

**Construction and Environmental Management Plan
Boston West Golf Course
Hubbert's Bridge
Boston
Lincolnshire**



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CONSTRUCTION AND ENVIRONMENTAL MANAGEMENT PLAN

BOSTON WEST GOLF COURSE, HUBBERT'S BRIDGE, BOSTON, LINCOLNSHIRE

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BOSTON, LINCOLNSHIRE

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1 INTRODUCTION

1.1 Background

Inspired Ecology Ltd has been commissioned by Martin Taylor of Avison Young to prepare a Construction and Environmental Management Plan (CEMP) with respect to proposed development and change of use applications at the former Boston West Golf Course in Hubbert's Bridge, Boston, Lincolnshire. This CEMP has been produced to mitigate impacts arising from all phases of the scheme, as shown in Appendix 1.

The wider site is centred at grid reference TF264440; see Figure 1, below.



Figure 1: Location of site boundary, outlined in red

Full and outline planning permission has been granted for a hybrid application at Boston West Golf Club (Boston Borough Council planning reference B/19/0520) with respect to the following proposals:

- Full planning permission for the part change of use of the golf course for the siting of caravans with associated works including landscaping, hardstandings and access routes;
- Full planning permission for the provision of a sales area including siting of "show units" and associated parking;
- Outline planning permission (all matters reserved) for the development of a "hub" building of up to 12,000sqm total floor spaced – to contain ancillary reception/activity centre/spa (Class D2)/retail unit (up to 100sqm)/ food and beverage (Classes A1, A4 and A5) and facilities management and ancillary works; and
- Outline planning permission for the provision of a sales building and associated works at Boston West Golf.

The application decision notice has stipulated reserved matters with respect to ecology; Condition 19 of the notice requests that:

With the exception of the works to be undertaken within phase 1, no development or works (including ground works and vegetation clearance) shall take place until a Construction Ecological Management Plan (CEMP) has been submitted to and been approved by the Local Planning Authority.

Guidance on the structure of the CEMP can be found in BS 42020:2013 Biodiversity Code of Practice for Planning and Development. The CEMP should accord with the National Planning Policy Framework 2019 (paragraphs 170, 174 & 175) and chapter 28 of the South East Lincolnshire Local Plan.

Suggested topics for inclusion into the CEMP should include but not be limited to:

- *Scheme description*
- *Identification of areas/species of conservation interest*
- *Risk assessment of potentially damaging activities and identification of biodiversity protection zones/sensitive areas*
- *Habitats and species protection - practical measures to be adhered to avoid or minimise impacts during construction e.g. a series of method statements for badgers, bats, common reptiles, hedgehogs and birds etc.*
- *Incorporation of SuDS and Green Infrastructure*

- *Full details of how the recommendations in Section 5 of the Inspired Ecology report (March, 2020) will be incorporated into the scheme, by what date, how they will be monitored, by whom, how often and for how long.*
- *The roles and responsibilities of an Ecological Clerk of Works (ECofW) to oversee the implementation of the CEMP and undertake required monitoring and maintenance.*
- *Responsible persons and lines of communication.*
- *Details on the submission of interim progress reports to the LPA as evidence of compliance, to report on success failure of mitigation and where necessary the need to amend the CEMP.*
- *Measures for management, monitoring and recording related to all actions undertaken as a result of the CEMP, for a period of not less than 5 years from the completion of the works identified by the CEMP or the last unit to be occupied, whichever is the later.*

The development of the site shall then only proceed in accordance with the agreed Construction Ecological Management Plan (CEMP).

Reason: In the interest of protected species, and to support ecological protection and biodiversity enhancement, in accordance with Policy 28 of the South East Lincolnshire Local Plan (2011-2036).

1.2 Purpose

Based upon the findings of a supporting Ecology and Protected Species report, issued by Inspired Ecology Ltd in November 2019 (Inspired Ecology Ltd, 2019), together with supplementary ecology survey works, the purpose of this CEMP is to advise appropriate and proportionate mitigation measures to ensure that any adverse impacts upon ecological receptors are avoided, minimised or reduced to an acceptable level, as far as practicable. This is to warrant that compliance with relevant legislation pertaining to protected species, designated sites and other environmental receptors, is maintained throughout all stages of the works.

2 PLANNING POLICY AND LEGISLATION

2.1 Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006 includes a list under Section 41 (S41) of England's rarest and most threatened species and habitats. These are considered to be of 'principal importance' in England. There is a requirement under Section 40(1) and (2) for each Secretary of State to take steps 'to be reasonably practicable to further the conservation of the living organisms and types of habitat' included in the list and there is a legal obligation on public bodies in England to have regard to these organisms and habitats whilst carrying out their functions. Currently, there are 56 habitats and 943 species of principal importance included on the S41 list.

2.2 National Planning Policy Framework (2019)

The National Planning Policy Framework (NPPF) is the leading framework for Government policies and sets out the basis for which local planning policies are created and planning decisions are made in England for all developments. Section 15 of the NPPF has regard to the conservation and enhancement of the natural environment.

Under paragraph 170 it is required that '*decisions should contribute to and enhance the natural and local environment by: ... (d) minimising impacts on and providing net gains for biodiversity*';

Paragraph 174 requires that plans should: '*(a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological network*' and '*(b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species*'.

