DAVID CLEMENTS ECOLOGY LTD

PLOT E, PENCOED TECHNOLOGY PARK

BIODIVERSITY STRATEGY

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1.0 INTRODUCTION

- 1.1 This report has been prepared by David Clements Ecology Ltd (DCE) on the instructions of Mango Planning and Development Ltd, on behalf of Fabco Holdings Ltd.
- 1.2 Planning permission is to be sought for an employment development comprising 16 units in 3 blocks with associated parking for 25 cars and 32 bikes at Plot E, Pencoed Technology Park, Bridgend, South Wales.
- 1.3 This plan has been prepared to support the planning application and aims to set out the mitigation, enhancement and management measures required to conserve biodiversity within Plot E, Pencoed Technology Park, both during construction and in the operational phase of the development.
- 1.4 Measures to retain, protect and enhance the valuable ecological features of the site have been included as part of the development, which will provide the green infrastructure required to deliver a net benefit for biodiversity. These measures also consider the maintenance of habitat connectivity of the site with the wider environs to contribute towards improving ecosystem resilience.

1.4 **Designated Sites of Biodiversity Interest**

- 1.4.1 The site does not contain or lie immediately adjacent to any statutory sites of nature conservation interest. However, there are three statutory Sites of Special Scientific Interest (SSSIs) within 2km of the site:
 - Coedymwstwr Woodlands SSSI, 1761m to the west;
 - Brynna a Wern Tarw SSSI, 1733m to the north; and
 - Breigam Moor SSSI 1917m to the south-east.
- 1.4.2 The site does not appear to contain, or lie immediately adjacent to, any non-statutory sites of nature conservation interest such as Sites of Importance for Nature Conservation (SINCs). However, there are eight such sites within 1km of the site:
 - Ruthin Fach Farm SINC, 418m to the south-east.
 - Ffynnon y Dera SINC, 445m to the south-west.
 - Coed Mawr SINC, 621m to the south-east.
 - North of Cae Coed SINC, 757m to the south-east.
 - South of Tyla Gwyn SINC, 955m to the south-west.
 - Cae Coed SINC, 966m to the south-west.
 - Mynydd Ruthin SINC, 974m to the south-east.
 - Land to East of Mynydd Ruthin SINC, 988m to the south-east.

1.5 Ecological Surveys

1.5.1 The site was subject to an Extended Phase 1 Survey/Preliminary Ecological Appraisal (DCE 2023).

1.6 Ecological Priorities for Conservation Management

Habitats

- 1.6.1 The following habitats have been identified within the site boundary (DCE 2020):
 - Hedgerows
 - Scrub
 - Scattered Trees
 - Semi-improved Neutral Grassland
 - Hard Standing
 - Fence
- 1.6.2 The main impact of the development would comprise the loss of the majority of grassland habitat SNG1. However, the north of grassland SNG1, all grassland within SNG2, scrub, scattered trees and hedgerows along with an appropriate buffer, would be retained and protected as part of the development.
- 1.6.3 The area of retained grassland SNG2 would be enhanced through management as a wildflower meadow and the area of retained grassland in the north of SNG1 would be enhanced as part of the development through the creation of a swale with marginal planting. Further enhancements are set out in *Section 3: Biodiversity Enhancement Scheme*.

Species

- 1.6.4 The following species of interest have been identified as using/ potentially using the site:
 - **Bats**: The site provides suitable habitat for foraging bats and the hedges could provide linear features used by commuting bats (DCE 2023).
 - **Nesting birds**: The hedgerows, scattered trees, and scrub on site provide suitable habitat for nesting birds, including Section 7 species such as bullfinch, dunnock, house sparrow, linnet, reed bunting and song thrush (DCE 2023).
 - Otter & badger: Although the habitats on site are not considered to be suitable for otter and badger, given that there are records of these species in the vicinity and that they are both mobile species, it is possible that they may traverse the site occasionally on an adventitious basis (DCE 2023).
 - **Hedgehog**: The dense vegetation at the base of the hedgerows provides suitable nesting habitat for hedgehog, and the areas of grassland offer some foraging potential for this species (DCE 2023).
 - **Dormouse:** The hedgerows H2 and H3 contain hazel and could provide suitable habitat for dormouse, although the nearest record is more than 1.6km from the site. It is understood that all hedgerows on site are to be retained and protected, and therefore this species should not be affected by the proposed development (DCE 2023).

- **Common reptiles & amphibians**: The hedgerows and the semi-improved neutral grassland immediately adjacent to the hedgerows provide suitable terrestrial habitat for common reptiles and amphibians (DCE 2023).
- 1.6.5 All of the above species are subject to varying degrees of statutory protection (see Appendix 1 for more details.)

2.0 WILDLIFE PROTECTION PLAN

2.1 The following section sets out details of the mitigation and protection measures which are to be implemented during the pre-construction and construction phases of the development.

