SF 3014 | RAITHWAITE ESTATE – WOODLAND ROOMS

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP: BIODIVERSITY)

December 2023 | For Planning
REVISION A

SMEEDEN FOREMAN
Landscape Architecture • Ecology • Arboriculture

Quality Assurance

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REVISION HISTORY

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APPENDICES

1.0 INTRODUCTION

1.1.1 Smeeden Foreman Limited has been commissioned by Raithwaite Whitby Developments Limited to provide a Construction Environmental Management Plan (CEMP: Biodiversity) with regards to their proposed development site within the Raithwaite Estate, Sandsend, North Yorkshire (grid reference NZ 86691158), hereafter referred to as the 'site'.

1.1.2 The site has been granted full planning permission (NYM/2020/0702/FL) subject to discharge of conditions. This report has been produced in relation to the discharge of condition 10 which states:

Condition 10: Prior to the commencement of development, a Construction Environment Management Plan (CEMP) shall be submitted to and approved in writing by the Local Planning Authority and the works shall thereafter be undertaken in accordance with the approved plan.

Subsequent works must be undertaken strictly in accordance with the CEMP, a copy of which must be kept available on site throughout the construction period.

1.1.3 The purpose of the report is to identify habitats and potential protected/notable species on site to be protected from construction operations. The report has been prepared to support discharging reserved matters for a full planning application for holiday accommodation and is to be read in conjunction with the corresponding documents completed by Smeeden Foreman in 2021 and 2023:

- *SF3014 Raithwaite Estate Woodlands Rooms Habitat and Species Management Plan* (2023)
- *SF 3014 Ecological Appraisal Raithwaite Woodland rooms – Revision D.* (2021)
- *Arboricultural Survey Report I BS 5837:2012 (*2021)
- *Woodland and Ecology Management and Monitoring Plan Part 1- Rev A* (2021)

1.1.4 CJ O'Shea and Company Limited are the company responsible for the implementation of this CEMP: Biodiversity.

2.0 SITE DESCRIPTION

2.1.1 The proposals site is located to the south of the Raithwaite Estate, within proximity to the hotel and lake. Habitats comprise broadleaf woodland, areas of introduced shrubs and grassland. The Dunsley Beck is located 65m adjacent to the western boundary and an area of ancient replanted woodland is located to the south. Habitats within the wider area largely comprises pasture grassland habitat, with further areas of woodland habitat. Refer to Figure 01 below.

Figure 01: Aerial view of site

3.0 PRE-CONSTRUCTION

3.1 WOODLAND, HEDGEROW AND TREE PROTECTION

3.1.1 Temporary protective fencing will be installed around the existing woodland areas, hedgerow and trees proposed for retention. The installation of protective fencing will ensure there is no accidental damage to the trees/shrubs or their root zones during the construction phase from machinery and will prevent the storage of construction material around the base of the hedgerows. Refer to the Arboricultural Survey Report (report ref. *SF3014 Arb Survey Report Rev E October 2021 Woodland & Ecology Monitoring Plan Part 1,* produced by Smeeden Foreman) for further details on protection of trees.

3.1.2 The temporary protective fencing is to be installed to BS5837:2012: Trees in Relation to Design, Demolition and Construction and extend outside the canopy of the retained trees and remain in position until construction is complete.

3.2 TREES WITH BAT ROOST SUITABILITY

3.2.1 During the initial ecological survey undertaken by Smeeden Foreman (refer to *SF3014 Ecological Appraisal Raithwaite Woodland Rooms- Revision D*, 2021), all trees within the application site boundary and the wider site area were subject to survey from ground level. Due to the current proposed site having been reduced in size since 2021, a reassessment of trees affected by the

proposal was undertaken in August 2023. A single tree with a suitability feature was identified to the north-west of site along the woodland edge, consisting of a cavity 2.5 metres from the ground.

3.2.2 For trees with low bat roost suitability, any felling or pruning should be undertaken in the winter period (November – February, inclusive) or subject to soft-felling measures outside of this period. This would involve removal of ivy from the 'Low' suitability trees, by hand, under the supervision of an appropriately licensed ecologist.

3.2.3 In the event of a bat roost being found a European Protected Species Mitigation (EPSM) Licence from Natural England may be required, with appropriate mitigation and working methods prior to works commencing.

3.2.4 Any trees which require pruning or felling works should be assessed with respect to their potential to support roosting bats prior to works taking place. Consideration will be given to retaining trees/limbs with the potential to support roosting bats where this is not outweighed by health and safety considerations.

3.3 VEGETATION CLEARANCE

Breeding birds

3.3.1 Nesting birds are afforded protection under the Wildlife and Countryside Act 1981 (as amended) with additional protection against disturbance given to those listed under Schedule 1 of the Act.

3.3.2 Where possible, vegetation clearance works should be undertaken outside of the main nesting bird season (March – August, inclusive).

3.3.3 If vegetation / grassland clearance works are to be undertaken during the bird nesting season (March to August, inclusive) a check for nesting birds will be carried out by a suitably qualified ecologist. These checks will be undertaken prior to any clearance works and within 48 hours of the proposed commencement date. If nesting birds are identified, the advising ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. Measures such as applying a 'no works' buffer around the nest may be necessary. The buffer distance would be species-specific and confirmed by the advising ecologist.

3.3.4 Partial vegetation clearance of the site has taken place outwith the bird nesting season by the Raithwaite Estate management team. It is understood these works have now ceased due to the beginning of the bird nesting season. Vegetation clearance works required to take place during March-August (inclusive) will recommence following checks carried out by a suitably qualified ecologist.

3.3.5 Any 'no works' buffer zones established during site clearance will be maintained until the ecologist has confirmed that the young birds have fledged and are no longer dependent on the nest site/s. The retention of tree / hedgerow protection fencing, as detailed above in Section 3.3.3 will also help to protect any birds nesting in retained vegetation.

Reptiles/Hedgehog

3.3.6 Precautionary working methods will be adopted to make sure hedgehogs are not harmed/killed during works. Such works will include the following:

- Removal of any potential hibernacula outside of the hibernation period (i.e. avoid November – February, inclusive);
- Avoid creating any potential refugia/hibernacula by removing any tree/shrub cuttings or arisings immediately after cutting; and,

- Removal of any hedgerows or areas of dense shrubs/scrub to be immediately preceded by a check for any resting hedgehog/reptiles, undertaken by an appropriately experienced ecologist.

3.4 BADGERS

3.4.1 Badgers *Meles meles* and their setts are protected by the Protection of Badgers Act 1992. No badger setts were identified on or within 30m of the proposed site, however, a larger red line boundary was previously proposed and a sett with a single entrance, likely to represent an outlier sett, was identified but was considered to be disused at the time of survey.

3.4.2 Due to the presence of suitable habitat within and adjacent to the site and known badger activity within the surrounding area, badger are known to be active within 1km of the site. It is therefore likely that badger may access the site for foraging and commuting purposes.

3.4.3 Given the mobile nature of badger, **a pre-commencement checking survey for badger will be undertaken prior to any site clearance.** The survey will assess the presence/absence of badgers on site and within proximity of the site (within a minimum of 30m).

3.4.4 This walkover will be undertaken by a suitably experienced ecologist at least three months prior to commencement of works (to allow sufficient time for any licensing which may be required).

3.4.5 Should any evidence or actual presence of badger be identified during the walkover, the ecologist will advise on the necessary licensing and mitigation measures. Please note, works under a badger mitigation licence can only take place between July – November, inclusive.

3.4.6 Clearance of any dense vegetation will be conducted using hand tools only under the supervision of a suitably qualified ecologist.

