening values (for human health or environmental risk), a suitable remediation or management plan will be devised before work resumes. This could include segregating the material for treatment or disposal, or implementing in-situ remediation if feasible.
- 6.3.2 All site personnel will be briefed on the signs of possible contamination and the stop-work procedure. Appropriate personal protective equipment (PPE) will be used in any suspect areas (gloves, masks, etc. as needed).
- 6.3.3 If necessary, a small on-site remediation area would be designated, where contaminated soils can be treated under a Mobile Plant permit so that the soil can then be safely reused under the DoWCoP. Any such approach will be detailed in the final SMP and agreed with regulators. It is likely that this approach would be adopted for the creation of the NBBMA.

6.4 Reuse of Excavated Material (CL:AIRE DoWCoP)

- 6.4.1 The preferred strategy for the Proposed Development is to reuse as much of the excavated material on-site as possible in order to avoid waste generation and reduce off-site disposal. To facilitate this, the project intends to employ the CL:AIRE DoWCoP process.
- 6.4.2 Under this process, a Materials Management Plan (MMP) will be prepared (at detailed design) which documents all excavations and material movements, and demonstrates that any reuse of material is genuinely required and suitable. A Qualified Person will review the MMP and the supporting risk assessments and will provide a Declaration to CL:AIRE prior to works,

effectively confirming that the use of materials on site meets the DoWCoP criteria and can be regarded as recovery (not waste).

6.4.3 The key criteria that will be ensured are:

- iv) Suitability for Use – chemical and geotechnical properties of the soil must be compatible with its place of reuse (e.g. clean topsoil reused in landscaping, or slightly contaminated dredging material reused in a contained area like the NBBMA with no pathway to receptors);
- v) Certainty of Use – there must be a clear plan for the material, e.g. defined landscaping fill in the habitat area or backfill for trenches, with no indefinite stockpiling;
- vi) Quantity – only the volume needed for the defined use will be reused (no excessive “dumping” of extra material); and
- vii) No Pollution Risk – the reuse should not cause new pollution or harm. If these are met, the materials can be reused on site without an environmental permit, as “non-waste.”

6.4.4 In practical terms, for the Proposed Development this means topsoil and subsoil arising from excavations will be reused in reinstatement of the solar farm or in approved habitat creation earthworks; e.g. the dredged sediments excavated for the NBBMA will be reused in reprofiling that area itself.

6.4.5 In relation to the NBBMA it may be necessary for the soils to be treated to ensure they do not cause harm to the environment. This may be accomplished through physical separation of soils e.g. for any contamination hotspots identified, or chemical treatment e.g. lime or cement stabilisation. If this is required, it may be necessary to obtain a mobile treatment permit and have a remediation strategy approved by the Environment Agency pursuant to the permitting regime.

6.4.6 Under the MMP, specific actions will be defined for verification. Samples will be tested to confirm compliance. A Verification Plan will outline how the team

will record volumes moved, sample the materials, and document placement locations.

- 6.4.7 Upon completion of construction, a Verification Report will be compiled by a competent person (and endorsed by the Qualifying Person) demonstrating that all excavated materials were managed according to the MMP, and that the reuse sites meet the agreed specifications (including any clean cover or capping if required in certain areas). This report will be made available to the EA and CWaCC to give confidence that the DoWCoP was properly implemented.
- 6.4.8 The use of the DoWCoP is considered acceptable for the purposes of the DCO application, with the expectation that a proper MMP and QP Declaration will follow at the detailed stage. Materials requiring treatment (e.g. contaminated soils) can only be reused following treatment. Should materials exceed “suitable for use” criteria, they will be routed to treatment or disposal rather than directly reused under the DoWCoP.

6.5 Alternative Waste Permitting Route

- 6.5.1 If certain excavated materials associated with the creation of the NBBMA cannot meet the DoWCoP requirements (which based on the site investigation data and analysis is considered unlikely), then an environmental permit route will be pursued.
- 6.5.2 It is the developer's responsibility to determine whether to proceed via the DoWCoP or the formal waste permitting route. If the requirements of the DoWCoP cannot be fully satisfied, a Deposit for Recovery (DfR) permit must be obtained.
- 6.5.3 A DfR permit (under the Environmental Permitting Regulations) would allow the placement of waste material on site for a beneficial purpose (such as land improvement or habitat creation e.g. creation of the NBBMA), subject to EA approval. To use this route, the project would likely need to first treat the waste

material to make it suitable, this would either be treatment using in-situ methods or within the site compound and would likely use the methods set out in **ES Vol 2 Appendix 10-2: Remediation Technical Concept Note – Cell 3 [EN010153/DR/6.2]**. All treatment will be done following an approved remediation strategy if required.