2.2 **Mitigation for Habitats**

- 2.2.1 The semi-improved grassland SNG2 in the field to the east of the development and the grassland buffers adjacent to the hedgerows at the site boundaries, are to be retained, and will be contained within physically demarcated 'Wildlife Protection Zones' (WPZ). These WPZs will have appropriate temporary fencing (eg Heras fences) installed at the outset of site clearance and construction, and the demarcated areas will be designated off-limits to site construction vehicles and personnel.
- 2.2.2 All retained trees, hedgerows and scrub must be protected in accordance with British Standard BS5837 (2012) *Guidance for the Treatment of Trees in Relation to Construction*.
- 2.2.3 Materials storage, mixing areas, refuelling areas, haul routes and site compounds etc will not be sited near to any areas of retained habitat, and will be suitably fenced and bunded where they stand adjacent to such habitats. All such areas will be drained and bunded in accordance with current requirements and best practice so as to prevent any incidental or accidental spillages of potential contaminants (eg mixing slurry, wash down, oil and diesel etc) affecting any retained habitat or nearby waterbodies.
- 2.2.4 Where temporary lighting is required during clearance and construction works, measures will be put in place to ensure that no habitats within the WPZ will be artificially illuminated at night. These areas must remain dark to avoid disturbance or disruption to any nocturnal species which may be using these habitats for shelter, foraging or as commuting routes etc.

2.3 **Mitigation for Bats**

- 2.3.1 The WPZ, comprising the areas of semi-improved grassland, hedgerows and scattered trees, provides suitable habitat for foraging bats.
- 2.3.2 There will be no working on the site at night (ie between dusk and dawn), and there will be no night-time lighting during the site clearance and construction phases, other than by short-duration PIR motion-activated security lighting.
- 2.3.3 Lighting of the constructed site will be designed in accordance with the guidance provided by the Bat Conservation Trust (2018). The site lighting design will minimise nocturnal light levels received by the retained habitats and new habitats, of value to wildlife.

2.4 Mitigation for Nesting Birds

2.4.1 The scattered trees, hedgerows and scrub habitats on the site provide suitable habitat for nesting birds. Nearly all species of bird are protected against killing or injury as

individuals under UK legislation, and this protection extends to their nests, eggs and young.

2.4.2 It is understood that all suitable nesting bird habitat is to be retained and protected. However, if any works are required which affect these habitats, they must avoid the main bird nesting season which runs approximately from March to August inclusive. If work must proceed in this period, it must be preceded by a nesting bird check, with any nests identified protected (including a buffer of 5m radius) until after the young have fledged.

2.5 Mitigation for Otter & Badger

- 2.5.1 Although the habitats on site are not considered to be suitable for otter and badger, given that there are records of these species in the vicinity and that they are both mobile species, precautionary measures for these species are set out below:
 - Gaps underneath site fencing of at least 250mm high should be maintained to allow passage by otter, badger and other fauna;
 - There will be no night-time working or lighting of the site at night;
 - Any trenches to be covered overnight or otherwise left with a means of escape; and
 - Any exposed pipes/trenches to be checked each morning before starting construction activities.

2.6 Mitigation for Hedgehog

- 2.6.1 The dense vegetation at the base of the hedgerows provides suitable nesting habitat for hedgehog, and the areas of grassland offer some foraging potential for this species. As the hedgerows and adjacent grassland buffers are to be retained and protected the risk of harm to this species is minimised. However, the following precautionary measures should be applied.
- 2.6.2 Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each workday to prevent hedgehogs and other small mammals entering/becoming trapped. In addition, any trenches >0.5m in depth will either be covered at night or will be left with a gently sloped plank (or similar) running from the bottom to the surface to act as an escape ramp for any fauna which may fall in.
- 2.6.3 Any fencing required within the site boundary, both during and post-construction, must allow access underneath for small animals, such as hedgehogs to move through the site. Gaps of 130mm x 130mm will be provided every 3m in the boundary fencing, and in exterior boundary enclosures, to provide selective passage for hedgehogs.

2.7 Mitigation for Common Reptiles & Amphibians

2.7.1 The hedgerows and the semi-improved neutral grassland immediately adjacent to the hedgerows which provides suitable terrestrial habitat for reptiles and common amphibians is to be retained. The area of semi-improved neutral grassland SNG1 which is to be cleared to facilitate the development provides sub-optimal habitat for common reptiles and amphibians, and so a precautionary approach to minimise the risk of killing or injury is set out below.

- 2.7.2 Due to the low likelihood of encountering reptiles within the grassland area to be cleared and as the hedgerows and adjacent grassland buffers are to be retained, 'species deterrence' measures will be used to encourage any reptiles present to move into the retained habitat within the WPZ.
- 2.7.3 Site clearance must take place during the period when reptiles and amphibians are active (between April and October inclusive), before they go into hibernation over the winter period.

Receptor Site

2.7.4 The designated receptor site will be the areas of retained semi-improved neutral within the WPZ. There are no physical barriers between the site and the receptor site so reptiles will be able to disperse into this area of grassland.

