SOFT LANDSCAPE WORKS MAINTENANCE AND MANAGEMENT PROPOSALS – 10 YEARS

SEVINGTON IBF

Ashford, Kent

Department for Transport

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MAINTENANCE AND MANAGEMENT STATEMENT

(Refer to Appendix B for BCA Landscape Masterplan drawing)

The establishment and future success of the external landscape is largely dependent on the standard and frequency of the subsequent maintenance and management it receives. Throughout the development period and thereafter a maintenance and management regime will be adopted with the following aims and objectives.

The aims and objectives of the landscape maintenance and management will be:

- To ensure the successful establishment and continued growth through to maturity of the Soft Landscape scheme shown on drawing 2418-24-01 Landscape Masterplan.
- To ensure that the infrastructure landscape at Sevington IBF develops in a manner commensurate with the original design intentions.
- To ensure that the maintenance and management of the soft landscape areas is commensurate with and achieves the aims and objectives of both Landscape & Ecological Management Plans (LEMP) prepared in 2020 and 2023 by Mott McDonald (Ref. Appendix C)
- To ensure the successful establishment and retention of effective landscape buffer planting, particularly along the north, east and southern boundaries of the site.
- To secure a long-term future for the existing trees, plus the new tree and native shrub planting, with particular emphasis upon achieving enhancement of ecological potential, conservation, and visual amenity.
- To achieve rapid establishment of the plant material with resultant total ground cover, thereby suppressing weed growth and reducing maintenance requirements.
- To retain the natural growth form and maximise the seasonal potential of individual species by the pruning methods adopted.
- To manage the landscape in a manner convivial with the safety of site users, such as maintaining visibility splays and the removal of dead, dangerous, or diseased tree branches.
- To ensure the successful establishment and continual enhancement of the vegetated areas in accordance with the project Ecologist’s recommendations, to increase the overall biodiversity of the site.

The soft landscape will, for the initial 1 year after Practical Completion, be maintained by the Landscape Contractor responsible for implementation of the works and in accordance with the LEMP, November 2020 document for Sevington IBF (Appendix C).

The maintenance and management matrix (Appendix A) provides information on the general techniques and methods to be adopted for the ongoing maintenance operations.

These will be reviewed at regular intervals to respond to natural or man-made changes in the environment which affect the landscape types (e.g., tree disease).

The above approach will ensure that the quality of the landscape infrastructure created in the early years can be maintained for the benefit of visitors to the Sevington IBF as well as providing a benefit to persons who live near and pass by the boundaries. In addition, it will ensure that the landscape develops to maximise the ecological potential of the proposals.

This document is to be read alongside the LEMP documents (Nov 2020 and Apr 2023) produced by Mott McDonald (Appendix C) and seeks to provides maintenance and management information following the first year of establishment. Should there be any conflict between this management and maintenance plan and the LEMP documents; the LEMP documents are to take priority.

APPENDIX A

LANDSCAPE MAINTENANCE AND MANAGEMENT SCHEDULE MATRIX FOR 10 YEAR PERIOD

MAINTENANCE AND MANAGEMENT SCHEDULE MATRIX FOR 10 YEAR PERIOD										
ITEM OF WORK	**YR 1**	**YR 2**	**YR 3**	**YR 4**	**YR 5**	**YR 6**	**YR 7**	**YR 8**	**YR 9**	**YR 10**
GENERAL										
Tidy up areas removing rubbish, litter, etc. from planted and grass areas.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Treat pests and disease as necessary.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Water all plant material and grass as necessary to maintain healthy growth.	✓	✓	✓							
Check plant material is firmly planted and firm in where required.	✓	✓	✓							
Dead, dangerous, or diseased wood to be pruned out.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Check shelter guards / rabbit protection and re-firm / replace as required including removing weed growth from within. Consider removal at years 4 to 5.	✓	4 times	4 times	2 times	2 times	✓	✓	✓	✓	✓
Removal of diseased or dead plants with replacements as appropriate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TREE PLANTING										
Check, adjust, replace stakes and ties as necessary. Remove stakes after approximately 3 years if appropriate. Prune, water and feed as necessary.	✓	✓	✓	✓	✓					
Remedial tree surgery as necessary to remove any dead, dangerous or diseased branches and to allow the tree to achieve full stature. All works to be carried out by an Arboricultural Association approved contractor in accordance with BS3998: Recommendations for Tree Work.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

MAINTENANCE AND MANAGEMENT SCHEDULE MATRIX FOR 10 YEAR PERIOD (CONTINUED)										
ITEM OF WORK	**YR 1**	**YR 2**	**YR 3**	**YR 4**	**YR 5**	**YR 6**	**YR 7**	**YR 8**	**YR 9**	**YR 10**
WOODLAND CORE / WOODLAND EDGE & NATIVE HEDGEROW PLANTED AREAS										
Keep areas clear of weed growth by herbicide treatment as appropriate from mid-April to late September.	4 times	4 times	4 times	4 times	2 times	2 times	2 times	Once	Once	Once
Woodland Core mix planting to be managed to ultimately achieve a tree canopy with understorey. Woodland Edge mix planting to achieve age diversity. A gradual development of a diverse age structure should be established over time using a regime of selective thinning, pruning, and coppicing (year 5 and 8).					1/3 of thicket plants			1/3 of thicket plants		
Remove branches that overhang footpaths or prevent access for grass cutting. Allow native trees to achieve natural form with only lower branches removed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prune native hedges to heights stated on landscape drawings. Approximate timing: September and in accordance with ecologist's recommendations to maximise wildlife benefit. Cut sides, tops, and ends to straight and true lines.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AMENITY PLANTED AREAS										
Keep amenity planting and formal hedge areas clear of weed growth by hand weeding or spot herbicide treatment.	12 times	12 times	12 times	10 times	10 times	6 times	6 times	6 times	6 times	6 times
Prune plants as necessary to prevent invasive species smothering less aggressive species and to prevent plants overhanging footpaths and other areas of hard paving.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Slow-release fertilizer application as appropriate to ensure establishment of planting. N/A to native amenity & hedge species.	✓	✓	✓							

MAINTENANCE AND MANAGEMENT SCHEDULE MATRIX FOR 10 YEAR PERIOD (CONTINUED)										
ITEM OF WORK	**YR 1**	**YR 2**	**YR 3**	**YR 4**	**YR 5**	**YR 6**	**YR 7**	**YR 8**	**YR 9**	**YR 10**
AMENITY PLANTED AREAS (continued)										
Prune formal hedges to heights stated on landscape drawings (approx. timing May and September). Cut sides, tops, and ends to straight and true lines.	✓	2 times	2 times	2 times	2 times	2 times	2 times	2 times	2 times	2 times
Lightly cultivate all planted areas, breaking up soil evenly. Once only.	✓	✓								
Edge up planted areas to maintain soil level 25mm below adjacent hard surfaces and kerbs. Any soil wash onto hard surfaces to be cleaned off.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AMENITY GRASS AREAS										
Grass cutting with edge trim (where required). Frequency of grass cutting operations to be commensurate with location and visual importance of grass area: Between 11 and 18no. cuts per year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Shape grass edge as necessary with half-moon spade. 2 times per year.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Application of fertilizer and selective weedkiller as appropriate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Re-seeding of worn areas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

MAINTENANCE AND MANAGEMENT SCHEDULE MATRIX FOR 10 YEAR PERIOD (CONTINUED)										
ITEM OF WORK	**YR 1**	**YR 2**	**YR 3**	**YR 4**	**YR 5**	**YR 6**	**YR 7**	**YR 8**	**YR 9**	**YR 10**
SPECIES RICH GRASSLAND										
Grass cutting: 1no. cut in March / April. 1no. cut in September / October. When appropriate to maximize seed dispersal following recommendation from an ecologist.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Treat and remove pernicious weed growth where it may be detrimental to establishment of species rich grassland sward.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
AQUATIC AND MARGINAL PLANTED AREAS										
Aquatic areas shall be maintained to achieve the original design objectives. Where necessary aggressive or pernicious weeds or woody plants shall be removed.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

APPENDIX B

DRAWINGS

Drawing No.	Drawing Title	Rev
2418-24-01	Landscape Masterplan	00
2418-24-02	Detailed Planting Plan Sheet 2	00
2418-24-03	Detailed Planting Plan Sheet 3	00
2418-24-04	Detailed Planting Plan Sheet 4	00
2418-24-05	Detailed Planting Plan Sheet 5	00

APPENDIX C

LEMP NOVEMBER 2020 AND LEMP APRIL 2023 by MOTT MCDONALD

MOTT MACDONALD

Sevington Inland Border Facility

Landscape and Environmental Management Plan

06 November 2020

Confidential

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1 Introduction

Mott MacDonald has been commissioned by the Department for Transport (DFT) to produce a Landscape and Ecological Management Plan (LEMP) in relation to the Sevington Inland Border Facility (IBF), Ashford Kent. This document provides a forward strategy for the management of the green infrastructure on site until 2025.

The green infrastructure of the site encompasses the landscape within the redline boundary of the site, both within and outside the 'operational' areas of the scheme. This document does not address the long-term management of civil engineered aspects of the scheme including built infrastructure and areas of hardstanding.

Landscape management processes use landscape, arboriculture and ecological understanding to achieve pre-determined goals and objectives relating to the long-term vision for any particular landscape.

The structure of the landscape on site would include existing hedgerows and trees to be retained, as well as new planting such as large areas of open grassland, species rich grassland, swathes of trees and shrubs, standard trees and marginal planting around ponds. Beyond the soft landscape, ongoing management of any potential built elements such as interpretation boards, seating and litter bins which may come forward as future enhancement measures would also need to be catered for.

This LEMP is considered a 'live' document and would require updating following the confirmation of the long-term enhancement strategy for the site beyond reinstatement. Consequently, this revision focuses on maintenance of confirmed aspects of the design, with management associated with any future enhancements being detailed in future revisions.

1.1 Objectives of this report

This LEMP aims to identify management objectives to ensure the key functions of the proposed environmental mitigation come to fruition. Future iterations would capture the management objectives for any enhancement measures post demobilisation of the Inland Border Facility (IBF).

This plan seeks to provide management solutions which are sympathetic to and, where possible, enhance landscape, ecological and heritage assets, providing a holistic approach to environmental management of the site.

1.2 Design Objectives

Design objectives have evolved from a need to avoid, or where unavoidable, mitigate adverse environmental effects associated with the construction and operation of the IBF. An integrated approach has been undertaken to the landscape design, taking due consideration of wider environmental features and assets, as well as buildability and operational constraints associated with the engineered aspects of the site.

Consequently, a well evolved landscape design has been developed with the objective of not only providing essential mitigation for the scheme during the five years of operation, but also to provide a positive long-term legacy for the site, whilst accounting for the potential for future employment use of the site as determined by Ashford Borough Council's Local Plan. The design

has also been developed to align with Ashford Borough Council's policies with regards to Green Blue Infrastructure and the creation and enhancement of Ashford's Green Corridors.

The long-term landscape strategy for this site is critical to ensuring that adverse effects upon landscape, biodiversity and heritage are avoided, eliminated or reduced. As such, a detailed long-term enhancement strategy would be developed, evolving from that outlined in Appendix A.3 of this plan, which would determine the long-term vision beyond operation of the IBF. This would ensure a positive legacy for the site and local communities who may access the associated green spaces in the future. Key environment considerations are outlined below.

1.2.1 Landscape and Visual Effects

The mitigation and enhancement of landscape character and visual amenity has been carefully considered within the development of the landscape design. A landscape framework around the periphery of the site would help to integrate the scheme and keep operational areas set back from nearby receptors wherever possible. Residential receptors along Church Road, Highfield Lane and Kingsford Street, some of which are listed buildings; as well as properties on the very eastern edge of Ashford afford views to site in the immediate foreground. In addition to the consideration of the visual amenity afforded by local receptors, it is also imperative to consider the setting of the listed buildings around the periphery of the site, including that of the Grade I listed Church of St Mary, which dates to the 12th century. Extending south from this is Church Lane, along which is set the village of Sevington which comprises a small collection of Grade II listed post-medieval farmhouses.

As such, screening opportunities have been carefully considered including incorporation of a series of earth bunds augmented with proposed native trees and shrubs to aid natural screening of the operational area of the site over time, set within a landscape of open grassland, large ponds, species rich wildflower, native shrubs, understorey, hedgerows and specimen trees, and an area of orchard planting.

Another key consideration in heritage and landscape terms is the relationship of intervisibility along the Public Right of Ways (PROW) linking the Church of St. John and Church of St. Mary, which is important to the value of both Grade I listed assets. The design has sought to retain the key sightlines between the two churches, as well as providing a sense of separation from the scheme for the Church of St Mary immediately adjacent to the site.