Paragraph 175 sets out the principles for which local planning authorities should apply when determining planning applications which includes '*(a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused*';

2.3 South East Lincolnshire Local Plan

The South East Lincolnshire Local Plan contains policies to be applied to all development proposed with the Boston area. Policies of relevance to this CEMP include:

Policy 28: The Natural Environment

A high quality, comprehensive ecological network of interconnected designated sites, sites of nature conservation importance and wildlife-friendly greenspace will be achieved by protecting,

enhancing and managing natural assets:

1. Internationally-designated sites, on land or at sea:

a. development proposals that would cause harm to these assets will not be permitted, except in exceptional circumstances, where imperative reasons of overriding public interest exist, and the loss will be compensated by the creation of sites of equal or greater nature conservation value;

b. all major housing proposals within 10km of The Wash and the North Norfolk Coast European Marine Site, including the Sustainable Urban Extensions in Boston (site Sou006 & Wes002), Spalding (site Pin024/Pin045) and Holbeach West (site Hob048), will be the subject of a project-level Habitats Regulations Assessment (HRA) to assess the impact of recreational pressure on The Wash and North Norfolk Coast European Marine Site. This should include:

i. locally-specific information relating to access and site sensitivities; Where the project-level HRA concludes that avoidance and/or mitigation measures are required, it is expected that:

ii. Suitable Alternative Natural Greenspace (SANGs) should be provided on site Sou006 and Wes002, site Pin024/Pin045 and site Hob048 as part of their package of mitigation measures; or

iii. all other major housing proposals should provide SANGs on-site and/or through a financial contribution to provide and/or enhance natural greenspace in the locality;

iv. Suitable Alternative Natural Greenspaces should be designed in accordance with capacity and facility requirements in relation to South East Lincolnshire Local Plan 2011-36 the developments they mitigate for, best practice elsewhere and relevant evidence.

2. Nationally or locally-designated sites and protected or priority habitats and species:

a. development proposals that would directly or indirectly adversely affect these assets will not be permitted unless:

i. there are no alternative sites that would cause less or no harm; and

ii. the benefits of the development at the proposed site, clearly outweigh the adverse impacts on the features of the site and the wider network of natural habitats; and

iii. suitable prevention, mitigation and compensation measures are provided.

3. Addressing gaps in the ecological network:

a. by ensuring that all development proposals shall provide an overall net gain in biodiversity, by:

i. protecting the biodiversity value of land, buildings and trees (including veteran trees)

- minimising the fragmentation of habitats;*
- ii. maximising the opportunities for restoration, enhancement and connection of natural habitats and species of principal importance;*
- iii. incorporating beneficial biodiversity conservation features on buildings, where appropriate; and maximising opportunities to enhance green infrastructure and ecological corridors, including water space; and*
- iv. conserving or enhancing biodiversity or geodiversity conservation features that will provide new habitat and help wildlife to adapt to climate change, and if the development is within a Nature Improvement Area (NIA), contributing to the aims and objectives of the NIA.*

3 SUPPORTING GUIDELINES

3.1 British Standard 5837 – Trees in relation to construction

Measures detailed within this plan to protect individual trees and/or those forming treelines, woodland and hedgerows, follow advice contained within British Standards Institute (BSI) 5837 (BSI, 2010). These guidelines indicate the protection of Root Protection Area (RPAs) which will be determined for each individual tree and remain undisturbed during the course of the work activities.

RPAs are applicable to all trees falling within significant proximity to the works areas (i.e., trees established within, or immediately outside the works areas).

3.2 CIRIA – Control of Water Pollution from Construction Sites

This plan details good practice measures to avoid potential pollution incidences in line with advice produced by CIRIA (Masters-Williams et al., 2001). These measures are crucial for safeguarding the existing chemical and biological condition of the adjacent waterbodies during the works and ensures compliance with relevant environmental legislation.

3.3 BS 42020:2013 Biodiversity Code of Practice for Planning and Development

This publication, prepared by BSI, gives recommendations and provides guidance primarily for ensuring that actions and decisions taken at each stage of the planning process are informed by sufficient and appropriate ecological information (BSI, 2013). The document intends to adopt a professional, scientific and consistent approach to gathering, analysing, presenting and reviewing ecological information at key stages of the planning application process, or in evaluating the ecological implications of associated activities as part of consultation or other regulatory procedures.

4 SUPPORTING SURVEYS / PLANS

4.1 Ecology and Protected Species Survey

An Ecology and Protected Species Survey (EPSS) report was issued by Inspired Ecology Ltd in November 2019 to support the application (Inspired Ecology Ltd, 2019). This involved an ecological walkover of the former golf course undertaken by company director Ian Nixon MCIEEM and associate Tim Smith on 29th October 2020. A second ecological walkover was completed on 26th February 2020 by Ian Nixon, Tim Smith and ecologist Rachel McNally BSc (Hons) MSc.

The EPSS report identified potential ecological receptors with respect to the proposed works and detailed possible ecological constraints to site related activities, the requirement for any further ecological survey works and details of proportionate mitigation measures, where necessary.

4.2 Great Crested Newt and Water Vole Survey

A survey report for great crested newts *Triturus cristatus* and water voles *Arvicola amphibius* was issued by Inspired Ecology Ltd in May 2020 (Inspired Ecology Ltd, 2020). This included the results on Environmental DNA (eDNA) testing of all ponds located within the application boundary together with a survey of water vole activity across all drains occurring on the site. The eDNA sampling and water vole survey was carried out by Ian Nixon and Rachel McNally on 22nd April 2020.

