

Mallard Pass Solar Farm

outline Decommissioning Environmental Management Plan (oDEMP) [Clean]

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Table of Contents

1.0	Introduction	3
1.1.	Purpose of Document	3
1.2.	The Order limits	6
1.3.	The Proposed Development	6
2.0	Decommissioning of the Proposed Development	7
2.1.	Decommissioning Activities	7
2.2.	Decommissioning Programme	8
2.3.	Roles and Responsibilities	8
2.4.	Working Hours	9
2.5.	Control of Noise	10
2.6.	Control of Light	10
2.7.	Decommissioning Traffic Management	10
2.8.	Site Security	11
2.9.	Waste Recycling and Disposal	11
2.10.	Best Practice Measures	12
2.11.	Environmental Incidents and Emergencies	12
3.0	Management and Mitigation Plan	14
4.0	Implementation of the DEMP	68
5.0	Monitoring and Recording	69
5.1.	Monitoring	69
5.2.	Records	70
List c	of Tables	
Table	3-1 Landscape and Visual	15
Table	3-2 Ecology and Biodiversity	18
Table	3-3 Cultural Heritage and Archaeology	24
Table	3-4 Access and Highways	25
Table	3-5 Noise and Vibration	26
Table	3-6 Air Quality	30

Table 3-7 Water Resources and Ground Conditions	37
Table 3-8 Agriculture and Land Use	54
Table 3-9 Climate Change	55
Table 3-10 Socio-Economics	58
Table 3-11 Arboriculture	59
Table 3-12 Waste	61
Table 3-13 Maior Accidents and Disasters	67

1.0 Introduction

1.1. Purpose of Document

- 1.1.1. This document provides an outline Decommissioning Environmental Management Plan (oDEMP) for the decommissioning of Mallard Pass Solar Farm (hereafter referred to as 'the Proposed Development').
- 1.1.2. The DEMP (s) will be produced for the Proposed Development in accordance the Development Consent Order (DCO) Requirements prior to commencing decommissioning, which will be required to be substantially in accordance with this oDEMP submitted as part of the DCO Application.
- 1.1.3. The Proposed Development is likely to constructed in phases or parts, and it is envisaged that the DEMP (s) may be prepared, approved and implemented for individual parts or phases of the Proposed Development. As a result, there could be multiple DEMP (s) prepared in accordance with this oDEMP. Each DEMP will be produced in line with this oDEMP following grant of the DCO and approved by the local planning authorities in consultation with the Environment Agency in advance of the date of final commissioning for the relevant phase of the Proposed Development.
- 1.1.4. This document does not address measures for the operational or construction phase, which are provided in the separate outline Operational Environmental Management Plan (oOEMP) [EN010127/APP/7.7] and the outline Construction Environmental Management Plan (oCEMP) [EN010127/APP/7.6] respectively.
- 1.1.5. Likely significant effects have been identified through the Environmental Impact Assessment (EIA) process and are reported in the Environmental

Statement (ES) [EN010127/APP/6.1]. A range of best practice mitigation measures were accounted for in the assessments, and these will be implemented during decommissioning of the Proposed Development. This oDEMP demonstrates how these measures will be implemented. It also sets out the monitoring activities designed to demonstrate that such mitigation measures are carried out, and that they are effective.

- 1.1.6. The DEMP (s) will be prepared following the appointment of a principal decommissioning contractor, prior to the start of decommissioning of the Proposed Development.
- 1.1.7. This oDEMP has been prepared with the objective of compliance with the relevant legislation and mitigation measures identified through the EIA process. Any additional licences, permits or approvals that are required for the decommissioning phase of the Proposed Development and that are not disapplied by the DCO, will be set out in the DEMP (s), including any environmental information submitted in respect of them (see also the Consents and Licenses required under other legislation [EN010127/APP/3.3]).
- 1.1.8. This oDEMP provides the likely structure of the DEMP (s) and controls which might be included within the DEMP (s) to deliver the decommissioning phase of the Proposed Development.
- 1.1.9. The appointed principal decommissioning contractor will be responsible for working in accordance with the environmental controls documented in this oDEMP. The overall responsibility for implementation of the DEMP (s) will lie with the appointed principal decommissioning contractor as a contractual responsibility to the Applicant, as the Applicant is ultimately responsible for compliance with the DCO.

1.1.10. This oDEMP is set out in the context of the other environmental management plans that will be submitted with the DCO Application in Figure 1-1 below.

Figure 1-1 Environmental Management Plans Hierarchy

outline Construction Environmental Management Plan (oCEMP)

outline Water Management Plan (oWMP)

outline Construction Traffic Management Plan (oCTMP)

outline Travel Plan

outline Soil Management Plan (oSMP)

outline Excavated Materials Management Plan (oEMMP)

outline Operational Environmental Management Plan (oOEMP)

outline Landscape Environmental Management Plan (oLEMP)

outline Decommissioning Environmental Management Plan (oDEMP)

1.1.11. The following additional environmental management plans are secured by this oDEMP and will be prepared as part of the DEMP(s) prior to decommissioning of the Proposed Development:

outline Skills, Supply Chain and Employment Plan

- a. Pollution Prevention Plan (PPP)
- b. Dust Management Plan (DMP)
- c. Emergency Response Plan
- d. Emergency Spillage Action Plan
- e. Health and Safety Plan (H&SP)
- f. Decommissioning Traffic Management Plan (DTMP)

1.2. The Order limits

- 1.2.1. The Order limits are described in *Chapter 3: Description of Order limits*, of the ES [EN010127/APP/6.1].
- 1.2.2. They comprise the Solar PV Site, Mitigation and Enhancement Areas,Highway Works Site and the Grid Connection Corridor.

1.3. The Proposed Development

1.3.1. The Proposed Development is described in *Chapter 5: Project Description* of the ES.

2.0 Decommissioning of the Proposed Development

2.1. Decommissioning Activities

- 2.1.1. The Applicant is not seeking a time limited consent. The operational life of the Proposed Development has not been specified within the DCO Application. However, it is recognised that the electrical infrastructure will have an operational lifespan, as such, for the purposes of assessing decommissioning with the ES, it has been assumed that the Proposed Development has a 40-year operational life span to enable an assessment of decommissioning to be carried out. The assessment does not assume that the operational phase will be limited to 40 years as the solar infrastructure may continue to be operating successfully and safely beyond this period.
- 2.1.2. All the solar infrastructure, including PV Modules, Onsite Substation, Mounting Structures, cabling on or near the surface, Inverters, Transformers, Awitchgear, fencing and ancillary infrastructure, would be removed and recycled or disposed of in accordance with good practice following the waste hierarchy, with materials being reused or recycled wherever possible. All waste will be disposed of in accordance with the legislation at the time of decommissioning. Any damage to agricultural drains that has occurred during the operation of the Proposed Development will be repaired.
- 2.1.3. Any requirement to leave the internal access tracks would be discussed and agreed with the landowners at the time of decommissioning.
- 2.1.4. The DEMP (s) will be subject to the approval of the local planning authorities. It is likely that decommissioning would include the removal of the permissive paths and potential reversion of grassland underneath the PV Arrays. Any landscape structural planting, such as tree planting,

hedgerows, scrub etc created to deliver biodiversity mitigation and enhancement associated with the Proposed Development that have potential to contain protected species would be left in-situ when the Site is handed back to landowners, who would then have the ability to do as they wish (within the restrictions of the planning system) with their land.

2.2. Decommissioning Programme

- 2.2.1. Decommissioning is anticipated to take approximately six to twelve months.
- 2.2.2. The effects of the decommissioning phase are often similar to, or of a lesser magnitude than, the effects generated during the construction phase and have been considered in the relevant sections of the ES. However, there can be a high degree of uncertainty regarding decommissioning as engineering approaches and technologies evolve over the operational life of the Proposed Development.
- 2.2.3. The detailed DEMP (s) will set out the decommissioning programme for the phase(s) of the authorised development to which it relates, including confirmation of when the decommissioning works are expected to complete based on the engineering approach and technologies at that time.