The environmental elements illustrated in the Day 1 and Day 200 masterplans would be further augmented in line the long term enhancements plan for the site to enrich the character of site beyond Year 5 to provide the local community with an important amenity asset, building upon Ashford Borough Council's Green Corridor strategy.

1.2.2 Biodiversity

The land within the scheme boundary predominantly comprises arable fields bound by habitats of higher importance including hedgerows and woodland. Action has been taken to avoid impacts through carefully siting of infrastructure away from sensitive habitats and species associated with such habitats (i.e. dormice). Mitigation to reduce impacts on these habitats and associated species recorded on site, would include:

- Maintaining and enhancing existing wildlife commuting corridors along the boundaries of the scheme through careful siting and inclusion of buffers to lessen impacts on species using adjacent habitats.
- Increasing connectivity around and through the site with the creation of new habitats, forming wildlife corridors and thus reducing the effects of habitat fragmentation.

- Increasing habitat appropriate to the local area to benefit target species such as dormice.
- Using locally native tree, shrub and herbaceous species in the landscape mitigation.
- Avoiding the use of invasive and competitive grass species.
- The commitment for the creation of new habitats to ensure net gain of locally important habitats (species rich grassland, woodland, aquatic habitat and hedgerows).
- Provision for new bat roosting features on site, comprising a range of woodcrete boxes targeted towards a variety of species and suitable for a range of different use types.
- Provision for new bird boxes installed within the site to provide additional nesting opportunities for species recorded at the site.

2 Regulatory Framework

2.1 Environmental Planning Context

2.1.1 Landscape Policy

Relevant planning policy in relation to the landscape discipline has been considered as part of the assessment of likely effects of the scheme and has informed the resulting environmental design. Both national and local policy has been considered as well as that of the Kent Downs AONB, in respect to the setting of this nearby designated landscape. Further detail on the policies considered is found in Section 2 Legislative and Policy Framework of the Sevington IBF Landscape and Visual Impact Assessment (document ref: 419419-MMD-XX-MO-RP-L-0002).

2.1.2 Nature Conservation Policy and Legislation

Please refer to Section 2 of the *An Analysis of the Likely Environmental Effects of the Development Report* (document ref: 419419-MMD-XX-SV-RP-YE-0002) and the *Biodiversity Assessment* (document ref: 419419-MMD-XX-MO-RP-BD-0001) for all policies and legislation regarding nature conservation.

3 Management Objectives

3.1 Landscape and Environmental Objectives

Table 3.1: Landscape Elements and Functions

Landscape Element	Intended Function
Wildflower and grassland areas	Landscape integration, and biodiversity value. Amenity grassland mix intended to provide a low maintenance grassland for operational areas of the site. Open grassland to provide landscape integration, biodiversity value for reptiles, badgers, invertebrates and birds. Wildflower and species rich areas to provide visual interest and biodiversity value for pollinating insects.
Hedgerow Planting	Landscape integration, screening and biodiversity value. Hedgerow planting to provide replacement dormice habitat whilst also enhancing wildlife and commuting corridors.
Native tree and shrub Planting	Landscape integration, visual screening and biodiversity value with the creation of new habitats and foraging opportunities.
Standard Tree Planting	Landscape integration, visual screening and biodiversity value. Flowering and fruiting species, including orchard trees offering additional amenity value to local community in long term strategy, biodiversity benefits with regards to habitat and foraging opportunities.
Marginal and aquatic planting around drainage features, including wetland grassland	Landscape integration and biodiversity value providing improvements to landscape character and new aquatic and marginal habitats for a number of a species.

Table 3.2: Environmental Elements and Functions

Environmental Element	Intended Function
Acoustic Barriers	To mitigate noise during the first 5 years of operation. To be removed upon reinstatement of the site.
Dormouse Boxes	Provision of additional nesting habitat and monitoring of the dormouse population, in accordance with the Natural England Mitigation Licence.
Bat Boxes	10 bat boxes to provide additional roosting opportunities.
Bird Boxes	10 bird boxes to provide additional nesting opportunities.
Hibernacula	Provision of additional hibernation features and cover for reptiles.

4 Maintenance Programme

The aftercare and maintenance programme has been detailed as part of the Series 3000 specification for Landscape and Ecology which is presented in Appendix B of this document.

The specification details the way in which the initial landscape works would be implemented, as well as defining the aftercare activities which would be undertaken during the first 5 years of Operation.

This aspect of the LEMP would be reviewed and updated upon confirmation of the Long-Term Enhancement Strategy for the site. Following this, the LEMP would remain a live document and be reviewed by the overseeing organisation on a regular basis to reflect any changes on site.

5 Monitoring and Review

5.1 Landscape monitoring

Landscape monitoring and reviews would be undertaken on site twice per year to monitor the establishment of planting on site for the first five years of operation. Any remedial tasks resulting from those visits would be presented in a monitoring report and provided to the overseeing organisation for action. This would cover any outstanding maintenance activities, as well as the replacement of any plant failures. In order to ensure that maturity is not lost, all replacement planting would be required to be one year older for every year that has lapsed since the original date of planting.

The ongoing monitoring of the site beyond the first five years would be reviewed in the next iteration of the LEMP, reflecting the confirmed details of the long-term enhancement strategy and future management for the site.

5.2 Biodiversity Monitoring

The following biodiversity monitoring would be required post construction:

- Dormouse – Monitoring as part of Natural England dormouse licence requirements - twice a year up to three years (May and September), with a visit each winter (December - February) to clean out boxes.
- Reptiles – Monitoring of the translocation receptor site to be undertaken every two years up to four years after completion of the scheme, carrying out surveys to assess the status of the reptile population. This would be carried out during the active season April – June / September – October following standard reptile guidelines set out in Froglife Advice Sheet 10[1].
- Habitat surveys – These surveys would be combined with the landscape monitoring and associated recommendations, in order to prevent the loss of proposed and retained habitats on site.
- Bats – Monitoring will be undertaken to determine if the level of bat activity at the site has been maintained once the scheme is operational. Monitoring will be composed of spring, summer and autumn activity transects which will be undertaken in years 3 and 5 in accordance with Collins (2016)[2].
- Breeding Birds – Monitoring will be undertaken to determine if the level of breeding bird activity at the site has been maintained once the scheme is operational. Monitoring will be undertaken in years 3 and 5 in accordance with the Common Bird Census methodology (Gilbert et al, 1998)[3].

A summary of the proposed post-development monitoring proposals is provided in Table 5.1:

[1] Froglife (1999) Reptile survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10.

[2] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

[3] Bird Monitoring Methods (from Gilbert et al. 1998)

Table 5.1: Summary of Monitoring Timescales

Feature	Monitoring	Timing	Year 1	Year 2	Year 3	Year 4	Year 5
Habitats	Photographic monitoring to be carried out using fixed point photography to keep record of developing habitats and results of habitat management works.	May – July (twice per year)	X	X	X	X	X
Dormouse	Monitoring of the local dormouse population by checking the 6 dormouse boxes.	May and September; Winter check (Dec-Feb)	X	X	X		
Reptiles	Presence/absence surveys to determine the success of the reptile translocation and the suitability of the ecological mitigation area.	April–June/September-October		X		X	
Bats	A bat activity survey to be carried out to determine the success of the mitigation proposals for bats.	April-September			X		X
Breeding Birds	A breeding bird survey to the success of the mitigation measures for breeding birds.	April-June			X		X

A. Landscape Design Plans

A.1 Environmental Masterplan Day 1 Drawing no. 419419-MMD-01-MO-DR-L-3030

A.2 Environmental Masterplan Day 200 Drawing no. 419419-MMD-01-MO-DR-L-3031

A.3 Outline Long Term Enhancement Plan Drawing no. 419419-MMD-01-MO-DR-L-3032

Notes

1. These drawings are not for construction and should not be used as such.
2. This drawing must be read in colour. Do not scale or measure from this drawing, if in doubt ask.

Key to symbols

- Low maintenance amenity grassland
- Individual small specimen tree
- Individual large specimen tree
- Species rich wildflower meadow
- Native species shrub and ground cover
- Native species tree and shrub (to be under seeded with EW1 mix)
- Open grassland
- Wildflower wetland meadow
- Marginal aquatic planting
- Submerged aquatic planting
- Existing vegetation to be retained
- Proposed native species hedgerow
- Bund area
- 3m acoustic fence
- 5m acoustic fence
- Permanent Security fence
- Suds feature
- PRoW Proposed
- PRow Existing
- Proposed Bat box site
- Proposed Bird nesting box site
- Proposed Dormouse nesting box site in existing vegetation
- Red line boundary

Reference drawings

1:2000 0 100m 200m

Rev	Date	Drawn	Description	Ch'k'd	App'd
P01	15/10/20	RD	First Issue	■	■
P02	20/10/20	RD	First Revision	■	■
P03	27/10/20	RD	RLB amended	■	■
P04.1	05/11/20	---		---	---

Status Stamp

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Title

Future EU Roads Relationship
Sevington IBF
Environmental Masterplan
Day 1
Sheet 1 of 1

Designed	■	■	Eng check	---	---
Drawn	---	---	Coordination	---	---
Dwg check	---	---	Approved	---	---

MMD Project Number	Scale at A1	Security
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Notes

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Key to symbols

- Low maintenance amenity grassland
- Individual small specimen tree
- Individual large specimen tree
- Species rich wildflower meadow
- Native species shrub and ground cover
- Native species tree and shrub (to be under seeded with EW1 mix)
- Open grassland
- Wildflower wetland meadow
- Marginal aquatic planting
- Submerged aquatic planting
- Existing vegetation to be retained
- Proposed native species hedgerow
- Bund area
- 3m accoustic fence
- 5m accoustic fence
- Permanent Security fence
- Suds feature
- PRoW Proposed
- PRow Existing
- Proposed Bat box site
- Proposed Bird nesting box site
- Proposed Dormouse nesting box site in existing vegetation
- Red line boundary

Reference drawings

1:2000 0 100m 200m

Rev	Date	Drawn	Description	Ch'k'd	App'd
P01	16/10/20	■	First Issue	■	■
P02	20/10/20	■	Fisrt revision	■	■
P03	27/10/20	■	RLB amended	■	■
P04.1	05/11/20	---		---	---

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Title

Future EU Roads Relationship
Sevington IBF
Environmental Masterplan
Day 200
Sheet 1 of 1

Designed	■	■	Eng check	---	---
Drawn	---	---	Coordination	---	---
Dwg check	---	---	Approved	---	---

MMD Project Number	Scale at A1	Security
419419	1:2000	STD

Suitability Description — Suit. Code

Drawing Number: 419419-MMD-01-MO-DR-L-3031 — Revision: P04.1

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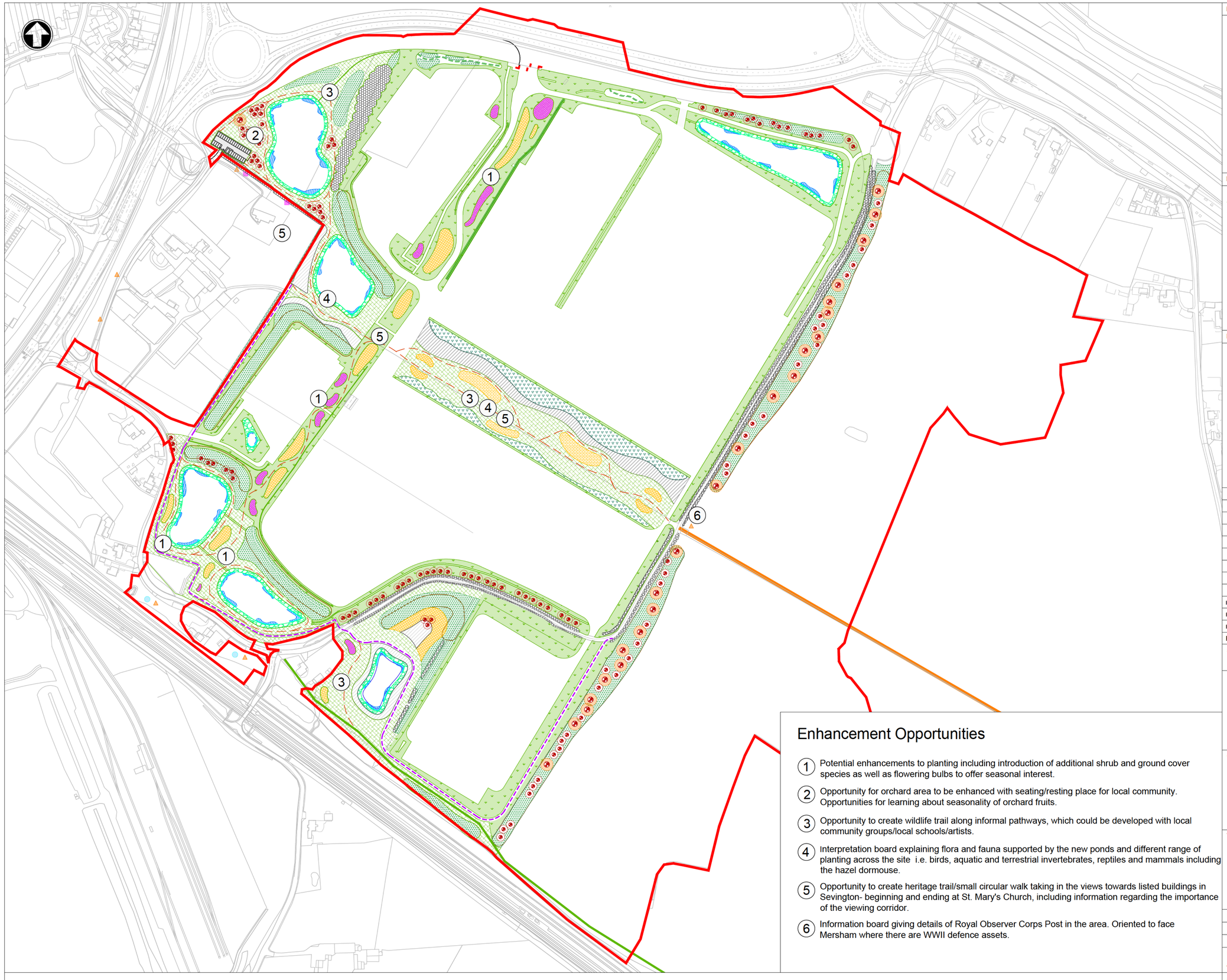