Vegetation Clearance ('Species Deterrence')

- 2.7.5 This operation will comprise the sequential removal of vegetation in the grassland SNG2 to make it superficially unattractive to reptiles and amphibians. This will be achieved by means of the staged cutting of the vegetation, starting from southern fenced boundary of the site and moving towards the northern site boundary allowing any reptiles/amphibians present to disperse into the WPZs. This operation will be carried out during the active reptile/amphibian season which is from April to October inclusive.
- 2.7.6 Two cuts will be carried out, 48 hours apart, under the supervision of an ecologist. The first cut will be carried out either using hand-operated tools such as strimmers, or with a lightweight agricultural cut and collect silage/bailing system comprising a small tractor unit with low-pressure tyres towing a 2.8m offset disc-mower set at 200mm, with the cut material being raked into rows for collection by a bailer or harvester, also set to 200mm above ground level. At this setting there may be some variation between about 150-250mm where the ground is uneven, but there should otherwise be adequate ground clearance throughout. The 2.8m off-set would mean that the tractor would be driving only over previously cleared ground.
- 2.7.7 Any reptiles/amphibians which are encountered will be allowed to disperse unmolested into the adjacent habitats or will be physically removed to the adjacent receptor site by the supervising ecologist. All arisings will be collected and removed from the site immediately (i.e. no long-term storage piles will be created, as these may attract sheltering reptiles).
- 2.7.8 The '2nd cut' will then be undertaken 48 hours later using only hand-operated equipment (ie strimmers). The vegetation will be cut to approximately 'ground level', i.e. a height of about 50mm, and any significant arisings collected and removed from the site.

Clearance of Refugia

2.7.9 Following the vegetation clearance, any naturally occurring or pre-existing refugia on the site will be carefully lifted and cleared away by hand, with any reptiles which are present

being removed to the adjacent receptor site by the supervising ecologist. The refugia will be removed from the site.

'Destructive Searching'

- 2.7.10 Any areas or features such as tree roots, bunds, etc which need to be cleared to facilitate the development will be subject to 'destructive searching' under the supervision of the SE. The dismantling of any potential refugia will be carried out by hand (as far as possible), supervised by the SE.
- 2.7.11 Soil clearance operations will be carried out using a wide-tined toothed bucket attached to a suitable excavator, such as a 3CX or mini-digger. Uncleared areas of the site will not be tracked over by the excavator, and the spoil arisings will not be stored on uncleared areas. The SE will attend as necessary.
- 2.7.12 The clearance operation will probably involve the use of a small vehicle (eg pick-up or Land Rover with trailer). Vehicle movements within the site will be kept to the minimum necessary, however, and will be confined to any existing trackways, bare ground or other areas which have previously been inspected by the SE to ensure that the risk of any reptile presence is minimal.

Timing of Clearance Operations

- 2.7.13 Mitigation operations for reptiles/amphibians <u>cannot</u> be carried out during their hibernation period, which runs approximately from (October) November to February (March), when there would be a significant risk of encountering hibernating or torpid individuals in the soil which would be unable to rouse themselves and escape from the area of the works. The works are therefore to be carried out outside of the hibernating period, i.e. between (March) April to September (October) inclusive.
- 2.7.14 The exact dates of the hibernation period depend on individual weather and seasonal conditions and can vary from year to year, with the beginning and end dates extending variably into October and March respectively. The viable period for clearance in each individual case should be determined at the time by an appropriately qualified person. Generally, this will be determined by the occurrence of overnight frosts and/or daytime temperatures of <5°C: where these occur for periods of longer than about 3 consecutive days the conditions are generally considered to be unsuitable for reptile clearance operations and should accordingly be suspended until the conditions ameliorate.

Post-clearance Stage

- 2.7.15 Once the clearance operation has been completed, site clearance and construction operations will start immediately and or will commence within five days. If there is a delay of any greater than five days between the cessation of clearance work and the start of construction works, then the site must be maintained in a reptile-free condition during the intervening period.
- 2.7.16 This will be achieved by the removal of all of the vegetation from the site and maintaining it in a bare condition, preferably by means of topsoil stripping. The topsoil may be removed

from the site or stored temporarily elsewhere, but in the latter case this must not be on top of any other habitats which may also be occupied by common reptiles.

Holding & Transfer of Reptiles

- 2.7.17 Any collected reptiles/ amphibians will be removed to suitable containers (e.g. steep-sided buckets with lids) with the different species being kept separate.
- 2.7.18 All reptiles/ amphibians will be transferred to the designated receptor site immediately or at least within one hour of collection, where they will be released under suitable cover in an undisturbed area. Reptiles/ amphibians in temporary holding containers will be placed in a safe location under shade and will be monitored to ensure that they do not become either too hot or too cold.

Record Keeping

2.7.18 A record of any reptiles/amphibians which are found during the clearance will be maintained by the site manager and will be tendered to the local planning authority ecologist at the end of the clearance operation. This record will include the species of the animals encountered, their numbers, age and sex, details of any injuries, and confirmation of their release site etc.

2.8 General Mitigation Approach for Protected Species

- 2.8.1 In the event that evidence of bats, nesting birds, otter, badger, dormouse, common reptiles/amphibians, dormouse, etc are unexpectedly discovered or suspected anywhere on the site following the commencement of clearance and construction activities, all work in the immediate find area will cease immediately and the advice of the Supervising Ecologist will be sought as a matter of urgency.
- 2.8.2 The 'immediate area' in this context will include any occupied shrub in its entirety and any other habitats for an area of at least 5m radius around the find-site. The affected area will be clearly demarcated on the ground by means of striped bunting or similar and made off-limits to all site personnel. Appropriate measures to rectify the situation in accordance with statutory obligations and responsibilities will be determined at the time by the Supervising Ecologist, and may include consultations with the statutory agencies and the seeking of derogation licences etc.