4.3 Drainage Plans

As part of the CEMP, the Sustainable Urban Drainage Systems (SuDS) design detailed in the Drainage Statement prepared by Hall Infrastructure Design Limited (Hall Infrastructure Design Ltd, 2021) was appraised together with the following, relevant drainage plans:

- 201103 rev B requisition schematic
- 201105 rev C layout sheet 2 of 11
- 201107 rev A layout sheet 4 of 11
- 201122 rev A requisition drawing

5 ECOLOGICAL BASELINE

5.1 Statutory Designated Nature Conservation Sites

The EPSS report did not identify any nationally or internationally/European designated nature conservation sites either on within significant proximity to the site. Statutory designated sites are therefore **not considered a potential receptor** with respect to the proposed works.

5.2 Non-Statutory Designated Nature Conservation Sites

Boston West Golf Course SNCI

Boston West Golf Course Site of Nature Conservation Interest (SNCI) encompasses the retained nine-hole golf course and two fields currently in arable production to the north of the site. As there was no citation for this SNCI provided and it has not been resurveyed against the Local Wildlife Site criteria which replaced SNCI, it is difficult to understand why the arable fields were included. However, since the production of the EPSS report, it is understood that this site was deselected as an SNCI in March 2020. Subsequently, Boston West Golf Course SNCI **is not considered a potential receptor** with respect to the proposed works.

South Forty Foot Drain LWS

South Forty Foot Drain Local Wildlife Site (LWS) is located to the south of the application site (>25m beyond the southern site boundary) and is separated by the A1121 main road. Given the location of the LWS relative to the application boundary, and considering the level of separation between the two, it was considered unlikely that the proposed works would impact upon the nature conservation interests of this site. Subsequently, South Forty Foot Drain LWS **is not considered a potential receptor** with respect to the proposed works.

5.3 Habitats

At the time of completing the preceding ecological walkover surveys in November 2019 and February 2020, the entire application site was reported to be chiefly composed of amenity and rough grassland interspersed with broadleaved plantation woodland, ornamental ponds (fringed with marginal swamps) with occasional pockets of scrub along the north-western site periphery. The site also supports lengths of intact hedgerows together with a combination of dry and wet ditches. A cluster of buildings (comprising the operational hotel, driving range and club house) are also situated within the south-eastern portion of the site.

A summary of habitats established on the wider site, together with an assessment of their inherent ecological value, is given in Table 1.

Table 1: Overview of Habitats recorded on the Application Site

Habitat	Dominant species	Ecological Value / Scale
Plantation woodland – broadleaved	Italian alder <i>Alnus cordata</i> , silver birch <i>Betula pendula</i> , alder <i>Alnus glutinosa</i> , ash <i>Fraxinus excelsior</i> , wild cherry <i>Prunus avium</i> , field maple <i>Acer campestre</i> , pedunculate oak <i>Quercus robur</i> , small-leaved lime <i>Tilia cordata</i> , Norway maple <i>Acer platanoides</i> , Scots pine <i>Pinus sylvestris</i> , bird cherry <i>Prunus padus</i> , common whitebeam <i>Sorbus aria</i> , dog-rose <i>Rosa canina</i> , aspen <i>Populus tremula</i> , hawthorn <i>Crataegus monogyna</i> , crack-willow <i>Salix fragilis</i> , grey willow <i>Salix cinerea</i> and white poplar <i>Salix alba</i> .	Moderate / Site and Local
Rough grassland	Perennial rye-grass <i>Lolium perenne</i> , white clover <i>Trifolium repens</i> , daisy <i>Bellis perennis</i> and dandelion <i>Taraxacum</i> sp.	Moderate / Site and Local
Amenity grassland		Low / Site
Open water (ponds)	Yellow iris <i>Iris pseudacorus</i> , bulrush <i>Typha latifolia</i> , false fox-sedge <i>Carex otrubae</i> , great willowherb <i>Epilobium hirsutum</i> , clustered dock <i>Rumex conglomeratus</i> , grey club-rush <i>Schoenoplectus tabernaemontani</i> and common reed <i>Phragmites australis</i> .	Moderate / Site and Local
Dense scrub	Bramble <i>Rubus fruticosus</i> agg.	Low / Site
Hard surface	None	Negligible
Buildings	None	Negligible
Wet ditch	Dogwood <i>Cornus sanguinea</i> , common reed, dog-rose, great willowherb, alder, blackthorn <i>Prunus spinosa</i> , dead-nettle species <i>Lamium</i> sp., common nettle <i>Urtica dioica</i> , bristly oxtongue <i>Helminthotheca echioides</i> , spear thistle <i>Cirsium vulgare</i> , creeping thistle <i>Cirsium arvense</i> , daisy and ribwort plantain <i>Plantago lanceolata</i> .	Moderate / Site and Local
Dry ditch		Low / Site
Hedgerows	Hawthorn, dog-rose, ivy <i>Hedera helix</i>	Moderate / Site and Local

5.4 Protected species

The preceding ecology surveys identified the potential for a number of protected species to inhabit and/or utilise the site (e.g., for foraging and commuting). An overview of faunal receptors are given in Table 2.