2.3. Roles and Responsibilities

- 2.3.1. Key roles and responsibilities during the decommissioning phase in managing environmental impacts will likely include, but are not limited to:
 - Site Manager Overall responsibility for activity onsite, and will be based onsite full time
 - b. Decommissioning Project Manager Overall responsibility for ensuring all elements in the DCO, DEMP (s) and all environmental legal and other

- requirements are implemented, and appropriately resourced, managed, reviewed and reported
- c. Environment Manager Responsible for the overall management of environmental aspects on site, ensuring environmental legislation and best practices are complied with, and environmental mitigation and monitoring measures identified are implemented. The Environmental Manager will oversee environmental monitoring onsite and carry out regular environmental site inspections, reporting and responding to any incidents or non-compliance. The Environment Manager will liaise with the local planning authorities and the Environment Agency.
- d. Ecological Clerk of Works (ECoW) Management of the risks to ecological features on decommissioning sites, advising protecting valued ecological features and providing practical solutions in line with this oDEMP.
- e. Flood Warden There will be a dedicated responsibility to be prepared for, and manage, the response to flood incidents
- f. Health and Safety Manager Responsible for the monitoring and controlling of health and safety compliance and related rules and regulations on-site.
- 2.3.2. These roles and responsibilities are indicative and will be confirmed in the DEMP(s).

2.4. Working Hours

- 2.4.1. Core decommissioning hours will run from 07:00 to 19:00 Monday to Saturday, with no working on Sundays or Bank Holidays. Heavy Goods Vehicle (HGV) deliveries to the Order limits and works likely to generate substantial levels of noise, would be limited to daytime hours of 07:00 to 19:00 during weekdays or Saturday mornings (until 13:00 hours), unless otherwise agreed with the relevant local authority.
- 2.4.2. Working days will be one 12-hour shift, with employees travelling to and from the Order limits an hour either side of these times (i.e. between 06:00 and 07:00, and 19:00 and 20:00). Where onsite works are to be

- conducted outside the core working hours, this will be agreed with the relevant planning authority.
- 2.4.3. Section 61 Consents would be obtained for the Proposed Development which would include agreed noise limits for nearby noise sensitive receptors.

2.5. Control of Noise

2.5.1. A display board will be installed onsite. This will include contact details for the Site Manager or alternative public interface with whom complaints can be lodged. A logbook of complaints and remedial actions taken will be prepared and managed by the Site Manager and made available to the relevant local authority where requested. See **Table 3-5** for more details.

2.6. Control of Light

2.6.1. Temporary lighting, in the form of mobile lighting towers, will be required in areas where natural lighting is unable to reach (sheltered/confined areas), and during core working hours within winter months. Artificial lighting will be provided to maintain sufficient security and health and safety within the Order limits, whilst adopting mitigation principles to avoid excessive glare, and minimise spill of light to nearby receptors (including ecology and residents) as far as reasonably practicable. See Table 3-1 3-1 and Table 3-2 for details on measures in relation to Landscape and Visual and Ecology respectively.

2.7. Decommissioning Traffic Management

2.7.1. A separate Decommissioning Traffic Management Plan (DTMP) will be produced and agreed with the relevant local planning authority, in consultation with the relevant highway authority prior to the

commencement of the decommissioning works within the Order limits and will be submitted as part of the DEMP(s). The DTMP will consider the methods by which materials, equipment and decommissioning workers will arrive at and depart from the Order limits, applying the same principles as have informed the *oCTMP*, unless the highway context has significantly altered during the operational phase of the Proposed Development.

2.8. Site Security

2.8.1. Site security during the decommissioning phase will be managed by the appointed principal decommissioning contractor. Temporary perimeter fencing will be established, where required, at the start of the decommissioning phase. Storage of materials and chemicals will be kept secure to ensure safety and prevent theft or vandalism. The principal decommissioning contractor will be responsible for establishing a safe system for accessing the material storage areas.

2.9. Waste Recycling and Disposal

- 2.9.1. The Waste (England and Wales) Regulations 2011 place a duty on all persons who produce, keep or manage waste to apply the 'Waste Hierarchy' in order to minimise waste production at every stage of the development.
- 2.9.2. The Waste Hierarchy is a European concept which requires anyone managing waste to consider first waste prevention, preparing for reuse and recycling, followed by waste recovery methods e.g. energy recovery and, lastly, waste disposal.
- 2.9.3. In order to control the waste generated onsite during the decommissioning phase, the principal decommissioning contractor will

- separate the main waste streams onsite, prior to transport to an approved, licensed third party waste facility for recycling and disposal.
- 2.9.4. All practicable actions will be taken by the principal decommissioning contractor to minimise the volume of waste produced as a result of the decommissioning of the Proposed Development. This can be through reducing consumption, reuse, using resources efficiently, and designing for longevity. Waste segregation will be undertaken where possible to maximise the opportunities for reuse and recycling.
- 2.9.5. All waste removed from the Order limits will be undertaken by fully licensed waste carriers and taken to licensed waste facilities for recycling or disposal.
- 2.9.6. The waste disposal methods will be reviewed and updated in the DEMP(s) to ensure compliance with any future changes in legislation.

2.10. Best Practice Measures

2.10.1. The Proposed Development will adopt the Considerate Constructors Scheme (CCS) (or equivalent at the point of decommissioning) to assist in reducing potential pollution and nuisance during the decommissioning of the Proposed Development, by employing best practice measures which go beyond statutory compliance.

2.11. Environmental Incidents and Emergencies

2.11.1. An emergency response plan will be developed in consultation with the relevant local authority's emergency planning officers, emergency services, and the Environment Agency in relation to responding to flood warnings and events.

2.11.2.	The plan will detail the procedures for responding to incidents and emergencies onsite, and any reporting.

3.0 Management and Mitigation Plan

- 3.1.1. This section of the oDEMP outlines the potential impacts and mitigation measures to be included as a minimum within the DEMP(s). It also provides the monitoring requirements for each mitigation and/or enhancement where required. The measures identified in Tables 3-1 3-13 below will be reviewed and updated following consent of the DCO Application and prior to decommissioning as part of the preparation of the DEMP (s).
- 3.1.2. Not all of these measures have been identified to address specific adverse effects assessed trough the EIA process. Some of the measures have been included as good practice.
- 3.1.3. Nothing in this oDEMP would prevent the modification or omission of the control measures set out in **Tables 3-1 3-13** where the decommissioning methodology means that the measures can be so modified or omitted. This will be confirmed (including confirming that the absence or change to such control measures would not lead to any materially new or materially different significant effects) at the time of submission of the DEMP(s).
- 3.1.4. The responsibility for ensuring that the measures set out in **Tables 3-1 –**3-13 are implemented will lie with the principal decommissioning contractor appointed by the Undertaker. The principal decommissioning contractor will also be responsible for appointing and managing personnel responsible for fulfilling particular roles identified in this document such as the Environmental Manager and ECoW. Specific responsibilities will be set out in the DEMP(s).



Table 3-1 Landscape and Visual

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Loss of existing landscape features, e.g.	The DEMP(s) will be required to take into account measures contained within the LEMP. A pre-commencement survey of vegetation prior to decommissioning will need to be undertaken to establish the extent to which	A pre-decommissioning arboricultural survey in line with BS5837:2012.
vegetation Visibility of decommissioning activities	any vegetation removal will be needed. Excluding where vegetation has spread into new areas and encroached on land required for decommissioning, planting implemented through the Proposed Development will be kept in-situ.	ECoW will carry out monitoring of the proposed protection measures such as
	Measures proposed to mitigate potential effects on landscape during the decommissioning phase include:	fencing.
	 a. To protect and retain existing trees and vegetation via decommissioning exclusion zones and tree protective fencing; 	
	 b. Landscape and biodiversity management and enhancement measures including replacement tree planting (where relevant) 	
	 c. Landscape, arborists and Ecological Clerks of Works (ECoW) to ensure that the landscape and ecology requirements of the DEMP(s) are adhered to and that the works are monitored 	
	The design of the Proposed Development has ensured careful consideration of the access points to limit the loss of vegetation at access points and the number of field boundary crossings. The access points from the highway (see the secondary access points on <i>Figure 5.10</i> of the ES) and internal	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	access tracks used during the construction phase and operational phase will be used for the purposes of decommissioning.	
	Tree Works	
	A pre-decommissioning tree survey will be required prior to decommissioning to re-establish the baseline prior to starting works. This survey will inform the tree protection zones to be applied during decommissioning. The findings of this will be included within an Arboriculture Report, which will be accompanied by an Arboriculture Method Statement (that will accompany the DEMP(s)) which will set out mitigation and protection measures to be undertaken.	
	Where works in close proximity to retained trees cannot be practically avoided, these works will be undertaken in accordance with current best practice, defined in British Standard (BS) 5837: 2012 'Trees in relation to design, demolition and construction'.	
	Lighting	
	Temporary lighting during the decommissioning phase, required to enable safe working during decommissioning in hours of darkness, will be designed as far as reasonably practical so as not to cause a nuisance outside of the Order limits. All lighting will be deployed in accordance with the following recommendations to prevent or reduce adverse effects:	
	 a. The use of lighting will be minimised to that required for safe site operations; 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	 b. Lighting will utilise directional fittings to minimise outward light spill and glare (e.g. via the use of light hoods/cowls which direct light below the horizontal plane, preferably at an angle greater than 20° from horizontal); and 	
	 c. Lighting will be directed towards the middle of the Order limits rather than towards the boundaries. 	