2.9 **Toolbox Talk**

2.9.1 All contractors carrying out clearance and construction works on the site will be warned of the *possible* presence of protected species and of their protected status etc, through the undertaking of a 'Toolbox Talk' immediately prior to the commencement of works. Contractors will be issued with a written method statement setting out the general principles and things to look out for etc that will be circulated to all site personnel including any new workers. Contractors will be required to sign a copy of the method statement to indicate that they have seen it.

2.10 **Presence of Supervising Ecologist**

2.10.1 An appropriately qualified and licensed Supervising Ecologist will be on-call to attend the site at short notice as required, and will visit the site at appropriate intervals to monitor progress and check for compliance with the terms of this document.

3.0 BIODIVERSITY ENHANCEMENT SCHEME

3.1 Habitat Creation & Enhancement

- 3.1.1 The hedgerows and adjacent grassland buffer will be retained and protected during construction and the operational phase of the development, which will maintain connectivity of the habitats on site to the wider environs.
- 3.1.2 The area of semi-improved neutral grassland to the east of the development will be retained and enhanced as a wildflower meadow through management, comprising cutting and weed control.
- 3.1.3 The areas of amenity grassland within the development will be sown with a species-rich seed mix which responds well to regular short mowing, such as Emorsgate EL1 Flowering Lawn Mixture, or equivalent.
- 3.1.4 A SuDS feature will be created in the north of the semi-improved grassland SNG1 and will be surfaced using topsoils rescued from the grassland habitat lost to the developed area. The new swale will be slightly over-deepened in places in order to retain shallow water to a depth of not greater than 100-150mm for part of the year, providing additional opportunities for colonisation by wetland plant species and invertebrates etc. This SuDS feature will subsequently be managed for biodiversity, as well as providing drainage attenuation.

3.2 Bird & Bat Boxes

- 3.2.1 Swift boxes, preferably in-built 'swift brick' types, will be installed as part of the new development. Swifts are gregarious birds that like to nest in groups, therefore installing a series of nest boxes is important in making them an attractive nest site. Recent research has shown that swift bricks are also occupied by other small bird species such as house sparrows, house martins, blue tits, great tits, starlings and nuthatches, and so could provide a 'universal' brick for small building-dependent species (SLN 2022).
- 3.2.2 Four double swift boxes will be installed, two on the north elevation of 5b-Block and two on the east elevation of 6-Block (See Appendix 3). The boxes will be sited at a minimum of 5m above ground level, with boxes placed 1m apart. The boxes should be installed in locations where they are not in direct sunlight, the entrances will not be obscured by vegetation, they will not be illuminated at night and where they are not in close proximity to window/door fixtures, or parking areas. Swifts in particular require nesting sites to be situated in areas with a 'clear run-up', i.e., elevations un-obstructed by tall herbaceous vegetation, shrubs and trees etc. The Supervising Ecologist will advise on the exact positioning of the boxes.
- 3.2.3 Two integrated bat boxes, such as Vivara Pro Build-in Woodstone bat box, or similar, will be installed on the west elevation of 6-Block (See Appendix 3). These will be sited in such a manner that predators such as cats cannot reach them and be at least 4m (preferably 5m) above ground level. The bat-boxes will be installed away from windows and doors in locations which will not be illuminated at night. The Supervising Ecologist will advise on the exact positioning of the boxes. Integrated bat boxes usually

require little maintenance, however, if required, upkeep and maintenance of the bat boxes is the responsibility of the developer.

3.3 Site Lighting

- 3.3.1 Light pollution will be minimised on the developed site to reduce the impacts on nocturnal fauna such as bats and moths etc. The lighting design for the developed site will be in accordance with the guidance provided by the Bat Conservation Trust (BCT 2023).
- 3.3.2 Any lights which must be illuminated at night will be of the lowest usable output, and will be vectored and baffled so as to avoid light-spill into adjacent hedgerows and other habitats which may be used as 'dark corridors' by nocturnal wildlife.
- 3.3.3 If any further security lighting is provided on the site, it will be of the minimum suitable output and passive infra-red (PIR) activated, with the minimum necessary activation time.

3.4 Wildlife Kerbs

3.4.1 New roads within the development will be provided with recessed or set-back wildlife kerbs adjacent to gully-pots, so as to minimise the risk that small mammals and amphibians will fall into the latter while traversing the site. Small animal escape ladders (such as suspended lengths of galvanised metal mesh) will be fitted within the gully-pots to allow the escape of any fauna which may fall in.

3.5 Landscaping

3.5.1 All landscaping within the new development must incorporate native species which are indigenous to the region, and from stock which is of local (or at least UK) provenance to maximise their future ecological value, particularly for pollinator such as bees, butterflies and moths. Plants selected will contain a good range of wildlife friendly plants (see Appendix 2 for example species) and will also aim to provide a good range of year-round flowering plants for pollinators (see RHS 2019).