Table 2: Overview of Faunal Receptors on the Application Site

Species	Field signs recorded	Potential habitats / features
Amphibians	None	Terrestrial refugia: plantation woodland, rough grassland, amenity grassland, brash piles, log piles, dense scrub and hedgerows. Breeding: Ponds and wet ditches. <i>NB: all ponds were subjected to eDNA testing in April 2020 which confirmed absence of great crested newts from Ponds 8 and 9 which were formerly assessed as having potential to support breeding populations.</i>
Reptiles	None	Refugia: plantation woodland, rough grassland, brash piles, log piles, amenity grassland, dense scrub and hedgerows.
Bats	None	Foraging/commuting: plantation woodland, dense scrub and hedgerows. Roosting: No features identified <i>NB: all buildings and trees were assessed as having negligible potential to support roosting activity.</i>
Badger <i>Meles meles</i>	Yes – prints	Foraging/commuting: plantation woodland, rough grassland, amenity grassland, dense scrub and hedgerows. <i>NB: Badger prints were noted within a sandy bunker to the west of the active golf course, confirming passage / foraging.</i> Setts: No evidence recorded.
Water vole	None	Foraging: Wet and dry ditches Burrowing: Wet and dry ditches <i>NB: all drains were subjected to water vole surveys in April 2020 which yielded no evidence of inhabitancy.</i>
Common bird species	Yes – nest boxes	Nesting: Plantation woodland, dense scrub, buildings and hedgerows.
Schedule 1 bird species	None	Nesting: Towers on the former golf course have been reported to be utilised by barn owl <i>Tyto alba</i> . Foraging: Ponds have suitability to be used by Kingfisher <i>Alcedo atthis</i> that have been reported on the site.

Species	Field signs recorded	Potential habitats / features
Common toad <i>Bufo bufo</i>	None	Terrestrial habitat: Plantation woodland, rough grassland, amenity grassland, brash piles, log piles, dense scrub and hedgerows. Breeding: Ponds and wet ditches.
Brown hare <i>Lepus europaeus</i>	Yes - seen	Foraging: Rough grassland and amenity grassland.
West European hedgehog <i>Erinaceus europaeus</i>	None	Foraging and refuge: Plantation woodland, brash piles, log piles, dense scrub and hedgerows.

6 PREDICTED IMPACTS AND MITIGATION

6.1 Risk Assessment of Impacts

An assessment of the proposed work activities against the ecological and environmental receptors identified within the application boundary is included under table 3, below, along with a prediction of foreseeable impacts.

Table 3: Overview of Predicted Impacts and Mitigation

Receptor	Proposed construction works and operational activities	Risk of Impact		Summary of significant impacts (in absence of mitigation)	Mitigation required	Predicted impacts (with mitigation in place)
		Direct	Indirect			
Habitats						
Plantation woodland	Ground preparation / vegetation clearance works	Yes	Yes	Minor/adverse/permanent impacts	Yes, see Action 1	Minor/positive/permanent impacts
	Adjacent construction works / plant machinery operations	No	Yes	Moderate/adverse/temporary impacts	Yes, see Action 2	Neutral impacts
Rough grassland	Ground preparation / vegetation clearance works.	Yes	No	Minor/adverse/permanent impacts	Yes, see Action 3	Minor/positive/permanent impacts
Amenity grassland	Ground preparation / vegetation clearance works	Yes	No	Minor/adverse/permanent impacts	Yes, see Action 3	Minor/positive/permanent impacts
Ponds	Ground preparation / vegetation clearance works	No	No	Neutral impacts	None	Neutral impacts
	Adjacent construction works / plant machinery operations	No	Yes	Moderate/adverse/temporary impacts	Yes, see Action 4	Neutral impacts
Dense scrub	Ground preparation / vegetation clearance works	No	No	Neutral impacts	None	Neutral impacts

Receptor	Proposed construction works and operational activities	Risk of Impact		Summary of significant impacts (in absence of mitigation)	Mitigation required	Predicted impacts (with mitigation in place)
		Direct	Indirect			
Buildings	N/A – no buildings will be impacted	No	No	-	None	-
Wet ditch	Adjacent construction works / plant machinery operations	No	Yes	Moderate/adverse/temporary impacts	Yes, see Action 4	Neutral impacts
Dry ditch	Ground preparation / vegetation clearance works	No	No	Neutral impacts	None	Neutral impacts
Hedgerows	Adjacent construction works / plant machinery operations	No	Yes	Moderate/adverse/temporary impacts	Yes, see Action 2	Neutral impacts
Protected Species						
Amphibians and reptiles	Ground preparation / vegetation clearance works	Yes	Yes	Moderate/adverse/temporary disturbance to resting reptiles and amphibians whilst in a place of shelter, during works phase and/or damage destruction of resting place, if present.	Yes, see Action 5	Neutral impacts to these protected species
				Moderate/permanent/adverse impacts to amphibian and reptile habitat and individual specimens (killing or injuring).		
Bats	Introduced, artificial lighting	No	Yes	Moderate/adverse/permanent impact to locally foraging and commuting bats	Yes, see Action 6	Neutral impacts to this protected species