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- Native species tree and shrub (to be under seeded with EW1 mix)
- Bulb planting
- Open grassland
- Wildflower wetland meadow
- Marginal aquatic planting
- Submerged aquatic planting
- Existing vegetation to be retained
- Proposed native species hedgerow
- Red line boundary
- Potential informal circulation routes - mown grass
- Bund area
- Suds feature
- PRoW Proposed
- PRow Existing
- Proposed Bat box site
- Proposed Bird nesting box site
- Proposed Dormouse nesting box site in existing vegetation

Reference drawings

0 100m 200m
1:2000

Enhancement Opportunities

1. Potential enhancements to planting including introduction of additional shrub and ground cover species as well as flowering bulbs to offer seasonal interest.
2. Opportunity for orchard area to be enhanced with seating/resting place for local community. Opportunities for learning about seasonality of orchard fruits.
3. Opportunity to create wildlife trail along informal pathways, which could be developed with local community groups/local schools/artists.
4. Interpretation board explaining flora and fauna supported by the new ponds and different range of planting across the site i.e. birds, aquatic and terrestrial invertebrates, reptiles and mammals including the hazel dormouse.
5. Opportunity to create heritage trail/small circular walk taking in the views towards listed buildings in Sevington- beginning and ending at St. Mary's Church, including information regarding the importance of the viewing corridor.
6. Information board giving details of Royal Observer Corps Post in the area. Oriented to face Mersham where there are WWII defence assets.

Rev	Date	Drawn	Description	Ch'k'd	App'd
P01	20/10/20		First Issue		
P02	27/10/20		RLB amended		
P03.1	05/11/20			---	---

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Title

Future EU Roads Relationship
Sevington IBF
Long Term Enhancement Plan

Sheet 1 of 1

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Drawn	---	---	Coordination	---	---
Dwg check	---	---	Approved	---	---

MMD Project Number	Scale at A1	Security
419419	1:2000	STD

Suitability Description | Suit. Code

Drawing Number: 419419-MMD-01-MO-DR-L-3032 | Revision: P03.1

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B. Series 3000 Landscape and Ecology

B.1 Series 3000 Landscape and Ecology Specification Document no. 419419-MMD-XX-SV-SP-L-0001

MOTT MACDONALD

Sevington Inland Border Facility

Series 3000 Landscape and Ecology Specification

06 November 2020

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Series 3000 Landscape and Ecology Specification

06 November 2020

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Issue and Revision Record

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P02	06/11/20	[redacted]	[redacted]	[redacted]	Final for Article 4 submission

Document reference: 419419 | 419419-MMD-XX-SV-SP-L-0001 | P02

Information class: Secure

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1 APPENDIX 30/1 GENERAL

This document is to be read with Volume 1 of the Specification to Highways Works Series 3000 Landscape and Ecology which provides the details for the Clauses listed out below. Other relevant series to landscape implementation include Series 600 earthworks which should be also be followed as part of the scheme implementation. This specification addresses the implementation of landscape works and maintenance activities for the duration of the 60 month aftercare period.

1.1 Notice and Liaison

In the event of environmental damage or the immediate threat of environmental damage, as defined under the Environmental Damage Regulations 2009, site operatives shall immediately inform the Site Supervisor, Environmental Manager and Scheme Ecologist in order to notify statutory agencies for compliance with the Environmental Damage Regulations 2009.

All site operatives shall attend an environmental toolbox talk before works commence, which shall be given by an appropriately experienced Ecologist and the Construction Engineer. The following Toolbox Talks will be given, as detailed within Series 3000 Appendix 30/12 (Chapter 12 below).

- Badgers
- Dormice
- Common reptiles
- Nesting birds
- Water pollution

During the proposed works the Root Protection Area of any existing trees in close proximity of the works which are not required to be removed shall be measured onsite and protective barrier shall be erected as necessary in accordance with *BS5837:2012 Trees in relation to design, demolition and construction - recommendations* to prevent l damage to the trees as a result of the proposed works.

All vegetation clearance shall be undertaken in accordance with Appendix 30/12.

Clause 3001.2 The Contractor shall give at least 48 hours' notice to the Environmental Manager of the intention to commence any of the operations stated in Clause 3001.2.

1.2 Peat

Clause 3001.3 Peat or peat-based products shall not be used as part of these works.

1.3 Pesticide Application

Clause 3001.13 A record of all pesticide use shall be maintained by the Contractor on the Sheet 1 Pesticide Application pro-forma for inclusion within the Handover Documents.

1.4 Bird Nesting Season

Clause 3001.14 The bird nesting season is from 1st February to 30th September inclusive, however this is only to serve as guidance. Seasonal variations will be advised by the Environmental Manager under advice from the Scheme Ecologist. In general site clearance

works are to be avoided within the bird breeding season or will otherwise require an ecological watching brief.

1.5 Inspection Reports

Clause 3001.15 The Contractor shall maintain and provide inspection reports for inclusion within the handover documents (examples of which can be found at the end of this document) for the following activities:

- Sheet 1. Pesticide application
- Sheet 2. Landscape works inspection report
- Sheet 3. Provenance Certificate
- Sheet 4. Arboriculture
- Sheet 5. Protected Species

2 APPENDIX 30/2: WEED CONTROL

2.1 General

Clause 3002.1 Applies. Weed control shall be carried out over the whole site to control target species listed below at a frequency of no less than 3 times during the period March to October, using spot treatment with a translocated herbicide, i.e. applied with a device that ensures the herbicide touches the weed species only.

The target species include the following:

a. Broad leafed dock
b. Curled dock
c. Common ragwort
d. Creeping thistle
e. Spear thistle
f. Himalayan balsam
g. Giant hogweed
h. Japanese knotweed

2.2 Total Weed Control

Clause 3002.3 Applies at a frequency of no less than 3 times during the growing season of March to October.

Clause 3002.4 Applies to all areas at a frequency of no less than 3 times during the growing season of March to October.

Clause 3002.5 Applies at a frequency of no less than 3 times during the growing season of March to October.

2.3 Selective Weed Control in Grass

Clause 3002.6 applies to all areas of grassland at a frequency of no less than 3 times during the growing season of March to October.

2.4 Weed Control by Spot Application of Herbicide

Clause 3002.7 Applies as per Clause 3002.1

Only herbicide treatment approved for use near water shall be applied within 10m of a water body or drainage feature.

No herbicide to be applied without written approval from the Environmental Manager.

2.5 Weed Control by Pulling/ Handweeding

Clause 3002.8 does not apply.

2.6 Weed Control by Cutting

Clause 3002.9 does not apply.

2.7 Arising from Weed Control operations

Clause 3002.10 All arisings from weed control operations to be removed off Site to an appropriate place of disposal (licensed tip where legislation requires).

3 APPENDIX 30/3 CONTROL OF RABBITS AND DEER

3.1 General

Clause 3003.1 The Contractor shall carry out rabbit control, as instructed by the Environmental Manager, to all planting areas for the duration of the contract and maintenance period. Prior to instructing rabbit control, the Contractor will liaise with the Project Manager and consult as necessary with adjacent landowners. Thereafter the Contractor shall liaise as necessary with adjacent landowners for access, and to control and report any complaints to the Environmental Manager.

3.2 Control Operations

The Contractor must ensure that any rabbit control developed should be sympathetic to other protected species issues mentioned in Appendix 30/12.

Clause 3003.5 does not apply.

3.3 Rabbit Control within the Site Boundary

Clause 3003.8 The Contractor shall ensure effective control for a period of 60 months from Practical Completion.

Clause 3003.9 At the request of the Overseeing Organisation an inspection of the Site together with a representative of the Contractor and design team must be undertaken to agree whether effective control has been achieved.

3.4 Clearance of Rabbits and Deer in Fenced Areas to be planted

Clause 3003.12 does not apply.

3.5 Replacement of Plants Damaged by Animals

Clause 3003.14 The Contractor shall replace any plant material damaged by in accordance with Clause 3006 and maintain them in accordance with Clauses 3008 and 3009 for the duration of the 60 month aftercare period.

4 APPENDIX 30/4 GROUND PREPARATION

4.1 Vegetation Clearance

Clause 3004.1 All vegetation must also be cleared in accordance with the following:

- Vegetation clearance drawing 419419-MMD-01-MO-DR-C-0201 and,
- All ecological protection measures stated in Appendix 30/12 of this document.

All the arisings must be removed offsite, unless otherwise specified by the Environmental Manager.

Should the Contractor encounter a vegetation type or feature within the work area that is not covered by the above drawings, the Contractor should inform the Environmental Manager immediately to clarify the treatment required. All the arisings must be removed offsite, unless otherwise specified by the Overseeing Organisation.

Clause 3004.2 applies in the event that delays in seeding/planting operations after topsoil application lead to weed establishment.

4.2 Subsoil Treatment

Clause 3004.5 applies to non-engineered slopes/soil profiles.

Clause 3004.6 applies.

Operations of stump grubbing, stump removal, soil grading or soil preparation may risk interference with or cause damage to buried or concealed services. The Contractor must undertake all work with due caution in this regard and with reference to drawings identifying service locations as provided by statutory undertakers.

The Contractor is responsible for checking all work areas that are subject to excavations or ground disturbance, with a suitable Cable Avoidance Tool (CAT) for the detection of buried cables in order to identify the presence and location of all services prior to commencement of works on site.

The Contractor shall undertake all work with due care to avoid damage to vegetation, structures and surfaces and must install and maintain protective measures to prevent damage as appropriate.

Soil depths for seeding in areas of Open Grassland and Low Maintenance Amenity Grassland shall require a minimum topsoil depth of 100 mm provided that there is a cohesive subsoil already in place (i.e. from existing sub-soil from site). However, where sowing over made ground and where the sub soil is granular (i.e. made up of non-site material and is type 2 fill or similar) a minimum depth of 200 mm of subsoil shall be required over the structural fill with a further 100 mm depth of topsoil on top.

Soil depth for seeding works in species rich wildflower meadow and pond edge areas are to be restricted to sowing onto a maximum depth of 50mm of topsoil over subsoil to be prepared as defined in 3004 Ground Preparation.

Soil depths for shrub and tree planting shall require 300 mm topsoil as a minimum. Where planting on made ground, if the structural fill is cohesive i.e. (from existing sub-soil from site) and a depth of 300 mm or more then additional subsoil shall not be required to be imported. Where the structural fill is granular (i.e. made up of non-site material) 300 mm of subsoil is required to be either imported/brought in from elsewhere on site with the additional 300 mm of topsoil on top.

Soil depths for specimen tree planting are presented in Table 30/01.

The top and toe of banks and slopes should be rounded for ease of maintenance and to allow better integration with the surrounding landscape in accordance with BS 4428.

4.3 Final Preparation of Soils

Clause 3004.7 Applies, refer to the 600 Earthworks specification and Detailed Planting Design drawings 419419-MMD-01-MO-DR-L-3034 to 419419-MMD-01-MO-DR-L-3041 for ground treatment types and methodology.

Clause 3004.8 Applies to all planting and seeding areas.

Clause 3004.10 Finished levels of material after settlement shall be at the same level as adjoining kerbs and carriageways and adjoining soil areas.

4.4 Soil Contaminated During the works

Clause 3004.12 applies.