3.6 **Responsibilities**

- 3.6.1 Fabco Holdings Ltd will be responsible for the implementation of this Biodiversity Strategy, who will appoint an appropriately qualified landscape management contractor to undertake the physical works required on the site.
- 3.6.2 Fabco Holdings Ltd will also retain the services of an appropriately qualified ecological contractor to act as 'Supervising Ecologist' (SE). The SE will advise on, and where necessary supervise, the implementation of the maintenance and management tasks set out, insofar as this affects habitats within the site.
- 3.6.3 Fabco Holdings Ltd will provide all of the resources and funding necessary to implement the Biodiversity Strategy in perpetuity for as long as they are the landowner of the site, and where or if the ownership is transferred any new landowner will be made contractually

responsible for such continued provisions. The Biodiversity Strategy would be provided to all new landowners as part of the site documentation, and it would be the new landowners responsibility to comply with the requirements of the document.

4.0 **BIODIVERSITY MANAGEMENT PLAN**

4.1 **Principles of Management**

- 4.1.1 The retained and newly created habitats of the site, including the hedgerows, scattered trees, scrub, grassland and SuDS feature, will be subject to a Biodiversity Management Plan (BMP) designed to maintain and enhance their value to wildlife into the future.
- 4.1.2 A five-year maintenance plan which should be implemented as a rolling schedule is set out in Section 4.8. Plan 2 indicates the location of the features referred to.

4.2 Hedgerows

- 4.2.1 The hedgerows of the development will be maintained by trimming to maintain thick and continuous canopies which extend down to ground-level. The hedges will be maintained at a minimum height of about 2m.
- 4.2.2 Any hedge maintenance should be undertaken outside of the bird nesting season (ie from September to February inclusive), ideally in January or February to allow any berry crop to be used by birds from September to December. It is recommended that hedge trimming be carried out on a two- or three-year rotation to maintain thick nesting cover and to increase berry crop which generally develops on second year growth (RSPB *Hedgerow Management Advice Leaflet*).
- 4.2.3 Arisings from hedge-trimming will be collected and either removed from the site entirely for disposal off-site or deposited in ecopiles in suitable locations around the site.

4.3 Trees & Scrub

- 4.3.1 The retained scattered trees within the grassland SNG2 and within hedgerows will be inspected annually and maintained for tree health and for the safety of site users.
- 4.3.2 The area of dense scrub which is to be retained and protected should not require maintenance.

4.4 Grassland Management

- 4.4.1 Strips of semi-improved neutral grassland adjacent to retained hedgerows are to be retained and enhanced through cutting and weed control. The areas of retained grassland should be mown early in season (ie late February to March) and/or late in season (late July to September), to allow maximum flowering and seed-set (Plantlife 2021). All cuttings should be removed to maintain low fertility and to prevent smothering of wildflower seedlings. Weeds such as thistles and docks should be hand-pulled or if necessary.
- 4.4.2 The area of semi-improved neutral grassland SNG2 which is also to be retained, will be enhanced through cutting, weed and scrub control. This grassland area will be maintained by mowing twice annually (to a sward height of approximately 5-10cm), once between late-February to March and once between late-July and September (Plantlife 2021). Mowing in late summer should ideally be undertaken with a forage harvester and the

arisings laid to dry and tedded (turned) each day to allow wildflower seeds to be released, with the hay collected and removed 3-5 days later. The removal of arisings should maintain low soil fertility as noted above. Any encroaching scrub vegetation such as willow or blackthorn saplings will be removed, and weeds such as thistles and docks will be hand-pulled.

- 4.4.3 If paths are required within the retained grassland area, these should be informal with grass mown to very short sward heights (5-10cm) and maintained at this height by regular mowing as required. Informal paths should not exceed 1.5m in width.
- 4.4.4 New areas of grassland within the development sown with species-rich Emorsgate EL1 Flowering Lawn Mixture can be mown as required with arisings removed to maintain low fertility as noted above.
- 4.4.5 The areas of retained and created grassland should not be used by tenants of the units for parking of vehicles or for the storage of materials.

4.5 SuDS Feature

- 4.5.1 The grassland around and within the swale will be subject to a mowing regime aiming to produce and maintain sward-heights of between about 15-35cm tall to both provide habitat for wildlife and to effectively trap silt and slow-down water flow through the feature. This grassland area would also be subject to a late summer cut as described for the retained grassland SNG2 and the grassland buffers adjacent to the hedgerows, mown between August and September, during dry weather conditions to a height of 10-20cm, prior to the wet conditions of autumn/winter. Ideally arisings would be left to dry and tedded (turned) each day for 3-5 days before the hay is collected and removed.
- 4.5.1 Litter, debris and silt will be removed from the SuDS features as required. Any encroaching scrub vegetation such as willow or blackthorn saplings will be removed by cutting, and weeds such as thistles and docks will be hand-pulled.

4.6 **Invasive Species & Litter**

- 4.6.1 The site should be monitored annually for presence of invasive non-native species by a suitably qualified person. If invasive species are found, an appropriate management programme should be added to the Biodiversity Management Plan to ensure they are eradicated and not allowed to spread.
- 4.6.2 Litter and rubbish will be removed from the site as required, with monitoring at least twice per annum.