Receptor	Proposed construction works and operational activities	Risk of Impact		Summary of significant impacts (in absence of mitigation)	Mitigation required	Predicted impacts (with mitigation in place)
		Direct	Indirect			
Badgers	Ground preparation / vegetation clearance works	No	Yes	Moderate/adverse/temporary impacts to commuting/foraging badger during works phase.	Yes, see Action 7	Neutral impacts to this protected species
Water vole	-	No	No	-	None	-
Common birds	Ground preparation / vegetation clearance works	Yes	Yes	Moderate/adverse/temporary impacts to nesting birds including disturbance and damage/destruction of active nests	Yes, see Action 8	Neutral impacts to this protected species
Schedule 1 birds	-	No	No	-	None	-
Common toad	<i>(refer to Amphibians and reptiles, above)</i>					
Brown hare	-	No	No	-	None	-
West European hedgehog	Ground preparation / vegetation clearance works	Yes	Yes	Moderate/adverse/temporary impacts to hedgehog including disturbance and damage/destruction of resting place	Yes, see Action 9	Neutral impacts to this protected species

7 MITIGATION MEASURES

The responsible personnel for carrying out mitigation measures will include a dedicated Ecological Clerk of Works (ECoW). The ECoW is required to oversee the implementation of the CEMP and undertake necessary monitoring, where required. It is proposed that Inspired Ecology Ltd are appointed ECoW duties for this scheme; the relevant contacts details will be:

- Ian Nixon (ian@inspiredecology.co.uk / 01205 723342 / 07833 674500)
- Rachel McNally (rachel@inspiredecology.co.uk / 07871 509185)

An implementation timetable is included under Appendix 2 with regards to habitat enhancement and habitat/protected species monitoring, where applicable, as well as reporting.

Appropriate measures to mitigate any predicted, adverse impacts to ecological/environmental receptors are given under Actions 1-11 under the following sub-headings.

Action 1: Replacement of Woodland Trees

Overview

Trees will be planted in line with planting plans produced by Eamonn Byrne Landscape Architects (EBLA) (Drawing no. PP-0-01:3, Project no. 21011) as referred to within the accompanying Landscape Management Plan (LMP) produced by EBLA in March 2021 (EBLA, 2021). Tree planting will take place before April or after November.

To ensure that tree plantations establish successfully, the prescriptive 25-year management plan, included within Appendix 2, will be strictly followed. Once the trees have been planted, the remaining ground underneath will be sown with species-rich grassland. These areas will be seeded with a meadow mix comprising 20 native wildflower species (NV11F) and six species of grassland (NVG) as shown in Appendix 3.

Guidance produced by Nature Space on ground preparation, sowing and aftercare for areas of introduced meadow grassland will be followed to ensure that this habitat establishes successfully; these measures are included under Appendix 4.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager and ECoW.

Action 2: Protection of Retained Hedgerow and Woodland Trees.

Overview

Works access will consider routes of least potential impact to woodland, hedgerows, tree lines and individual trees. Where these features/habitats exist, a buffer will be maintained that avoids tracking over the root systems by establishing Root Protection Areas (RPA). RPAs chiefly represent the full canopy cover over of individual trees and will be considered as Construction Exclusion Zones (CEZs). Protective barrier fencing will be installed immediately outside of RPAs.

Where access routes along RPAs cannot be avoided (e.g., when accessing through woodland or along field boundaries where hedgerows are established) a product such as CellWeb Tree Root Protection System, overlain with connecting ground protection boards, will provide adequate protection. This would depend on the type of plant/machinery and frequency of use and will be advised by an engineer. Ground protection will be in place for the entire duration of the works within any given area will be removed as soon as works are completed to minimise ground compaction and to assist habitat recovery.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager, ECoW and/or appointed arborist.

Action 3: Enhancing Retained Grassland

Overview

In line with planting plans produced by Eamonn Byrne Landscape Architects (EBLA) (Drawing no. PP-0-01:3, Project no. 21011), as referred to within the accompanying Landscape Management Plan (LMP) produced by EBLA in March 2021 (EBLA, 2021), areas of retained grassland will be sown with species-rich grassland. These areas will be seeded with a meadow mix comprising 20 native wildflower species (NV11F) and six species of grassland (NVG) as shown in Appendix 2. Guidance produced by Nature Space on ground preparation, sowing and aftercare for areas of introduced meadow grassland will be followed to ensure that this habitat establishes successfully; these measures are included under Appendix 3. To ensure that grassland establish successfully, the prescriptive 25-year management plan, included within Appendix 4, will be strictly followed.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager and ECoW.

Action 4: Water Pollution Prevention

Overview

The following mitigation actions will be undertaken to avoid pollution incidents:

- Any chemical, fuel and oil stores will be located on impervious bases within a secured bund with a storage capacity 110% of the stored volume.
- Biodegradable oils and fuels will be used, where possible.
- Drip trays will be placed underneath any standing machinery to prevent pollution by oil/fuel leaks. Where practicable, refuelling of vehicles and machinery will be carried out on an impermeable surface in one designated area well away from any watercourse or drainage (at least 10m).
- Emergency spill kits will be available on site and staff trained in their use.
- Operators must check their vehicles on a daily basis before starting work to confirm the absence of leakages. Any leakages will be reported immediately.
- Daily checks will be carried out and records kept on a weekly basis and any items that have been repaired/replaced/rejected noted and recorded.
- Any items of plant machinery found to be defective will be removed from site immediately or positioned in a place of safety until such time that it can be removed.

Silt run off will be prevented during the works by incorporating the following actions:

- Visual monitoring to see if water colour has changed or if a plume is visible, indicating sediment input.
- Exposed, bare earth will be covered as soon as possible to prevent soil erosion and silt run-off. Alternatively, geotextile coverings can be used to cover any exposed earth and prevent soil erosion.
- Environmentally sensitive products will be used, where possible.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager and ECoW.