5 APPENDIX 30/5: GRASS SEEDING, WILDFLOWER SEEDING AND TURFING

5.1 Season

Clause 3005.1 All operations shall be carried out in accordance with good horticultural practice avoiding periods of inclement weather or when soil conditions are unsuited to preparatory and/or seeding operations. Seeding will be carried out in the first available window of opportunity during the stated sowing period of 1st March to 31st May or 1st September to 31st October unless otherwise specified by the project Landscape Architect or Overseeing Organisation.

Where a fallow period is dictated by constraints of the seeding season the Contractor shall carry out one or a combination of the following management practices as directed by the Environmental Manager:

- Cut emergent weeds to a height of between 50 to 75mm prior to seed set and remove all arisings from site prior to final cultivation.
- Apply a non-residual translocated herbicide to all areas to be seeded between 21 and 25 days prior to seeding. Where vegetation has been cut prior to herbicide application the Contractor shall await active vegetation re growth sufficient for the herbicide to be effective resulting in the killing of all treated growth and their root systems.

5.2 Final Cultivation

Clauses 3005.2 and 3005.3 Prior to sowing the following operations shall be carried out:

- Any consolidated ground to be broken up to a minimum depth of 300mm;
- Topsoil shall be graded to achieve finished levels after settlement in accordance with the earthworks design drawing 419419-MMD-01-MO-DR-C-0603.
- Finished levels should tie in with surrounding ground/hard features;
- Immediately prior to sowing the upper 50mm of soil shall be reduced to a fine tilth by use of a chain harrow or other suitable plant / machinery;
- All undesirable material including stones larger than 50mm in any one dimension, roots tufts of grass and foreign matter are to be removed off site unless otherwise stated; and,
- Fertiliser shall not be used.

5.3 Seed

Clause 3005.4 The Contractor shall supply the following species rich grassland seed mix, or similar to be approved by the Overseeing Organisation.

- British Seed Houses, A18 Road Verge and Embankments Grass Mix to be seeded at a rate of 35g/m² to proposed low maintenance amenity grassland.
- Emorsgate EG1 or similar approved to be seeded at a rate of 5g/ m² for proposed Open Grassland.
- Emorsgate EM2 or similar approved to seeded at a rate of 4g/m² for Species Rich Wildflower Meadow. The mix should exclude the use of Yellow Rattle as this is not appropriate in an agricultural environment.

- Emorsgate EP1 of similar approved for areas of Pond Edge mix to seeded at a rate of 4g/m².
- Emorsgate EW1 – Grass mixture for hedgerows and woodland mix or similar approved to be applied to all areas, Native Tree and Shrub Mix at a rate of 5 g/m².

Clause 3005.7 The Contractor shall make available evidence that the seeds are of UK provenance using Sheet 3 contained in this document.

5.4 Conventional Sowing

Clause 3005.8 applies

The use of fertilisers is precluded.

5.5 Hydraulic Seeding

Clause 3005.10 applies

Areas of proposed hydro-seeding are to be agreed with the landscape architect before arrangements are made.

The use of fertilisers is precluded.

Homogeneous slurry to be Conwed hydromulch, premium dyed 100% wood mulch fibre with none leaching temporary green indicator dye. Application rate to be 242kg per hectare (dry weight) / 11,400kg per hectare (wet weight). Hydro-Track tackifier erosion control agent to be applied at a rate of 6 – 35g per m2 (depending on site conditions). Supplied by RMB Hydroseeding tel. 01453 511365 or similar, to be approved by the Environmental Manager.

Seeds shall be mixed with slurry as per the seeding rates provided in 3005.4

5.6 Turf

Clause 3005.13 – 3005.26 do not apply.

5.7 Establishment Cuts

Clause 3005.29 applies.

Species Rich Wildflower Meadow EM2, Pond Edge Mix EP1, underseeding mix EW1: Sub-clause 3005.29 - For the first growing season following seeding and if sown during Autumn, newly established wildflower and species rich grassland areas shall be mown in March/April to leave a nominal 70mm height. The second establishment cut shall be undertaken after flowering during the month of August/September to leave a nominal 40mm height. If sown during spring only one cut will be necessary after flowering during the month of August/September to leave a nominal 40mm height.

Open Grassland EG2- General Purpose Meadow Grass Mixture First year management: Growth and establishment of wild grasses may be slow initially, especially at low sowing rates. There will often be a flush of annual weeds from the soil in the first growing season. This weed growth is easily controlled by topping or mowing. Mow all plant growth (sown grasses and weeds) regularly to 40-60mm throughout the first growing season to prevent weeds smothering the slower-growing grasses.

Low Maintenance Amenity grassland A18 Mix: For the first growing season following seeding, newly established grass shall be mown to leave a nominal 50mm height. The first mowing shall

be carried out once the grass has reached a height of 100mm. The second and any subsequent establishment cuts shall be undertaken when it has re-grown to 100mm.

Clause 3005.30 applies.

6 APPENDIX 30/6: PLANTING

6.1 Plants

Clause 3006.1 All planting works shall be carried out in accordance with BS 4428, BS 5837, BS 8545and BS 6550.

Clause 3006.3 All plants to be supplied in accordance with clause 3006.3 and as per Detailed Planting Design drawings 419419-MMD-01-MO-DR-L-3034 to 419419-MMD-01-MO-DR-L-3041, and in addition shall comply with the Forestry Commission Practice Note 8: Using Local Stock for Planting Native Trees and Shrubs. All cell grown plants shall be grown in open conditions for one growing season.

Clause 3006.4 No grafted stock to be used.

Clause 3006.5 Does not apply.

Clause 3006.6 All planting stock to be of origin from the UK and in accordance with Forestry Commission Practice Note 8 (see above). Written evidence of its provenance will be provided to the Overseeing Organisation and made available to the Project Manager prior to planting using Sheet 3.

Clause 3006.7 does not apply.

Clause 3006.8 Plants shall be lifted, packed and handled in accordance with BS 8545, BS 4428, the Horticultural Trades Association publication and the National Plant Specification, Section 10.2, Handling and Establishing Landscape Plants.

Clause 3006.9 During the period subsequent to the receipt of the plants and prior to planting, the Contractor shall comply with the treatment of nursery stock as specified in 3006.9. applies.

Setting out to be in accordance with instruction issued at pre-start meeting prior to commencement of planting. Any alterations or amendments to these instructions must be agreed and be followed with a written instruction issued by the Overseeing Organisation.

Clause 3006.10 does not apply. All tied, canes and labels present on supplied plants are to be removed at the time of planting.

6.2 Topsoil, Compost, Fertiliser and Anti-dessicants

Clause 3006.12 Applies.

Clause 3006.13 Does not apply.

Clause 3006.14 Applies.

Clause 3006.15 Applies to all pit planting and shall be evenly mixed with backfill. Fertiliser application rates to be in accordance with manufacturer’s recommendations.

Clause 3006.16 Does not apply.

6.3 Time of Planting

Clause 3006.17 Planting of bare-rooted stock shall take place during favourable weather and soil conditions, during the dormant season between October and March of the first available planting season. Bare rooted or root-balled conifers or evergreens shall be planted during November of March.

Clause 3006.18 Container grown plants can be planted at any time during favourable weather and soil conditions, however caution should be taken to avoid periods of drought and or very warm weather unless sufficient watering is allowed for to ensure successful establishment.

Clause 3006.19 Does not apply.

Clause 3006.20 The planting season for marginal and aquatic plants shall be mid Spring to early Summer (April to June - weather depending).

6.4 Notch Planting of Trees, Shrubs and Hedges

Clause 3006.23 Does not apply.

6.5 Planting Pits, Beds and Trenches

Clause 3006.24 Applies as per Table 30/1.

Clause 3006.27 Applies to standard trees only.

6.6 Planting in Cultivated Beds and Hedges

Clauses 3006.28 to 3006.33 Do not apply.

6.7 Planting of Whips, Transplants and Shrubs into Pits or Trenches

Clause 3006.34 Applies to pit planting and hedge trenches,

Clause 3006.35 Applies with pre-mixed 80% topsoil/20% compost mixture.

6.8 Planting of Trees

Clause 3006.38 Does not apply.

Clauses 3006.41 and 3006.44 Apply.

Clause 3006.45 Does not apply.

Clause 3006.46 Applies.

Clause 3006.49 Applies to ground capacity.

Clause 3006.50 Does not apply.

6.9 Tubes, Guards and Ties

Clause does not apply.

6.10 Mulches: Ground Preparation

Clause 3006.53 Applies. Water to ground capacity.

6.11 Organic Mulches

Clause 3006.54 Does not apply.

Clause 3006.55 Applied to hedgerow planting and native shrub and understorey planting areas.

6.12 Individual Mulch Mats

Clauses 3006.58 and 3006.60 Do not apply.

6.13 Sheet Mulch

Clauses 3006.61 to 3006.63 Do not apply.

6.14 Sheet Mulch Collars

Clause 3006.64 Does not apply.

6.15 Planting of Bulbs

Clauses 3006.65 to 3006.67 Do not apply.

6.16 Wildflower Plant Preparation and Planting

Clauses 3006.68 to 3006.72 Do not apply.

6.17 Planting of Reeds, Rushes, Marginal, Emergent and Aquatic Plants

Clause 3006.73 Applies

Clause 3006.77 Excavated material shall be distributed evenly over surrounding ground.

6.18 Marker Posts for Planted Areas

Clause 3006.80 The Contractor, in conjunction with the Overseeing Organisation, shall insert marker posts to mark out the boundary of each planting area which is not otherwise protected by fencing or other structures.

6.19 Replacement of Failed or Defective Plants

Clause 3006.87 The Contractor shall replace all plants which are missing, have died are failing to make satisfactory extension growth for a duration of 60 months.

Clause 3006.89 Replacement plants shall be one year older for each year that has passed since the original planting was carried out.

6.20 Post-planting Maintenance

Clause 3006.92 The maintenance period shall be 60 months.

7 APPENDIX 30/7: GRASS, BULBS AND WILDFLOWER MAINTENANCE

7.1 General Grass Maintenance

Clause 3007.5 applies. Grass cutting around plants should be undertaken to prevent plants being outcompeted by grassland species; however, no grass cutting shall be carried out within a distance that shall cause damage to individual plants.

Clause 3007.6 Cuttings from species rich meadow areas shall be removed from site after cutting.

7.2 Grass Cutting: High frequency

Clauses 3007.9 to 3007.12 Do not apply.

7.3 Grass Cutting: Medium frequency

Clauses 3007.13 to 3007.16 Do not apply.

7.4 Grass Cutting: Low frequency

Clause 3007.17 Applies for amenity grassland areas when the grass sward reaches a height of 100-150mm. The areas shall be cut to a height between 50 – 70 mm throughout the growing season and cuttings removed from site. Additional cuts shall be undertaken when grass exceeds a height of 150mm.

7.5 Grass Cutting: Minimal frequency

Clauses 3007.18 to 3007.21 Do not apply.

7.6 Grass Cutting: Banks and Ditches

Clause 3007.22 Applies.

7.7 Grass Cutting: Areas of Planting

Clauses 3007.23 to 3007.25 Apply to areas of underseeding of native trees and shrubs.

7.8 Wildflower Areas and Areas of Nature Conservation Value

Clause 3007.26 and 3007.27 Apply for areas of Open Grassland, Species Rich wildflower meadow and wildflower wetland meadow mix.

Areas of open grassland shall receive a topping cut to a height of 90mm-100mm after the seeding of desirable species, in late summer with the cuttings being finely chopped and evenly dispersed over the area. Regrowth shall be mown in late autumn with an additional cut if necessary.

Areas of species rich wildflower meadow shall receive an annual summer/autumn cut to a height of between 50 and 60mm after the seeding of desirable species in late summer/early autumn. Arisings shall be left for between 5-7 days to allow seeds to disperse prior to arisings

being raked and removed off site, by such means to avoid pulling, tearing, or causing other damage to the soil surface and retained vegetation.

Clause 3007.28 Applies

Clause 3007.30 Does not apply.

7.9 Molehills

Clause 3007.31 Does not apply.

7.10 Bulbs and Perennials

Clause 3007.32 Does not apply.

8 APPENDIX 30/8: WATERING

8.1 General

Clauses 3008.1-3008.4 Apply.

8.2 Establishment Watering

3008.5 Applies

3008.6 Watering is to be carried out throughout the establishment period of 60 months from Practical Completion.

8.3 Additional Watering

Clause 3008.7 Watering to be undertaken in accordance with Landscape Institute Technical Bulletin for Watering 'Option 1: Performance' i.e. to achieve healthy plants at the end of contract period. Applies to all areas of grass seeding and planting and trees. Particular attention shall be paid during periods of abnormally dry weather to ensure the successful establishment and thriving of plant stock.