3.4.7 If any setts become established within the site or within close proximity to the site (30m), a protected species licence obtained from Natural England may be required to allow for the exclusion of the setts prior to proposed construction works commencing to ensure badgers are not disturbed/harmed/killed (exclusion works can only be carried out between 1st July and 30th November). The updating survey should be undertaken shortly prior or early within this period. It is recommended that the survey is carried out **approx. 2-3 months prior to construction works** commencing (depending on the season) to allow enough time for mitigation to be put in place in case any further active badger setts are identified / have become established within the interim period of the previous badger survey and the badger checking survey. This will reduce potential delay to the development.

3.5 REPTILE FENCING AND TRANSLOCATION

3.5.1 Reptile surveys completed in May and June 2020 identified a population of slow worms using grassland habitats on site. A peak count of 23 adult slow worms were recorded during one of the seven survey visits undertaken, which could represent a high population with a peak count of 23 individuals recorded in areas which equate to 0.07ha in size and a high population of slow worm being over 100 individuals per hectare.

Reptile Risk Assessment

3.5.2 If undertaken during the hibernation period (November to February) any construction activities such as ground clearance and excavation works have the potential to disturb habitats which may be used by reptiles such as dense scrub and rough grassland.

3.5.3 If undertaken during the reptile active season (March to October), vegetation clearance activities have the potential to disturb/kill/injure reptiles. The below table identifies risk levels and associated precautionary measures.

Table 01: Risk to reptiles assessment

Proposed activity to facilitate development	**Risk level**	**Precautionary measure/s to be implemented to avoid potential harm to reptiles**
Reduction of vegetation on site **during the winter period** with respect to breeding bird habitat	Negligible	To be undertaken without the use of machinery to avoid tracking over site i.e. by use of a strimmer or brush-cutter.
Reduction of vegetation during translocation process in active season	Negligible	Subject to checks for breeding birds, reduction of vegetation to encourage reptiles to move to specific areas of site to allow for a more concentrated trapping effort.
Clearance of vegetation such as grassland and dense shrubs	High – destruction of potential habitat and/or refugia	Destructive hand searches and directional clearance of vegetation in a northerly direction. Vegetation to be cut to a height of 150mm. **To be undertaken within the reptile active season.**
Ground excavation works using plant/machinery	High – disturbance/destruction of habitat and/or refugia	Destructive hand searches of suitable habitat prior to construction works starting on site. Light machinery may be required to assist in the destructive search to check for refuging reptiles prior to removal of materials off site, where possible to be completed by hand. **To be undertaken within the reptile active season.**
Removal of trees/hedgerows	High – disturbance/destruction of habitat and/or refugia	Any root systems of the cut shrubs/trees can be grubbed out in the spring, after the reptile hibernation period and subject to checks for breeding birds.

Reptile Mitigation Strategy

3.5.4 As development will impact suitable reptile habitat, it is recommended a mitigation scheme is adopted to ensure the legislation afforded to reptiles is not contravened. It is therefore recommended that prior to construction works commencing, reptile exclusion fencing is installed at the construction boundaries (refer to Figure 02, appended) to enable trapping and translocation of reptiles to be undertaken during the reptile active season. The objective of the trapping and translocation exercise will be to remove all reptiles from the site and exclude them from the working area whilst construction works are taking place to avoid killing/harming reptile species. Any reptiles caught during the trapping period will be translocated to suitable habitats adjacent to the construction areas (refer to Figure 02 for the proposed receptor site). Once major construction works are complete, the reptile fencing can be removed to allow reptiles to re-access the developed areas of the site, where suitable habitats will be available.

3.5.5 Reptile fencing is to be installed around the perimeter of the construction zone. Two types of reptile fencing will be used where appropriate, with one-way sloped reptile fencing to prevent the return dispersal of reptiles onto site prior to construction works commencing. This fencing

separates suitable reptile habitats from the proposed development areas. It is considered that this fencing should be adequate in preventing reptiles from re-entering the development site during construction works. Exclusion fencing will also be installed to prevent dispersal of reptiles into the site. An access grid will require installation where vehicular access into the construction zone is required once construction works commence. The access grid will allow vehicular access within the fenced area but prevent reptiles from re-entering the site.

3.5.1 Fencing will be installed and removed by an approved fencing contractor specialising in wildlife habitat management and completed under supervision of a suitably qualified ecologist. Fencing will remain in place for the duration of the development works.

3.5.2 Fencing will be subject to regular inspections to assess for damages and subsequent repair works which may be required. Any repair works will be carried out by the appointed fencing contractor under supervision of a suitably qualified ecologist, where necessary.

3.5.3 Trapping and translocation of slow worm to be carried out including the clearing to be affected and hand searching of woodland areas prior to construction and creation of plant access. Any other wildlife which can be moved safely will also be translocated to this area.

3.5.4 Reference has been made to Herpetofauna Groups of Britain and Ireland (HGBI) *Evaluating Local Mitigation/Translocation Programmes: Maintaining Best Practice and Lawful Standards* in regards to the effort recommended during the trapping and translocation for the site. The suggested minimum capture effort for slow worm projects where there is a high population (>100/ha - of which could be present on the site, with a peak of 23 individuals recorded during one visit on areas approximately 0.07ha in size) is 90 suitable days, with trapping to stop when no individuals are found for five consecutive suitable trapping days. Due to the small size of the areas found to support reptiles on the estate and the proposed implementation of habitat manipulation methods in combination with the trapping programme, it is proposed to undertake a 60 day trapping period. Trapping will continue after this time, if necessary, until no individuals are found for five consecutive suitable trapping days. The guidance recommends that a minimum of 100 refuges/hectare are used and this will be used on site as a minimum. Trapping and translocation will be undertaken during the active reptile period (generally April- September) and ideally as per the recommendations within the HGBI guidance, during April and late June (to avoid gravid females) and in late August and late September, depending on success of trapping undertaken during the spring/early summer period.

3.5.5 Any reptiles caught during the trapping period will be translocated to unaffected areas of the pasture grassland adjacent to the south.

3.5.6 Habitat manipulation will be undertaken to enhance capture of reptiles. This will involve reducing the amount of suitable vegetation cover, thus rendering the reptiles easier to catch.

Reasonable Avoidance Measures (RAMS)

3.5.7 Following completion of a reptile trapping and translocation programme, it is recommended that site clearance works take place within the reptile active season (April – September) prior to works commencing to avoid harm to potential hibernating reptiles.

3.5.8 Precautionary working methods will be adopted during any vegetation clearance undertaken including directional clearance methods and cutting vegetation above ground level within the reptile hibernation period (generally November – March) to avoid harming potentially hibernating reptiles. If necessary root systems can be removed once reptiles are active. Cutting of on-site vegetation above ground level during the winter period will also reduce the amount of suitable habitat available to nesting birds during the breeding season. Due care and consideration for hedgehog should be adopted during winter vegetation reduction works.

3.5.9 Directional clearance methods during the reptile active season will be adopted prior to plant/machinery arriving on site, with vegetation to be cleared towards the pasture grassland to the south allowing any reptiles that may be present to move to adjacent habitats. Directional site clearance would need to take place under supervision of an ecologist with any individuals found being moved offsite accordingly. Breeding bird checks would be undertaken by the onsite ecologist prior to any site clearance taking place, with regular checks during each stage of clearance;

3.5.10 Directional clearance of vegetation on site is to be conducted in stages:

- Prior to commencement of the reptile trapping and translocation programme light machinery (i.e., use of strimmers, a brush-cutter or side-mounted flail) will be used to reduce the height of vegetation within the site boundary to a height of 150mm to avoid harm to reptiles and encourage individuals to move towards areas of suitable retained boundary habitat. Cut material should be removed from site immediately to avoid creating suitable refuge piles for reptiles. Some reduction of vegetation may be undertaken during the reptile hibernation period prior to the later installation of fencing during the active period, however this would be limited to use of a strimmer or brush-cutter (refer to Table 01) to avoid potentially impacting hibernating individuals.
- Once reptile fencing is installed and the trapping process is underway, further habitat manipulation will be undertaken during the trapping process, if required, to enhance capture of individuals. Strimming or brush cutting of additional areas will leave 'islands' of rank vegetation so that the remaining reptiles will be concentrated within these areas.
- Following completion of trapping, remaining vegetation to be subject to final checks before being strimmed to ground level prior to the breaking of ground.