- 6.5.4 If even after treatment some material is deemed unsuitable for reuse, it will be excavated, characterised, and sent off-site as waste to an appropriately licensed landfill or soil treatment facility. The volume of such material is expected to be small given the intention to treat and reuse most site-won soils.
- 6.5.5 Any off-site waste disposal will follow the Duty of Care requirements: waste classification, consignment notes, use of licensed carriers, and disposal at permitted sites. Non-hazardous soils would go to a landfill or recovery site, and any hazardous-hotspot (if found) would go to a hazardous waste landfill.
- 6.5.6 This approach is in line with the waste hierarchy (prevention > reuse > recycle > disposal). It will also be coordinated with the construction programme – e.g., if a mobile treatment process is needed, it will be scheduled to avoid delaying critical works, or done in parallel in a designated area. All necessary permits or CL:AIRE declarations will be secured prior to the relevant works.
- 6.5.7 The EA will be consulted throughout to ensure that the chosen path (DoWCoP vs permit) remains acceptable as investigations continue.

7.0 SITE-SPECIFIC MANAGEMENT MEASURES

7.1.1 Building upon the general principles, several site-specific measures will be implemented through the construction, operational and decommissioning phases at the Site due to its unique context.

Dredging Deposit Cells and Bund Stability

7.1.2 As noted, former dredging deposit cells (Cells 1, 2, 3 and 5) lie within the Site. Except where integrated into the NBBMA (Cell 3), these cells and their confining bunds will largely be left undisturbed. A buffer zone will be established around each bund – no excavation will approach within 10m of the toe of a bund. Similarly, additional loading (stockpiling or heavy equipment) will not be permitted on the slopes or crest of bunds.

7.1.3 Where the solar development (e.g. panel rows or fencing) is near a bund, careful surveying will ensure footings do not compromise the bund. If any minor works on bunds are required, a detailed method and risk assessment will be produced and appropriate strengthening or shoring applied.

7.1.4 Monitoring for any signs of bund movement or seepage will be done during construction in adjacent areas.

Non-Breeding Bird Mitigation Area (NBBMA)

7.1.5 Cell 3 soils will be reworked to create areas of wet grassland and areas of seasonal shallow water features. As set out above these works would be undertaken under either DoWCoP or a DfR permit.

7.1.6 Construction of the NBBMA will involve excavation and movement of soils (roughly the upper 0.5–1.0 m of material) within the central area of Cell 3 to form islands, bunds, and scrapes as per the **Non-Breeding Bird Mitigation Strategy at Appendix B of the outline Landscape and Ecology Management Plan [EN010153/DR/7.13]**. Soils would be reprofiled in Cell 3

to create the features described above, with some soils also potentially deposited in the existing ponds located to the immediate north of Cell 3.

- 7.1.7 The construction of the NBBMA will necessitate the implementation of specialised ground engineering and soil management methodologies, as the subsurface soils are expected to be of higher moisture content, evident from site investigations in this area. Where this softer ground is anticipated, low-ground pressure equipment and possibly temporary bog mats will be used to minimise rutting and retain soil structure.
- 7.1.8 After creation, the NBBMA soils will remain in place, but they will be monitored for stability and vegetation establishment.

Artificial Bunds and Landfill Areas Off-Site

- 7.1.9 The Order Limits are adjacent to other man-made deposit grounds (such as the Inovyn deposit to north-east). Although these are outside the Site, construction planning will account for them. For example, dust control will be important if working near dried sediment mounds, and vibration from piling will be assessed so as not to destabilise adjacent deposited materials. No materials will be removed from or added to those off-site areas.

