



BIODIVERSE
CONSULTING

KINGS MEADOW, BRECON

**LANDSCAPE AND ECOLOGICAL
ENHANCEMENT AND MANAGEMENT
PLAN**

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CONTENTS

CONTENTS	4
1 INTRODUCTION	6
1.1 CONTEXT	6
1.2 SITE LOCATION & DESCRIPTION	6
1.3 PLAN OBJECTIVES	7
1.4 THE DEVELOPMENT	7
1.5 ROLES AND RESPONSIBILITIES	7
1.6 POST DEVELOPMENT HABITAT PROPOSALS	7
2 HABITAT RETENTION	9
2.1 BROADLEAVED WOODLAND AND LINE OF TREES	9
2.2 RIVER	10
3 HABITAT CREATION	11
3.1 MODIFIED GRASSLAND	11
3.2 MIXED SCRUB	Error! Bookmark not defined.
3.3 INDIVIDUAL URBAN TREES	14
3.4 NATIVE HEDGEROWS	14
3.5 INTRODUCED SHRUB	15
4 PROTECTED SPECIES	18
4.1 BIRDS	18
4.2 BATS	18
4.3 REPTILES & AMPHIBIANS	19
4.4 OTTERS	19
5 MANAGEMENT & MONITORING STRATEGY	21
5.1 GENERAL MANAGEMENT	21
5.2 MODIFIED GRASSLAND	21
5.3 MIXED SCRUB	Error! Bookmark not defined.
5.4 INDIVIDUAL URBAN TREES	23
5.5 NATIVE HEDGEROWS	25
5.6 INTRODUCED SHRUB	25
5.7 HABITAT MONITORING AND ADAPTIVE MANAGEMENT	26
APPENDICES	28
APPENDIX A – LANDSCAPE PLANS	29



APPENDIX B – MANAGEMENT AND MONITORING SCHEDULE	30
APPENDIX C – NEST BOX SPECIFICATIONS	34

1 INTRODUCTION

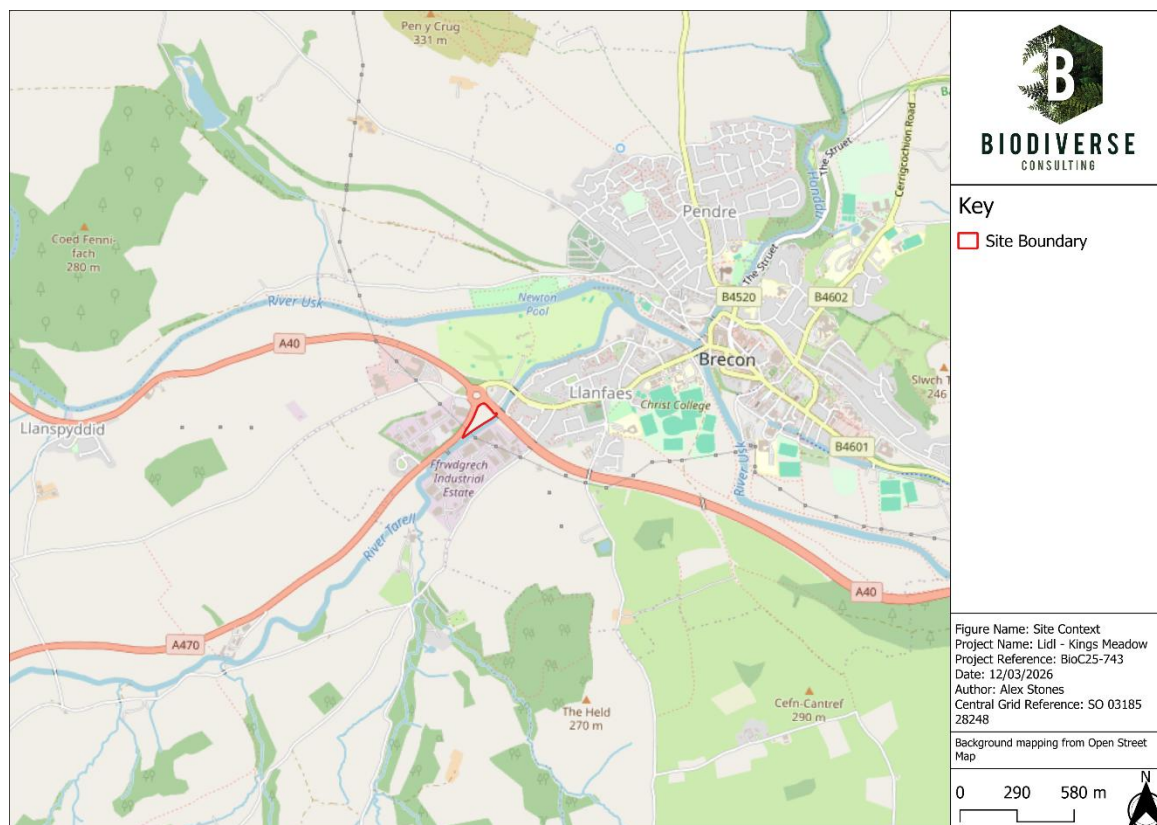
1.1 CONTEXT

Biodiverse Consulting Ltd. has been commissioned to produce a Landscape and Ecological Enhancement and Management Plan (LEEMP) for Kings Meadow, Warren Road, Brecon, LD3 8BT. This LEEMP is informed by the Landscape Masterplan¹ (drawing number CA-2026-BRKM-03, Appendix A). This report builds on the initial findings with the Preliminary Ecological Appraisal (PEA)². The further surveys recommended within the PEA will be completed in the 2026/2027 survey season and will inform further recommendations for mitigation and compensation to be outlined within an EcIA.

1.2 SITE LOCATION & DESCRIPTION

The Site is located at Kings Meadow, Brecon, LD3 8LA at a central grid reference of SO 03185 28248 as illustrated in Figure 1. The 1.18ha Site currently consists of grassland, woodland, scrub, lines of trees and hardstanding. The Site is currently unused and is not open to public access.