3.5.11 The proposed receptor sites will be enhanced for reptile species through the creation of hibernacula in these areas.

3.6 INVASIVE NON-NATIVE SPECIES CHECKING SURVEY

3.6.1 Sympathetic removal of non-native shrubs identified within the understorey of the woodland habitat, such as rhododendron *Rhododendron* Sp. are recommended to allow the re-establishment of native ground flora and planting of appropriate native shrubs. Rhododendron reduces the biodiversity value of a site, hindering woodland regeneration and once established, is difficult and costly to eradicate. Rhododendron can also be a host for the fungus-like pathogen *Phytophthora ramorum*, which affects larch, beech and oak. Rhododendrons are poisonous to people, dogs, cats, horses, livestock, birds, and some insects.

3.6.2 This species is a non-native invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), making it an offence to plant or otherwise cause to grow this species in the wild.

3.6.3 A large rhododendron exists in the clearing near to where woodland rooms (WRs) 9 and 10 are to be located, although control / eradication measures are not considered likely to be needed for this specimen. It is possible that given the age of Raithwaite Hall this might be progeny of the first rhododendrons planted and as a result have some historic value.

3.6.4 Should any non-native invasives be identified on site, the infested area and an appropriate buffer zone with be protected from disturbance (e.g., with Heras fencing), until an invasive non-native species specialist can be contacted with regards to suitable eradication / control measures. Measures may include the adoption of pre-cautionary measures to prevent any spread of the berries / seeds (e.g., 'no works' buffer, equipment cleaning etc).

Rhododendron control programme

- Prune/cut back rhododendron between January and March when the plant is dormant.
- Remove all rhododendron within the target area.
- Cut all live rhododendron material from the stump, allowing access for chemical spraying of any re-growth.
- Treat all stumps with a suitable herbicide on the day of being cut and in frost free and rain free conditions - rain should not be forecast for at least 6 hours.
- Dispose of cut material so that it allows access to stumps for chemical spraying of any re-growth.
- Control any injurious weed species when the site regenerates. Chemically treat re-growth with a recommended herbicide - follow the manufacturer's guidance on application rates and safety requirements.
- Keep the operations in line with recommendations in the Forestry Commission practice guide *Managing and controlling invasive rhododendron.*
- Dispose by burning. Agree in advance where the burn site will be.
- Build bonfires far enough away from trees (at least 10m from the crown of any tree) to avoid damaging them, make sure that burning sites and piles of wood are not on patches of ground where they could damage species-rich grassland, anthills or other ecological or archaeological features.
- Clean up the site as soon as possible after burning - burning on a metal sheet reduces damage to the soil and makes it easier to remove ash from the site.

4.0 DURING CONSTRUCTION

4.1 TOOLBOX TALK

4.1.1 Immediately prior to works commencing on site a toolbox talk will be given by an appropriately qualified ecologist to the building contractor. The toolbox talk will highlight the protected species known to occur on site and the measures put in place to avoid adverse impact upon them during construction works, such as protective fencing, precautionary working methods, etc.

4.1.2 Contact details of the ecologist will be provided to the building contractor so contact can be made if advice is required during construction works being carried out. A copy of this management plan will be made available to the contractor for reference purposes during works.

4.2 TREE PROTECTION

4.2.1 Temporary protective fencing installed pre-construction must remain in place for the duration of development works to avoid encroachment by construction plant to ensure there is no damage to the trees or their root zones during the construction phase. The protection fencing will also discourage the storage of construction material around the base of trees/within the woodland area.

4.3 PRECAUTIONARY WORKING METHODS – BADGER & OTHER TERRESTRIAL MAMMALS

4.3.1 Badger and roe deer *Capreolus capreolus* are known to utilise the site and immediate surroundings and suitable habitat is also present on site for hedgehog *Erinaceus europaeus*. Otter *Lutra lutra* are also known to frequent the area.

4.3.2 Precautionary working methods will therefore be adopted during construction works, which will include the following:

- Any artificial lighting required during construction works should illuminate the minimum area required to complete the task at hand. Lighting hoods / cowls or time/motion-triggered lighting could also be used to control and minimise artificial light-spill. Off-site habitats should also be kept free of artificial illumination.
- Installing fencing around the periphery of the site, which will sit flush with ground-level, to reduce the likelihood of deer, badgers and hedgehog entering the active construction site;
- Covering, or providing a means of escape from, any trenches left open overnight; and,
- Capping any open pipework at the end of each working day, to prevent accidental harm to badger, roe deer, hedgehog and otter.

4.3.3 Storage of materials / waste will be on areas of hardstanding or bare ground. Stored material will ideally be raised off the ground (e.g., on pallets) and waste is to be stored in skips or removed from site as soon as possible.

4.3.4 In addition to the above, tree/shrub cuttings will be removed from construction zones once vegetation is cut so as to avoid the creation of brash piles; these may be attractive to hedgehogs or reptiles, which could subsequently be harmed if the brash pile is burnt or removed with machinery.

4.4 REPTILES

4.4.1 During construction works reptile fencing will remain in place (as per Figure 02, appended) to prevent reptiles from re-entering the working area. The building contractor will undertake regular checks of the fencing and the associated access grid/s to make repairs where necessary.

4.4.2 Once development works are completed, reptile fencing can be removed and reptiles can re-access the developed areas. The fencing can be removed during the reptile active period (generally April – October) to avoid harming potentially hibernating reptiles.

4.4.3 Precautionary working methods should be adopted during proposed development works such as the covering or providing a means of escape from trenches with ramps no steeper than a 45° angle and capping of any open pipework at the end of each working day. Any open excavations should be subject to inspection for animals prior to the continuation of works/infilling.

4.5 SYMPATHETIC LIGHTING

4.5.1 Any flood lighting used during construction works, if necessary, will be directed away from retained vegetation along the boundaries, where hedgerows and trees/woodland occur. This will aim to ensure that such areas remain attractive to wildlife species, such as foraging and commuting bats, badgers etc. Refer to the relevant guidance produced by the Institute of Lighting Professionals and the Bat Conservation Trust "*Bats and Artificial Lighting at Night*"(2023).

4.6 PLACEMENT AND CONSTRUCTION

4.6.1 The Woodland Rooms (WRs) will be constructed in-situ sympathetically to minimise the impact to the woodland. The proposed positions of the WRs have been pegged out on site to allow a detailed survey of the trees which may be affected by the development. Some tree removal will be required to facilitate the proposed development. Tree removal will include thinning of diseased, unstable or non-native species in accordance with the woodland management plan. (Refer to *Woodland and Ecology Management and Monitoring Plan SF 3014 April 2021*). It is intended that professional judgement will be made on site so that the location of the WRs may be adjusted to ensure the optimum retention of trees and minimise the impact to the woodland trees and root protection areas (RPAs).

4.6.2 The WR construction process is designed to keep vehicle and construction plant movements to a minimum, thereby reducing the potential for compaction damage to the woodland.

4.7 ACCESS CONSTRUCTION

4.7.1 Plant access may have to be created following the route of the established beech hedge and an area of introduced shrub rhododendron species and cherry laurel Prunus laurocerasus. In order to avoid damage to the hedge, use of temporary protective demarcation fencing to protect retained areas/features is recommended.