Flood Mitigation and Soil

- 7.1.10 Parts of the Site are in Flood Zone 3. The Proposed Development design incorporates maintaining flood storage capacity. From a soil perspective, this means large stockpiles will not be left in flood zones that could displace water.
- 7.1.11 The outline drainage strategy will ensure no increase in runoff rates, protecting soil from unexpected erosion (**ES Vol 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]**)

Unexploded Ordnance (UXO)

- 7.1.12 As set out in **ES Vol 2 Appendix 10-1: Stage 1 Geo-Environmental Assessment [EN010153/DR/7.5]** a UXO survey has identified a potential risk



at the Site. A UXO Management Plan will be prepared prior to construction commencing, as set out in the **outline Construction Environmental Management Plan [EN010153/DR/7.5]**.

7.1.13 If UXO is encountered, the procedures of the UXO Management Plan will override normal soil handling until the item is made safe. Afterwards, disturbed soil will be reinstated as per this oSMP.

Biosecurity

7.1.14 As set out in the **outline Construction Environmental Management Plan [EN010153/DR/7.5]**, prior to the commencement of construction, an invasive species walkover survey will be undertaken during an appropriate time of year (May – October) in order to assess the spread of invasive species.

7.1.15 Any areas identified as containing invasive non-native species (INNS) will be suitably demarcated to ensure site staff are aware of its presence and avoid work in such areas without approval from the Ecological Clerk of Works.

7.1.16 An invasive species treatment programme will be implemented by a licenced and experienced invasive species contractor, which will follow a detailed method statement set out in an Invasive Non-Native Species Management Plan produced prior to the commencement of work to ensure that the INNS are not spread during works, that any soil containing them is managed appropriately, and that a long-term eradication or control programme is undertaken.

7.1.17 For the NBBMA, a New Zealand Pygmyweed Control and Management Strategy will be produced prior to the commencement of work. This is secured via the **oCEMP [EN010153/DR/7.5]**. This shall set out detail to ensure that New Zealand Pygmyweed is not spread during works, that arisings from the NBBMA are managed appropriately, and that a long-term control programme is undertaken within the NBBMA.

Peat Resources

7.1.18 Further ground investigation and geoarchaeological investigation will be carried out across the Site prior to construction of the Proposed Development, in accordance with the **oCEMP [EN010153/DR/7.15]** and Requirement 17 of the **draft DCO [EN010153/DR/3.1]**.

7.1.19 The Applicant has undertaken an appropriate and proportionate approach to identifying peat across the Site, and concluded that based on ground investigations undertaken to date, there will be no, or only very limited potential for localised peat disturbance as a result of the Proposed Development. However, should surface-level peat (or other peat) that has the potential to be impacted by the Proposed Development be identified during the further investigations, a Peat Management Plan will be prepared for approval by CWaCC prior to commencing the relevant phase of the Proposed Development.

Summary

7.1.20 By addressing these site-specific issues, this oSMP ensures that the soil and material management strategy is tailored to the Site's conditions – particularly the handling of dredged sediments (with habitat creation), safeguarding existing bunds, and preventing any legacy contamination issues.

8.0 IMPLEMENTATION OF MANAGEMENT PLAN

- 8.1.1 The Principal Contractor will be required to adhere to the provisions of this oSMP and develop the final Soil Management Plan (SMP) for approval by CWaCC.
- 8.1.2 A competent Soil Resource specialist will be appointed to oversee soil management activities, advise on appropriate handling (e.g. confirming when soil conditions are suitable for stripping), and maintain records. The Environmental Clerk of Works or Environmental Manager will also ensure that protective measures (for example, buffer zones around sensitive areas) are in place prior to soil works.
- 8.1.3 All site personnel will be briefed on the soil management requirements and “stop work” conditions (e.g. during adverse weather) so that they are clearly understood.
- 8.1.4 Requirement 16 of the draft DCO requires a ground conditions investigation and assessments strategy to be developed and approved by CWaCC. This will be prepared under the instruction of the Environmental Manager, with a suitably qualified environmental consultant / contractor overseeing any necessary remediation or waste management actions.
- 8.1.5 This oSMP provides the strategy and minimum requirements for soil and material management, but several future actions are required to develop it into the final, detailed SMP for implementation:
 - i) **Appointment of Specialists:** The Applicant will engage a suitably qualified soil specialist (e.g. soil scientist or agricultural expert) to join the project team prior to construction. Similarly, a geo-environmental engineer or contaminated land specialist will be appointed to refine the contamination mitigation strategy. These specialists will input to the detailed SMP.