Table 3-2 Ecology and Biodiversity

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Potential for spillages to enter watercourses and impact ecology. Clearance or damage of habitat to facilitate decommissioning – resulting in temporary or permanent reduction in habitat extent and potential direct and indirect effects on associated species.	Ecological Clerk of Works A licensed ECoW will be employed/contracted to advise on legislation, the findings of the updated surveys, protected species licencing requirements and with reference to the relevant project programmes. Prior to the decommissioning of the Proposed Development, further walkover surveys will be undertaken by an ecologist to establish an updated baseline of ecological receptors and confirm whether the risks remain as previously identified in Chapter 7: Ecology and Biodiversity of the ES and/or to confirm correct implementation of impact avoidance measures (e.g. protected species stand-offs). The scope of the required walkovers will be defined on a case-bycase basis in consultation with the project team, the local planning authorities or other relevant statutory consultees as necessary. Dormouse Removal of woody vegetation or scrub at the decommissioning phase may require a survey for the species to inform appropriate mitigation based on the level of removal and licensing requirements at that time. All staff involved in decommissioning works will receive toolbox talks on the	A pre-decommissioning walkover will be undertaken in advance of mobilisation/any potential advance works to re-confirm the ecological baseline conditions at that time and to identify any new ecological risks. Updated species surveys will be completed as appropriate to re-confirm the status of protected species identified, to inform mitigation requirements. The DEMP(s) will be
Dust deposition on sensitive	ecological risks present, legal requirements and working arrangements necessary to comply with legislation. Toolbox talks will be repeated as necessary over the duration of the decommissioning phase.	updated to reflect additional survey requirements and then any mitigation measures



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
ecological receptors. Loss of grassland within the Order limits which will be used as a decommissioning compound area.	Contact details for the Site Management or alternative public interface will be available on a display board installed onsite so that nuisance or complaints can be logged and reported over the duration of the decommissioning works. A log book of complaints will be prepared and managed by the Site Manager. Working Methods to avoid and minimise impacts on protected / notable species and existing habitats The following precautionary working methods will be employed to minimise potential adverse effects on habitats and protected/notable species at the end of the operational period prior to, and during, decommissioning: a. Fencing will be installed around sensitive ecological features to prevent encroachment of decommissioning activities and accidental damage; b. Measures to prevent and minimise dust creation and air pollution will be adopted throughout decommissioning. Please refer to Table 3-6for the measures employed to minimise effects on air quality; c. Measures to prevent pollution incidents will be adopted throughout the decommissioning phase. Please refer to Table 3-7 for the measures employed to avoid pollution events with respect to water quality; d. Measures to minimise effects on ecology from noise and vibration will be adopted throughout the decommissioning phase. Please refer to the Table 3-5 for the measures employed to minimise noise and vibration;	subsequently identified through those surveys. Such surveys will be undertaken sufficiently far in advance of decommissioning works to account for seasonality constraints and to allow time for the implementation of any necessary mitigation, prior to decommissioning.



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	e. Pre-commencement surveys will be undertaken to validate and, if necessary, update the baseline habitat survey findings at that time to inform the implementation of mitigation measures;	
	 Retained trees adjacent to decommissioning working areas will be protected by clearly defined root protection zones to prevent damage/compaction of roots by plant and other machinery; 	
	g. Vegetation clearance will be undertaken in advance of decommissioning and at an appropriate time of year. This will likely involve a two-stage vegetation removal with a first cut in winter (October to February) and the final removal during the active season for reptiles (mid-April onwards). This would be implemented for any small scale hedgerow, scrub or rough grassland removal/clearance;	
	h. As a precaution, prior to starting decommissioning works during the nesting season (mid-March to August), an experienced ecologist will carry out a watch of the affected field(s) to determine whether lapwing (or other ground nesting birds) are nesting in the area. If nesting birds are discovered, then the ecologist will advise on an appropriate exclusion zone or a delay to works until fledglings have left the nests;	
	i. Prior to decommissioning the vegetation will be kept short to displace any present amphibians, which may be present, away from the decommissioning works when the amphibians emerge in the early	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	spring, and discourage amphibians from moving into the Order limits from the surrounding habitat;	
	j. Reasonable avoidance measures will be used during clearance of any habitat suitable for reptiles, to minimise the risk of direct impacts including phased clearance of vegetation to gradually reduce suitability for reptiles, thereby encouraging animals to move away from affected areas into adjacent suitable habitat;	
	 k. Cleared ground will be maintained in a disturbed state in the lead up to the decommissioning works commencing to minimise the risk of ground nesting birds attempting to nest on cleared ground; 	
	 Implementation of measures to avoid animals being injured or killed within decommissioning working areas, through excluding them from such areas and preventing them falling into and becoming trapped in excavations; 	
	m. Precautionary measures will be implemented to prevent trapping wildlife in decommissioning excavations. All excavations deeper than 1m will be covered or fenced overnight, or where this is not practicable, a means of escape will be fitted (e.g. battened soil slope or scaffold plank) to provide an escape route should any animals stray into the Order limits and fall into an excavation;	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	n. Reasonable avoidance measures to avoid impact on badgers and bats will be employed, including buffers of 30m around any identified badger setts and 15m buffer around trees with bat roost potential;	
	 A 15m buffer zone will be applied to the adjacent Local Wildlife Sites and ancient woodland surrounding the Order limits. 	
	 Prior to decommissioning works commencing onsite an updated badger survey will be undertaken across the entire Order limits to check for any changes to the status of setts and ensure up to date information on badger activity; 	
	q. Toolbox talks will be delivered to contractors and operatives in advance of decommissioning. This toolbox talk will be delivered by a suitably qualified ecologist and will focus on badger, signs of badger presence to be aware of (particularly excavations);	
	 r. Vegetation (including topsoil) will be carefully removed using an excavator using a toothed bucket. These works should be supervised by a suitably qualified and experienced ecologist if this is deemed appropriate to do so; 	
	s. Any habitat features which may conceal sheltering amphibians (log piles, rubble mound bunds, any other debris etc.) will be dismantled by hand under supervision of the suitably qualified and experienced ecologist;	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	t. Dismantling of any onsite rubble piles should be conducted during the amphibian active season (i.e. April to October) during warm weather conditions (i.e. above 5°C) to avoid killing or injuring potential hibernating amphibians; and	
	 u. in the unlikely event that any Great Crested Newt are discovered during decommissioning works, works within 250m must cease immediately an appropriate approach will be agreed taking into account potential licencing requirements. 	
	Habitat Restoration	
	Habitats to be temporarily lost or damaged during decommissioning will be fully reinstated on a like-for-like basis at the same location on completion of the works.	
Potential for obtrusive light and light spill impact on species and habitats	Controls on lighting/illumination to minimise visual intrusion and potential adverse effects on sensitive ecology, such as bats, will be considered as far as reasonably practicable.	None
	Temporary lighting will be designed as far as reasonably practicable so as to minimise artificial light spill from the Order limits. Lighting will be kept to a minimum during decommissioning works. Decommissioning core working hours will be 07:00 – 19:00 Monday to Saturday and during decommissioning in the winter months, mobile lighting towers will be used. Any lighting required during the decommissioning phase will be directed away from retained habitats and include hoods or cowls to direct light forwards into the decommissioning areas.	