4.7.2 The proposed access to the WRs will be installed using a permeable surface construction utilizing a Cellular Confinement System (CCS), as recommended within BS5837:2012, to minimise the impact to the woodland.

4.7.3 The new surface must be established above the existing levels of the Root Protection Area (RPA). Such works must not remove more than 50mm from the existing surface level.

4.7.4 A geo-textile membrane will be laid out in position. This will allow drainage and separation whilst preventing any polluting contaminants from damaging roots. A Cellular Confinement System (CCS) will be pinned out in position, using road pins and taking care to avoid any roots. The CCS is specified to a depth of 150mm (Cellweb). The CCS will be backfilled with clean aggregate (no-fines stone). The CCS must be laid out over the geo-textile and filled with machinery only running on filled CCS and not the exposed surface of the RPA.

4.7.5 The CCS will be used as a permanent base for a permeable wearing course. The final surface is proposed as clean angular stone.

4.7.6 Construction will not be carried out during wet weather and will be undertaken when the ground is driest and least prone to compaction.

4.7.7 The installation of kerbs, edging and their associated foundations can damage tree roots. Within the Root Protection Area (RPA) this will be avoided by the use of alternative methods of edge support. Timber sleepers are proposed, held in place with track or road pins. Where it is necessary to pin the sleepers in place, the pins will be located clear of any major tree roots visible on the surface.

4.7.8 Routes will be edged using pinned logs or boulders to ensure vehicles stay within the confines of the track.

4.8 SERVICES

4.8.1 The proposed services trench will be hand excavated in order to establish the positions of any roots which must be retained. The services will then either be installed below or above the existing

roots, depending on the available depth. Hand digging will commence in short stretches, ensuring that major tree roots are not affected or left exposed for extended periods of time.

4.8.2 The use of either hand tools or an 'air spade' (a compressed air powered tool) to loosen the surrounding soil and expose any tree roots that may be present. The extent of excavation is to be the absolute minimum required to facilitate the construction.

4.8.3 The trench work will be supervised by a qualified ECoW and monitored to identify and prevent harm to any animals found during trench works.

5.0 ECOLOGICAL CLERK OF WORKS

5.1.1 Appropriately qualified ecologists will act as the Ecological Clerk of Works for actions where supervision is required, such as the pre-commencement badger checking surveys, nesting bird checks, and bat survey of trees with bat roost potential.

5.1.2 Within the woodland habitat and grassland clearing, hand searches will be undertaken within areas proposed to be affected by works, such as the pathways and where pile driving is proposed. Hand searching and destructive searches will be undertaken immediately prior to and during works to avoid harm to potentially hibernating reptiles and amphibians and their removal out of the construction site if necessary.

6.0 TIMETABLE

	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Vegetation clearance	Vegetation to be cut above ground level with root systems to be left intact to avoid harming potentially hibernating reptiles. Roots can be removed once reptiles come out of hibernation (March – October).		Nesting bird season – vegetation clearance to be carried out following checks by an ecologist where active nests found to be absent. Hedgehogs – vegetation cuttings to be moved to unaffected areas of the site to avoid creation of brash piles to avoid harm to hedgehogs. Reptiles – directional clearance to be adopted, clearing vegetation towards unaffected areas.						Vegetation clearance can be undertaken without constraint in regards to nesting birds and hibernating reptiles. Directional clearance methods still to be adopted.		Vegetation to be cut above ground level with root systems to be left intact to avoid harming potentially hibernating reptiles. Roots can be removed once reptiles come out of hibernation (March – October)	
Badger checking survey	Pre-commencement survey which can be undertaken at any time within the year (ideally winter when vegetation died back)											
Badger sett exclusion							Exclusion of setts to take place between the 1st July and 31st November to avoid the badger breeding period. An artificial sett will be created ideally 6 months prior to exclusion works to provide an alternative sett.					
Reptile trapping and translocation				Trapping and translocation works to take place for 60 days until 5 consecutive days of no reptiles being captured has been achieved.				Trapping and translocation works to continue depending on trapping success during spring/early summer.				
Reptile exclusion fencing removal				Reptile fencing to be removed outside of the reptile hibernation period to avoid harm to potentially hibernating reptiles								
Invasive species checking survey	Survey possible year round for Rhododendron species. Cut back in January to March. March-September for Himalayan balsam.											

FIGURES

FIGURE 02: REPTILE MITIGATION AREAS

APPENDICES

Appendix 01: Protected Species Legislation

APPENDIX 01: PROTECTED SPECIES LEGISLATION

Bats

Bats and their roosts are afforded full legal protection under both UK and European legislation. Conservation of Habitats and Species Regulations 2017 transpose the Habitats Directive into UK law, making it an offence to:

- deliberately disturb a bat;
- deliberately kill, injure or capture a bat;
- damage, destroy or obstruct access to a breeding site or resting place (note this applies to both deliberate and reckless actions).

The Wildlife and Countryside Act 1981 (as amended) (Schedule 5) made it an offence to:

- intentionally kill, injure or take a bat ;
- damage, destroy or obstruct a bat roost *;
- disturb a bat at a roost *;
- possess or control a bat or any part thereof;
- sell, offer for sale, possess or transport for sale any bat or part thereof;
- set traps for catching, killing or injuring bats;
- possess articles for the purposes of committing offences against bats;

[*= intentional and reckless offences covered].

Legal protection under the Habitats Directive applies to the animals and their breeding sites and resting places. This means that bat roosts are fully protected, whether they are in use at the time or not. Where roosts or resting/breeding sites are identified, any works which may contravene the protection afforded to them require derogation from the provisions of the legislation in the form of a licence from Natural England.

Breeding birds

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built or,
- take or destroy an egg of any wild bird.

This protection applies from the moment the nest is being built. Additional protection against disturbance on the nest or of dependent young is provided for birds included on Schedule 1.

Badger

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under the Act it is illegal to:

- Wilfully kill, injure or take a badger or attempt to do so;
- Cruelly ill-treat a badger; and,
- Interfere with a sett by doing any of the following:

  (i) damaging a badger sett or any part of it;

  (ii) destroying a badger sett;

  (iii) obstructing access to a badger sett;

  (iv) causing a dog to enter a sett; and,

  (v) disturbing a badger while it is occupying a sett.

Reptiles

The Wildlife and Countryside Act 1981 makes it an offence to intentionally kill any of our native snakes and lizards. The sand lizard and smooth snake receive additional protection; for these species, it is unlawful to capture or possess them, or to damage/obstruct access to places they use for shelter or protection, or to disturb them whilst in such a place.

SF 3014 | RAITHWAITE ESTATE-WOODLAND ROOMS

HABITAT AND SPECIES MANAGEMENT PLAN

December 2023

SMEEDEN FOREMAN
Landscape Architecture • Ecology • Arboriculture

Quality Assurance

Job Title: Raithwaite Estate Woodland Rooms			**Job Number:** SF 3014	
Document title: Habitat and Species Management Plan (HSMP)				
Issue	**Date**	**Prepared by**	**Checked by**	**Approved by**
Original	December 2023	NL	MG	MG/MS
Revision A	February 2024	NL	MG	MG/MS

Name:	**Initials:**	**Status:**
Maria Gill *Principal Ecologist*	MG	BSc (Hons) ACIEEM
Nick Lishman *Ecologist*	NL	BSc (Hons) MSc
Mark Smeeden *Design Director*	MS	BA Dip Hort DipLA MIHort CMLI

REVISION HISTORY

Original report issued December 2023

Revision A issued February 2024 to reflect minor amendments following client review.