FIGURE 1: SITE LOCATION



¹ Corscadden Associates (2026) Proposals Overall

² Biodiverse Consulting (2026) Preliminary Ecological Appraisal



1.3 PLAN OBJECTIVES

The objectives of this report are to provide requested additional information in preparation for Pre-Application Consultation associated with application number: 26/24544/PAYPRE as requested by Bannau Brycheiniog National Park Authority:

‘A Landscape and Ecological Enhancement and Management Plan (LEEMP) will be needed to tie together landscaping and biodiversity enhancements along with provision for their long-term management.’

In order to achieve this, the objectives of this plan are:

- To detail the methodology for the retention and creation of habitats within the Site.
- To set out the management and monitoring requirements for retained and created habitats.
- To establish a framework for ecological monitoring and adaptive management.

1.4 THE DEVELOPMENT

The proposed development comprises a retail supermarket, car park and associated infrastructure. The current landscaping proposals are shown on drawing CA-2026-BRKM-03 in Appendix A. To facilitate the development, the following habitats are expected to be lost:

- Individual Tree (T1)
- Other Neutral Grassland
- Lowland Mixed Deciduous Woodland
- Line of Trees

1.5 ROLES AND RESPONSIBILITIES

The implementation of habitat creation and ongoing management operations will be undertaken by the Site operator (Lidl GB) or a suitably qualified landscape contractor or ecological contractor appointed by the Site operator.

Habitat monitoring of created habitats (scrub, grassland, and trees) and retained habitats (Woodland, river and treelines) will be undertaken by a qualified ecologist on behalf of the Site operator and be continued for at least 10 years post-construction.

The Site operator will retain overall responsibility for ensuring that works are carried out in accordance with this LEEMP.

1.6 POST DEVELOPMENT HABITAT PROPOSALS

The locations of retained and created habitats are shown in the post-development Landscape Masterplan (Appendix A).



1.6.1 Habitat Retention

Ecological and landscape features that will be retained within the Site, which require management, are:

- Lowland Mixed Deciduous Woodland
- Line of Trees
- River

1.6.2 Habitat Creation

New habitat creation forms part of the on-site ecological mitigation for the development. This LEEMP sets out the establishment and maintenance requirements for all new planting within the Site. The habitats to be created are:

- Native Blocked and Associated Tree Planting
- Individual Trees
- Native Hedgerows
- Introduced Shrub
- Modified Grassland



2 HABITAT RETENTION

The following section details onsite habitat retention methods and considerations for the habitats proposed to be retained onsite. These methods are designed to guide the retention of habitats in conjunction with methodologies used by contractors undertaking habitat creation.

2.1 BROADLEAVED WOODLAND AND LINE OF TREES

The following habitats will be retained as part of the development proposals:

- Lowland Mixed Deciduous Woodland located to the south of the Site.
- Line of trees located at the north-eastern Site boundaries.

Considerations

- All retained woody vegetation will be protected in accordance with the recommendations contained within the Arboricultural Survey Reports, together with the associated Tree Protection Plan.
- Retained, restored Ancient Woodland will be protected by a conservation fence and buffer planting.
- Development of this Site will increase disturbance during construction and operation, with potential effects on sensitive receptors, such as the woodland, treeline and a section of the River Tarell (tributary of River Usk SAC). This will be mitigated by installing protective fencing around the retained habitats as well as following species-appropriate method statements detailed within the CEcMP.

Retention Methodology

- The development will require removal of part of the southern woodland because of the constrained nature of the Site. After the initial clearance works, no further encroachment into retained woodland will be permitted. Protective fencing will define the retained conservation areas, which will remain inaccessible to construction personnel and, once the Site is operational, to members of the public.
- During the construction phase, measures will be implemented to prevent both direct and indirect impacts on retained woodland and trees. Protective fencing will be installed in accordance with the approved Tree Protection Plan to establish exclusion zones around retained features, including their Root Protection Areas (RPAs). No excavation, soil stripping, changes in ground level, storage of materials, vehicle access or other construction activities will be permitted within these exclusion zones.



- Indirect impacts, including soil compaction, contamination, alterations to drainage and accidental damage, will be minimised through adherence to the approved Arboricultural Method Statement, adherence to best practice construction protocols and toolbox talks.
- Pollution Prevention measures will also be detailed within a CEMP that will include measures to avoid surface water run-off of dust and construction materials into the Woodland and adjacent River Tarell.
- During the operational phase, retained habitats will be managed in accordance with the relevant habitat creation and management methodologies set out in Sections 3 and 4.

2.2 RIVER

The existing river will be retained in its current condition as part of development proposals.

Considerations

- The river is used by otters, with multiple otter field signs being observed within and around the watercourse from initial survey data.
- A HRA and detailed CEMP will be produced, containing information on method statements and mitigation strategies to protect vulnerable receptors during the construction and development phases of this project. Once the full survey of riparian mammals is completed an accurate assessment of the impacts to the SAC and its designated features will be provided.

Retention Methodology

- No works will encroach into the retained river or its banks. The retained woodland will provide a buffer between the development and the watercourse, and practicable measures will be implemented to avoid impacts during construction.
- During the construction phase, measures will be implemented to prevent both direct and indirect impacts on the river. Protective fencing will be installed around the woodland buffer zone, as mentioned above. Species-specific risk avoidance measures and working methods, as required by the Council and as set out in the Preliminary Ecological Appraisal. Refuelling and fuel storage will take place at least 10m from the conservation fence boundary, and construction and refuelling activities with a risk of sediment or contaminated runoff will not be undertaken during or immediately following heavy rainfall.
- During the operational phase, retained habitats will be broadly managed in accordance with the relevant habitat creation and management methodologies set out in Sections 3 and 4.



3 HABITAT CREATION

The following section details onsite habitat creation methods and considerations. These methods are designed to guide the creation of habitats in conjunction with methodologies used by contractors undertaking habitat creation.

3.1 MODIFIED GRASSLAND

Objectives

- Ensure the successful establishment of Modified Grassland parcels as amenity features.

Required Species

Modified grassland areas will be sown with M1 Standard General Purpose Meadow Mix sowed at a rate of 4gms per m² and EG1 General Purpose Meadow Grass Mix sowed at a rate of 5gms per m².