9 APPENDIX 30/9: ESTABLISHMENT MAINTENANCE FOR PLANTING

9.1 Planting

Clause 3009.1 Plants and planting areas as shown in Detailed Planting Design Drawings 419419-MMD-01-MO-DR-L-3034 to 419419-MMD-01-MO-DR-L-3041 shall be maintained in accordance with Clause 3009 for a period of 60 months from Practical Completion.

9.2 Firming

Clause 3009.2 Applies.

9.3 Stakes, Tubes, Guards and their Ties

Clause 3009.3 Applies to all tree planting.

Clause 3009.4 Stakes and their ties shall be removed from all plants at the end of the aftercare period and disposed of off Site.

9.4 Weed Control: Young Trees and Shrubs in Grass Plots

Clause 3009.10 Non-residual translocated herbicide to be applied twice annually in the months of April and July to the plant circles (300 mm diameter) of all individual trees and shrubs as shown in drawings Detailed Planting Design drawings 419419-MMD-01-MO-DR-L-3034 to 419419-MMD-01-MO-DR-L-3041.

Clause 3009.11 Does not apply.

Clause 3009.12 Applies.

Clause 3009.13 Does not apply.

9.5 Weed Control: Young Trees and Shrubs in Cultivated Beds

Clauses 3009.15 to 3009.19 Do not apply.

9.6 Weed Control: Hedges

Clause 3009.20 Applies.

9.7 Individual Trees in Urban Streets

Clauses 3009.24 to 3009.25 Do not apply.

10 APPENDIX 30/10: MAINTENANCE OF ESTABLISHED TREES AND SHRUBS

Clause 3010.1 Existing established planting areas are shown in the Tree Protection Plan (drawing reference 418703-MMD-XX-SV-VS-YB-0001) and shall be maintained in accordance with Clause 3010 for a period of 60 months from Practical Completion.

10.1 Weed Control: Trees and Shrubs in Cultivated Areas

Clause 3010.2 Does not apply.

10.2 Arisings from Pruning, Cutting or Felling of Woody Plants

Clause 3010.4 Healthy arisings, unless required for ecological enhancement measures (see Appendix 30/12 Special Ecological Protection Measures), shall be dealt with in the following ways: (i) Removed off Site without chipping first or (ii) Chipping. All arisings shall be processed immediately using a woodchipper. All remaining arisings that cannot be chipped shall be removed off Site.

10.3 Shrub Pruning

Clause 3010.8 Does not apply.

10.4 Hedge Maintenance

Clause 3010.12 Applies. Hedges shall be cut once annually during winter months (December to February) to avoid breeding birds and potential harm to dormice.

Clause 3010.15 Applies.

Clauses 3010.20 to 3010.31 Do not apply.

10.5 Individual Established Trees in Urban Streets

Clauses 3010.32 and 3010.33 Do not apply.

10.6 Arboriculture: General

Clause 3010.34 and 3010.36 The contractor shall comply with the following:

- *Arboriculture and Forestry Advisory Group (AFAG) recommendations;*
- *National Joint Utilities Guidelines (NJUG) recommendations;*
- *BS 5837:2012 Trees in relation to design, demolition and construction -recommendations;* and,
- *BS 3998:2010 Tree work. Recommendations.*

Clause 3010.35 The Arboricultural Report for this Site (document reference 418703-MMD-XX-SV-RP-YB-0001, October 2020), confirms that the extents of this Scheme do not fall within a Conservation Area (CA) and will not affect any trees subject to a Tree Preservation Order (TPO). This statement was made in October 2020 and before any tree works are carried out it is recommended that the tree contractor checks the current situation with the Local Planning Authority (LPA) immediately prior to works commencing.

The Overseeing Organisation shall seek advice from the Scheme Arboriculturalist in order to oversee works where necessary. Proof of the arboriculturalist's experience and qualifications must be supplied to the Overseeing Organisation prior to works commencing.

No work should be conducted on 'off Site' trees without first obtaining all appropriate consents from the relevant landowner or LPA and the Overseeing Organisation.

10.7 Tree Surgery

Clause 3010.45 to 3010.56 Do not apply as no pruning works have been specified for this Site. The trees will either be felled or retained unaffected by the proposed construction.

10.8 Tree Felling

Clause 3010.57 Where straight felling is possible, within the health and safety considerations of working adjacent to a live carriageway, the whole tree shall be felled to within 100mm above ground level, with the assistance of a powered or hand winch where necessary.

Clause 3010.58 Where sectional felling is required as directed by the Overseeing Organisation, the tree shall be felled in sections of a size appropriate to the location, using ropes where necessary to lower the sections.

Clause 3010.59 The height at which the stump shall be cut shall be as close to the ground level as possible unless instructed otherwise by the Overseeing Organisation.

Clause 3010.60 The stumps of all felled trees and shrubs shall have a stump-killing herbicide applied in accordance with the following:

- The method for chemical application is to be in accordance with the manufacturer's recommendations;
- The chemical is to be a non-selective systemic herbicide approved by the manufacturer for its intended purpose;
- The inclusion of an appropriate blue colour dye is required to enable the verification of treated stumps;
- If adverse weather conditions prevent effective stump treatment immediately after work, stumps should be re-cut and treated in the next fair weather 'window'; and,
- All herbicide application in the vicinity of watercourses should be carried out with due care and attention and in accordance with a suitable methodology to prevent water contamination.

Clause 3010.62 As directed by the Overseeing Organisation, the complete root, including buttress and surface roots arising from or near to its base, shall be removed, either by:

- stump grinding to a minimum depth of 300 mm; or,
- stump grubbing by means of excavation or winching.

Clause 3010.63 Following removal of stumps by any means, the void shall be filled with topsoil to match existing levels in grassed areas. All arisings shall be disposed of off Site.

10.9 Thinning and Coppicing

Clauses 3010.64 to 3010.66 Do not apply as no thinning or coppicing works have been specified for this Site.

10.10 Scrub Control in Grass

Clauses 3010.67 to 3010.71 Do not apply.

11 APPENDIX 30/11: MANAGEMENT OF WATERBODIES

11.1 General

Clause 3011.1 to 3011.3 apply.

11.2 Weed control

3011.4 undesirable species subject to weed control include the following:

- New zealand piygmy weed *Crassula helmsii;*
- Floating pennywort *Hydrocotyle ranunculoides,*
- Parrot's feather *Myriophyllum* aquaticum,
- Water fern *Azolla filiculoides;* and,
- Water primrose *Ludwigia peploides.*

Clause 3011.6 Applies - to be undertaken annually to prevent invasion of weed species across waterbody

11.3 Silt

Clause 3011.7 and 3011.8 does not apply.

11.4 Reedbeds and Marginal Plants

Clause 3011.9 Marginal and aquatic planting should be inspected twice per year and remedial actions taken to ensure the successful establishment and long term thriving of species.

Clause 3011.10 Applies.

12 APPENDIX 30/12: SPECIAL ECOLOGICAL MEASURES

12.1 General

Clause 3012.1: The maintenance works specified under Clause 3012 shall be carried out for a period of 60 months post construction.

Clause 3012.2: Special Ecological Measures works shall be carried out in accordance with the methods proposed in the following documents:

- Hazel Dormouse European Protected Species Licence (EPSL);
- Badger Licence;
- Ecological Management Strategy incorporated into the CEMP.

Without in any way limiting the liabilities and obligations imposed upon the Principal Contractor elsewhere in the Contract, the Principal Contractor shall carry out the Works in such a manner so as to minimise at all times the levels of impact to ecology and nature conservation.

The Principal Contractor shall ensure that all those onsite are aware of the legal protection afforded to these species and the necessary action in the event of a protected species or evidence of a protected species being identified. This information shall be passed on in the form of Toolbox Talks and associated species information sheets developed by the Designer (Mott MacDonald) to the Principal Contractor (Gallagher) for all dormouse and badger work. All site operatives shall confirm their understanding of environmental obligations by signing sheets of attendance.

Should protected species, or signs of them, be found during works, site personnel shall cease work immediately and inform the Environmental Manager who shall consult the scheme Ecologist. With the exception of measures to make the site safe, no further works shall be undertaken until appropriate mitigation has been put in place and permission has been received from the Environmental Manager, who shall seek advice from the scheme Ecologist.

In the event that a protected species licence becomes necessary during works, all activities shall cease immediately and shall not re-commence until the licence has been obtained, and confirmation to proceed has been received from the Environmental Manager.

Vegetation clearance works and soil stripping will require supervision and/ or regular inspections by the scheme Ecologist as considered necessary on site, and as identified in the Construction Management Plan (CMP).

Should any species listed in the Weeds Act 1959; or on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) be identified on site, the Environmental Manager must be contacted immediately for advice. No works to be undertaken that could cause the spread of any such species.

If rabbit warrens are identified within the works footprint, the Environmental Manager shall ensure rabbits are humanely despatched prior to any earthworks within 20m of the burrow entrances. To avoid harm to reptiles and other species, this must not be undertaken using gas. The chosen method of despatch is to be agreed with the Scheme Ecologist prior to any action being taken.

All spoil heaps and material storage to be checked for signs of badger activity on a daily basis. Any signs of badger activity are to be reported to the Environmental Manager.

12.2 Tunnels, fencing and underpasses

Clause 3012.3 Does not apply

Clause 3012.4 Does not apply.

Clause 3012.5: Any excavations left overnight should provide facilities to prevent badgers from falling in and becoming trapped. This can comprise barriers around the excavation; covers over the top of the excavation/s (e.g. sheets of ply); or escape ramps (e.g. scaffold boards) installed temporarily.

12.3 Reflectors

Clauses 3012.6 and 3012.7 Does not apply.

12.4 Artificial Nests, Boxes, Perches and other Wildlife Shelters

6 dormouse nest boxes, 10 bird boxes and 10 bats boxes shall be installed no later than 30 days prior to the start of construction. The boxes shall comprise of the following designs:

- 6 No. Dormouse boxes
- 1 No. Wren nest 1ZA
- 2 No, Hole front 1B
- 2 No. Open front 2H
- 5 No. General purpose
- 10 No Bat boxes

The boxes shall be installed using Landscape Screws fastened into suitable trees at locations to be determined by the Scheme Ecologist.

12.5 Other Habitat Creation Measures

Clause 3012.11 Applies.

Reptile hibernacula will need to be created in the reptile receptor area located between M20 and the Old Mill Stream, to be located on free-draining soil with split wood/ woodchips/ rocks/ bricks, covered with topsoil and grass seeded where appropriate in accordance with Advice Natural England (NE) (2001) guidelines[1].

Clause 3012.12 The known locations of Protected Species or their habitats are noted below. This information is confidential.

- Dormouse population along tree/hedgerows of Church Road, Highfield Lane and along tree line adjacent to the A2070 north of Church Road.
- A badger outlier north east of [redacted]. Additional badger evidence is mainly constrained to the east of the works footprint, with no additional setts were found within the works footprint itself.
- A medium population of reptiles has been recorded onsite within the area north of Sevington Church.

[1] Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.

- Another small population of reptiles to the south of the site, bordering HS1.

Clause 3012.13 Any vegetation clearance of trees, hedgerow or scrub in the area of known dormouse presence shall require a development licence from NE and shall require direct supervision as stated under the licence, by a suitably qualified person during removal.

Removal of the badger sett outlier shall require a licence approval from NE to interfere with a badger sett. The sett closure shall need to be undertaken with direct supervision as stated under the licence, by a suitably qualified person during removal.

Any vegetation clearance required during the active nesting period for birds (February until August) will require the scheme Ecologist to be present to determine the presence of any nesting birds prior to removal.

Any removal of grassland habitat that will have been subjected to a translocation survey will have a destructive search carried out when removed under direct supervision by the scheme Ecologist.

Sheet 1: PESTICIDE RECORD

This form should be completed once an inspection has been carried out onsite. All those onsite should be made aware that an inspection has been conducted. This form should also be clearly displayed on site

Contract ref. number:

Contract Name:

Date and time of inspection:*

Name of Contractor:

Name + telephone number of person conducting inspection:

Operations carried out	Pesticide used	Locations of Operations
Total weed control		
Weed control in any water body		
Selective herbicide to areas of grass		
Herbicide to cultivated plant beds		
Total herbicide around individual plants in grass		
Other (state purpose)		

Names and Qualifications of operatives on site:

Supervisor

Storeman:

Application by:

SIGNED (for Contractor) NAME: DATE:

Contractor's observations on damage by other or any incidents

Sheet 2: LANDSCAPE WORKS INSPECTION REPORT

This form should be completed once an inspection has been carried out onsite. All those onsite should be made aware that an inspection has been conducted. This form should also be clearly displayed on site.