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LIST OF FIGURES AND TABLES

APPENDIX

1.0 INTRODUCTION

1.1.1 Smeeden Foreman Limited has been commissioned by Raithwaite Whitby Developments Limited to provide a Habitat and Species Management Plan (HSMP) for their site at Raithwaite Hall, Sandsend, North Yorkshire (grid reference NZ 86691158), hereafter referred to as the 'site'.

1.1.2 The proposals site has been granted outline planning permission (NYM/2020/0702/FL) for the erection of 5 no. woodland rooms (WR) ancillary to the existing Hotel with associated linkage paths at Raithwaite Estate, Sandsend Road, Sandsend.

1.1.3 This report has been produced in relation to discharge of conditions 8 and 11.

> 8) *The roof of the lodges hereby permitted shall be covered in a sedum woodland flora mix which shall therefore be so maintained in that condition and replaced if any of the plants die.*
>
> 11) *Prior to the commencement of development, a Habitat and Species Management Plan (HSMP) shall be submitted to and approved in writing by the Local Planning Authority and the works shall thereafter be undertaken in accordance with the approved plan.*

1.1.4 The purpose of the report is to set out the measures that will be undertaken to address the requirements of Conditions 8 and 11, specifically detailing ecological enhancement and management regimes for the development parcels.

1.1.5 The main contractor and subsequent maintenance contractors will be responsible for the implementation of the HSMP on behalf of Raithwaite Whitby Developments Limited. The contractors and consultants which have currently been appointed are listed in Table 01. The HSMP is to be funded by Raithwaite Whitby Developments Limited.

Table 01: Contractors/consultants contact details

Works	Contractors/consultants	Contacts
DESIGN STAGE		
Arboricultural advisor	Smeeden Foreman Ltd. Somerset House, Low Moor Lane, Scotton, Knaresborough, N.Yorks HG5 9JB Dan Robinson	
Ecological advisor	Smeeden Foreman Ltd. Somerset House, Low Moor Lane, Scotton, Knaresborough, N.Yorks HG5 9JB Nick Lishman Ecologist	
Landscape design	Smeeden Foreman Ltd. Somerset House, Low Moor Lane, Scotton, Knaresborough, N.Yorks HG5 9JB Ian Birtwistle Principal Landscape Architect	
CONSTRUCTION STAGE		
Principal contractor	To be appointed by the developer	
Ecological Clerk of Works (ECoW)		
Arboricultural Clerk of Works		
Tree works contractor		
Landscape supervision		
Landscape contractor		
POST DEVELOPMENT		
Arboricultural inspections/advice	To be appointed by the developer.	
Ecological monitoring/advice		

2.0 SITE DESCRIPTION

2.1.1 The proposals site is located to the south of the Raithwaite Estate, within proximity to the hotel and lake. Habitats comprise broadleaf woodland, areas of introduced shrubs and grassland. The Dunsley Beck is located 65m adjacent to the western boundary and an area of ancient replanted woodland is located to the south. Habitats within the wider area largely comprises pasture grassland habitat, with areas of woodland habitat. Refer to Figure 01. below.

Figure 01: Aerial view of site/location

3.0 LANDSCAPE AIMS AND OBJECTIVES

3.1.1 There are several elements to the landscape and ecological mitigation/enhancement measures included within the development as detailed in Table 02 below with proposed locations shown in Figure 02:

Table 02: Landscape and ecological mitigation/enhancement elements

Element reference	Mitigation/Enhancement Feature
1	Management/monitoring of existing retained trees and shrubs Planting of trees/woodland planting and native shrubs known to be of wildlife value
2	Management of existing hedgerows and ground flora of interest New hedgerow planting
3	Retained grassland management
4	Creation of wildflower grassland
5	Creation of green Sedum roofs for WRs
6	Wildlife features – bat/bird boxes installation and reptile hibernacula.
2	New native woodland planting beneficial to wildlife and management of existing retained trees;
3	Retain or plant new hedgerow, management of existing hedgerows and ground flora of interest and mixed ornamental species planting;
4	Monitoring of areas of dense shrub habitats to assess whether these are encroaching into the woodland habitat and whether sympathetic management is required.
5	Protective fencing
6	Creation of wildflower grassland meadow and grassland management.
7	Sympathetic lighting
8	Wildlife features

3.1.2 The management of these elements is intended to fulfil the following aims and objectives:

- Integrate the development with its surroundings;
- Provide mitigation for lost habitat;
- Provide a pleasant environment within the development;
- Provide access to local nature and wildlife; and,
- Contribute to the biodiversity/ecological potential of the area, with the aim of achieving ecological gains for the site.

3.1.3 These aims and objectives will be achieved through the strategies described in section 4.0 of this report and implemented by the management operations detailed in section 5.0.

4.0 STRATEGY

4.1 GENERAL

4.1.1 The potentially adverse environmental impacts resulting from any management operations on site should be minimised including timing operations to avoid disturbance.

4.1.2 All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) during breeding with additional protection from disturbance for those listed on Schedule 1. **Vegetation management** works should be avoided during the active **bird nesting season** (March – September, inclusive) and preferably only to be carried out during January and February when the majority of the berry crop of trees and shrubs has been utilised.

4.1.3 **Badger, reptiles, amphibians and hedgehog** may utilise the site habitats post construction. When undertaking maintenance works which may affect these species the following precautionary working methods should be followed to avoid accidental harm or injury:

- Cuttings from scrub/tree works to be removed from site immediately following cutting unless used to form brash/log piles which are to be retained for biodiversity enhancement. If brash piles are to be kept on site to create valuable dead wood habitat, these should be situated in their permanent location to avoid adverse impact on wildlife;
- Checking surveys to be undertaking if clearance works to be undertaken within dense scrub areas.
- The covering, or providing a means of escape from, any trenches and capping any open pipework at the end of each working day, to prevent accidental harm to wildlife which may access the site;
- Any open excavation or pipe ends to be covered or means of escape provided..
- Checking surveys to be undertaking if clearance works to be undertaken within dense scrub areas;

4.1.4 Operatives carrying out woodland management works should undertake a walkover of the area where management is to take place to assess the presence/absence of badger setts and consult a suitably qualified ecologist where required.

4.1.5 Any mature trees which require **pruning or felling works** should be assessed with respect to their potential to support **roosting bats** prior to works taking place. Consideration will be given to retaining trees/limbs with the potential to support roosting bats where this is not outweighed by health and safety considerations.

4.1.6 The woodland, grassland, shrubs and hedgerow on site provide suitable habitat for foraging and commuting bats, acting as potential flight corridors and connecting the site to suitable adjacent habitats beyond the site boundary. Habitats within the site are to be retained as much as is feasible and any losses are to be mitigated through habitat creation, including:

- Hedgerow planting;
- Over-seeding unaffected grassland with a diverse species mix, translocation of affected grassland habitat within the clearing location of WRs 9 & 10.

- Native tree and shrub planting where possible;

4.1.7 Sympathetic management of the woodland habitat will aim to enhance species and structural diversity and promote standing and fallen dead wood habitats.

4.1.8 New lighting will be appropriately and sympathetically designed including directional and low wattage luminaires to avoid illuminating the areas of planting.

4.1.9 No external lighting is proposed on the terraces of the woodland rooms. Reference should be made to the Bat Conservation Trust publications '*Bats and Artificial Lighting at night*' (2023) 'which includes the following guidelines:

- Remove or minimize artificial lighting close to vegetative commuting corridors;
- Using warm white, narrow spectrum lights (LEDs) with little or no UV;
- Directional lighting with near full horizontal cut off;
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance;
- Use of bollard of low-level downward-directional luminaires should only be considered in specific circumstances due to issues with glare, poor illumination and unacceptable light outputs.