Action 5: Protection of Amphibians and Reptiles

Overview

Site preparation will incur the permanent loss of existing grassland habitat, alongside discrete areas of plantation woodland, within which herpetofauna could inhabit. The method statement

contained within Appendix 5 will be followed during site preparation works to ensure that reptiles and amphibians are appropriately safeguarded.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager and ECoW.

Action 6: Protection of Foraging and Commuting Bats

Overview

Lighting on site will strictly follow the *4471-213 Proposed Lighting Plan & Details Phase 1 and 2* produced by A&M Architectural Partnership LLP which proposes the installation of low-level lighting bollards, approximately 1,000mm high, along all access routes.

Responsible personnel

This action will be overseen jointly by the appointed project manager and lighting engineer.

Action 7: Protection of Badgers

Overview

Vigilance will be maintained for signs of badger activity during the works and a pre-works check for badger setts will be undertaken of the works area immediately prior to works commencing. If badger presence is suspected at any time, it will be necessary to seek advice immediately by contacting the appointed ECoW for advice and to ensure legal compliance.

To safeguard ground mammals, including badgers and hedgehogs, during the development phase, no trenches or pipes will be left uncovered overnight.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager and ECoW.

Action 8: Protection of Nesting Birds

Overview

With the exception of grassland, all other habitats established within the works area offer sufficient vegetation structure to accommodate nesting birds. Should vegetation removal works be required within these habitats during the main nesting bird season (i.e., between March-August, inclusive) these will be firstly checked by a suitably experienced ecologist/ECoW. If

active nests are found, the ecologist/ECoW will demarcate a Construction Exclusion Zone (CEZ) to remain in place until all chicks have fledged.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager and ECoW.

Action 9: Safeguarding Hedgehogs

Overview

The development will be considerate of the movement of hedgehogs both onto and through the site. A sufficient gap of 13cm will be maintained on the underside of all areas of introduced fencing. This has the added benefit of allowing dispersal of other small mammals and herpetofauna onto and off the sites and to retain ecological connectivity.

To safeguard ground mammals, including badgers and hedgehogs, during the development phase, no trenches or pipes will be left uncovered overnight.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager and ECoW.

Action 10: Introduction of Bird and Bat Boxes

Overview

As a positive conservation measure to enhance the site for bats and birds, at least 20 bat boxes and 70 bird nest boxes (of various designs) will be installed onto the trees on site.

Examples of bat boxes which could be used are given as Appendix 6 and more information can be found at www.wildcare.co.uk.

The 70 nest boxes will be of various design and installed on trees within the woodland on site, to include 20 open fronted bird boxes, 20 25mm diameter hole nest boxes and 20 28mm diameter hole nest boxes. A further 10 sparrow nest boxes will also be on site to benefit house sparrow *Passer domesticus*, a Section 41 species. Details of nest boxes suitable for use by a range of common bird species can be obtained from Wildcare, Eastgate House, Moreton Road, Longborough, Gloucestershire GL56 0QJ (01451 833181), www.wildcareshop.co.uk, with examples provided in Appendix 7. The most suitable locations of the nest/bat boxes will be advised by an ECoW during a site visit.

Responsible personnel

This action will be overseen jointly by the appointed project manager, site manager and ECoW.

Action 11: Enhancements for Reptiles and Amphibians

Overview

Habitat features of value for herpetofauna will be introduced within existing areas of plantation woodland habitat. These will include ten log/brush piles which provide potential refuge for amphibians and reptiles in addition to sheltering mammals and prey invertebrate.

Following advice produced by Amphibian and Reptile Ground (ARG), the brush piles will be created using logs and tree branches to be piled in a heap over areas of open grassland (see Figure 2). The brush piles will measure 2-8m in length and 1-1.5m in height. The brush piles can be overlain with smaller deposits of organic material, such as wood chippings and grass cuttings. A suggested location plan of the refuge piles is included under Figure 3.

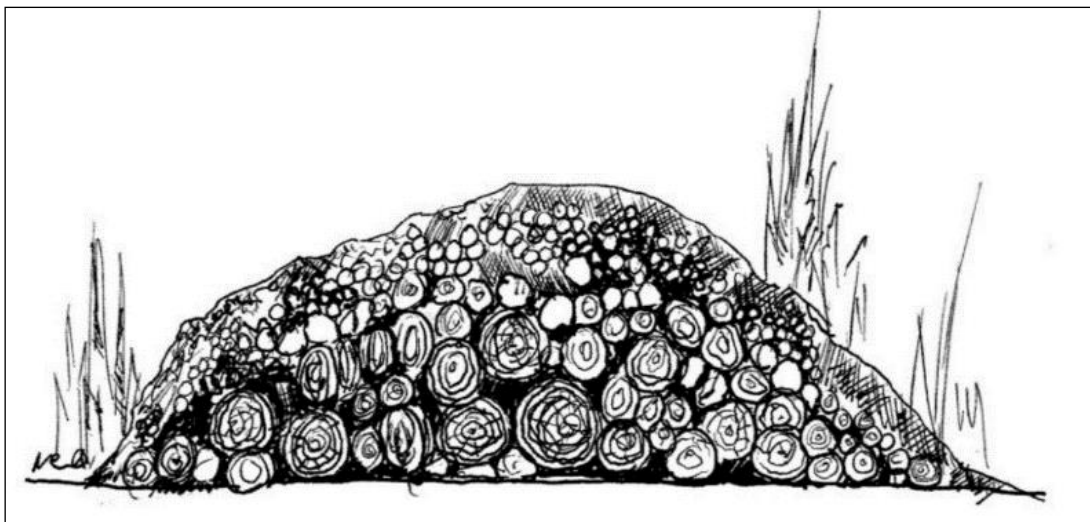


Figure 2: Artificial Brush Pile Indicative Illustration (Julian and Hand, 2018)