M1 Standard General Purpose Meadow Mixture

- | | |
|--|---|
| • Common bent <i>Agrostis capillaris</i> | • Smaller cat's tail <i>Phleum bertolonii</i> |
| • Crested dogtail <i>Cynosurus cristatus</i> | • Smooth-stalked meadow grass <i>Poa pratensis</i> |
| • Slender creeping red fescue <i>Festuca rubra</i> | • Musk mallow <i>Malva moschata</i> |
| • Common knapweed <i>Centaurea nigra</i> | • Ribwort plantain <i>Plantago lanceolata</i> |
| • Wild carrot <i>Daucus carota</i> | • Salad burnet <i>Poterium sanguisorba</i> spp <i>snaguisorba</i> |
| • Lady's bedstraw <i>Galium verum</i> | • Yellow rattle <i>Rhinanthus minor</i> |
| • Ox eye daisy <i>Leucanthemum vulgare</i> | • Red campion <i>Silene dioica</i> |

EG1 General Purpose Meadow Grass Mix

- | | |
|--|--|
| • Common bent <i>Agrostis capillaris</i> | • Smaller cat's tail <i>Phleum bertolonii</i> |
| • Crested dogtail <i>Cynosurus cristatus</i> | • Smooth-stalked meadow grass <i>Poa pratensis</i> |
| • Slender creeping red fescue <i>Festuca rubra</i> | |

Ground Preparation

- Prior to sowing, areas shall be cleared of construction debris, cultivated to create a fine, firm and level seedbed. Any invasive non-native species or injurious weeds shall be removed prior



to seeding. Following sowing, the ground shall be lightly rolled or consolidated to ensure good seed-to-soil contact.

Creation Methodology

- Modified grassland shall be established using Germinal A19 All Purpose Landscaping Mix (or similar approved), sown at a rate of 50 g/m² during suitable weather conditions in either spring (March–May) or autumn (August–October).
- All works are to be carried out when soil and weather conditions are suitable.

3.2 NATIVE BLOCKS AND ASSOCIATED TREE PLANTING

Objectives

- The native blocks and associated trees and existing riverbank are to be isolated from general access to carpark and store to form a continuous nature conservation area for floral and fauna conservation areas 1,2 and 3. Adjust species list from planting schedule. To be maintained at 70%.
- Ensure ongoing regeneration and prevent succession to closed canopy woodland where not desired.
- Extend adjacent woodland areas and act as a buffer between the Site and the conservation area to the south.

Required Species

All native planting blocks will be sown with M1 Standard General Purpose Meadow Mix. Native plants within each block will be spaced at either 1.0 m or 1.2 m centres, as specified for each location on the landscape planting plan.

M1 Standard General Purpose Meadow Mixture

- | | |
|--|---|
| • Common bent <i>Agrostis capillaris</i> | • Smaller cat’s tail <i>Phleum bertolonii</i> |
| • Crested dogstail <i>Cynosurus cristatus</i> | • Smooth-stalked meadow grass <i>Poa pratensis</i> |
| • Slender creeping red fescue <i>Festuca rubra</i> | • Musk mallow <i>Malva moschata</i> |
| • Common knapweed <i>Centaurea nigra</i> | • Ribwort plantain <i>Plantago lanceolata</i> |
| • Wild carrot <i>Daucus carota</i> | • Salad burnet <i>Poterium sanguisorba</i> spp <i>snaguisorba</i> |
| • Lady’s bedstraw <i>Galium verum</i> | • Yellow rattle <i>Rhinanthus minor</i> |
| • Ox eye daisy <i>Leucanthemum vulgare</i> | • Red campion <i>Silene dioica</i> |

Native block planting mix



- Field maple *Acer campestre*
- Hawthorn *Crataegus monogyna*
- Hazel *Corylus avellana*
- Dogwood *Cornus sanguinea*
- Holly *Ilex aquifolium*
- Wild privet *Ligustrum vulgare*
- Crab apple *Malus sylvestris*
- Blackthorn *Prunus spinosa*
- Dogrose *Rosa canina*
- Bramble *Rubus fruticosus*
- Elder *Sambucus nigra*
- Guelder rose *Viburnum opulus*

Considerations

- Individual whips will be protected using biodegradable spiral guards/tubes to prevent browsing by animals.
- Native blocks will be managed to provide additional buffer habitat to sensitive ecological features including the woodland, river and tree lines.
- Up to 30% of whips may not establish and therefore supplementary planting will be required to achieve the desired density of mixed scrub over the longer term.
- native blocks are seeded with mulch circles round native plants. No underplanting but allow natural colonisation after year 3.

Ground Preparation

- All plants must be planted within the next available planting season post-construction. All planting works shall be carried out between the first week in October and/or the first week of March.
- Planting should only be carried out if weather and ground conditions are suitable. No planting shall be carried out when the ground is frozen, covered in snow, or waterlogged.

Creation Methodology

- Scrub stock size to be determined by the contractor based on an assessment of nursery stock/provenance availability and a risk assessment of conditions at the time of planting, likely to comprise bare root seedlings, transplants or whips.
- All plants will be fitted with appropriate guards/shelters to prevent damage from voles, rabbits, hares or deer as determined by the tree planting contractor at the time of planting depending on site conditions, visual impact and risk of damage. Guards will have suitable support (i.e. stakes or canes appropriate to their size to maintain the guard in position).
- All planting and operations should comply with the latest version of BS4428 'General Landscape Operations' (BSI, 1989) and BS 3936 'Nursery Stock - Specification for Trees & Shrubs' (BSI, 1992).



- Prior to planting, the planting areas must be cleared of rubbish, concrete, metal, glass, decaying vegetation and contaminated topsoil. Substances injurious to plant growth including rubble, fuel and lubricants must also be removed.

3.3 INDIVIDUAL URBAN TREES

Objectives

- Plant individual trees ensuring joint value for biodiversity and visual amenity.
- Ensure successful establishment within the first five years through appropriate aftercare.
- Promote long-term health, resilience and structural diversity of the urban tree stock.
- Provide habitat for roosting and resting bats.