Contract ref number:

Contract Project Manager / Site Person in charge:

Contract Name:

Date and time of inspection:*

Name of Contractor:

Name + telephone number of person conducting inspection:

Operations carried out	Locations of Operations

Names of operatives on site:

Sub- Contractor's observations on damage by others, additional work required or general condition of the works:

Observations of the Contractor on standard of workmanship, additional work required or general condition of the works:

This maintenance visit has been satisfactorily completed:

SIGNED (for Contractor) NAME: DATE:

SIGNED (for Overseeing Organisation) NAME: DATE:

Sheet 3: PROVENANCE CERTIFICATE

CERTIFICATE NUMBER:

1. We hereby certify that the origins of the plant stock incorporated in the Works are as identified in the Plant Schedule contained in Annex 1 of this Certificate.
2. The words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Forestry Commission Practice Note 8 'Using Local Stock for Planting Native Trees and Shrubs'.
3. Receipt of this certificate is acknowledged by the Overseeing Organisation

CONTRACTOR

FIRM:

NAME: **POSITION:**

SIGNED: **DATE:**

OVERSEEING ORGANISATION

NAME: **POSITION:**

SIGNED: **DATE:**

ANNEX 1: PLANT SCHEDULE

BOTANICAL NAME	QUANTITY	FORM/ AGE	HEIGHT (cm)	ZONE OF PROVENANCE AND LOCATION	FORESTRY COMMISISION LOCAL PROVENANCE CERTIFICATE NUMBER (IF AVAILABLE)	APPROX.DATE PROPAGATION MATERIAL COLLECTED	NURSERY(S) WHERE THE PLANTS HAVE BEEN GROWN

Sheet 4: ARBORICULTURE

This form should be completed as a record of an inspection carried out onsite by a competent and experienced arboriculturalist. All those onsite should be made aware that an inspection has been conducted. This form should also be clearly displayed on site.

Contract ref number:

Contract Project Manager / Site Person in charge:

Contract Name:

Date and time of inspection:

Name of Contractor:

Name + telephone number of person conducting inspection:

1 Location of inspection (inc. work section ref):
2 Description of work undertaken / progress to date and general comments:

3 Tree works / tree protection measures carried out in accordance with agreed specification and methodology *(Delete as appropriate):* YES / NO
4 Additional action required / programme to address non-compliance within Item 3:

5 Site instruction (as detailed in item 4) issued to:

Company Name	
Name	
Position	
Time / Date	

6 General Notes:

This inspection record is materially accurate:

SIGNED (for Contractor)

NAME:

DATE

SIGNED (for Overseeing Organisation)

NAME:

DATE:

Sheet 6: PROTECTED SPECIES INSPECTION FORM

This form should be completed once an inspection has been carried out on site. All those onsite should be made aware that an inspection has been conducted. This form should also be clearly displayed on site.

Contract ref number:

Contract Project Manager / Site Person in charge:

Contract Name:

Date and time of inspection:

Name of Contractor:

Name + telephone number of person conducting inspection:

*NB if there is more than 24 hours since this survey was completed then works should stop until a survey is conducted

Attach plan of exact location of area searched and areas to be retained, and sign/date plan.

Plan Ref. Number:

(If appropriate, sketch location plan on rear of form, and sign/date).

Protected species present: Yes*/No

*If yes provide exact details of location (on searched area location), and if possible species (do not proceed with works until approval given by relevant species worker). Details of any necessary further action should also be detailed.

Plot Description	
Description of adjacent land	

Signed: **Date of inspection:**

On behalf of: **Further action taken:**

Parties notified of survey results and date of notification:

For ecological advice contact:

Location of areas searched including location of protected species if necessary or details of further action in the event of a protected species being encountered.



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MOTT MACDONALD

Land East of Highfield Lane

Landscape and Ecological Management Plan

April 2023

Confidential

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Land East of Highfield Lane

Landscape and Ecological Management Plan

April 2023

Confidential

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Issue and Revision Record

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P02	27/06/22	[redacted]	[redacted]	[redacted]	Draft submission – for DLUHC
P03	07/07/22	[redacted]	[redacted]	[redacted]	Second draft – for client comment
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P05	07/03/23	[redacted]	[redacted]	[redacted]	Second issue – Draft for client comment
P06	10/03/23	[redacted]	[redacted]	[redacted]	Draft submission – for DLUHC
P07	30/03/23	[redacted]	[redacted]	[redacted]	Updated draft submission
P08	20/04/23	[redacted]	[redacted]	[redacted]	Final Submission

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Information class: **Secure**

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1 Introduction

Mott MacDonald has been commissioned by the Department for Transport (DfT) to produce a Landscape and Ecological Management Plan (LEMP) in relation to the land east of Highfield Lane, which neighbours the Sevington Inland Border Facility (IBF), Ashford, Kent. This document provides a forward strategy for the initial management of the green infrastructure on Site until the end of 2025.

This LEMP covers the land east of Highfield Lane, as shown within the *Landscape and Ecological Management Plan Drawing* (Drawing ref: 419419-MMD-01-MO-DR-L-3206 Rev P01) (Appendix A) hereafter referred to as the 'LEMP Drawing'.

This LEMP was previously submitted in 2022 and subsequently retracted following the potential need for change of the landscape design along with inclusion of an interpretive archaeological barrow.

1.1 Scheme Context

The *Analysis of the Likely Environmental Effects of the Development Report* (ALEED) (Document ref: 419419-MMD-XX-SV-RP-YE-0002) was submitted as part of the Article 4 Submission to the Secretary of State (SoS) for Levelling Up, Housing and Communities. The most recent, Relevant Approval 4, was granted by the SoS on 28 April 2022, which provided permission for the IBF Site operation until 31 December 2025. This included an extension of the Article 4 Red Line Boundary, to include the land east of Highfield Lane in order to implement biodiversity enhancements.

Condition 11 of the Relevant Approval states:

"11. A Landscape and Ecological Management Plan for the detailed design of land east of Highfield Lane, including planting schedules, species and a timetable for implementation, shall be submitted to the Secretary of State no later than 30 June 2022. Development shall not be other than in accordance with the agreed details."

The goal is to provide substantial biodiversity enhancements by bringing new landscape and habitat creation to a once arable field. As the grassland and scrub habitats mature, it is envisaged that the Site would provide habitat suitable for hedgehogs, bats, dormice, brown hare, reptiles, newts, birds of prey and breeding birds of conservation priority such as skylark and nightingales.

This LEMP covers the initial maintenance period until the end of 2025, after which it will be superseded by a long-term management strategy. This will be undertaken either as part of reinstatement works, which will be progressed as part of an approved Reinstatement Plan once the Scheme has ceased operations, or earlier, if agreed for another organisation to take over the maintenance activities, or if permanent planning permission for the IBF and land east of Highfield Lane is confirmed.

1.2 Discharging of Condition 11

This LEMP is intended to discharge Condition 11 of the Relevant Approval in its entirety, meaning no further approval of the biodiversity enhancements is required. Approval is sought for the implementation, establishment and initial maintenance period until the end of 2025. This

covers all biodiversity enhancements and fencing as set out within the *LEMP Drawing* (Appendix A).

The following documents are submitted for approval:

- Landscape and Ecological Management Plan: Document number: 419419-MMD-XX-SV-RP-L-0004 Rev P08. [This document]
- Landscape and Ecological Management Plan Drawing. Document number: 419419-MMD-01-MO-DR-L-3206 Rev P01. [Appendix A of this document].

The LEMP Drawing does not contradict any drawings previously approved under Relevant Approval 4. The LEMP Drawing compliments plans previously submitted within Annex 2 (Approved plans and document) of Relevant Approval 4.

2 Regulatory Framework

2.1 Environmental Planning Context

2.1.1 Landscape Policy

Relevant planning policy in relation to the landscape discipline has been considered as part of the assessment of likely effects of the Scheme and has informed the resulting environmental design of the land east of Highfield Lane. Both national and local policy has been considered as well as that of the Kent Downs Area of Outstanding Natural Beauty (AONB), in respect to the setting of this nearby designated landscape. Further detail on the policies considered is found in Section 2 Legislative and Policy Framework of the *Landscape and Visual Impact Assessment,* (Document ref: 419419-MMD-XX-MO-RP-L-0002).

2.1.2 Nature Conservation Policy and Legislation

Please refer to Section 2 of the *Biodiversity Assessment* (Document ref: 419419-MMD-XX-MO-RP-BD-0001) for all policies and legislation regarding nature conservation. As was the case for the landscape design of the main IBF Site, the design for the land east of Highfield Lane has also been developed to align with Ashford Borough Council's policies with regards to Green Blue Infrastructure, and the creation and enhancement of Ashford's Green Corridors. In addition to this, the design is intended to also contribute towards terrestrial biodiversity targets set out within the Kent Biodiversity Strategy[1], creating species-rich grassland and diverse native scrub and hedgerows which would help reinforce local ecological networks.

2.1.3 Heritage and Archaeology Policy and Legislation

Legislation and policy of relevance to the Scheme with regard to the historic environment is described in the *Cultural Heritage Assessment* (Document ref: 419419-MMD-XX-SV-RP-HE-0001). National and local policy has been considered, as well as the relevant legislation with particular regard to the Planning (Listed Buildings and Conservation Areas) Act 1990 and the Ancient Monuments and Archaeological Areas Act 1979. This has informed the design of the Scheme, appropriate mitigation and the assessment undertaken for the ALEED (Document ref: 419419-MMD-XX-SV-RP-YE-0002).

[1] Kent Nature Partnership (2021) Kent Biodiversity Strategy. [ONLINE] Available at: https://kentnature.org.uk/strategy/kent-biodiversity-strategy/

3 Scheme Design Proposals for Land East of Highfield Lane

3.1 Design Objectives

Design objectives for the land east of Highfield Lane have evolved due to a requirement to provide biodiversity enhancements beyond the mitigation and enhancements afforded as part of the green infrastructure implemented within the neighbouring IBF Site to the west.

Through engagement with the local community, it was understood there is a desire to maintain the land east of Highfield Lane as a green space. DfT shares this vision for the Site and, as part of the Relevant Approval for the IBF, ('Sevington 4'), a local biodiversity asset has been designed within the land east of Highfield Lane. Mitigation has already been provided on the existing IBF Site, and the design for Sevington 4 exceeds that, to ensure a long-term legacy for biodiversity enhancements beyond providing no net loss of biodiversity. The design within the land east of Highfield Lane would also achieve a positive Biodiversity Net Gain (BNG) of 140.92 units (calculated using the Biodiversity Metric 3.0[10]). This results in a positive BNG of 150.62 units (75.70% increase) across both the Sevington IBF and the land east of Highfield Lane.

An integrated approach has been undertaken to the landscape and ecological design to provide biodiversity enhancements whilst considering the long-term viability and management opportunities for the land to the east of Highfield Lane. Environmental constraints have also been accounted for.

Furthermore, both Kent Wildlife Trust and Natural England have been engaged throughout the design process, to gain their recommendations and expertise for the Site design to maximise biodiversity and the long-term success of the scheme. This has directly influenced the final designs of the wildflower species mix, potential future maintenance regimes, localised risks such as invasive species, and guided the layout of design, where this was possible within the Site constraints.

The land east of Highfield Lane contains a multi-period burial site along with other potentially regionally significant remains. Kent County Council's (KCC) Archaeological Advisor was also engaged during the finalisation of the landscape design, to ensure that any design measures do not disturb archaeological remains.

3.2 Broader Environmental Considerations

Whilst considering the biodiversity focus of the Site proposals, potential effects upon the environment including archaeology and heritage, as well as landscape and visual amenity have also been considered during the development of the Scheme design, with details provided below.

3.2.1 Archaeology and Heritage

Archaeology and heritage constraints and opportunities have been considered in the design, following close liaison with the archaeological advisor to Kent County Council.

The design has evolved with consideration of archaeological constraints, seeking to minimise intrusive works where possible and allowing archaeological remains to be retained in situ for the majority of the Site. Where this has not been possible, the information from the recording of

archaeological remains will be disseminated, through public archives and eventually with information boards to educate the general public. In order to maximise public benefit and offset the loss of archaeological remains an interpretative archaeological feature has been created, representing a round barrow. This creates an opportunity for education and public understanding of a historic landscape feature which had been erased by centuries of ploughing. The dimensions and location of this feature have been informed by archaeological excavation, eliminating the need for destructive excavation of the surviving circular ditch.

The design seeks to minimise change within the settings of heritage assets. The landscape design minimises change to the setting of the grade II listed buildings on Church Road and Kingsford Street. The viewing corridor retained between the two grade I listed churches in Mersham and Sevington maintains a historic and visual relationship between the buildings.