Figure 3: Location of refuge piles

8 MECHANISM FOR DELIVERY

An interim progress report, pertaining to each mitigative Action (1-11), will be completed and submitted to Boston Borough Council upon completion of each Action. The reports will evidence the implementation of this CEMP and will be completed jointly by the appointed project manager, site manager and ECoW. The reports will identify the success or failure of each mitigative Action and, where necessary, the need to amend this CEMP.

9 REFERENCES AND BIBLIOGRAPHY

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APPENDIX 1





Proposed Development / Phasing Plan



KEY

-  Site Boundary
-  Single unit with parking (129) 12.5m x 3.7m
-  Lodge with parking (171) 12.5m x 6m
-  Access roads
-  Indicative areas of SUDS
-  Indicative areas of planting

PHASING

-  **PHASE 1 – ACCESS ROAD**
-  **PHASE 2 – UP TO 70 CARAVAN UNITS AND ASSOCIATED INFRASTRUCTURE**
-  **PHASE 3 – UP TO 99 CARAVAN UNITS AND ASSOCIATED INFRASTRUCTURE**
-  **PHASE 4 – UP TO 131 CARAVAN UNITS AND ASSOCIATED INFRASTRUCTURE**

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APPENDIX 2

Actions implementation schedule

Action	Description	Activity	Timing - Year 1												Year 2	Year 2	Year 4	Year 5	Continue beyond 5 years?
			J	F	M	A	M	J	J	A	S	O	N	D					
Action 1	Tree replacement and grassland sowing	Plant trees	✓	✓	✓								✓	✓	-	-	-	-	-
		Monitor tree growth					✓	✓	✓	✓					Nov-March	-	-	-	-
		Replacement of failed trees	✓	✓	✓								✓	✓	-	-	-	-	-
		Spot treat weeds					✓	✓	✓	✓	✓	✓			May to October	May to October	May to October	May to October	Yes
		Sow meadow grassland			✓	✓					✓	✓			-	-	-	-	-
Action 2	Establishing RPAs	Supervision of CEZs	Immediately prior to any plant, machinery arriving on site or ground penetrating activities. The CEZs must be monitored by the ECoW/arborist at weekly intervals during the construction phase.												-	-	-	-	-
Action 3	Enhancing Grassland	Sow meadow grassland	✓	✓	✓								✓	✓	-	-	-	-	-
		Spot treat weeds					✓	✓	✓	✓	✓	✓			May to October	May to October	May to October	May to October	Yes
Action 4	Water Pollution Prevention	Pre-works mitigation measures	Mitigation measures to be implemented immediately prior to any plant or machinery arriving on site by the site manager and ECoW.												-	-	-	-	-
		Monitoring of mitigation measures	Daily checks of vehicles for leakages to be carried out by plant/machinery operators and site manager.												-	-	-	-	-
Action 5	Amphibians and Reptile Method Statement	Pre-works habitat checks	To be carried out by ECoW immediately prior to and during the start of the vegetation management works.												-	-	-	-	-
Action 6	Lighting Scheme	Follow bat sensitive lighting	Follow bat sensitive lighting plan (4471-213 Proposed Lighting Plan & Details Phase 1 and 2).												-	-	-	-	-

		scheme						
Action 7	Protection of Badgers	Pre-works habitat checks	To be carried out by ECoW immediately prior to and during the start of the vegetation management works.	-	-	-	-	-
		Trenches and pipes to be covered overnight	To be completed daily by site personnel during the full duration of the construction phase.	-	-	-	-	-
Action 8	Protection of Nesting Birds	Pre-works nesting bird survey	To be carried out by ECoW immediately prior to and during the start of the vegetation management works.	-	-	-	-	-
Action 9	Safeguarding hedgehogs	Trenches and pipes to be covered overnight	To be completed daily by site personnel during the full duration of the construction phase.	-	-	-	-	-
Action 10	Introduction of Bird and Bat Boxes	Installation of 20 bat boxes and 70 nest boxes	To be completed during or after the construction phase by site personnel and under the supervision of a suitably qualified and experienced ecologist.	-	-	-	-	-
Action 11	Enhancements for Reptiles and Amphibians	Ten log and brash piles to be introduced.	To be completed during or after the construction phase by site personnel and under the supervision of a suitably qualified and experienced ecologist.	-	-	-	-	-