Required Species

- | | |
|---|--|
| • Field maple <i>Acer campestre Elegans</i> | • Hawthorn <i>Crataegus monogyna</i> |
| • Alder <i>Alnus glutinosa</i> | • Pedunculate oak <i>Quercus robur</i> |
| • Hornbeam <i>Carpinus betulus Lucas</i> | • Sycamore <i>Acer pseudoplatanus</i> |

Considerations

- In the first years trees must be watered frequently, particularly during the summer or any other dry periods with little rainfall to ensure successful establishment.
- There is potential for some trees to fail to establish and therefore supplementary planting over the following three years will be required.

Creation Methodology

- Pas 100 Green Compost to be worked into top 150mm topsoil
- 75mm back mulch for 1.00m diameters
- Nursery stock trees will be planted within the optimal tree planting season (October to March inclusive).
- General-purpose slow-release fertiliser and Tree Planting and Mulching Compost to be incorporated into the top 150 mm of topsoil.
- Suitable wooden stakes with biodegradable guards will be used to support and protect the trees.
- Weeds will be controlled around the base of the trees by applying organic mulch (75 mm depth in a 0.8 m buffer around trees). To be applied early summer until trees are successfully established (minimum 5 years).

3.4 NATIVE HEDGEROWS

Objectives



- Create Native Hedgerow throughout the Site to provide a foraging resource for a range of fauna such as invertebrates, small mammals, and birds via provision of nectar, pollen, and fruits.

Required Species

Hedgerows vary from single row, double rows and triple rows according to location. Hedge plants are planted at 0.30m centres and where double or triple rows staggered with 500mm between rows.

- | | |
|--------------------------------------|---------------------------------------|
| • Field maple <i>Acer campestre</i> | • Hazel <i>Corylus avellana</i> |
| • Honrbeam <i>Carpinus betulus</i> | • Dogwood <i>Cornus sanguinea</i> |
| • Hawthorn <i>Crataegus monogyna</i> | • Blackthorn <i>Prunus spinosa</i> |
| • Holly <i>Ilex aquifolium</i> | • Guelder rose <i>Viburnum opulus</i> |

Considerations

- In the first years trees must be watered frequently, particularly during the summer or any other dry periods with little rainfall to ensure successful establishment.
- There is potential for some trees to fail to establish and therefore supplementary planting over the following three years will be required.

Creation Methodology

- Native hedgerow planting shall be undertaken in accordance with the approved planting schedule and landscape plans.
- Planting shall take place during the dormant season (November to March) in suitable ground conditions, avoiding waterlogged or frozen soils.
- Hedgerows shall be planted as a double staggered row at appropriate densities to ensure a dense, continuous hedgerow structure upon establishment.
- Hedge plants to be protected with appropriate guards.

3.5 INTRODUCED SHRUB

Objectives

- Ensure the successful establishment of introduced shrubs as amenity features.

Required Species

- | | |
|--------------------------------------|---------------------------------------|
| • Field maple <i>Acer campestre</i> | • Hazel <i>Corylus avellana</i> |
| • Honrbeam <i>Carpinus betulus</i> | • Dogwood <i>Cornus sanguinea</i> |
| • Hawthorn <i>Crataegus monogyna</i> | • Blackthorn <i>Prunus spinosa</i> |
| • Holly <i>Ilex aquifolium</i> | • Guelder rose <i>Viburnum opulus</i> |



Creation Methodology

- Excavate planting beds to a depth of 600mm. Excavation to be adjusted where planting beds close to Root Protection Areas.
- Break up ground under to a depth of 300mm.
- Spread 300mm depth of existing subsoil and 300mm depth of existing topsoil over area.
- Cultivate planting beds and work in Green Compost, 50mm layer spread over area to full topsoil depth. Remove any debris arising from cultivations.
- Supply and lay a geotextile weed membrane with a minimum overlap of 200mm and holes cut for planting. Sufficient pins to be installed to prevent membrane lifting.
- Supply and plant the plants as specified
- Supply and spread a layer of slate mulch 40mm deep over the planting bed areas.
- Water plants thoroughly after planting
- Management maintenance and defects replacement for years 1-5
- All planting operations shall be undertaken in accordance with good horticultural practice and the relevant requirements of BS4428 and BS3936 (where applicable).

3.6 RAIN GARDEN

Objectives

- Establish and maintain a native, species-diverse wetland habitat.
- Ensure planting is appropriate to hydrological conditions, with species tolerant of periodic inundation and fluctuating water levels.
- Deliver biodiversity benefits alongside functional drainage performance.

Required Species

- Iris iris Tropic Night
- Form of mahonia *Mahonia Caress*
- Dogwood *Cornus sanguinea*
- Dwarf euonymus *Euonymus Harlequin*

Considerations

- Construction activities should avoid soil compaction in the planting area, as this will reduce infiltration and vegetation establishment success.

Ground Preparation

- Prior to seeding, all existing weeds shall be removed through repeated cultivation. The ground shall then be harrowed or raked to produce a medium tilth, and rolled or firmed by treading to create a stable seedbed.
- Rain garden shall be protected against erosion throughout the establishment period until vegetation is fully established. Fully biodegradable erosion control matting shall be



installed on side slopes, channel bases and other areas susceptible to concentrated surface water flows.

Creation Methodology

- Sowing shall be undertaken during early autumn or spring when soil conditions are suitable and free draining. Seed shall be surface sown, either mechanically or by hand, in accordance with the approved seed specification.



4 PROTECTED SPECIES

This section sets out enhancement, mitigation and compensation for the following protected and priority species and species groups:

4.1 BIRDS

Breeding bird surveys are anticipated to be undertaken in the 2027 survey season and detailed recommendations will be included within an EclA. The below recommendations are based on the initial PEA and likely impacts from the development.

A total of three bird boxes (1B Schwegler or similar) will be incorporated into the retained trees and woodland to increase nesting opportunities for birds on Site. All bird boxes should be installed between 4m above ground in a variety of locations. Approximate locations and number of boxes will be informed by further survey.

Current landscaping plans provide suitable commuting and foraging habitat for birds, along the boundaries of the Site, particularly to the south and east within the woodland conservation zone. Bird boxes will be located adjacent to suitable foraging habitat to provide suitable connectivity between the roost boxes and the commuting and foraging habitat.