3.2.2 Environmental Impact Assessment

No part of the Scheme is within a sensitive environmental area, as defined under Part 1 of the Environmental Impact Assessment (EIA) Regulations[2]. The Scheme comprises development listed under Schedule 2 of the EIA Regulations, in view of the extent of land to be used for the IBF and associated buildings and works. As such, screening for EIA was required to determine if there would be any likely significant effects on the environment. The Scheme included specific mitigation measures to prevent and reduce significant adverse environmental effects, principally for the Church of St Mary and for visual receptors adjacent to the Site, as well as to provide replacement and new habitats. The ALEED concluded that there would not be an overall significant adverse effect on the environment during construction, operation or reinstatement.

Archaeological fieldwork and creation of an interpretive round barrow within land east of Highfield Lane was completed in 2022. This fieldwork was required to both compensate for the construction of the eastern compound and potential accidental damage (HGV rutting) during construction of the IBF, and enable the design of the Scheme to avoid archaeological features, ensuring that the Scheme does not result in a significant effect. In addition, this has allowed the appropriate reuse of the stockpiled material[3].

This LEMP covers the area of land east of Highfield Lane, as shown within the *LEMP Drawing* (Appendix A). The enhancements are not required to prevent or reduce significant effects, but would ensure delivery of a positive long-term legacy for the local community and wildlife. As such, no significant effects would result from the Scheme.

3.2.3 Landscape and Visual Amenity

Whilst the design of the land east of Highfield Lane has been driven by biodiversity requirements, consideration has been given to potential landscape and visual effects that may arise as a result of the proposals. These details are captured in full within the ALEED. Consideration of the potential impact upon local residential receptors backing on to the land east of Highfield Lane has been considered, along with suitability of the proposals in respect to local landscape character.

[2] Statutory Instrument. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

[3] The *Stockpile Strategy* (Document number: 419419-MMD-XX-SV-RP-0010) was approved as part of Relevant Approval for the Scheme on 28 April 2022.

3.3 Proposed Enhancements

Baseline conditions of the land east of Highfield Lane predominantly comprises arable fields bound by hedgerow habitat of higher importance. Biodiversity enhancement measures put forward for approval are:

- Planting of native trees, shrubs and groundcover, equating to approximately 15,000 plants.
- Maintaining and enhancing existing wildlife commuting corridors along the boundaries of the Scheme.
- Increasing the ecological value and connectivity across the Site through the creation of new grassland and scrub habitats.
- Increasing habitat appropriate to the local area to benefit target species such as pollinator invertebrates, conservation priority bird species, reptiles and dormice.
- Where possible, using UK and locally-sourced native tree, shrub and herbaceous species in the landscape mitigation.
- Avoiding the use of invasive and competitive species, and including management measures to control existing invasive and competitive species.
- Landscaping works using stockpiled spoil heaps to create a varied topography on Site with diverse micro-habitats of varying aspects, shade and humidity levels to maximise the range of flora and fauna species that the Site can support. The created mounds would have stony material used on the south facing slopes to create open early successional habitat suitable for basking reptiles and uncommon invertebrate assemblages.
- Seeding of stony south facing slopes on the created mounds with calcicolous plant species suited to the calcareous Kentish ragstone geology which exists on Site aiming to recreate the flora previously occurring within Highfield Lane Roadside Nature Reserve[4].
- Creating shallow scrapes and using retained impermeable clayey soil material would allow development of boggy/ ephemeral wetland features and areas of wet grassland.
- The commitment for the creation of new habitats to ensure net gain of locally important habitats (species rich grassland and hedgerows).
- Provision for new bat roosting features on Site, comprising a range of woodcrete boxes targeted towards a variety of species and suitable for a range of different use types.
- Provision for new bird boxes installed within the Site to provide additional nesting opportunities for species recorded at the Site – this would also include provision of two barn owl boxes to reinforce the local population of this species, as suggested by Natural England.
- Creation of an interpretative archaeological feature, representing a round barrow. This offsets the potential loss of archaeological remains and creates an opportunity for education and public understanding of this historic landscape feature.
- Following completion of off-site post-excavation archaeological works (anticipated to be complete by end 2024), information boards will be installed alongside the interpretive barrow and along the PRoW (as indicated within Appendix A). This will help to offset the impact of disturbance to archaeological remains by providing an understanding of the history of the site to the general public, particularly the local community using the PRoW.

Plant species schedules are presented in Appendix B of this report. Plant numbers are based on the design presented within the *LEMP Drawing* (Appendix A), but may be subject to minor amendment during finalisation of the detailed design due to stock availability during the upcoming planting season in Autumn 2023, in order to allow contractual flexibility. All planting

[4] The Highfield Lane Roadside Nature Reserve was destroyed as part of the M20 J10a Scheme.

will be native and take the form of small whips in the most part, accompanied by a number of larger standard trees. Smaller plants generally require less maintenance than larger stock in the early years of establishment, and have shown to establish as quickly, and if not more so than larger stock.

An outcome-based approach to providing the biodiversity enhancements will be taken, and any changes made to the selection of planting species would still ensure the delivery of commitments to BNG units set out in Section 3.1. A mechanism will be in place to ensure any changes to the planting species are appropriate and provide the required BNG units. The Overseeing Organisation[5] is responsible for ensuring an appropriately qualified Landscape Architect and Ecologist undertake a thorough check of any variations from the detailed design, to ensure that biodiversity commitments are adhered to, and that it is appropriate to the local area. This check will be undertaken in advance of any installations of seeding and planting within the land east of Highfield Lane.

As set out in Section 1.3, no further submissions or approvals for land east of Highfield Lane is required following the acceptance of this LEMP and discharge of Condition 11 of the Relevant Approval.

3.3.1 Fencing

Fencing installed within the Scheme boundary is also put forward for approval. The fencing was installed in Summer 2022 and comprises a timber post and rail fencing (rail height 1.4m) which was installed either side of the existing Public Right of Way (PRoW) for safety and security purposes. It prevents users of the PRoW straying outside of the public footpath into areas of the biodiversity enhancement. The fencing utilised was of the same type implemented next the PRoW alongside the IBF. The fencing is included on the *LEMP Drawing* (Appendix A) and is subject to approval of this LEMP and associated details.

3.4 Proposed Implementation Timetable

Table 3.1 below sets out the proposed timescales for implementation of the biodiversity enhancements within the land east of Highfield Lane.

Table 3.1: Proposed Implementation Timetable

Task	Dates
Fencing	Fencing installed either side of the PRoW during Summer 2022.
Archaeological strip, map and sampling works	Archaeological fieldwork was finalised in 2022 and is fully completed.
Post-excavation works	Post-excavation work will continue to be undertaken off-site to offset the impact of the disturbance of archaeological remains. This work is expected to be completed by end 2025.
Earthworks to move stockpile material into final positions	These works were completed in 2022. All earth is now in its final location. The *Stockpile Strategy* (Document number: 419419-MMD-XX-SV-RP-0010) was approved as part of Relevant Approval for the Scheme on 28 April 2022. No further work for the stockpiles is required.
Seeding	Spring 2023 of areas that would not involve disturbing ground nesting birds (relandscaped area south off the PRoW). All remaining seeding would take place after appropriate ground preparation in Autumn 2023.

[5] The Overseeing Organisation is the party in place with the responsibility to implement the LEMP, by and on behalf of the SoS for Transport.

Task	Dates
Fencing	Fencing installed either side of the PRoW during Summer 2022.
Planting of trees, shrubs and scrub	November 2023 to March 2024 inclusive During planting season
Information Boards	Following completion of post-excavation archaeological works, information boards will be installed alongside the interpretive barrow and along the PRoW (as indicated within Appendix A).

4 Management Objectives

4.1 Landscape and Environmental Objectives

Table 4.1: Landscape Elements and Functions

Landscape Element	Intended Function
Wildflower and grassland areas	Landscape integration, and biodiversity value. Open grassland to provide landscape integration, biodiversity value for reptiles, badgers, invertebrates and birds. Wildflower and species rich areas to provide visual interest and biodiversity value for pollinating insects.
Hedgerow Planting	Landscape integration and biodiversity value. Hedgerow planting to provide replacement dormice habitat whilst also enhancing wildlife commuting corridors.
Native tree and shrub Planting	Landscape integration, visual screening and biodiversity value with the creation of new habitats and foraging opportunities.
Standard Tree Planting	Landscape integration and biodiversity value. Flowering and fruiting species providing biodiversity benefits with regards to habitat and foraging opportunities.

Table 4.2: Environmental Elements and Functions

Environmental Element	Intended Function
Bat Boxes	10 bat boxes to provide additional roosting opportunities.
Bird Boxes	10 bird boxes, in addition to two barn owl boxes, to provide additional nesting opportunities.
Hibernacula	Provision of additional hibernation features and cover for reptiles, utilising Site-won stone material.
Landscaping	Provision of diverse range of micro-habitats with varied aspect, shading and humidity levels to maximise biodiversity benefit. This would include south-facing slopes with stony surface material seeded with calcicolous flora species aiming to create open early successional habitat suitable for basking reptiles and diverse invertebrate assemblages. Wet hollows would be created and impermeable soil material used to encourage development of wetland/ wet grassland features.
Scrub planting	Diverse native scrub species would be planted in patches across the Site and to fill gaps and improve connectivity of the Site perimeter hedgerow thus allowing the development of a complex scrub/ grassland mosaic across the Site to provide habitat for priority fauna species such as nightingale.

5 Maintenance Programme

5.1 Land East of Highfield Lane

This LEMP outlines the way in which the initial landscape works would be implemented, as well as defining the maintenance activities which would be undertaken initially by DfT (as the Overseeing Organisation) until end 2025, or earlier, if agreed for another organisation to take over the maintenance activities. However, ongoing maintenance beyond 2025 is paramount to the successful achievement of the BNG.

This LEMP would remain in place until the end of 2025, thereafter it will be replaced by a long-term management strategy, which will be produced by the Overseeing Organisation taking responsibility for the land east of Highfield Lane. Any future management proposals would need to be mindful of previous discussions with Kent Wildlife Trust and Natural England and be sufficient in ensuring the long-term biodiversity legacy objectives for the Site. It is recommended that Kent Wildlife Trust and Natural England are involved in any discussions with potential future maintenance changes. For example, aspirations from stakeholders to date have included conservation grazing which should be considered beyond the initial establishment of the proposed grass sward, whilst being cognisant of broader habitat requirements on the Site. Grazing is deemed the most suitable long-term management regime in terms of maximising the condition and function of species rich grassland on Site, beyond 2025.

Table 5.1 below illustrates the likely cyclical maintenance required for landscape and environmental elements during the initial maintenance period. Ongoing maintenance activities in addition to those presented below, would be required beyond this date in order to ensure biodiversity enhancements come to fruition. Similarly, following the early years of the initial maintenance, alternative maintenance and management activities may be deemed more appropriate for the long-term viability of the Site.

Table 5.1: Cyclical Management up until End 2025 (prior to review and update)

Landscape/ Environmental Element	Maintenance Activity	J	F	M	A	M	J	J	A	S	O	N	D
Wildflower and grassland areas (Establishment Phase 2023)	Weed Control				Top all plant growth regularly to 40-60mm throughout the first growing season. Bird nesting constraints to be considered.								
	Grass Cutting												
	Re-seeding as necessary if bare soil is exposed over 10%												
Wildflower and grassland areas (Post Establishment Phase- 2024)	Weed Control												
	Grass Cutting												

Hedgerow Planting (existing)	Pruning												
Hedgerow Planting (New)	Weed control												
	Re-firming of stakes and ties												
	Replacement of Failures												
Native tree and shrub Planting	Weed control												
	Re-firming of stakes and ties												
	Replacement of Failures												
Scrub Planting	Weed control												
	Re-firming of stakes and ties												
	Replacement of Failures												
Grassland in Wet scrapes	Grass Cutting			As needed to ensure grass height within design range to allow conveyance									
	Weed Control												
	Re-seeding as necessary if bare soil is exposed over 10% or more of wet scrape areas.												
Bird Boxes	Cleaning												
Bat Boxes	Cleaning												

6 Monitoring and Review

6.1 Monitoring

Monitoring and reviews would be undertaken on Site twice per year to monitor the establishment of planting on Site until the end of 2025, aligning with that of the IBF initial maintenance period. This work would be undertaken as part of the wider IBF landscape monitoring, and any remedial tasks resulting from those visits would be presented in a monitoring report and provided to the Overseeing Organisation for action. This would cover any outstanding maintenance activities, as well as the replacement of any plant failures. In order to ensure that maturity is not lost, all replacement planting would be required to be one year older for every year that has lapsed since the original date of planting.

The ongoing monitoring of the Site for 2026 and beyond would be reviewed as part of the Site's reinstatement works, which will be progressed as part of an approved Reinstatement Plan or through the mechanism in place after 2025. At this point, confirmation of the long-term future management strategy for the Site would be confirmed.

Appendices

A. Landscape and Ecological Management Plan Drawing 14
B. Planting Schedules for Land East of Highfield Lane 15

A. Landscape and Ecological Management Plan Drawing

A.1 Landscape and Ecological Management Plan Drawing. Drawing ref: 419419-MMD-01-MO-DR-L-3206 Rev P01



Notes

Do not scale from this drawing.