Table 3-3 Cultural Heritage and Archaeology

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Impacts on archaeological deposits	The decommissioning phase is not expected to result in any impact beyond the already-disturbed footprint of the Proposed Development. Therefore, it is not anticipated that decommissioning activities will have a direct physical impact upon archaeological remains.	None
Impacts on built heritage assets	Direct impacts to designated heritage assets are not anticipated during decommissioning. Temporary impacts on the setting of heritage assets will be minimised by the retention of landscape screening implemented during construction and maintained during operation in accordance with the oLEMP .	None



Table 3-4 Access and Highways

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
The effect of the decommissioning phase on access and highways is anticipated to be the same or less than construction effects. Increased traffic flows, including HGVs on the roads leading to the Order limits. Severance and intimidation associated	A Decommissioning Traffic Management Plan (DTMP) will provide the mitigation measures required to reduce the impacts of increased traffic flows including heavy goods vehicles (HGVs) on roads including severance and intimidation associated with increased traffic and abnormal loads. The DTMP will be produced prior to decommissioning works commencing and will form part of the DEMP(s). The assessment and identification of any mitigation measures for the transport of any abnormal loads will be undertaken separately through a standalone Abnormal Indivisible Load (AIL) assessment that will be prepared and submitted alongside the DEMP(s) and DTMP.	The appointed principal decommissioning contractor will undertake such monitoring as is necessary. Further details to be confirmed in the DEMP (s) and DTMP.
with increased decommissioning traffic and abnormal loads.		



Table 3-5 Noise and Vibration

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Vibration due to decommissioning activities potentially causing annoyance at noise sensitive receptors and damage to building structures. Decommissioning traffic, plant and machinery noise at nearby noise sensitive receptors.	Best Practicable Means (BPM) will be applied, as far as reasonably practicable, during decommissioning works to minimise noise and vibration at noise sensitive receptors, including neighbouring residential properties and other sensitive receptors arising from decommissioning activities. These include, as appropriate: a. Ensuring that all appropriate processes, procedures and measures are in place to minimise noise before works begin and throughout the decommissioning programme; b. All contractors to be made familiar with the applicable legislation and guidance at the point of decommissioning which should form a prerequisite of their appointment; c. Ensuring that, where reasonably practicable, noise and vibration is controlled at source (e.g. the selection of inherently quiet plant and low vibration equipment), review of the decommissioning programme and methodology to consider quieter methods, consideration of the location of equipment onsite and control of working hours; d. Use of modern plant, complying with applicable UK noise emission requirements at the time of decommissioning works;	Noise monitoring will be undertaken throughout the decommissioning phase. Requirements including monitoring locations and noise monitoring methods and frequency to be employed will be determined by the principal decommissioning contractor and agreed with the relevant planning authorities. The DEMP (s) will set out a scheme for the provision of monthly reporting information to local residents to advise of potential noisy works that are due to take place. The DEMP (s) will set out a scheme for the monitoring of noise complaints and reporting to the Applicant for immediate investigation and action.



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	e. Hydraulic techniques for breaking to be used in preference to percussive techniques, where reasonably practicable;	
	f. Drop heights of materials will be minimised;	
	g. Unnecessary revving of engines will be avoided, and equipment will be switched off when not in use;	
	h. Plant and vehicles will be sequentially started up rather than all together;	
	 Use of screening locally around significant noise producing plant and activities. Screening would be designed to minimise landscape and visual impacts; 	
	j. Regular maintenance by trained personnel will be undertaken to keep plant and equipment working to manufacturer's specifications;	
	 k. All plant and equipment to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use; 	
	 Loading and unloading of vehicles, dismantling of equipment or moving equipment or materials around the Order limits to be conducted in such a manner as to minimise noise generation, as far as reasonably practicable; 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	m. All vehicles used onsite shall incorporate reversing warning devices as opposed to the typical tonal reversing alarms to minimise noise disturbance where reasonably practicable;	
	 n. Appropriate routing of decommissioning traffic on public roads and along access tracks pursuant to the DTMP; 	
	 Section 61 Consents, where required, would be obtained for the Proposed Development which would include agreed decommissioning noise limits for nearby noise sensitive receptors; 	
	 p. Provision of information to local planning authorities and local residents to advise of potential noisy works that are due to take place; 	
	q. Monitoring of noise complaints and reporting to the Applicant for immediate investigation and action. A display board will be installed onsite. These will include contact details for the Site Manager or alternative public interface with whom nuisance or complaints can be lodged. A log book of complaints will be prepared and managed by the Site Manager; and	
	r. Consideration will also be given to traffic routing, timing and access points to the Order limits to minimise noise impacts at existing receptors following appointment of a	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	principal decommissioning contractor, and as decommissioning working methods are developed. The principal decommissioning contractor will issue a project route map and delivery schedule to control decommissioning traffic. Management of heavy goods vehicles (HGVs) within the Order limits and being let onto the highway network will be managed through the DTMP.	
	HGV movements to and from the Order limits and works likely to generate substantial levels of noise, would not be undertaken on Saturday afternoons (13:00 onwards). Other decommissioning activities unlikely to generate high noise levels (e.g. site access and inductions, light vehicle movements etc.) may continue during these hours.	
	If night-time operation is required, the closest residents to the works shall be notified of the start and completion of the works.	



Table 3-6 Air Quality

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
The effect of the decommissioning phase on air quality is anticipated to be the same or less than construction effects.	Appropriate best practice control measures will be included in the DEMP(s), which may include, but not be limited to: Communication	Measures in the DEMP(s) will include the implementation of inspection procedures
	 a. Develop and implement a stakeholder communications plan that includes community engagement before work commences onsite; 	onsite to periodically visually assess any dust
	 b. Display the name and contact details of the Environment Manager. The head or regional office contact information will also be displayed; and 	and air pollution which may be generated. Additional monitoring
Increased nitrogen dioxide (NO ₂) and particulate matter (PM ₁₀ and PM _{2.5})	c. A Dust Management Plan (DMP) in support of the DEMP(s). The level of detail will depend on the risk and should include as a minimum the recommended measures set out below.	measures will be provided in the DEMP (s).
from onsite and offsite	Site Management	
decommissioning vehicle/plant emissions.	 a. Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken; 	
Increased particulates and deposited dust from decommissioning	b. Make the complaints log available to the local planning authorities upon request;	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
activities, materials transportation,	 Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook; and 	
storage and handling, including	d. Sheet vehicles carrying dusty substrates.	
use of haul roads.	e. Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on un-surfaced haul roads and work areas.	
	 f. Use enclosed chutes, conveyors and covered skips, where practicable. 	
	g. Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.	
	h. Ensure equipment is readily available onsite to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	
	Monitoring	
	 Agree dust monitoring locations and frequency with the local planning authorities as part of the DEMP(s); 	
	 b. Undertake inspections, where receptors (including roads) are nearby and where access is granted to monitor dust, record inspection results, and make the log available to the local authorities when asked. This should include dust soiling checks of surfaces within publicly available 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	land within 100m of the Order limits, with cleaning to be provided if necessary;	
	 c. Carry out site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local planning authorities when asked; 	
	d. Increase the frequency of site inspections by the Environmental Manager when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions; and	
	 Monitoring upwind and downwind of any dusty activities and close to sensitive receptors at the Order limits boundary. If required and where possible commence baseline monitoring at least three months before work on a phase commences. 	
	Preparing the Order limits	
	 a. Design the layout for example location of temporary decommissioning compounds) so that machinery and dust causing activities are located away from receptors, as far as is possible; 	
	 Erect solid screens or barriers around dusty activities that are at least as high as any stockpiles onsite where stockpiles are within 100m of receptors; 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	 Fully enclose specific operations where there is a high potential for dust production and where the decommissioning activities are active for an extensive period where operations are within 100m of receptors; 	
	d. Avoid site runoff of water or mud;	
	e. Keep fencing, scaffolding and barriers clean using wet methods;	
	f. Remove materials that have a potential to produce dust from the Order Limits as soon as possible, unless being re-used onsite. If they are being re-used onsite cover as described below; and	
	g. Cover, seed or fence stockpiles to prevent wind whipping.	
	Operating vehicle/machinery and sustainable travel	
	 a. Ensure all vehicles switch off engines when stationary i.e. no idling vehicles; 	
	 b. Minimise the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable; 	
	 c. Ensure all non-road mobile machinery (NRMM) are regularly maintained and checked to minimise emissions; 	
	Operation of Equipment	
	 a. Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems; 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	 b. Ensure an adequate water supply onsite for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate; and 	
	c. Ensure equipment is readily available onsite to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	
	Waste	
	a. No bonfires and burning of waste materials will be carried out.	
	Earthworks	
	 Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable; 	
	 Use Hessian, mulches or tackifiers where it is not possible to re- vegetate or cover with topsoil, as soon as practicable; and 	
	c. Only remove the cover in small areas during work and not all at once.	
	Decommissioning	
	a. Minimise scabbling (roughening of concrete surfaces) if possible;	
	 b. Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place; 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	 c. Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored appropriately with suitable emission control systems to prevent escape of material and overfilling during delivery; and 	
	d. For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.	
	Track-out	
	 a. Use water-assisted dust sweeper(s) on the site accesses and local roads, to remove, as necessary, any material tracked out of the Order limits. This may require the sweeper being continuously in use; 	
	b. Minimise dry sweeping of large areas;	
	 c. Ensure vehicles entering and leaving the Order limits are covered to prevent escape of materials during transport; 	
	d. Inspect onsite access tracks for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;	
	 e. Record all inspections of access tracks and any subsequent action in a site logbook; 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	 f. Use operational access tracks, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned; 	
	g. Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the Order limits where reasonably practicable);	
	h. Use existing hard surfaced road between the wheel wash facility and the Order limits exit, wherever Order limits size and layout permits; and	
	 i. Access gates to be located at least 10m from receptors where possible. 	