All bird boxes should be installed during construction prior to occupation of the Site and locations should be confirmed by a Suitably Qualified Ecologist (SQE) prior to their installation. The bird boxes should be cleaned once a year outside of the nesting season (March - August) to ensure the nest box remains functional. Cleaning should be undertaken using boiling water to remove any harmful parasites that may be within the box.

4.2 BATS

Nighttime bat walkover and vantage point surveys are anticipated to be undertaken in the 2027 survey season and detailed recommendations will be included within an EclA. The below recommendations are based on the initial PEA and likely impacts from the development.

The loss of the veteran oak tree (T1) will reduce bat roosting opportunities onsite. To mitigate this, individual tree planting featuring oak as an important component will occur onsite and offsite. Furthermore, A total of three (Schwegler 2F-DFP or similar) will be incorporated into the retained woodland to increase roosting opportunities for bats on Site. All bat boxes should be installed 4m above ground in a variety of locations preferably facing as southernly as possible and away from artificial light sources. Approximate locations and number of boxes will be informed by further



survey. External lighting will follow Bat Conservation Trust (BCT) Good Practice Guidelines³ to minimise disturbance to local bats.

Current landscaping plans provide suitable bat commuting and foraging habitat for bats along the boundaries of the Site, particularly to the south and east within the woodland conservation zone. Bat boxes will be located adjacent to suitable foraging habitat to provide suitable connectivity between the roost boxes and the commuting and foraging habitat.

All bat boxes should be installed during construction prior to occupation of the Site and locations should be confirmed by a SQE prior to their installation. Once the boxes are installed, they can be left in situ and do not require maintenance. If the box needs to be moved once installed or maintenance to the building is required close to the box, a licensed bat ecologist should inspect it. If the box is in use, a licence from Natural Resources Wales may be required before works proceed.

4.3 REPTILES & AMPHIBIANS

Reptile surveys are anticipated to be undertaken in the 2027 survey season and detailed recommendations will be included within an EclA. The below recommendations are based on the initial PEA and likely impacts from the development.

To compensate for loss of deadwood habitat, removed trees and appropriate woody shrubs should be retained on Site as log piles to provide suitable refugia habitat for reptiles and amphibians. Approximate locations of log piles and hibernacula have been identified in Appendix A.

Current landscaping plans provide suitable commuting and foraging habitat for reptiles and amphibians along the boundaries of the Site, particularly to the south and east within the woodland conservation zone. Log piles and hibernacula will be located within mixed scrub, adjacent to suitable foraging habitat to provide a protective habitat and suitable connectivity between the refugia and the commuting and foraging habitat.

All refugia should be installed during construction prior to occupation of the Site and locations should be confirmed by a SQE prior to their installation. Once the refugia is in place, they can be left in situ and do not require maintenance. If the refugia needs to be moved or removed once installed or maintenance to the building is required close to refugia, an SQW should first assess the risk to reptiles and amphibians and specific any necessary precautionary measures required.

4.4 OTTERS

Otter surveys are currently underway and detailed recommendations will be included within an EclA. The below recommendations are based on the initial PEA and likely impacts from the development.

³ Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). Bat Conservation Trust



To mitigate potential impacts on otters and riparian habitats, retained woodland and newly planted mixed scrub will buffer the river and its banks. Construction and refuelling will be managed during and after heavy rainfall to prevent contaminated runoff entering the river. Refuelling will take place at least 10 m from the conservation fence boundary. The conservation fencing is shown in Appendix A.

The landscape proposals retain suitable otter commuting and foraging habitat along the southern and eastern Site boundaries, within the woodland conservation zone. A conservation fence with 50 × 50 mm mesh openings will protect this buffer.

The fence should be installed after mixed scrub planting and before construction of the Site to ensure full protection of the woodland and river from potential construction impacts. The fence should be checked regularly, with sections being fixed or replaced if any gaps occur.

5 MANAGEMENT & MONITORING STRATEGY

The following section details the management and monitoring methods for the habitats proposed to be created onsite with detailed management and monitoring schedule located in Appendix B.

5.1 GENERAL MANAGEMENT

The following management practices will apply throughout the Site to protect retained and created habitats and avoid damage arising from inappropriate maintenance:

- Weed control will be undertaken using non-chemical interventions including mulching and hand pulling. Where deemed necessary, the spot application of eco-friendly herbicides may be used, avoiding areas containing waterbodies/courses.
- The application of fertilisers to grassland habitats will be avoided as excessive nutrient loading will negatively alter the species composition of the habitats.
- Care will always be taken when maintaining habitats to avoid damage or disturbance to protected species such as breeding birds.
- Arisings and cuttings generated by maintenance will be removed from the Site or placed in an approved location, such as a designated composting area or habitat pile, where appropriate.
- All areas are to be monitored for invasive species and appropriate action taken to remove if found.
- All areas to be monitored for fly-tipping, rubbish, and litter annually (both construction and post-construction phases) with appropriate action taken to remove if found.

5.2 MODIFIED GRASSLAND

Management

Year 1

- The initial grass cutting will be done once the seed has germinated with a first cut to be made when the grass has reached 100mm in height and cut to 50mm. Remove arisings to a designated compost area.
- Control injurious weeds and invasive non-native species through spot treatment or manual removal.
- Damaged ground, bare areas and those areas that have failed to thrive post-development are to be reseeded/re-turfed as required.

Ongoing

- Grass should be cut as necessary using machines that are appropriate for the size of the parcel being maintained. Inaccessible margins shall be cut by suitable machines or by hand at the same time as the main area of grass. Cutters of all mowers shall be sharp and set to produce an even, clean sward cut.
- In periods of drought ensure the grass is not cut too short and water as necessary.
- All debris shall be removed prior to mowing and all arising from grass cutting shall be removed on the same day mowing is undertaken.
- Reinstatement damaged areas through cultivation and reseeding where necessary.

Monitoring

- Monitor to confirm good sward establishment and >90% vegetation cover.
- Record areas of wear, bare ground or compaction requiring reinstatement.
- Monitor for establishment of injurious weeds or invasive non-native species.

5.3 NATIVE BLOCKS AND ASSOCIATED TREE PLANTING

The created native blocks with associated trees within the Site will require annual management to retain a diverse mix of native species. This will ensure the native blocks provides shelter and foraging resources to a range of wildlife.