4.7 Monitoring

- 4.7.1 Annual monitoring checks will be undertaken to ensure:
 - Bird and bat boxes remain *in situ* and in working order.
 - Management of retained and created habitats is effective, as per this plan.
 - There are no invasive non-native species on site.
 - Litter and rubbish removal is adequately managed.

4.8 Management Schedule

4.8.1 This schedule sets out a five-year maintenance plan which should be implemented as a rolling schedule. It should however be reviewed periodically and updated as appropriate.

5-Year Management Schedule

Key	Features/Habitats/Species etc			
•]	Retained hedgerows			
• 7	Trees & scrub			
•]	Retained & enhanced semi-improved neutral grassland			
•]	Mown species rich and low maintenance grassland			
• 5	SuDS feature			
•]	Bird and bat boxes			
Exis	ting Management Conditions			
•]	Potential for disturbance of habitats/wildlife by tenants/owners			
•]	Mature trees in publicly accessible areas with consequent risks			
•]	Possible ingress by invasive non-native species			
•]	Potential for increased litter			
Mar	agement Aims			
•]	Maximise biodiversity potential whilst enabling access for employmen	t unit users		
• (Continued maintenance of trees and hedgerows			
•]	Encourage use of site by pollinators and foraging bats			
•]	Encourage use of site by roosting bats and nesting birds			
Mar	agement Tasks	Method	Start	Return
	-		Year	
•]	inspect and maintain larger trees	А	1	Annually
• 7	Frim and maintain hedgerows in 2- 3-year rotation	В	1	Annually
•]	Mow species-rich and low maintenance lawn grassland areas	С	1	Annually
•]	Mow retained semi-improved grassland strips	D	1	Twice/annually
•]	Monitor for invasive non-native species & treat as necessary	Е	1	Annually
•]	Monitor use of and maintain bat/bird boxes.	F	1	Annually/Year 5
Mar	agement Methods			
Α	Inspect on site in winter and identify any dangerous limbs. Where requ	uired, carry	out select	tive tree works in
	winter, and leave large cut timber on ground in shaded situation. Fellin	ng as last res	sort only,	and wherever
	possible leave standing trunk or tall stump (2-3m) to decay in situ.			
В	Trim once in September to minimum 2m high, and side-up only where necessary. Collect and remove			
	arisings from site.			
С	Mow lawn grassed areas to maintain a grass sward height of 50mm between April and Sept; minimum 6			
D	cuts. Remove arisings.			
D	Mow retained semi-improved grassland areas twice annually. Once early in season (late-Feb to March) and			
F	once fale in season (fale-July to Sept). Remove arisings.			
Ľ	arisings to be dried thoroughly and hagged securely for disposal at an approved tipping site			
F	F Inspect usage in May and July from ground-level Every 5 years climb and clear debris in winter months			
	(licensed operative only for bat boxes). Lodge records with local planning authority ecologist. Where			
	necessary replace any lost or damaged boxes in winter months, like for like.			
Start Vear ¹	Where Year 1 is the first year after completion of the development			
Year				

4.9 **Responsibilities**

4.9.1 Fabco Holdings Ltd will be responsible for the implementation of this Biodiversity Strategy, as set out in Section 3.6.

5.0 **REFERENCES**

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APPENDIX 1: RELEVANT LEGISLATION

Badger

Badger is protected by the Protection of Badgers Act 1992, primarily in relation to animal welfare and cruelty, as a result of illegal persecution. Badgers are protected against intentional killing, injury, 'cruel ill-treatment' or capture in all of their life stages. Their nesting burrows ('setts') may not be destroyed, damaged, dug into or obstructed and it is illegal to disturb a badger while occupying a sett, either deliberately or 'recklessly' (ie unintentionally as a result of failure to take due care).

Bats

All bats and their roosts require strict protection under the EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC; the 'Habitats Directive'), which is implemented in the UK via the Conservation of Habitats & Species Regulations 2017 (the 'Habitats Regulations'¹) which lists all bat species in the UK as 'European Protected Species'. Some additional protection against disturbance is also conferred under the amended Wildlife & Countryside Act 1981. Several bats are considered to be 'species of principal importance for conservation of biological diversity in Wales', as listed under Section 7 of the Environment Wales Act 2016² (see WBP 2016b).

Birds

Nearly all species of bird in the UK are protected as individuals against killing or injury under the amended Wildlife & Countryside Act 1981, and this protection extends to their nests, eggs and young. A number of especially rare species are subject to enhanced protection against disturbance whilst nesting by virtue of their listing on Schedule 1 of the Act, including little ringed plover.

Hazel Dormouse

Hazel dormouse (*Muscardinus avellanarius*) and their resting/breeding places require strict protection under the EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC; the 'Habitats Directive'), which is implemented in the UK via the Conservation of Habitats & Species Regulations 2017 (the 'Habitats Regulations') which lists Hazel Dormouse in the UK as 'European Protected Species'. Some additional protection against disturbance is also conferred under the amended Wildlife & Countryside Act 1981. The hazel dormouse is additionally considered to be a 'species of principal importance for conservation of biological diversity in Wales', as listed under Section 7 of the Environment Wales Act 2016³ (see WBP 2016b).