Table 3-7 Water Resources and Ground Conditions

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Leakage or accidental spillage of decommissioning	General Requirements set out in the pollution prevention guidance (and any other relevant guidance available at the time of decommissioning) will be provided in the DEMP(s).	Water quality monitoring of potentially impacted watercourses will be undertaken to ensure that pollution events
materials and potential pollutants used onsite, migrating to nearby surface	Embedded mitigation measures are set out within the <i>outline Water Management Plan (oWMP)</i> [EN010127/APP/7.13] which is secured by the DCO and secures the preparation of a WMP. This will be supported by a Pollution Prevention Plan (PPP), which is secured by this oDEMP.	can be detected against baseline conditions and can be dealt with effectively. Specific details will be confirmed in the DEMP (s).
watercourses or	Management of Runoff	
infiltrating to groundwater.	The measures outlined below will be required for the management of fine particulates in surface water runoff as a result of the decommissioning	
Any flooding	activities:	
during decommissioning could flood equipment and/materials, causing release of pollutants to nearby surface watercourses or	a. All reasonably practicable measures will be taken to prevent the deposition of fine sediment or other material in, and the pollution by sediment of, any existing watercourse, arising from decommissioning activities. If still applicable at the point of decommissioning, the measures will accord with the principles set out in industry guidelines including the Construction Industry Research and Information Association (CIRIA) report 'C532: Control of water pollution from construction sites' (2001) and CIRIA report 'C649: Control of water pollution from linear construction sites' (2006). Measures may include use and maintenance of	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
infiltrating to groundwater.	temporary lagoons, tanks, bunds and fabric silt fences or silt screens as well as consideration of the type of plant used;	
Impacts on workers during decommissioning from extreme weather.	 b. If applicable, the relevant sections of British Standard (BS) 6031: Code of Practice for Earthworks (2009) will be followed for the general control of site drainage; 	
	c. Where practical, earth works will be undertaken during the drier months of the year. When undertaking earth moving works periods of very wet weather will be avoided, where practical, to minimise the risk of generating runoff contaminated with fine particulates. However, it is likely that some working during wet weather periods will be unavoidable, in which case other mitigation measures (see below) will be implemented to control fine sediment laden runoff. Water may also be required to dampen earthworks during dry weather to reduce dust impacts, and any runoff generated will need to be appropriately managed by the principal decommissioning contractor in accordance with the pollution prevention principles;	
	d. To protect watercourses from fine sediment runoff, topsoil/subsoil will where practicable, be stored a minimum of 20m from watercourses on flat lying land. Where this is not practicable, and it is to be stockpiled for longer than a two-week period, the material will either be covered with geotextile mats, seeded to promote vegetation growth, or runoff prevented from draining to a watercourse without prior treatment;	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	e. Appropriately sized runoff storage areas for the settlement of excessive fine particulates in runoff will be provided. Site runoff will be treated onsite or discharged under a water discharge activity permit from the Environment Agency to controlled waters (potentially also including infiltration to ground);	
	f. Equipment and plant are to be washed out and cleaned in designated areas within the decommissioning compounds where runoff can be isolated for treatment before disposal as outlined above;	
	g. Mud deposits will be controlled at entry and exit points to the Order limits using wheel washing facilities and / or road sweepers operating during earthworks activities or other times as required;	
	h. Debris and other material will be prevented from entering surface water drainage, through maintenance of a clean and tidy decommissioning areas, provision of clearly labelled waste receptacles, grid covers and the presence of security fencing; and	
	i. The WMP prepared on the basis of the oWMP prepared in support of the DCO will include details of water quality monitoring. The WMP will be updated prior to decommissioning when details of decommissioning activities are known. This will be based on a combination of visual observations and reviews of the Environment Agency's automatic water quality monitoring network.	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	Management of Spillage Risk	
	The measures outlined below will be implemented to manage the risk of accidental spillages onsite and potential conveyance to nearby waterbodies via surface runoff or land drains during the decommissioning phase:	
	 a. Fuel will be stored and used in accordance with the prevailing regulations; currently the Control of Substances Hazardous to Health Regulations 2002, and the Control of Pollution (Oil Storage) (England) Regulations 2001 (or latest guidance/legislation at the point of decommissioning).; 	
	 Fuel and other potentially polluting chemicals will either be in self bunded leak proof containers or stored in a secure impermeable and bunded area (minimum capacity of 110% of the capacity of the containers); 	
	c. Any plant, machinery or vehicles will be regularly inspected and maintained to ensure they are in good working order and clean for use in a sensitive environment. This maintenance is to take place offsite if possible or only at designated areas within the Order limits compound. Only equipment and vehicles free of all oil/fuel leaks will be permitted onsite. Drip trays will be placed below static mechanical plant;	
	d. It is considered unlikely that the Proposed Development will require a high number of trips requiring the transportation of hazardous loads; however, all vehicles carrying hazardous loads during decommissioning will be required to follow the regulations set out in	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	the Health and Safety Executive's (HSE) Carriage of Dangerous Goods (2009) (or latest guidance/legislation at the point of decommissioning);	
	e. Drivers must ensure that hazardous loads are always accompanied by a transport document which sets out detailed information on the load being carried, including full classification of any substances carried and how to package them. The transport document much include:	
	f. Information for each dangerous substance, material or article being carried;	
	g. Emergency instructions in writing; and	
	h. Means of identification, including a photograph of each member of the transportation crew.	
	 i. All drivers of vehicles carrying hazardous loads must be appropriately trained, so that they: 	
	j. Are aware of the hazards in the carriage of hazardous loads;	
	k. Can take steps to reduce the likelihood of an accident taking place;	
	 Can take all necessary measures for their own safety and that of the public and the environment to limit the effects of any incident that does occur; and 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	m. Have individual practical experience of the actions they will need to take.	
	The following measures will be in place to avoid contamination of the ground and water courses:	
	 All washing down of vehicles and equipment will take place in designated areas and untreated wash water will be prevented from entering watercourses; 	
	 All refuelling, oiling and greasing will take place above drip trays or on an impermeable surface which provides protection to underground strata and watercourses, and away from drains as far as reasonably practicable. Vehicles will not be left unattended during refuelling; 	
	c. As far as reasonably practicable, only biodegradable hydraulic oils will be used in equipment working in or over watercourses;	
	d. All fixed plant use onsite will be self-bunded;	
	e. Mobile plant is to be in good working order, kept clean and fitted with plant 'nappies' at all times;	
	f. The WMP will be updated to include details for pollution prevention and will be prepared and included within the DEMP(s). Spill kits and oil absorbent material will be carried by mobile plant and located at high-risk locations across the Order limits and regularly topped up.	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	All decommissioning workers will receive spill response training and tool box talks;	
	g. Where required the Order limits will be secured to prevent any vandalism that could lead to a pollution incident;	
	 h. Decommissioning waste / debris are to be prevented from entering any surface water drainage or water body; 	
	 Surface water drains on public roads trafficked by plant or within the compound will be identified and, where there is a risk that fine particulates or spillages could enter them, the drains will be protected (e.g. using covers or sand bags) or the road regularly cleaned by road sweeper; and 	
	j. Water quality monitoring of potentially impacted watercourses will be undertaken to ensure that pollution events can be detected against baseline conditions and can be dealt with effectively.	
	k. In addition, any welfare facilities will be appropriately managed, and all foul waste disposed of by an appropriate contractor to a suitably licenced facility.	
	Watercourse Crossings	
	It is not anticipated that the decommissioning stage will require any new watercourse crossings as the existing and/or crossings constructed during the construction phase would be utilised. However, in the event that a new watercourse crossing is required, the use of in-situ fresh concrete in the construction of watercourse crossings will be avoided where possible by the	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	use of pre-cast elements. Existing culverts may be upgraded and anticipated to be replaced with suitable pre-cast culvert designs. Ready-made concrete 'box style' or plastic culverts will be used. Existing culverts requiring an upgrade will be replaced using ready-made culverts.	
	Culverts will be designed based on pre-works morphology surveys and best practice in order to minimise effects of developments on the natural integrity and continuity of water courses. The design will incorporate the following criteria:	
	 a. Culverts will be well bedded to avoid settlement and protected by an adequate cover of road material; 	
	 b. The substrate and side/ head walls will be reinforced in order to prevent erosion; 	
	 c. The culverts will be designed such that it does not cause a barrier to movement of fish or other aquatic fauna; 	
	d. The culvert type will be predominantly box culverts;	
	 e. Culvert floors will have the same gradient (not exceeding a slope of 3 %) and level, and carry similar bed material and flow, as the original steam; 	
	f. There shall be no hydraulic drop at the culvert inlet or outlet;	
	g. The width of the culvert will be greater than the active channel width of the watercourse;	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	h. Culverts will be used to conduct water under the access tracks; and	