Management

- The edge of the scrub will be maintained through rotational cutting and mowing to create a well-developed and diverse edge habitat.
- Cut scrub in January or February to avoid the breeding bird season and maintain foraging resource (berries/seeds etc.) Arisings produced from scrub management will be piled up in designated areas to act as deadwood habitat and shelter.
- Native blocks to be selectively thinned in winter after five years.
- Pruning is to be undertaken as follows:
 - Remove dead or damaged branches and cut back any ragged edges of wounded bark back to healthy tissue. Prune only to encourage bushy growth.
 - Pruning shall be undertaken once per year during mid/late Spring and be completed by June and once during October in first two years. Thereafter once per year between October and February. The use of chainsaws and the like will not be permitted
 - In year 3 allow colonisation of native species.
 - In Year 5 thin the block favouring strongest growing best formed plants.

Monitoring

- March planting season to maintain a stocking level of 70%.
- Habitat will be monitored for controlled and/or invasive species annually and appropriate action taken to remove if found, by a licenced specialist contractor.
- Habitat will be monitored for natural transition of scrub into woodland (vegetation colonised by tree species and/or scrub species reaching over 5m in height).
- Ensure that all native plants/whips remain firmly bedded in the ground after strong winds, frost and other disturbances.
- Reaffirm by treading around the base. Any 'collars' forming at the base of the whip shall be broken up and then backfilled with topsoil.
- Provide aeration where compaction is considered to be one cause for poor whip condition.
- Guards to be removed in Year 3
- Any native plants/whips which die or are otherwise defective during the Years 1-5 Maintenance Period shall be replaced in the next October.

5.4 INDIVIDUAL URBAN TREES

Urban Trees planted within the Site will require management to ensure they are protected and healthy.

Management

Years 1–5

- Water newly planted trees and shrubs during prolonged dry periods to promote successful establishment.
- Check tree stakes for firmness and signs of rot or damage.
- Replace any dead, dying or defective trees and shrubs during the next available planting season with stock of the same species and specification.
- Maintain a weed-free area around planting through mulching and manual weed control where practicable.
- Tree stakes should be removed after three growing seasons. If the tree has failed to anchor at this time the tree is to be replaced.
- Check all tree ties. Remove, adjust, refix or replace if broken. Ties to be supplied by the Contractor at his/her own expense. The make of replacement ties must be approved by the CA before use on site. Ties to be nailed securely to the stake.

- Refirm or replace as required. Tree stakes to be supplied by the Contractor at his sole cost to be suitable for the size of tree to be staked, fully tanalised, round, peeled and pointed at one end.
- Provide aeration where compaction is considered to be one cause for poor tree condition.
- Trees are within planting beds, grass areas and native blocks.
- Top up bark mulch around trees in grass areas and Native Block 2 in Year 1 and Year 2.
- Water as necessary during dry periods
- Any trees which die or are otherwise defective during Year 1-5 Defects/Maintenance Period shall be replaced at the Contractor's cost in the next November and March planting season.

Ongoing

- Allow trees to develop naturally with minimal intervention once established.
- Undertake formative pruning of individual trees only where necessary to promote good form or remove dead, diseased or damaged branches.
- Carry out any pruning or coppicing outside the bird nesting season (March to August), unless a pre-works nesting bird check confirms works can proceed safely.
- Manage woodland and scrub edges on a rotational basis where necessary to maintain a structurally diverse transition to adjacent habitats.
- Retain arisings from pruning and coppicing in discrete habitat piles where appropriate to provide deadwood habitat for invertebrates, amphibians and small mammals.
- Supplement planting where significant gaps develop that could compromise the intended habitat structure or function.

Monitoring

- Inspect annually during the establishment period to assess survival, health and vigour of planted trees and shrubs.
- Record failed planting and implement replacement planting during the following planting season where necessary.
- Monitor for pest damage, disease and invasive non-native species.
- Assess development of woodland and scrub structure, including canopy, shrub and edge habitats.
- Monitor natural regeneration and ensure scrub or woodland does not encroach into adjacent habitats where this would compromise management objectives.
- Review whether additional management, such as selective thinning, pruning or coppicing, is required to achieve the long-term habitat objectives.

5.5 NATIVE HEDGEROWS

Management

Year 1 - 5

- Hedgerow plants must be watered frequently to ensure successful establishment for the first two years. Particular attention must be given during periods of high temperatures and/or drought.
- Any hedge plants which die or are otherwise defective during Year 1-5 Defects/Maintenance Period shall be replaced at the Contractor's cost in the next November and March planting season.
- Stakes and ties must be adjusted each year to allow for growth. They must be removed when the tree has sufficiently established to support itself, usually between 5 and 10 years. All stakes, trees and shrubs will be checked annually and shall be maintained in firm positions within the ground and with all ties securely fixed and adjusted to allow for the increase in stem girth.
- Guards to be removed in Year 3.

Ongoing

- Any invasive species identified during monitoring must be immediately removed, and further treatment progressed if appropriate to prevent further spread of these species.
- Once established, native hedgerows will require cutting once every 1-5 years.
- All hedgerow cutting must be undertaken outside of the bird nesting season (March to August) by a suitably experienced contractor. Unless a pre-works nesting bird check confirms works can proceed safely.
- Any hedgerow plants that die or show signs of disease must be removed and replaced immediately with an individual of the same species and size.

Monitoring

- Monitor tree establishment, record any gaps in the hedge and replace failed plants.
- Assess hedge height, width and connectivity.
- Monitor encroachment of undesirable species and invasive non-native plants.
- Confirm cutting regime maintains a dense, species-rich hedgerow.

5.6 INTRODUCED SHRUB

Years 1–5

- Water during prolonged dry periods to aid establishment.
- Maintain weed-free planting beds through hand weeding or mulching.
- Replace dead, dying or defective plants during the next planting season.

- Prune damaged or dead growth where required.

Ongoing

- Control competitive vegetation and invasive species as required.
- Water only during exceptional drought conditions.
- Undertake selective pruning to maintain plant health, form and sightlines.
- Replace failed plants where significant gaps occur, or the planting function is compromised.
- Remove litter and debris as required.