4.1.10 Where possible automated internal black-out blinds will be installed in association with the windows to avoid light spill during times when bats would be active; explanatory materials will be provided to the guests to advise the purpose of the blinds and the need to avoid noise and light within the woodland.

4.2 ELEMENT 1 - EXISTING TREES AND SHRUBS

4.2.1 Existing trees, shrubs and hedgerow to be managed in accordance with arboricultural recommendations (refer to *SF3014-2 Arboricultural Survey report RevE* with corresponding Arboricultural Impact Assessment Plan).

4.2.2 Tree protection fencing must be installed before work on site can be undertaken. *Refer to Woodland & Ecology Monitoring Plan - Part 1 -section 3.1.*

4.2.3 The proposal site for WRs 6-8 is in an area of immature to semi-mature woodland, which is likely to have been previously cleared in association with amenity planting. Where existing individual trees and scrub are retained, they are to be managed to maximise their value to wildlife.

4.2.4 Ash die-back disease (*Hymenoscyphus fraxineus*) is present on site and is likely to cause further loss of ash trees across the site so this situation should be monitored.

4.2.5 Sympathetic removal of non-native shrubs identified within the understorey of the woodland habitat, such as rhododendron *Rhododendron* sp, where considered necessary, to allow the re-establishment of native ground flora and planting of appropriate native shrub. If root removal is required during winter, potential impacts on hibernating reptiles using tree roots (a known slow worm population present in the area) may need to be considered, and further advice from an ecologist sought.

4.2.6 Thinning and replanting required to diversify the canopy species and to mitigate losses of trees to the proposals. Thinning ash, sycamore and hawthorn scrub and carrying out planting of alternative species to build up resilience to the potential impacts of decimation of individual species by pest/disease/climate change.

4.2.7 Trees should be allowed to grow to their natural form and size with formative pruning only, to provide a canopy of attractive, well-shaped, healthy, mature trees.

4.2.8 Species recommended will be appropriate to the woodland habitat identified on site and include those typical of the National Vegetation Community W9 ash *Fraxinus excelsior – rowan Sorbus aucuparia* – dogs mercury *Mercurialis perennis* woodland.

4.2.9 New tree planting within the site includes native tree species considered to be of value to wildlife (i.e. – high yields of pollen, fruits and/or berries).

4.2.10 New trees planted should be free of any diseases.

4.2.11 Any pruning required will follow current best horticultural practice. Sympathetic management of existing and newly planted trees and shrubs should be undertaken to avoid disturbance to breeding birds and hibernating reptiles.

4.2.12 Shrub planting may be pruned to remove material encroaching over footpaths and to encourage vegetative renewal. General pruning should be undertaken to preserve the natural form of plants and their propensity to bear flowers, fruits or exhibit winter stem colour.

4.2.13 Cutting and any pruning operations required should take place during the winter period (i.e. October – February, inclusive) to avoid disturbance during the breeding bird season and ideally between January – February (inclusive), to allow any fruits to be utilised through the early winter.

4.2.14 Refer to sections 5.2-5.9 for further information regarding management and establishment of retained/proposed trees and shrubs.

4.3 ELEMENT 2 – RETAINED AND NEW HEDGEROW PLANTING

4.3.1 Retained hedgerow and new hedgerow planting will be managed to maintain a dense bushy growth to an eventual height of 2m. Each side of the hedgerow will be cut in alternate years, resulting in biennial cutting of each side of the hedgerow. Existing planting will be supplemented with appropriate native species where gaps are currently present subject to management. They should be trimmed to an 'A' profile to encourage dense cover to be maintained at the base. The hedges may be laid in the long term should they become thin or gappy. Where the existing hedgerow forms a boundary, it should be monitored post-development. This includes checking for presence of invasive species and prevention of overshading/spread of undesirable species from adjacent planting.

4.3.2 Species proposed for gap planting include the following: blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium* and hornbeam *Carpinus betulus.*

4.3.3 Hedge cutting and any pruning operations required should take place during the winter period (i.e. October – February, inclusive) to avoid disturbance during the breeding bird season and ideally between January – February (inclusive), to allow any fruits to be utilised through the early winter. Cuttings can be laid in the long term should areas become thin or gappy.

4.3.4 Refer to sections 5.2-5.9 for further information regarding management and establishment of retained/proposed hedgerows.

4.4 ELEMENT 3 - RETAINED GRASSLAND

4.4.1 Semi-improved neutral grassland slope with woodland clearing, location of WRs 9 & 10 occurs to the east of the site adjacent to the immature to semi-mature woodland and areas of dense introduced shrubs.

4.4.2 Translocation of turfs from the clearing, where areas are to be affected by work (i.e. proposed pathways, underneath woodland room platform, etc.) to unaffected areas of the pasture grassland habitat to the south;

4.5 ELEMENT 4 - WILDFLOWER GRASSLAND

4.5.1 Long grass and native wildflower seeding is proposed within the clearing area location of woodland rooms 9 & 10 of the development. This will aim to be visually attractive as well as providing a botanically diverse, invertebrate rich and structurally varied habitat.

4.5.2 Following initial establishment after Year 1, wildflower areas should be cut once annually in August leaving up to a fifth to stand uncut through the winter and cut down and remove the clippings in March the following year, thus providing a habitat for invertebrates and some vertebrates over the winter. Arisings should be removed to reduce nutrient build up and smothering. The cut shall also be made as high as possible (ideally 150mm) with a strimmer or brushcutter, but a varied sward height must also be maintained.

4.6 ELEMENT 5 – GREEN SEDUM ROOF

4.6.1 The proposed WRs will have sedum green roofs as stated by National Park condition 8 (Notice decision of Planning Authority on Application).

4.6.2 Sedum roofs shall be maintained and replaced if necessary.

4.7 ELEMENT 6 - WILDLIFE FEATURES

Bird boxes

4.7.1 For birds the installation of species-specific boxes upon suitable trees within the woodland would aim to provide roosting/breeding for bird species known to be of conservation concern and local bird populations in general. Nest boxes for key species recorded during site survey include tawny owl. Boxes installed within favourable locations would provide breeding opportunities for kestrel, flycatchers, willow tits and redstarts within the wider woodland area.

Hibernacula/habitat piles

4.7.2 To enhance the site for existing reptile/amphibian populations, hibernacula will be created within grassland adjacent to the south site boundary. Hibernacula will be constructed from rubble/organic material and topsoil/turf to provide sheltering and foraging opportunities.

4.7.3 Cut timber to be used on site to create habitat piles within areas of retained habitat (within grassland clearing, location of WRs 9 & 10) to encourage invertebrate diversity and provide a food source for local reptile, amphibian, mammal and bird populations. Cuttings from ongoing tree/shrub management can be used to replenish habitat piles during the months of April, May and October as piles naturally decompose.

4.7.4 Once this feature is naturally established, occasional maintenance may be undertaken if required to maintain an open aspect and prevent encroachment of scrub. This should be undertaken during the active season (April to September) to avoid any impacts upon hibernating reptiles/amphibians/hedgehogs.

5.0 MANAGEMENT OPERATIONS

5.1 PROGRAMME AND NOTIFICATION

5.1.1 The appointed landscaping contractor shall carry out management operations at suitable times and in suitable weather conditions.

5.1.2 The Contractor is required to produce a programme of intended management operations on a yearly basis, at the beginning of each year of the contract.

5.1.3 Refer to Tables 04 - 06 for recommended timings on when management works should be undertaken. The Contractor shall notify the Contract Supervisor before his intention to carry out any of the management operations in order that the work can be checked and approved if necessary.