- ii) **Further Site Investigations:** Targeted ground investigations (both for geotechnical and contamination purposes) will be undertaken post-consent, to inform construction design and materials management. The results (e.g. chemical analysis of dredge deposits, physical properties of soil for handling) will feed into the SMP. Any area found with contamination above guideline levels will have a Remediation Method Statement added to the SMP for that area.
- iii) **Preparation of a Materials Management Plan (MMP):** A project-specific MMP, compliant with the CL:AIRE DoWCoP, will be produced by the Contractor or their consultant at the detailed design stage. This will include:
 - a) identification of all waste streams;
 - b) reuse routes for excavated soils;
 - c) chemical test results and acceptable criteria;
 - d) locations and volumes for material reuses;
 - e) procedures for segregation; and
 - f) contingency plans if material fails criteria.

If necessary, a remediation strategy would be prepared for approval by the Environment Agency to support the MMP. The MMP will reference this oSMP for general measures, and will be reviewed and endorsed by a Qualified Person. It will then be submitted to the EA for information (through the DoWCoP Declaration process) prior to the start of excavation works.

- iv) **Environmental Permits (if required):** In parallel with the MMP, the Contractor will apply for any necessary environmental permits. This could include a Mobile Plant permit deployment form (under a contractor's existing standard permit) for treating soils, or a bespoke permit if novel treatment is needed. The conditions of any permit will be incorporated into the SMP. For example, if a Mobile Plant permit requires certain monitoring (like groundwater monitoring during treatment), the SMP will include that monitoring schedule. Similarly, if a DfR permit is chosen for some

materials, its approved plan will essentially become part of this management plan.

- v) **Consultation and Approvals:** The final SMP (noting that multiple SMPs can be developed for the different construction phases of the project) will be developed in consultation with relevant stakeholders – the planning authority (and their consultees like the Minerals and Waste team and Natural England for soil aspects), and the Environment Agency (for contamination and waste permitting aspects). The final SMP(s) will require approval from the planning authority pursuant to Requirement 15 of the draft DCO prior to the commencement of construction.
- vi) **Construction Method Statements:** The Principal Contractor will produce method statements for all construction activities that interact with soils (e.g. earthworks method, drainage installation, etc.). Those method statements will adhere to the principles in this oSMP. The SMP will reference these documents, and vice versa, to ensure cohesion. For instance, a method statement for trenching will explicitly state “topsoil to be stripped and stored as per SMP Section 4” and will detail equipment and sequencing consistent with the plan.
- vii) **Training and Tool-box Talks:** An important future step is translating the SMP into on-site practice. The Contractor will develop training materials or tool-box talks for crews, covering topics like “soil stripping do’s and don’ts,” “recognising and reporting contamination,” and “protecting stockpiles.” These will be delivered at site induction and regularly during works.
- viii) **Monitoring and Reporting Framework:** The final SMP will include a monitoring programme described in more detail in the following section. This will likely be presented as a table of inspections (e.g. daily soil condition checks, weekly stockpile audits, etc.) and will outline reporting requirements – e.g. monthly environmental reports during construction will include a section on soil management, any issues encountered and corrective actions taken.

ix) **Post-Construction Review:** After the construction phase (including the NBBMA creation) is completed, a review will be carried out to evaluate the success of soil and material management. Lessons learned (what worked well, what issues arose) will be documented. This is forward-looking to decommissioning – the knowledge gained will make the eventual decommissioning soil management easier and more effective. The SMP document may be revised at the end of construction to serve as a baseline for site operations (though minimal soil disturbance is expected in operation, it could address maintenance).

8.1.6 In conclusion, this oSMP establishes the commitments and approach to responsibly manage soils and materials for the Proposed Development. It will protect soil resources, ensure regulatory compliance for any waste or contamination issues, and facilitate restoration of the Site. The final SMP to follow will provide the specific instructions and specifications needed for on-site implementation, in substantial accordance with the framework and principles set out in this document.