Monitoring

- Inspect planting annually to assess establishment and condition.
- Record weed competition, invasive species and any failed plants requiring replacement.

5.7 RAIN GARDEN

Years 1–5

- Manage annual weeds to aid establishment.
- Ensure wetland vegetation establishes successfully.

Remove invasive species if identified.

Ongoing

- Control competitive vegetation and invasive species as required.
- Water only during exceptional drought conditions.
- Undertake selective pruning to maintain plant health, form and sightlines.
- Replace failed plants where significant gaps occur, or the planting function is compromised.
- Remove litter and debris as required.

Monitoring

- Assess establishment and condition.
- Record failed plants and weed competition.
- Inspect for health, weed competition and invasive species.

5.8 RECORD ALL REPLACEMENT PLANTING REQUIREMENTS.HABITAT MONITORING AND ADAPTIVE MANAGEMENT

The Site will be monitored the first-year post-planting and then every 5 years by an ecologist, to ensure that management is being undertaken in accordance with this management plan.

If monitoring identifies that the required aims and objectives of the LEEMP are not being met (e.g. failure to establish species diversity thresholds, presence of invasive species, or significant mortality of planted stock), remedial action will be implemented.

Management of the Site will be reviewed on a five-yearly basis for the lifetime of the development to ensure aims and objectives are being met.

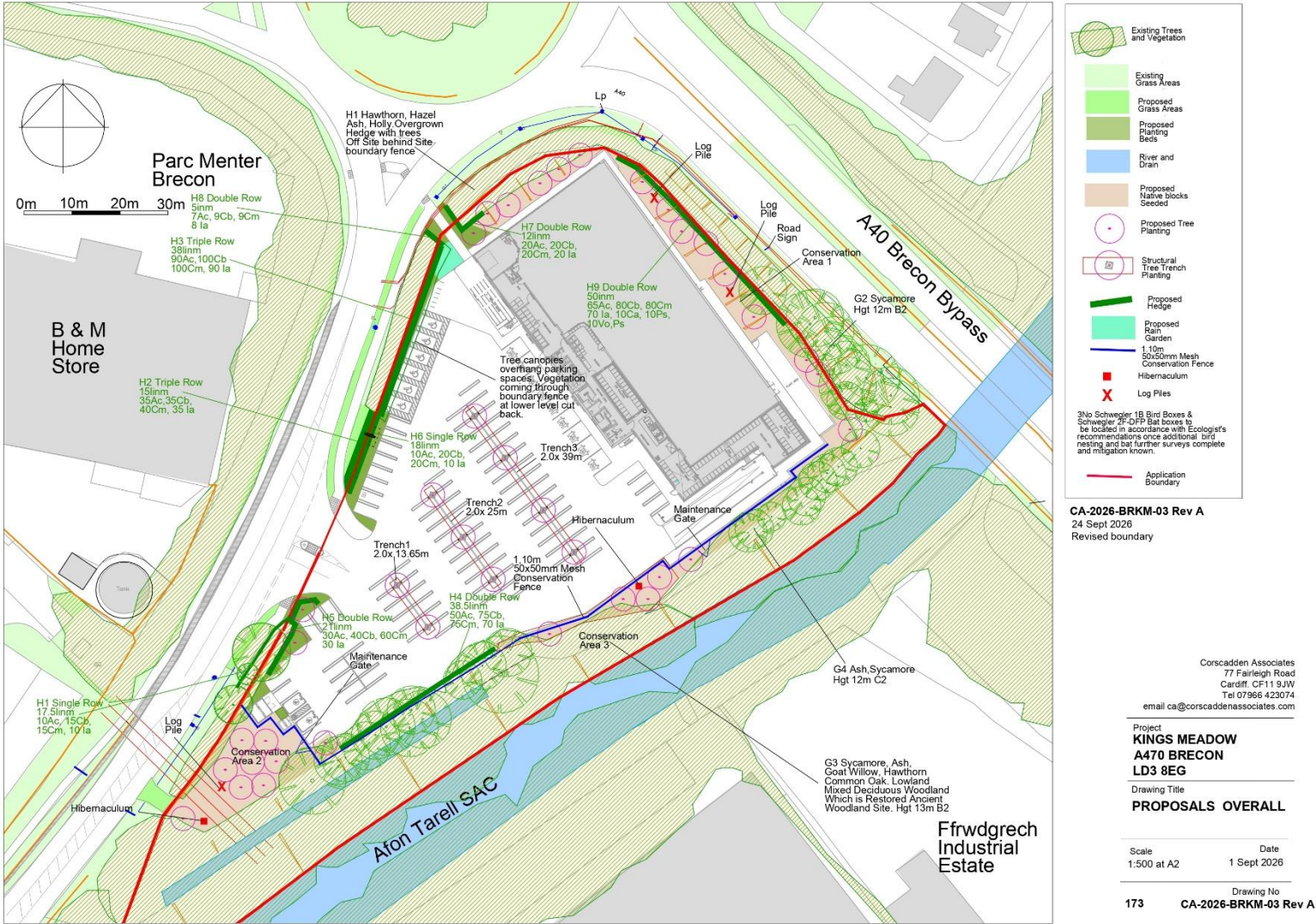
Where a review identifies that amendments or additional operations are required, revised management plans will be prepared and submitted to the LPA for written approval. The current management plans will remain in effect until approval of the revised plan is confirmed.

Following the first 20 years, management operations will continue in perpetuity on a cyclical basis.

Any remedial measures required to achieve the aims set out in this LEEMP, including any which deviate from this management plan, will be provided to the Site manager and maintenance team in a written report to be submitted within two weeks of completion of the monitoring visit. The monitoring report will also be sent to the Local Planning Authority for information.