¹ The European legislation cited herewith is that which was applicable at the time of survey, but it should be noted that new arrangements have become applicable after 31 Jan 2020 as a result of 'Brexit'. At the time of writing these comprise a continuance of the current legal and protection arrangements by means of Statutory Instrument No. 579 (*The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations*, 2019) but the longer term arrangements which will apply after the end of the Brexit 'Transition Period' are still to be confirmed and may differ in detail from those which previously applied.

² In Wales the s.7 list of the EWA 2016 supersedes the s.42 list of the Natural Environment & Rural Communities Act 2006, which in turn replaced the 'Priority Species' lists of the UK Biodiversity Action Plan and its Welsh equivalent. ³ In Wales the s.7 list of the EWA 2016 supersedes the s.42 list of the Natural Environment & Rural Communities Act 2006, which in turn replaced the 'Priority Species' lists of the UK Biodiversity Action Plan and its Welsh equivalent.

Hedgehog

Hedgehogs are listed as a conservation priority in Wales under section 7 of the EWA 2016 (see WBP 2016b).

Otter

Otter (*Lutra lutra*) and their resting/breeding places require strict protection under the EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC; the 'Habitats Directive'), which is implemented in the UK via the Conservation of Habitats & Species Regulations 2017 (the 'Habitats Regulations') which lists Otter in the UK as 'European Protected Species'. Some additional protection against disturbance is also conferred under the amended Wildlife & Countryside Act 1981. Otter is additionally considered to be a 'species of principal importance for conservation of biological diversity in Wales', as listed under Section 7 of the Environment Wales Act 2016⁴ (see WBP 2016b).

Reptiles

Four native reptile species occur in South Wales, comprising common lizard, slow-worm, adder and grass snake. These four species are all afforded so-called 'partial protection' under the amended Wildlife & Countryside Act 1981, which prohibits the deliberate or reckless killing or injury of individuals. However, there is no direct protection extended to the habitats which support these species. Whilst not rare nationally, these species are nevertheless on the 'Section 7' list of conservation priorities in Wales (see WBP 2016b).

⁴ In Wales the s.7 list of the EWA 2016 supersedes the s.42 list of the Natural Environment & Rural Communities Act 2006, which in turn replaced the 'Priority Species' lists of the UK Biodiversity Action Plan and its Welsh equivalent.

APPENDIX 2 – EXAMPLES OF WILDLIFE-FRIENDLY PLANTING SPECIES

GRASSLANDS

New or existing low-fertility topsoil should be lightly harrowed and raked to create a moderately fine tilth. No fertiliser should be added to any of these areas. Areas should be seeded either by hand (broadcasting) or by using a light tractor-mounted spinner or drill with drills at 5cm centres, 5mm maximum depth, immediately after preparation which should ideally occur in late summer (ie Aug-Sep). The seed rate should be $4g/m^2$ (ie 40kg/ha). The seed mixture in new soil areas should comprise an 80:20 mix of native grass to native wildflower seed. A minimum of any six broadleaved species should be included, in equal quantities, up to a maximum of 15 species. Legumes should be supplied as low fertility non-fodder strains only.

All seed material should be of Welsh, or at least UK, native origin. Seed suppliers should be signatories to the *Flora Locale* Code of Practice for collectors, growers and suppliers of native plants and seed.

Semi-natural 'Meadow' Mixtures

For creating a more 'traditional' meadow with a tall sward

Grasses				
Agrostis capillaris	Common bent	Low fertility strains only, eg 'Arletta	a', 'Tracenta'	
Alopecurus pratensis	Meadow foxtail	\leq 5% of mixture		
Anthoxanthum odoratum	Sweet vernal-grass	≤5% of mixture		
Cynosurus cristatus	Crested dog's-tail			
Festuca rubra ssp rubra	Red-fescue	Low fertility strains only, eg 'Boreal	', 'Franklin'	
F. rubra ssp commutata	Chewing's fescue	Low fertility strains only, eg 'Agram', 'Banner', 'Koket' 'Wintergreen', 'Lifalla', 'Raymond', 'Wilma'		
F. rubra ssp littoralis	Slender red fescue	Low fertility strains only, eg 'Dawson', 'Logro', 'Merlin', 'Oriflame' 'Lovisa', 'Bornado', 'Garance'		
Phleum bertolonii	Small cat's-tail	≤5% of mixture		
Broadleaved herbs				
Achillea millefolium	Yarrow	Plantago media*	Hoary plantain	
Centaurea nigra	Common knapweed	Potentilla anserina	Silverweed	
Centaurea scabiosa*	Greater knapweed	Potentilla repens	Creeping cinquefoil	
Daucus carota	Wild carrot	Primula veris	Cowslip	
Galium mollugo	Hedge bedstraw	Prunella vulgaris	Self-heal	
Galium verum*	Lady's bedstraw	Ranunculus acris	Meadow buttercup	
Hypericum perforatum	St John's-wort	Rhinanthus minor	Yellow rattle	
Hypochaeris radicata	Cat's-ear	Rumex acetosa!	Common sorrel	
Knautia arvensis*	Field scabious	Sanguisorba minor*	Salad burnet	
Lathyrus pratense	Meadow vetchling	Silene dioica	Red campion	
Leontodon autumnalis	Autumn hawkbit	Silene vulgaris	Bladder campion	
Leontodon hispidus	Rough hawk-bit	Trifolium campestre	Hop trefoil	
Leucanthemum vulgare	Ox-eye daisy	Trifolium dubium	Least trefoil	
Lotus corniculatus!	Bird's-foot trefoil	Trifolium pratense [!]	Red clover	
Luzula campestris	Common wood-rush	Veronica chamaedrys	Germander speedwell	
Medicago lupulina	Black medick	Vicia cracca	Tufted vetch	
Origanum vulgare*	Wild marjoram	Vicia sativa!	Common vetch	
Plantago lanceolata	Ribwort plantain	Vicia sepium [!]	Bush vetch	