5.2 GENERAL MAINTENANCE OF TREES AND PLANTED AREAS

5.2.1 Management and maintenance shall cover the following operations (where required), as described in detail in the following sections:

- Plant replacement.
- Removal of tree ties/stakes and guards on establishment.
- Tightening and repairing of ties; re-setting plants to proper grades or upright positions.
- Hand weeding and herbicide spray.
- Fertiliser application.
- Formative pruning, removing epicormic growth and establishing well-formed trees and shrubs.
- Annual application of mulch within the planting areas.
- Retained woodland and trees.
- Wildflower grassland cutting and control of pernicious weeds.
- Bat and bird box inspections.

5.3 PLANT REPLACEMENT

5.3.1 Trees/shrubs/hedgerows shall be inspected in late Summer or Autumn each year and where required, a schedule of replacement planting, for plants which have died or failed to thrive, will be prepared.

5.3.2 The replacement planting shall be carried out by the landscaping contractor during the next appropriate planting period following the inspection.

5.3.3 The procedure specified for the initial planting shall be followed by the landscaping contractor when re-planting.

5.4 TREE STAKE AND GUARD MANAGEMENT

5.4.1 An annual check of tree stakes/ties and guards should be undertaken to assess the requirement for and undertake any adjustments to ensure healthy growth of the plants, to include:

- Refirming of plants and stakes to proper grade and upright position.
- Repair/loosening/removal of ties to maintain support or prevent strangulation.
- Repair/replace/remove tree guards to maintain protection, prevent damage via rubbing and prevent littering of the site with damaged tree guards.

5.4.2 It is anticipated that all plants will have established to an extent to allow stakes and ties to be removed within 3 years of initial planting; however, this should be judged annually on an individual basis.

5.4.3 All removed stakes/ties and guards to be responsibly disposed of.

5.5 HAND WEEDING AND HERBICIDE SPRAY

5.5.1 Existing trees and scrub should not require routine weed control.

5.5.2 Selective weed control of invasive perennials by hand or directed herbicide application (e.g., weed wipe) may be required and should be assessed on an individual basis as required. Any herbicide use (to be suitable for use and appropriately authorised) should be undertaken in accordance with the manufacturer's instructions, using appropriately qualified operatives.

Table 03: Recommended weed control by habitat

Planting/habitat/ type	Notes	Coverage
New native shrub planting	Weed control and removal by hand or herbicide spray.	500mm radius around each plant
New hedgerow planting	Weed control and removal by hand or herbicide spray.	Throughout the hedge line
Individual tree planting	Weed control and removal by hand or herbicide spray.	500mm radius around each plant
Wildflower grassland	Selective weed control of invasive perennials by hand or directed herbicide application (e.g. weed wipe).	Selective only

5.6 FERTILISER APPLICATION

5.6.1 Where necessary, fertilisers may be used to assist with maintaining healthy habitat areas. However, use of fertilisers should be minimised and should only comprise natural/organic products. No fertiliser should be applied to wildflower grassland habitats.

5.7 TREE PRUNING/REMOVAL

5.7.1 Trees are to be inspected by an operative with arboricultural knowledge for any dead, damaged, diseased, or crossing wood and epicormic growth which would be detrimental to the health of the trees or could pose a health and safety risk.

5.7.2 Pruning of trees should be based on best practice for each species concerned and undertaken according to good horticultural practice. All pruning should be undertaken to preserve the natural form of plants and their propensity to bear flowers, fruits or exhibit winter stem colour.

5.7.3 Pruning of trees and shrubs should take place during the winter period (i.e. October – February, inclusive) to avoid disturbance during the breeding bird season and ideally between January – February (inclusive), to allow any fruits to be utilised through the early winter.

5.8 MULCH APPLICATION

5.8.1 Where mulch is provided to protect plants and suppress weed growth, this shall be maintained and reinstated on a yearly basis until the respective areas have achieved a closed canopy (anticipated 5 years from planting date).

5.9 RETAINED TREES AND SHRUBS

5.9.1 Management of retained trees and scrub is to be limited to those works which are required for health and safety or those recommended by an arboriculturist.

5.9.2 Management should also seek to maximise their value to wildlife, allowing them to grow to their natural size and form and allow various structural layers to form within the woodland (e.g., well-developed understorey and groundcover).

5.9.3 Management regime to be encouraged, such as micro habitat sites for birds, mammals and insects e.g presence of deadwood, cavities or loose bark etc;

5.9.4 The retained plantation woodland will be specifically managed to increase the value for biodiversity. This will comprise:

- Scrub growth should be monitored every two years, to ensure that scrub does not dominate and outcompete ground flora. Similarly, if any stands of ruderal species such as thistles, nettles and willowherbs should also be monitored to avoid domination. Where scrub and / or ruderals are becoming more dominant, clearance of approx. 1/3 of the scrub and / or ruderal stands should be undertaken.

5.10 RETAINED GRASSLAND/WILDFLOWER GRASSLAND

5.10.1 First year: Wildflower/retained grassland areas should be cut 4/5 times to reduce competition from grasses and control weeds. Cut to a height of 50mm every two months. All cut material to be removed to reduce nutrient build up and smothering.

For Autumn sowing: first cut to be March/April - final cut to be September/October.

For Spring sowing: first cut to be May – final cut to be September/October.

5.10.2 Subsequent years: Wildflower/retained grassland areas shall be cut once annually in August leaving up to a fifth to stand uncut through the winter and cut down and remove the clippings in March the following year, thus providing a habitat for invertebrates and some vertebrates over the winter. During cutting visits, areas of bare ground should also be created and should comprise between 1-5% of the grassland area.

5.10.3 General: Vegetation shall be cut in the direction of unaffected sections of grassland habitat. The cut shall also be made as high as possible (150mm) and a strimmer or brushcutter shall be used, but a varied sward height must also be maintained.

5.10.4 Weeding: Selective/spot weeding can be undertaken by hand with an appropriate and authorised herbicide / spot applicator (e.g. weed wipe) to remove aggressive/invading weed species.

5.11 BAT AND BIRD BOXES

5.11.1 Bird boxes installed within retained mature trees will be cleaned every year, outside of the nesting bird period (i.e. avoiding March – September, inclusive). Old nesting material may be removed, and boxes can be cleaned with boiling water (if required). Bird box cleaning should be undertaken by the appointed landscape maintenance contractor or by an ecologist.

5.11.2 Please note, once bat boxes are installed, they should only be subject to maintenance by or under the supervision of an appropriately licensed ecologist.

5.12 MANAGEMENT OPERATIONS POST-DEVELOPMENT

5.12.1 The below tables identify timings of management operations during Years 1-5.

Table 04: Habitat Objectives: current and target condition assessments

BEMP Element Ref	Habitat/Ecological Feature to be impacted/retained /enhanced/ created within proposals	Existing condition	Condition criteria failures	Target condition	Proposed mitigation and enhancement measures (to achieve target condition where appropriate)	Key indicators for measuring success	Potential actions if failure of measures identified
1	Existing trees within the site boundary and grassland area. Refer to Arboricultural survey report	Varied	Habitat retained and managed in accordance with Arboricultural report recommendations				
	Tree planting	N/A		Moderate	N/A	Healthy form through formative pruning and growth to natural form and size	Removal of dead or damaged trees and replacement planting where required. Monitor for disease, crossing wood and epicormic growth by arboricultural professional
2/3	Existing hedgerow-beech hedgerow	Moderate Good	N/A	Moderate to Good	Habitat retained and managed in accordance with report recommendations. Both hedgerows are located in proximity to residential gardens and they may be subject to pruning by homeowners.		N/A
	New hedgerow planting Ornamental species planting	N/A N/A		Moderate Good	Native species-rich mix including berry-bearing species for wildlife value. Supplementary native planting and laying to gap up existing hedgerows and strengthen as a linear feature. Time to target condition 10 years N/A	Bushy growth form for entire length of feature. Successful establishment of ground flora and supplementary canopy layers. Absence of invasive species.	Inspection to remove litter. Monitor for presence of undesirable/invasive species. Appropriate pruning/cutting. Hedge laying where form has become thin or gappy.
4	Existing neutral grassland	Moderate	Criteria failures due to limited species diversity .	Good	Increase species diversity by supplementing with sowing of wildflowers. Encourage varied sward height through selective cutting and introduction of yellow rattle within the sward	Quadrat surveys to indicate increased species diversity. Monitoring to ensure cotoneaster control successful.	Inspection to remove litter and encroaching scrub if present. Monitor for damaged areas and presence of undesirable/invasive species.
5	Wildflower grassland	N/A		Good	Time to target condition 10 years		
6	Wildlife features	N/A			Installation of bat and bird boxes across site. Habitat piles creation in suitable habitat. Habitat piles to encourage invertebrate diversity. Hedgehog highways to provide connectivity throughout development	Successful occupation of bat/bird boxes. Monitoring of occupation optional, inspections of bat boxes must be undertaken by a licenced bat worker.	Monitor for damage and replacement where required.