	 Any fences or screens fitted on the inlet or outlet of the culvert will be designed to allow at least 230 mm of space between the bars of the screen of fence, up to the high water level. 	
	j. There is a preference to avoid construction in watercourses altogether through the use box culverts or bridges structures appropriately designed not to impede the flow of water and allow safe passage for wildlife, such as fish, water voles, otters etc. However, short and long term impact of designs should be considered, and there can be a case for using pipe or box culverts;	
	 k. When installing culverts, care will be taken to ensure that the construction does not pose a permanent obstruction to migrating species of fish, or riparian mammals (i.e. the crossings will make provision for fish and wildlife migration); 	
	 Culverts should be sized so that they do not interfere with the bed of the stream post decommissioning, (i.e. the crossings will leave the watercourse in as natural condition as possible or permit reestablishment of substrate post decommissioning); 	
	 m. Single culverts will be used in preference to a series of smaller culverts that may be more likely to become blocked with flotsam and create erosion (i.e. the crossings will not constrict the channel); 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	n. If any fish are found during the construction of any culverts, they will be removed to a place of safety if deemed necessary after consultation with the relevant fisheries interest;	
	 To minimise impacts on breeding of any fish found, then any in- stream works in these areas will be conducted during months which have less impact on their breeding and development, where possible; 	
	 p. Ease and speed of construction are important to minimise disruption to the watercourse and surrounding habitat; 	
	 q. Designs should be low maintenance and where possible self- cleansing; and 	
	r. Structures should visually in keeping with the surroundings	
	s. If required, each watercourse crossing shall be designed on a case by case basis to be appropriate for the width of watercourse being crossed, and the prevailing ecological and hydrological situation (i.e. the sensitivity of the watercourse).	
	Management of Flood Risk	
	The DEMP(s) will incorporate measures aimed at preventing an increase in flood risk during the decommissioning works. Examples of measures that will be implemented onsite include:	
	 a. Topsoil and other materials will be stored outside of the 1 in 100 year floodplain extent. If areas located within Flood Zone 2 are to 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	be utilised for the storage of materials, this will be done in accordance with the applicable flood risk activity regulations, if required;	
	 b. Connectivity will be maintained between the floodplain and the adjacent watercourses, with no changes in ground levels within the floodplain as far as practicable; 	
	 During the decommissioning phase, the principal decommissioning contractor will monitor weather forecasts on a monthly, weekly and daily basis, and plan works accordingly; and 	
	 d. The laydown area, decommissioning office and supervisor will be notified of any potential flood occurring by use of the Floodline Warnings Direct or equivalent service. 	
	As part of the DEMP(s) the appointed principal decommissioning contractor will be required to produce an Emergency Response Plan which will provide details of the response to an impending flood and include:	
	 a. A 24-hour availability and ability to mobilise staff in the event of a flood warning; 	
	 b. The removal of all plant, machinery and material capable of being mobilised in a flood for the duration of any holiday close down period where there is a forecast risk that the Order limits may be flooded; 	
	c. Details of the evacuation and Order limits closedown procedures;	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	 d. Arrangements for removing any potentially hazardous material and anything capable of becoming entrained in floodwaters, from the temporary works areas; 	
	e. The appointed principal decommissioning contractor will sign up to Environment Agency flood warning alerts and describe in the Emergency Response Plan the actions it will take in the event of a flood event occurring. These actions will be hierarchal meaning that as the risk increases the principal decommissioning contractor will implement more stringent protection measures;	
	f. If water is encountered during below ground decommissioning, suitable de-watering methods will be used. Any groundwater dewatering required in excess of the exemption thresholds will be undertaken in line with the requirements of the Environment Agency;	
	g. Safe egress and exits are to be maintained at all times when working in excavations. When working in excavations a banksman is to be present at all times.	
	Measures required for increased flood risk due to climate change are included in the Table 3-9.	
	There will be a dedicated Flood Warden with the responsibility to be prepared for, and manage, the response to flood incidents as secured by this oDEMP. The detail on procedures that the Flood Warden will follow will be set out in the DEMP (s).	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Potential for risks to human health associated with waste generation,	Best practice avoidance and mitigation measures proposed include: a. Appropriate use of Personal Protective Equipment (PPE) and implementation and adherence to H&SP	To be confirmed in the DEMP (s).
land contamination, airborne contamination and groundwater contamination. The discovery of ground contamination during groundworks. Levelling of the Order limits including the	 b. A Pollution Response Plan will be drafted prior to the commencement of the decommissioning works. The plan will outline key pollution mitigation measures including a Control of Substances Hazardous to Health (COSHH) / fuel inventory and key contacts to be notified in the event of a significant pollution incident, which may subsequently lead to the contamination of controlled waters. Tanks and dispensing pumps will be locked when not in use to prevent unauthorised access; c. Oils and hydrocarbons will be stored in designated locations with specific measures to prevent leakage and release of their contents, include the siting of storage areas away from surface water drains, on an impermeable base with an impermeable bund that has no outflow and is of adequate capacity to contain 110% of the 	
possible introduction of new fill materials.	contents. Valves and trigger guns will be protected from vandalism and kept locked up when not in use. All chemicals will be stored in accordance with their COSHH guidelines, whilst spill kits will be provided in areas of fuel/oil storage;	
	d. All plant and machinery will be kept away from surface water bodies wherever possible. Vehicles should be well maintained to prevent accidental pollution from leaks. Static machinery and plant should	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	include drip trays beneath oil tanks/engines/gearboxes/hydraulics, which will be checked and emptied regularly via a licensed waste disposal operator. Refuelling and delivery areas will be located away from surface water drains;	
	 e. An Emergency Spillage Action Plan will be produced, which all staff will have read and understood, and provisions made to contain any leak/spill. Information regarding spill prevention and disposal of COSHH items will be provided as part of the standard site induction presentations and during regular toolbox talks and as the decommissioning works progress; 	
	f. Workers will remain vigilant of ground conditions at all times and will report to the principal decommissioning contractor any suspect areas of potential contamination;	
	g. Should any potentially contaminated ground, including isolated 'hotspots' of contamination and/or potential deposits of asbestos containing materials (ACM), be encountered, the principal decommissioning contractor will be required to investigate the areas and assess the need for containment or disposal of the material. Advice should be sought from an environmental specialist should materials suspected of being contaminated be found. The principal decommissioning contractor will also be required to assess whether any additional health and safety measures are required;	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	h. To further minimise the risks of contaminants being transferred and contaminating other soils or water, decommissioning workers will be briefed as to the possibility of the presence of such materials;	
	 In the event that contamination is identified, appropriate remediation measures will be taken to protect decommissioning workers, future users, water resources, structures and services; 	
	 j. The principal decommissioning contractor will be required to place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water will be directed away from stockpiles to prevent erosion; 	
	 k. Stockpiles and material handling areas will be kept as clean as practicable to avoid nuisance from dust. Dusty materials will be dampened down using water sprays in dry weather or covered; 	
	I. The length of time materials are stockpiled onsite before being removed for re-use, recycling or disposal is to be kept to a minimum and stockpiles are to be covered with tarpaulins prior to disposal;	
	 m. Dust generating equipment e.g. mobile crushing and screening equipment will be located to minimise potential nuisance impacts to receptors, as far as practicable. 	
	n. The risk to surface water and groundwater from runoff from any contaminated stockpiles during decommissioning works will be reduced by implementing suitable measures to minimise rainwater infiltration and/or capture runoff and leachates, through use of	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	bunding and/or temporary drainage systems. These mitigation measures will be designed in line with current good practice, follow appropriate guidelines and all relevant licences/permits;	
	 The principal decommissioning contractor will ensure that all material is suitable for its proposed use and will not result in an increase in contamination-related risks on identified receptors, including any landscaped areas and underlying groundwater; 	
	 p. Any waters removed from excavations by dewatering will be discharged appropriately, subject to the relevant permits being obtained from the Environment Agency; 	
	 q. The principal decommissioning contractor will implement a dust suppression/management system in order to control the potential risk from airborne contamination migrating offsite to adjacent sites; 	
	 Complaints about dust will be investigated at the earliest opportunity and appropriate action taken to control the source or remedy the impact as appropriate; 	
	s. Access roads will be regularly cleaned and damped down with water;	
	t. All vehicles entering and leaving the Order limits during the decommissioning works will pass through a wheel washing facility. Vehicles used to transport materials and aggregates will be enclosed or covered in a tarpaulin. Vehicle movements will be kept	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	to a minimum and vehicle speeds within the Order limits will be limited;	
	 u. A competent/licensed contractor will survey (pre-site preparation survey as defined by the Health and Safety Executive (HSE)) and remove asbestos containing materials and other materials and structures contaminated with asbestos fibres. 	