1. All dimensions are stated in millimetres unless stated otherwise.
2. For positioning of possible services, reference should be made to utilities plans.
3. For positioning of adjacent fencing, utilities, lighting drainage and technology assets reference should be made to relevant discipline contract drawings.
4. This drawing should be read in conjunction with the Landscape and Ecological Management Plan (LEMP) Document number 419419-MMD-XX-SV-RP-L-0004.
5. The drawing is based on the following design models: 419419-MMD-01-MO-M2-C-0101|P52, 419419-MMD-01-MO-M2-C-0131|P11, 419419-MMD-01-MO-M2-C-0301|P17, 419419-MMD-01-MO-M2-D-0501|P16, 419419-MMD-01-MO-M2-L-3011|P23, 419419-MMD-01-MO-M2-Z-0001|P01, 419419-MMD-01-MO-M2-Z-0005|P05, 419419-MMD-01-MO-M3-Z-0001|P01.
6. This Landscape and Ecological Management Plan (LEMP) Drawing has been produced to support the LEMP for land east of Highfield Lane. For completeness, all Scheme design within the Article 4 Red Line Boundary is shown but has been made grayscale to focus on the area within the 'Zone Identified for Biodiversity enhancement' on the land east of Highfield Lane.

Key to symbols

- Proposed specimen tree
- Proposed native species hedgerow
- Existing vegetation to be retained
- Proposed species rich grassland wildflower meadow
- Proposed native shrubs
- Article 4 Red Line Boundary
- Proposed reptile and invertebrate bank
- Proposed contours
- Zone identified for Biodiversity Enhancements
- Proposed wetland scrapes and ponds
- Proposed Bat box site
- Proposed Bird nesting box site
- Existing Public Right of Way
- Proposed native trees and shrubs Mix1
- Proposed Barn owl box site
- Post & rail fence for PRoW (1.4m high)
- Proposed native trees and shrubs Mix 2
- Proposed interpretive information boards

Reference drawings

1:2000 0 100m 200m

Rev	Date	Drawn	Description	Ch'k'd	App'd
P01	06/04/23		Final submission		

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Title
Future EU Roads Relationship
Sevington IBF
Land East of Highfield Lane
LEMP Drawing
Sheet 1 of 1

Designed			Eng check		
Drawn			Coordination		
Dwg check			Approved		

MMD Project Number	Scale at A1	Security
419419	1:2000	STD

Suitability Description	Suit. Code
Suitable for Information	S2

Drawing Number	Revision
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B. Planting Schedules for Land East of Highfield Lane

As set out within Section 3.3, an outcome-based approach to providing biodiversity enhancements will be taken, and any changes made to the selection of planting species would still ensure the delivery of commitments to BNG units confirmed within Section 3.1. The Overseeing Organisation[6] is responsible for ensuring an appropriately qualified Landscape Architect and Ecologist undertake a thorough check of any variations from the schedules set out in this section of the report, to ensure that biodiversity commitments are adhered to and that it is appropriate to the local area. This check will be undertaken in advance of any installations of seeding and planting within the land east of Highfield Lane.

B.1 Grassland Seed mixes

Table B.1: Grassland Seed Mixes

SPECIES RICH GRASSLAND		
EM1 - Basic General Purpose Meadow Mixture		**1.5g/m²**
WILD FLOWERS		
Botanical Name	**Common Name**	**% mix**
Centaurea nigra	Common Knapweed	2.5
Daucus carota	Wild Carrot	0.5
Leucanthemum vulgare	Oxeye Daisy - (Moon Daisy)	1
Plantago lanceolata	Ribwort Plantain	2.5
Prunella vulgaris	Selfheal	0.5
Ranunculus acris	Meadow Buttercup	1
Vicia cracca	Tufted Vetch	2
GRASSES		
Botanical Name	Common Name	
Agrostis capillaris	Common Bent	9
Cynosurus cristatus	Crested Dogstail	36
Festuca rubra	Red Fescue	27
Poa pratensis	Smooth-stalked Meadow-grass	18
EC1 - Standard Cornfield Mixture		**0.5g/m²**
Botanical Name	**Common Name**	**% mix**
Agrostemma githago	Corncockle	45
Centaurea cyanus	Cornflower	30
Cota austriaca (Anthemis austriaca)	Corn Chamomile	10
Glebionis segetum - (Chrysanthemum segetum)	Corn Marigold	10
Papaver rhoeas	Common Poppy	5
		Total: 2g/m²

[6] The Overseeing Organisation is the party in place with the responsibility to implement the LEMP, by and on behalf of the SoS for Transport.

Table B.2: Reptile and Invertebrate Banks

REPTILE AND INVERTEBRATE BANKS		
EG6 - Meadow Grass Mixture for Chalk & Limestone Soils		**2g/m²**
Botanical Name	**Common Name**	**% mix**
Briza media	Quaking Grass	5
Carex flacca	Glaucous Sedge	0.25
Cynosurus cristatus	Crested Dogstail	30
Festuca ovina	Sheep's Fescue	30
Festuca rubra	Red Fescue	30
Koeleria macrantha	Crested Hair-grass	2.5
Trisetum flavescens	Yellow Oat-grass	2.25

Table B.3: Wetland Scrapes and Ponds

EM8 – Meadow Mixture for Wetlands		
		2g/m²
WILDFLOWER		
Botanical Name	**Common Name**	**% mix**
Achillea millefolium	Yarrow	0.1
Betonica officinalis – (Stachys officinalis)	Betony	1.5
Centaurea nigra	Common Knapweed	4
Filipendula ularia	Meadowsweet	1.5
Galium verum	Lady's Bedstraw	0.5
Leontodon hispidus	Rough Hawkbit	0.1
Leucanthemum vulgare	Oxeye Daisy – (Moon Daisy)	0.5
Lotus corniculatus	Birdsfoot Trefoil	2
Plantago lancelata	Ribwort Plantain	2.5
Primula veris	Cowslip	0.5
Prunella vulgaris	Selfheal	0.2
Ranunculus acris	Meadow Buttercup	0.9
Rumex acetosa	Common Sorrel	0.1
Silaum silaus	Pepper Saxifrage	0.2
Succisa pratensis	Devil's-bit Scabious	0.2
Taraxacum officinale	Dandelion	0.1
Traopogon pratensis	Goat's-beard	0.1
Vicia cracca	Tufted Vetch	5
GRASSES		
Botanical Name	**Common Name**	**% mix**
Agrostis capillaris	Common Bent (w)	4
Anthoxanthum odoratum	Sweet Vernal-grass (w)	4

Briza media	Quaking Grass (w)	4
Cynosurus cristatus	Crested Dogstail	54
Deschampsia cespitosa	Tufted Hair-grass (w)	4
Festuca rubra	Red Fescue	10

B.2 Native Shrubs and Groundcover

Table B.4: Native Shrubs and Groundcover

Native Shrubs and Groundcover				Planted at 1.25m Ctr	
Botanical Name	**Common Name**	**Height**	**Root zone**	**Spec**	**No.**
SHRUB					
Cornus sanguinea	Common Dogwood	60-80	BR	1+1; Transplant - seed raised; branched; 3 breaks	397
Corylus avellana	Common Hazel	60-80	BR	1+2; Transplant - seed raised; branched; 3 breaks	397
Crataegus monogyna	Common Hawthorn	60-80	BR	1+1; Transplant - seed raised	594
Euonymus europaeus	Common Spindle Tree	60-80	BR	1+2; Transplant - seed raised; branched; 5 breaks	202
Ilex aquilfolium	Common Holly	60-80	RB	Leader with laterals	124
Ligustrum vulgare	Privet	60-80	BR	0/2; Cutting; branched; 2 breaks	281
Prunus spinosa	Blackthorn	60-80	BR	1+1; Transplant - seed raised; 2 breaks	202
Rosa canina	Dog Rose	60-80	BR	1+1;Transplant - seed raised; branched; 3 breaks	202
Viburnum opulus	Guelder Rose	60-80	BR	1+2;Transplant - seed raised; branched; 3 breaks	202
GROUND COVER					
Galium odoratum (planted at 3/m^2)	Sweet Woodruff		1L	Full pot; Sept to April planting; British native-origin	792
Primula vulgaris (planted at 5/m^2)	Primrose		1L	Full pot; Sept to April planting; British native-origin	594

B.3 Native Trees and Shrubs

Table B.5: Native Trees and Shrubs

Native Species Tree and Shrub				Planted at 1.5m Ctr	
Botanical Name	Common Name	Height	Root zone	Spec	No.
Acer campestre	Field Maple	60-80	BR	1+1; Transplant - seed raised	294
Alnus glutinosa	Common Alder	60-80	BR	1+1; Transplant - seed raised	294
Cornus sanguinea	Common Dogwood	60-80	BR	1+1; Transplant - seed raised; branched; 3 breaks	585
Corylus avellana	Hazel	60-80	BR	1+2; Transplant - seed raised; branched; 3 breaks	874
Crataegus monogyna	Hawthorn	60-80	BR	1+1; Transplant - seed raised	1167
Fagus sylvatica	Beech	60-80	BR	1+1; Transplant - seed raised	585
Malus sylvestris	crab Apple	60-80	BR	1+1; Transplant - seed raised	294
Prunus domestica	Damson	60-80	BR	1+1; Transplant - seed raised; branched; 3 breaks	294
Salix caprea	Goat Willow	60-80	BR	0/1; Cutting; branched; 2 Breaks	294
Salix cinerea	Grey Willow	60-80	BR	0/1; Cutting; branched; 2 breaks	294
Sambucus nigra	Elder	60-80	BR	1+1; Transplant - seed raised; branched; 3 Breaks	874

B.4 Native Species Hedgerow

Table B.6: Native Species Hedgerow Planting

Native Species Hedgerow				Double staggered planted @ 0.3m ctr & 0.45m between rows		
Botanical Name	**Common Name**	**Height**	**Root zone**	**Spec**	**%mix**	**No.**
Crataegus monogyna	Hawthorn	40-60	BR	1+1; Transplant - seed raised	25	295
Prunus spinosa	Blackthorn	40-60	BR	1+1; Transplant - seed raised; 2 breaks	25	295
Acer campestre	Field Maple	40-60	BR	1+1; Transplant - seed raised	15	179
Corylus avellana	Hazel	40-60	BR	1+1; Transplant - seed raised; 2 breaks	10	118
Ligustrum vulgare	Wild privet	40-60	BR	0/1; Cutting; branched; 2 breaks	10	118
Rosa canina	Dog Rose	40-60	BR	1+1; Transplant - seed raised; branched; 3 breaks	5	62
Viburnum opulus	Guelder Rose	40-60	BR	1+2;Transplant - seed raised; branched; 3 breaks	5	62
Lonicera periclymenum	Honey suckle	40-60	BR	0/1; Cutting; branched; 2 breaks	5	62

B.5 Specimen Trees

Table B.7: Specimen Trees

Specimen Trees Planting					Spot Planted	
Botanical Name	**Common Name**	**Girth/Dia**	**Height**	**Root zone**	**Spec**	**No.**
LARGE TREES						
Alnus glutinosa	Common Alder	10-12	300-350	RB	2x; Selected Standard; clear stem minimum 200cm; 4 breaks	7 No.
Prunus padus	Bird Cherry	10-12	300-350	RB	2x; Selected Standard; clear stem 175-200cm; 4 breaks	3 No.
Quercus robur	Common Oak	10-12	300-350	RB	2x; Selected Standard; clear stem 175-200cm; 4 breaks	5 No.
Salix fragilis	Crack Willow	10-12	300-350	RB	2x; Selected Standard; clear stem 175-200cm; 4 breaks	5 No.
Populus nigra	Black Poplar	10-12	300-350	RB	2x; Selected Standard; clear stem 175-200cm; 4 breaks	5 No.
Acer campestre	Field Maple	10-12	300-350	RB	2x; Selected Standard; clear stem minimum 200cm; 4 breaks	7 No.
Betula pendula	Silver Birch	10-12	300-350	RB	2x; Selected Standard; clear stem 175-200cm; 4 breaks	6 No.
Carpinus betulus	Hornbeam	10-12	300-350	RB	2x; Selected Standard; clear stem 175-200cm; 4 breaks	6 No.
Malus sylvestris	Common Crab Apple	10-12	300-350	BR	2x; Selected Standard; clear stem 175-200cm; 4 breaks	4 No.
Salix caprea	Goat willow	10-12	300-350	RB	2x; Selected Standard; clear stem 175-200cm; 4 breaks	6 No.
Tilia Cordata	Small leaved lime	10-12	300-350	RB	2x; Selected Standard; clear stem 175-200cm; 4 breaks	6 No.



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