Table 05: Management operations – years 1-3

<table>
<tr><th></th><th colspan="2">Jan Feb</th><th>March</th><th>April</th><th>May</th><th>June</th><th>July</th><th colspan="2">Aug Sep</th><th>Oct</th><th>Nov</th><th>Dec</th></tr>
<tr><td>New tree planting</td><td colspan="2">Formative pruning only if required.</td><td rowspan="2"></td><td rowspan="2">Fertiliser application and mulch reinstatement</td><td colspan="3" rowspan="2"></td><td colspan="2">Check for dead plants and adjust tree ties / stakes as required.</td><td rowspan="2"></td><td rowspan="2">Replacement planting as required.</td><td rowspan="2"></td></tr>
<tr><td>Native hedgerow planting</td><td colspan="2">Annual cut to maintain a height of 2-3m.</td><td colspan="2">Check for dead plants, invasive species and litter.</td></tr>
<tr><td>Wildflower grassland (year 1)</td><td colspan="2" rowspan="2"></td><td colspan="3">Seeds can be sown in the first year.
If seeds sown in the autumn cutting can be undertaken in early Spring in succeeding years.</td><td colspan="2"></td><td>Cut to 50mm to suppress pernicious weeds. Cuttings to be removed from site.</td><td colspan="2">Seeds can be sown in the first year. If sown in Spring in the first year cutting can be undertaken through until the end of March of the following year.</td><td colspan="2" rowspan="2"></td></tr>
<tr><td>Wildflower grassland (year 2-3)</td><td colspan="3">Early season cut to suppress pernicious weeds. Cuttings to be removed from site.</td><td colspan="4"></td><td colspan="2">End of season cut following seed set to 150mm. Cuttings to be removed from site.</td></tr>
<tr><td rowspan="2">Native shrub planting</td><td colspan="10">Formative pruning as per species specifications if required.</td></tr>
<tr><td colspan="2">Formative pruning only if required.</td><td></td><td>Fertiliser application and mulch reinstatement</td><td colspan="3"></td><td colspan="2">Check for dead plants.</td><td></td><td>Replacement planting as required.</td><td></td></tr>
<tr><td>Watering</td><td colspan="2"></td><td></td><td colspan="6">As required.</td><td colspan="3"></td></tr>
<tr><td>Bat boxes</td><td colspan="11">No maintenance required.</td></tr>
<tr><td>Bird boxes</td><td colspan="8">No maintenance required.</td><td colspan="3">Cleaning advised but not essential</td></tr>
<tr><td>Habitat piles</td><td colspan="2">Disturbance to be avoided</td><td colspan="7">Cuttings from ongoing tree/shrub management can be used to replenish piles</td><td>Disturbance to be avoided</td></tr>
<tr><td>Amphibian/reptile hibernacula</td><td colspan="2">Disturbance to be avoided</td><td colspan="7">Occasional maintenance may be undertaken if required to maintain an open aspect and prevent encroachment of scrub</td><td>Disturbance to be avoided</td></tr>
</table>

Table 06: Management operations – years 4-5

	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
New tree planting	Formative pruning only if required.			Fertiliser application and mulch reinstatement				Check for dead plants and adjust tree ties / stakes as required.			Replacement planting as required.	
Native hedgerow planting	Annual cut to maintain a height of 2-3m.			Fertiliser application and mulch reinstatement				Check for dead plants, invasive species and litter.			Replacement planting as required.	
Wildflower grassland (year 4-5)				Early season cut to suppress pernicious weeds. Cuttings to be removed from site.					End of season cut following seed set to 150mm. Cuttings to be removed from site.			
Native shrub planting	Formative pruning as per species specifications if required.											
				Fertiliser application and mulch reinstatement				Check for dead plants.			Replacement planting as required.	
Watering				As required.								
Bat boxes (year 5)				Periodic inspection by licenced bat worker. (April OR October)						Periodic inspection by licenced bat worker. (April OR October)		
Bird boxes	No maintenance required.									Cleaning advised but not essential		
Habitat piles	Disturbance to be avoided		Cuttings from ongoing tree/shrub management can be used to replenish piles								Disturbance to be avoided	
Amphibian/reptile hibernacula	Disturbance to be avoided		Occasional maintenance may be undertaken if required to maintain an open aspect and prevent encroachment of scrub								Disturbance to be avoided	

6.0 REFERENCES

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APPENDIX

Appendix 01: Legislation Notes: Protected Species

APPENDIX 01: LEGISLATION NOTES: PROTECTED SPECIES

Bats

Bats and their roosts are afforded full legal protection under both UK and European legislation. Conservation of Habitats and Species Regulations 2017 transpose the Habitats Directive into UK law, making it an offence to:

- deliberately disturb a bat;
- deliberately kill, injure or capture a bat;
- damage, destroy or obstruct access to a breeding site or resting place (note this applies to both deliberate and reckless actions).

The Wildlife and Countryside Act 1981 (as amended) (Schedule 5) made it an offence to:

- intentionally kill, injure or take a bat ;
- damage, destroy or obstruct a bat roost *;
- disturb a bat at a roost *;
- possess or control a bat or any part thereof;
- sell, offer for sale, possess or transport for sale any bat or part thereof;
- set traps for catching, killing or injuring bats;
- possess articles for the purposes of committing offences against bats;

[*= intentional and reckless offences covered].

Legal protection under the Habitats Directive applies to the animals and their breeding sites and resting places. This means that bat roosts are fully protected, whether they are in use at the time or not. Where roosts or resting/breeding sites are identified, any works which may contravene the protection afforded to them require derogation from the provisions of the legislation in the form of a licence from Natural England.

Breeding birds

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built or,
- take or destroy an egg of any wild bird.

This protection applies from the moment the nest is being built. Additional protection against disturbance on the nest or of dependent young is provided for birds included on Schedule 1.

Badger

Badgers and their setts are protected by the Protection of Badgers Act 1992. Under the Act it is illegal to:

- Wilfully kill, injure or take a badger or attempt to do so;
- Cruelly ill-treat a badger; and,
- Interfere with a sett by doing any of the following:

  (i) damaging a badger sett or any part of it;

  (ii) destroying a badger sett;

  (iii) obstructing access to a badger sett;

  (iv) causing a dog to enter a sett; and,

  (v) disturbing a badger while it is occupying a sett.

Reptiles

The Wildlife and Countryside Act 1981 makes it an offence to intentionally kill any of our native snakes and lizards. The sand lizard and smooth snake receive additional protection; for these species, it is unlawful to capture or possess them, or to damage/obstruct access to places they use for shelter or protection, or to disturb them whilst in such a place.