Table 3-8 Agriculture and Land Use

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Impacts on soil	The oSMP [EN010127/APP/7.12] and oEMMP will inform decommissioning works to minimise the damage to soil structures during the decommissioning phase, and provide amelioration to any localised impacts using good agricultural practices. The oSMP will inform the preparation of a SMP (incorporating the EMMP) prepared prior to decommissioning which will:	None.
	 a. a description of the soil types and their resilience to being trafficked; 	
	 b. an outline description of proposed access routes and details of how access will be managed to minimise impacts on soils; 	
	 c. a description of works and how soil damage will be minimised and ameliorated; and 	
	 d. a methodology for monitoring soil condition, and criteria against which compliance will be assessed. 	
	The DEMP(s) will consider access routes to ensure ongoing access for husbandry and any land being cropped during the decommissioning process, and to the need to adhere to precautions to minimise the risk of any spread of plants and seeds between holdings.	
	The DEMP(s) will include measures to liaise with landowners and negotiate closure or severance of field accesses at key times of the farming year to mitigate potential short-term effects on farm businesses and enterprises as a result of decommissioning.	



Table 3-9 Climate Change

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Greenhouse gas (GHG) emissions from decommissioning	The principal decommissioning contractor as part of their strategy to reduce greenhouse gas emissions during the decommissioning phase will adopt best practice measures to control impacts, such measures to be included in the DEMP will include:	To be confirmed by the principal decommissioning contractor in the DEMP (s).
vehicles and equipment. Use of natural resources.	 a. Adopting the CCS (or its equivalent) to assist in the reduction of pollution, including GHG, from the Proposed Development by employing industry best practice measures. These will be listed in the DEMP 	
Increased ambient temperature due to climate change.		
	 c. Implementing a Travel Plan to reduce the use of private car journeys to Order limits by decommissioning staff and employees; 	
	 d. Liaising with decommissioning personnel for potential to implement staff minibuses and car sharing options; 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	e. Prevent idling vehicles by switching vehicles and plant off when not in use and ensuring that all decommissioning vehicles conform to current EU emissions standards;	
	 f. Conducting regular and planned maintenance of the decommissioning plant and machinery to optimise efficiency; 	
	 g. Increasing recyclability by segregating decommissioning waste to be re-used and recycled where reasonably practicable; 	
	 Disposing of decommissioning waste locally where reasonably practicable to reduce emissions associated with transportation; and 	
	 Reusing site-won materials to minimise the use of natural resources and unnecessary materials (e.g. reusing excavated soil onsite). 	
	The following measures are required to ensure safety of staff from increased flood risk onsite due to climate change:	
	 Health and safety plans will be required to account for potential climate change impacts on workers, such as flooding and heatwaves; 	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	b. Storing materials outside of flood extent as far as reasonably practicable; and	
	c. Appointing at least one designated Flood Warden who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings and water levels of the local waterways.	



Table 3-10 Socio-Economics

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Impacts to local residents, businesses and community facilities Disruption to users of Public Rights of Way	Temporary diversions of Public Rights of Way (PRoW) will be supported by appropriate and clearly signed alternative routes and where possible will be planned and programmed to minimise disruption to users. All members of the decommissioning work force and visitors will be made aware of the bridleways affected by the decommissioning of the Proposed Development.	Monitor temporary diversions of PRoWs during the decommissioning phase to ensure they are suitable and well maintained for use.



Table 3-11 Arboriculture

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Impact to trees	Prior to decommissioning, a detailed Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) will be prepared and will form part of the DEMP(s). The AMS and TPP will identify the specification for tree protection measures and the methodology for sensitive works in proximity to retained trees during decommissioning and be in accordance with the requirements of BS 5837:2012.	A pre-decommissioning arboriculture survey in line with BS5837:2012 will be undertaken concurrently with the detailed design of the Proposed Development, to identify where trees are likely to be affected by the decommissioning works.
	A pre-decommissioning tree survey will be undertaken where decommissioning works are likely to affect trees. The findings and recommendations of these will be taken into account by the appointed principal decommissioning contractor.	
	Where works in close proximity to retained trees cannot be practically avoided, these works will be undertaken in accordance with current best practice, defined in British Standard (BS) 5837: 2012 'Trees in relation to design, demolition and construction'.	
	All necessary protective fencing provided for the safeguarding of trees will be erected prior to the commencement of any clearance or decommissioning works. This fencing must have all weather notices attached stating "Decommissioning Exclusion Zone – No Access" and, will not be removed or altered without the prior consent of the Local Planning Authority.	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	Prior to and during all decommissioning works onsite, no spoil or materials will be stored within the RPA of any tree on, or adjacent to the Order limits. Any encroachment within the RPAs for such works will only be with the prior agreement of the Local Planning Authority.	
	If it is necessary to excavate so close to trees that roots greater than 50mm diameter are likely to be encountered, particular care will be taken to avoid damage. Excavation in these areas will be undertaken by hand or using an air spade, avoiding any damage to the bark. The roots will be surrounded with sharp sand prior to the replacing of any soil or other material in the vicinity.	
	If it is necessary to raise levels, it is essential that adequate supplies of water and oxygen pass through the soil to the trees' roots. Therefore, where necessary, a granular material will be used which will not inhibit gaseous diffusion. Possible options are nofines gravel, cobbles or, Type 2 road-stone. All hard surfaces will be of suitable specification to allow such gaseous diffusion.	



Table 3-12 Waste

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
Potential to impact on sensitive receptors (humans, wildlife and controlled waters) if waste generated by the decommissioning phase of the Proposed Development is not stored and managed appropriately.	The principal decommissioning contractor will consider the objectives of sustainable resource and waste management and seek to use material resources efficiently, reduce waste at source, reduce waste that requires final disposal to landfill and apply the principles of the waste hierarchy. This will include, where reasonably practical, working towards a cut and fill balance for excavations; segregation of materials onsite for appropriate re-use, recycling and recovery, with landfill as a last resort. This will be achieved by a combination of the following measures: a. The principal contractor will prepare and implement a Decommissioning Resource Management Plan (DRMP) as part of the DEMP(s), which will set out targets for fuel, waste and energy consumption; b. All waste transported offsite will be delivered to the appropriately licenced receivers of such materials; and c. As part of the DRMP, the principal contractor will segregate decommissioning waste to be re-used and recycled where reasonably practicable. All soil to be reused onsite or disposed of offsite will be appropriately characterised by the principal decommissioning contractor.	The types, quantities and final destination of waste generated during the decommissioning phase will be identified, measured and recorded through the DRMP (s). A register of all waste loads leaving the Order limits will be maintained to provide a suitable audit trail for compliance purposes and to facilitate monitoring and reporting of waste types, quantities and management methods.