APPENDICES

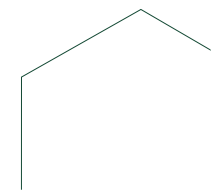
APPENDIX A - LANDSCAPE PLANS





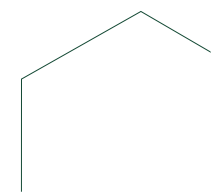
APPENDIX B - MANAGEMENT AND MONITORING SCHEDULE

HABITAT	MANAGEMENT AND MONITORING SCHEDULE	
MODIFIED GRASSLAND	MANAGEMENT YEAR 1	ANNUAL MANAGEMENT
	- Cut when sward reaches ~100 mm, reducing to 50 mm and remove arisings. - Control injurious weeds and invasive species. - Reseed or re-turf failed or bare areas.	- Maintain amenity grassland through regular mowing and remove arisings after cutting. - Prevent weed dominance through spot treatment/manual removal. - Reinstate damaged areas as required.
	MONITORING YEAR 1	FURTHER MONITORING
	- Confirm establishment and >90% vegetation cover. - Record bare or compacted areas. - Check for invasive or injurious weeds.	- Monitor sward quality and condition. - Identify areas requiring reinstatement. - Monitor weed and invasive species presence.
RAIN GARDEN	MANAGEMENT YEAR 1	
	- Manage annual weeds to aid establishment. - Ensure wetland vegetation establishes successfully. - Remove invasive species if identified.	
	MONITORING YEAR 1	
	Assess establishment and condition.	



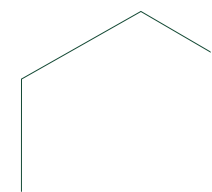


	- Record failed plants and weed competition. - Inspect for health, weed competition and invasive species. - Record all replacement planting requirements.	
WOODLAND AND MIXED SCRUB	MANAGEMENT YEAR 1	ANNUAL MANAGEMENT
	- Water during dry periods. - Replace failed stock. - Maintain weed-free establishment zones. - Inspect ties, stakes and guards. - Control pests, diseases and invasive species.	- Allow natural development with limited intervention. - Thinning native blocks in year 5 - Retain deadwood habitat piles. - Any trees/plants which die or are otherwise defective during Year 1-5 Defects/Maintenance Period shall be replaced at the Contractor's cost in the next November and March planting season.
	MONITORING YEAR 1	FURTHER MONITORING
	- Assess survival and condition of planted stock. - Record failures requiring replacement. - Check for pests, disease and invasive species.	- Review habitat structure and regeneration. - Determine need for thinning, pruning or coppicing. - Monitor for natural transition of scrub into woodland (vegetation colonised by tree species and/or scrub species reaching over 5m in height).
INDIVIDUAL TREES	MANAGEMENT YEAR 1	ANNUAL MANAGEMENT
	- Water regularly during establishment. - Replace failed trees during the next planting season.	- Prune only where necessary. - Remove dead, damaged or diseased branches.



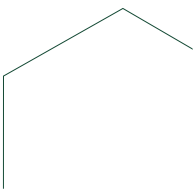


	• Maintain guards, stakes and ties. • Control weeds around tree bases.	• Continue inspections and replacement planting if required. • Maintain long-term tree health and structure.
	MONITORING YEAR 1	FURTHER MONITORING
	• Assess survival and condition of planted stock. • Record failures requiring replacement. • Check for pests and disease.	• Assess survival and condition of planted stock. • Record failures requiring replacement. • Check for pests and disease.
NATIVE HEDGEROW	MANAGEMENT YEAR 1	ANNUAL MANAGEMENT
	• Hedge plants to be protected with appropriate • Water regularly during establishment. • Replace failed plants.	• Cut native hedgerows every 1–5 years. • Undertake cutting outside the bird nesting season. • Remove invasive species and replace failed plants.
	MONITORING YEAR 1	FURTHER MONITORING
	• Monitor establishment and identify failed plants. • Record gaps in hedgerow structure.	• Assess hedge height, width and continuity. • Monitor invasive species. • Confirm cutting regime maintains dense, species-rich native hedgerows.
INTRODUCED SHRUBS	MANAGEMENT YEAR 1	ANNUAL MANAGEMENT
	• Water during dry periods. • Maintain weed-free beds.	• Selective pruning to maintain form and sightlines. • Control invasive or competitive vegetation. • Replace failed plants where significant gaps occur.





	Replace dead or defective plants and remove damaged growth.	Remove litter and debris.
	MONITORING YEAR 1	FURTHER MONITORING
	- Assess establishment and condition. - Record failed plants and weed competition.	- Inspect annually for health, weed competition and invasive species. - Record all replacement planting requirements.



APPENDIX C – NEST BOX SPECIFICATIONS

BIRD BOX SPECIFICATION (TREES)	
1B SCHWEGLER NEST BOX (OR SUITABLE EQUIVALENT)	DIMENSIONS
	• Height: 23cm • Width: 16cm • Weight: 3.6kg
Description: Nest box suitable for a wide range of species such as House Sparrow <i>Passer domesticus</i> Blue Tit <i>Cyanistes caeruleus</i> and Great Tit <i>Parus major</i> providing a stable environment, mimicking natural nest sites. The nest box is made of a breathable blend of wood, concrete and clay, lasting for multiple decades. Ideal for installation on trees.	
Placement considerations: • Nest boxes will be placed at a north-eastern aspect. • Nest boxes will be placed 4m or more above the ground. • Nest boxes will be sheltered from extreme weather conditions. • It is advised that nest boxes are cleaned annually removing existing materials. This will be done outside of the breeding season to avoid disturbance of breeding birds.	

BAT BOX SPECIFICATION

Schwegler 2F-DFP or similar	Dimensions
	• Height: 33 cm • Width: 16 cm • Weight: 4.1 kg

Description:
An excellent general-purpose bat box, the Schwegler 2F-DFP Bat Box is suitable for summer use by a wide variety of species (and particularly liked by pipistrelles). Being made of woodcrete the box will last for years and provide a stable environment inside.

- Placement should consider the following:**
- Attach to a tree using the aluminium nail (included) or hung from a branch.
 - The bat boxes should be positioned 4m from the ground.
 - South-easterly to south-westerly direction.
 - Can be grouped together at different orientations to provide multiple options.
 - Branches should be cleared under the boxes for access.
 - Sheltered from wind and rain.

LOG PILE SPECIFICATION

Log Piles	Positioning
	• Structures should be installed to a maximum 1.0 m height above ground level • The structure should be located in a sheltered area, protected from prevailing winds and heavy rainfall • Structures should be placed close to suitable foraging habitat, such as wildflower areas, trees, shrubs, or hedgerows, to provide easy access to food sources.



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