9.0 MONITORING

9.1 Monitoring

- 9.1.1 To ensure compliance with the measures set out in the oSMP, monitoring and reporting will take place throughout the construction of the Proposed Development. This process will also include oversight of the resulting reporting to ensure that corrective action is taken where necessary. Details of monitoring, inspection and audits to be undertaken will be provided in the final SMP.
- 9.1.2 The Environmental Clerk of Works will be present on Site throughout the construction phase. They will observe site activities and in particular will attend when new activities first occur, to ensure compliance with the SMP, raise deviations where they occur, and to monitor actions and conditions on the Site. They will also undertake regular walkover surveys of the Site to monitor compliance, and undertake regular inspections as required by the SMP. They will also meet regularly with the Site Manager to discuss the construction programme and any issues arising from that or their inspection/monitoring activities. They will also undertake day-to-day contact with relevant local authorities and other regulatory agencies (such as the Environment Agency).
- 9.1.3 All activities observed by the Environmental Clerk of Works, the results of surveys and inspections undertaken by them, and reports produced by them will be documented as part of the procedures defined in the CEMP.
- 9.1.4 If complaints are received from members of the public these will be logged by the Site Manager. Where necessary, the complaints will be referred to the specialists advising on soil management.
- 9.1.5 All complaints will be reviewed by the Site Manager, Community Liaison Officer, and Environmental Manager, and result of the review and any corrective actions taken will be logged. The Complaints Log will be reviewed

for signs of wider on-going issues, and where these are identified corrective action will be taken.

9.2 Record keeping

9.2.1 Quality and Safety Management Systems (QMS) and Environmental Management System (EMS) will be kept by the Principal Contractor, as set out in the **Outline Construction Environmental Management Plan (oCEMP) [EN010153/DR/7.5]**. These will be certified in line with ISO 14001 standards.

9.2.2 Those systems will ensure that records are kept of monitoring, recording, and implementation of environmental management measures for the Proposed Development, including in respect to soil management. This is vital to ensuring that the Proposed Development is delivered with a high standard of environmental control throughout the construction phase, and that corrective actions are undertaken.

9.2.3 A central record keeping system will be established which will provide a repository for procedures, checklists, reports and other such measures required for the EMS and QMS. This will include maintaining records of inspections, audits, or other such activity undertaken by internal or external parties undertaking audit of the SMP. These will include the following records as a minimum:

- Permits, approvals, and other similar regulatory documentation.
- Environmental surveys.
- Environmental equipment test records.
- Records of routine site inspections.
- Details of incidents, breaches of the SMP, or complaints from third parties, and corrective action taken in respect of the same.

9.2.4 The records held in respect of the SMP will be made available for the purposes of monitoring compliance where a request is made by Cheshire West and Chester Council or the Environment Agency.



10.0 REFERENCES

ⁱ Department for Environment, Food and Rural Affairs, (2009). *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites*. [online] Available at: <https://www.gov.uk/government/publications/code-of-practice-for-the-sustainable-use-of-soils-on-construction-sites> [Accessed 22 April 2025]

ⁱⁱ Ministry of Agriculture, Fisheries and Food, (2000). *Good Practice Guide for Handling Soils*. [online] Available at: <https://www.quarrying.org/soils-guidance> [Accessed 22 April 2025]

ⁱⁱⁱ Natural England, (2012). *Agricultural Land Classification: Protecting the Best and Most Versatile Agricultural Land (Technical Information Note TIN049)*. [online] Available at: <https://publications.naturalengland.org.uk/publication/35012> [Accessed 22 April 2025]

^{iv} British Society of Soil Science, (2022). Guidance Document 3. Working with Soil Guidance Note on Benefitting from Soil Management in Development and Construction. Available at <https://soils.org.uk/wp-content/uploads/2022/02/WWS3-Benefitting-from-Soil-Management-in-Development-and-Construction-Jan-2022.pdf> [Accessed 22 April 2025]

^v HMSO, (1990). *Environmental Protection Act 1990*. [online] Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents> [Accessed 22 April 2025]

^{vi} HMSO, (2016). The Environmental Permitting (England and Wales) Regulations 2016. [online] Available at: <https://www.legislation.gov.uk/ukssi/2016/1154/contents> [Accessed 22 April 2025]

^{vii} Contaminated Land: Applications in Real Environments, (2011). *Definition of Waste: Development Industry Code of Practice (Version 2)*. [online] London: CL:AIRE. Available at: <https://www.claire.co.uk/projects-and-initiatives/dow-cop> [Accessed 22 April 2025]