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APPENDIX 3

Nature Space N11 Value Dry Soils & Green Roof Meadow Mix

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NV11 Flowers Species

Latin Name	English Name	Mix Composition
<i>Achillea millefolium</i>	Yarrow	3.5%
<i>Agrimonia eupatoria</i>	Common agrimony	3%
<i>Anthyllis vulneraria</i>	Kidney vetch	1.5%
<i>Centaurea nigra</i>	Common knapweed	10%
<i>Centaurea scabiosa</i>	Greater knapweed	2.5%
<i>Daucus carota</i>	Wild carrot	9%
<i>Echium vulgare</i>	Viper's bugloss	3%
<i>Galium verum</i>	Lady's bedstraw	10%
<i>Knautia arvensis</i>	Field scabious	2.5%
<i>Leucanthemum vulgare</i>	Oxeye daisy	7%
<i>Linaria vulgaris</i>	Common toadflax	0.5%
<i>Lotus corniculatus</i>	Birdsfoot trefoil	5%
<i>Malva moschata</i>	Musk mallow	2.5%
<i>Plantago lanceolata</i>	Ribwort plantain	3%
<i>Plantago media</i>	Hoary plantain	3%
<i>Primula veris</i>	Cowslip	1.5%
<i>Prunella vulgaris</i>	Self heal	9%
<i>Ranunculus acris</i>	Meadow buttercup	7%
<i>Ranunculus bulbosus</i>	Bulbous buttercup	6.5%
<i>Rhinanthus minor</i>	Yellow rattle	10%

NV Grass Species

Latin Name	English Name	Mix Composition
<i>Agrostis capillaris</i>	Common bent	5%
<i>Cynosurus cristatus</i>	Crested dog's-tail	15%
<i>Festuca Trachyphylla</i>	Hard fescue	20%
<i>Festuca rubra ssp. litoralis</i>	Slender creeping red fescue	20%
<i>Festuca rubra ssp. rubra</i>	Strong creeping red fescue	20%
<i>Poa pratensis</i>	Smooth stalked meadow grass	20%

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APPENDIX 4

Guidance on Sowing and Maintaining Meadow Grassland

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- Meadow mixes should not be sown on areas containing large numbers of strong perennial weeds such as docks, nettles or thistles. Sowing into bare ground is always best and it is essential to eliminate such weed species from the proposed meadow area prior to sowing.
- Eradication is best undertaken when the weed species are in rapid, active growth by spraying with which ever herbicide or natural weed killer suits you or by raking, pulling up by hand. April/May is the most effective time to do this.
- If sowing into grass or an established meadow, make sure the grass/meadow is as low as possible.
- When the sown meadow emerges and reaches about 3 inches (7cm) in height, mow back to 1" (2.5cm) and remove all cuttings. Repeat this each time the grass reaches 3" and cease only when the meadow plants reach 3" in height themselves and are receiving good light.
- Do not be concerned about mowing off some foliage and flowers of odd wildflowers; they will suffer no harm and benefit in the longer term.
- If this management is not carried out in the first season after sowing, grass and annual weeds may swamp the new meadow and cause failure.
- Once the perennial wildflowers are established, mow the meadow annually after flowering and remove all cuttings. Best for small areas; scythe/trimmer and for larger areas use a cutter bar mower.
- The best time to sow is Autumn or Spring.

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APPENDIX 5

Reptile and Amphibian Method Statement

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1. Site preparatory works, including disturbances to scrub and woodland habitats will avoid the period in which reptiles and amphibians are hibernating (between October and March, inclusive).
2. For the initial stages of the development, the clearance of scrub and woodland habitats will be undertaken in a phased manner under the supervision of an experienced ecologist. Ground vegetation clearance will encompass a finger-tip search around all potential refugia in a careful and controlled manner, with constant vigilance for any sheltering newts and reptiles.
3. Any building materials will be stored on pallets to deter amphibians taking shelter underneath them.
4. All site operatives will stay vigilant for the presence of reptiles and amphibians, particularly great crested newts, during the works.
5. If great crested newts are found at any point, the works will stop immediately, and an ecologist be appointed to advise the way forward.
6. Any great crested newt if found, will be carefully gathered up by hand by a suitable licensed ecologist and placed in a suitable holding receptacle for safe transportation away from the area of site clearance operations and released. This rescue method will also be extended to any other amphibian species or reptiles found. Once a great crested newt has been located it will be released in this manner and then work will cease whilst further advice is sought.

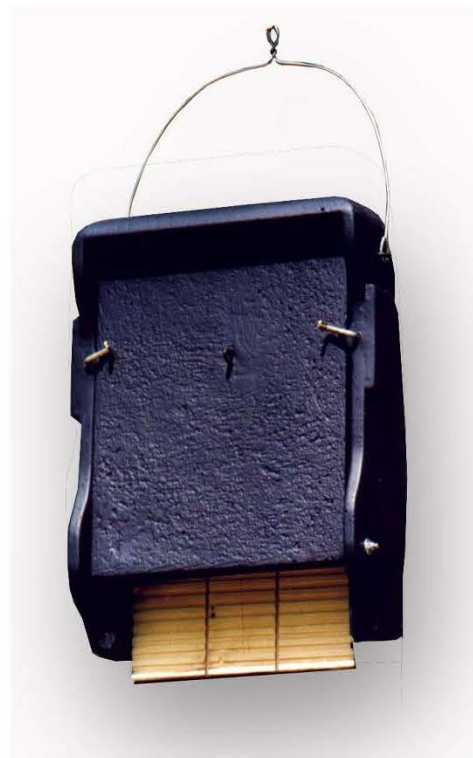
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**APPENDIX 6
Bat box examples**

Woodcrete bat boxes for siting on trees



Schwegler 2F-DFP



Schwegler 1FF

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APPENDIX 7

Bird box examples

Examples of bird boxes for siting on trees



Schwegler 1B 26mm entrance



Schwegler 1 B 32mm entrance



Schwegler 2H open front box



Schwegler 2GR Oval Entrance