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	Waste Hierarchy	
	The Waste (England and Wales) Regulations 2011 place a duty on all persons who produce, keep or manage waste to apply the 'Waste Hierarchy' in order to minimise waste production at every stage of the development. The 'Waste Hierarchy' promotes selection of the Best Practicable Environmental Option (BPEO) and preferred option for management of waste.	
	The core waste management principles of prevention, reuse, recycle, recover and disposal as defined in the 'Waste Hierarchy' will be embedded within the DEMP (s), produced prior to decommissioning.	
	The separation of waste will be carried out at the source in order to maximise opportunities for reuse and recycling. Segregation of waste will require training, monitoring and enforcement.	
	All areas used for temporary storage of waste within the Order limits will comply with Defra and the Environment Agency (EA) guidelines relevant at the point of decommissioning and will be clearly signed. Waste storage facilities will be provided at source using the best environmental options available. Any hazardous or special waste will be stored in separate, secure containers and clearly identified as such.	
	Waste Disposal	
	Disposal activities will also be carried out in accordance with the relevant Pollution Prevention Guidelines (or any relevant successive	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	guidance in place) in order to ensure compliance with current waste legislation.	
	All waste transported offsite will be delivered to the appropriately licenced receivers of such materials. Waste transportation will take place at regular intervals to avoid the accrual of waste.	
	Only registered waste carriers will be authorised to transport waste and subject to legislation at the point of decommissioning a Waste Transfer Note (WTN) will be completed for each load of waste, which must contain a record of their waste carrier registration number. Copies of each WTN will be filed as an appendix to the DEMP(s) and held for a minimum of two years. The appropriate European Waste Catalogue (EWC) code will be noted on the WTN, in addition to how it is contained. All sites receiving waste must have an appropriate permit, licence or registration exemption, the details of which should also be recorded.	
	Hazardous Waste	
	If required, the EA will be advised in advance of any hazardous waste movements and Waste Consignment Notes (WCNs) will be purchased in advance for this type of waste transportation. These consignment notes will be held for a minimum of three years. Burning of waste or unwanted materials will not be permitted onsite. All hazardous materials including chemicals, cleaning agents and	
	solvent containing products to be properly sealed in sealed	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	containers at the end of each day prior to storage in appropriately protected and bunded storage areas.	
	All fuel and oil will be stored within the Order limits and contained by a small bund constructed from material sourced onsite and lined with an impermeable membrane in order to prevent any contamination of the surrounding soils, vegetation and water table, in accordance with Defra and Environmental Agency Oil Storage Regulations for Businesses 2015 (as amended in 2020) (or latest guidance/legislation at the point of decommissioning). Any contaminated runoff within the bund will be disposed of at an appropriate waste management facility.	
	Any used (contaminated) spill kits, absorbent granules, sheets or fibres must be disposed of in accordance with the COSHH regulations (or latest guidance/legislation at the point of decommissioning) and in accordance with the Emergency Spillage Action Plan.	
	Waste from Welfare and Domestic Facilities	
	Temporary welfare facilities will be provided during the decommissioning phase. These facilities will include toilets, washing and drinking water. This will include a cess tank that will be periodically emptied and taken offsite by a licensed waste operator. All onsite welfare facilities will be clearly signposted and maintained.	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	Where excess surface water occurs from the area of the buildings, this will be collected and treated in a Sustainable Drainage System (SuDS), prior to discharge.	
	Effluent and waste from onsite decommissioning personnel will be treated at a package sewage treatment plant or a septic tank and discharged into a properly designed and sized drainage field, in accordance with Defra's GPP4 (2021), subject to obtaining the required consents.	
	Collection facilities for other domestic refuse will be provided to segregate waste. These facilities will be clearly marked, positioned in appropriate locations and protected from the weather and animals.	
	a. To minimise impacts of waste on the surrounding environment, the following measures will be implemented:	
	 b. Burning of waste or unwanted materials will not be permitted onsite; 	
	 c. All hazardous materials including chemicals, cleaning agents and solvent containing products to be properly sealed in sealed containers at the end of each day prior to storage in appropriately protected and bunded storage areas; 	
	d. Materials requiring removal from the Order limits will be transported using licensed carriers and records kept,	



Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
	detailing the types and quantities of waste moved and the destinations of this waste, in accordance with the relevant regulations. An audit and careful checks will be undertaken to ensure that all carriers and facilities will be licenced, and that the appropriate permits and transfer notes are in place prior to removal of waste; and	
	 e. Prior to commencement of decommissioning, suitable recycling and landfill facilities with sufficient capacity to receive the quantities of decommissioning waste expected will be identified. 	



Table 3-13 Major Accidents and Disasters

Potential Impact	Mitigation and/or Enhancement Measure	Requirement for Monitoring
The incidence of major accidents and disasters as a result of the Proposed Development. Potential impacts on the Proposed Development as a result of Major Accidents and Disasters.	All works will be undertaken in accordance with (or their successors) the Building Regulations, NHS England Emergency Preparedness, Resilience and Response Framework, Health and Safety at Work Act 1974, Safety at Work Regulations 1999, CDM Regulations 2015, Railway Operator Regulatory Requirements, 999 emergency service response procedure and call/response procedure to report utility system failures (or latest guidance/legislation at the point of decommissioning). Details of fire, police, emergency services and hospitals will be publicised and included in the induction.	To be confirmed in the DEMP (s).
	The relevant risk assessments for safety during decommissioning will be required and produced by the principal decommissioning contractor prior to works commencing, which will be implemented to minimise the risk of accidents and disasters onsite. Furthers risks of major accidents and disasters are covered in Table	
	3-4, Table 3-7 and Table 3-12.	



4.0 Implementation of the DEMP

- 4.1.1. The DEMP(s) will set out all roles, responsibilities and actions required in respect of implementation of the measures described in this oDEMP, including:
 - a. An organogram showing team roles, names and responsibilities;
 - b. Training requirements for relevant personnel on environmental topics;
 - Information onsite briefings and toolbox talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;
 - d. Measures to advise employees of changing circumstances as work progresses;
 - e. Communication methods;
 - f. Document control; and
 - g. Environmental emergency procedures.



5.0 Monitoring and Recording

5.1. Monitoring

- 5.1.1. To meet the requirement of the DEMP(s), environmental monitoring of the Proposed Development and its impacts will be undertaken throughout the decommissioning phase.
- 5.1.2. As part of the monitoring process the principal decommissioning contractor will allocate a designated Environmental Manager(s), who will be present onsite throughout the decommissioning works and when new activities are commencing. The Environmental Manager will observe decommissioning activities and report any deviations from the measures set out within the DEMP (s), along with the action taken and general conditions at the time. The Applicant will be informed of any deviations from the measures set out within the DEMP(s) as soon as possible following identification of such issues. The Environmental Manager will also act as day-to-day contact with relevant local authorities and other regulatory agencies such as the Environment Agency.
- 5.1.3. During the decommissioning phase, the Environmental Manager will conduct walkover surveys to ensure all requirements of the DEMP(s) are being met. Action from these surveys will be documented on an Environmental Action Schedule, discussed with the Site Manager for programming requirements and issued weekly for actioning. The Environmental Manager and /or the Project Manager will arrange regular formal inspections to ensure the requirements of the DEMP(s) are being adhered to. After completion of the works, the Environmental Manager will conduct a final review.
- 5.1.4. Display board will be installed onsite. These will include contact details for the Site Manager or alternative public interface with whom complaints can be lodged. A logbook of complaints will be prepared and managed by the Site Manager. A Community Liaison Officer will be appointed to



respond to any complaints raised by the local communities during the decommissioning phase. Contact details will also be available on the display board at the Order limits entrance should anyone wish to make contact. The principal decommissioning contractor will set up a social media page where regular progress updates will be provided. This would be used to post any information on changes such as crane deliveries or new phases of work to ensure that the local community remain up to date.

5.2. Records

- 5.2.1. The Environmental Manager will retain records of environmental monitoring and implementation of the DEMP(s). This will allow provision of evidence that the DEMP(s) is being implemented effectively. These records will include:
 - a. Environmental Action Schedule;
 - b. Licences and approvals;
 - c. Results of inspections by Environmental Manager/ Project Manager;
 - d. Other environmental surveys and investigations; and
 - e. Environmental equipment test records.