* Prefer calcareous soils

¹ Low-fertility non-fodder strains only

For the first year of growth, mowing should take place at 6-8 weeks after sowing, with the cuttings collected and disposed of off-site. This should be repeated at two-monthly intervals, with the last cut being made in October. In the second and subsequent years, the grass should be mown twice each year, with a first cut to 50mm in April and a second cut to 100mm in September. All cuttings should be collected and removed for off-site disposal.

Flowering Lawn Mixture

Allowing regular maintenance to create a relatively short sward

Grasses

Agrostis capillaris	Common bent		
Cynosurus cristatus	Crested dog's-tail		
Festuca rubra	Red-fescue		
Phleum bertolonii	Small cat's-tail		
Broadleaved Herbs			
Galium verum	Lady's bedstraw	Prunella vulgaris	
Leontodon hispidus	Rough hawkbit	Ranunculus acris	
Leucanthemum vulgare	Oxeye daisy	Rumex acetosa	
Lotus corniculatus	Birds-foot trefoil	Trifolium pratense	

Cowslip

Self-heal Meadow buttercup Common sorrel Red clover

A sward of this type may take longer to form a dense turf than more conventional grass lawns. Once established the lawn should be mown regularly (as any other lawn) to a sward height of between 25-40mm. Reduce mowing in April to allow cowslip to flower and from late June to allow further flowering of the other species - next cut once the sward again becomes untidy. Cuttings should be collected and removed from site.

TREES & SHRUBS

Primula veris

All planting stock should be of native species which are indigenous to the region and of Welsh, or at least UK, provenance.

Semi-natural Woodlands

Canopy Species		Percentage
Quercus robur	Pedunculate oak	40
Quercus petraea	Sessile oak	40
Acer campestre	Field maple	20
Understorey		
Corylus avellana	Hazel	30
Crataegus monogyna	Common hawthorn	30
Betula pendula	Silver birch)
Cornus sanguinea	Dog wood)
Ilex aquifolium	Holly)
Malus sylvestris	Crab apple)
Prunus avium	Wild cherry) 40
Prunus spinosa	Blackthorn)
Rosa canina	Common dog-rose)
Sorbus aucuparia	Rowan)
Taxus baccata	Yew)
Viburnum opulus	Guelder rose)

Planting should be carried out using 600mm bare-rooted transplants in spiral plastic guards (rabbit/vole protection) where appropriate. Standard tree aftercare should be applied.

Hedgerows

Canopy Species		Percentage
Crataegus monogyna	Common hawthorn	30
Prunus spinosa	Blackthorn	10
Corylus avellana	Hazel	20
Acer campestre	Field maple)
Cornus sanguinea	Dogwood)
Euonymus europaeus	Spindle)
Ilex aquifolium	Holly) 40
Prunus avium	Wild cherry)
Quercus robur	Pedunculate oak)
Rosa canina	Common dog-rose)
Sambucus nigra	Elder)
Sorbus aucuparia	Rowan)
Viburnum opulus	Guelder rose)
Climbers		
Clematis vitalba	Traveller's-joy) Alternate at 3m intervals
Lonicera periclymenum	Honeysuckle)
Solanum dulcamara	Bittersweet)
Tamus communis	Black bryony)

Ideally plant in late autumn, after mid-November, although anytime between October and March is appropriate if the ground is not frozen. Plant 60-125mm high whips in trenches (300mm depth x 600mm width) in two lines 300mm apart to form a staggered, double row. Whips in each line should be 450mm apart, giving a total of five plants per running metre. Use a spiral guard to protect the whip from rabbits with a cane to support them. Back fill with a mixture of the topsoil excavated from the pit, mixed with organic matter.

Newly planted hedges are vulnerable to damage by wind, drought and severe weather for the first 2-3 years. Keep moist and mulch with a 50-75mm layer of composted bark to stop weed growth and retain moisture in the soil.

Wildlife-friendly Plants for Formal Landscaping & 'Pollinator Plantings'

The species listed below are primarily non-native species which are commonly found in gardens and formal landscape areas, and which are considered 'wildlife-friendly'. Those native species which are included are aesthetically pleasing and suitable for formal planting schemes. The herbaceous species listed are particularly suitable for 'pollinator plantings'

Woody Species			
Viburnum x bodnantense	Bodnant viburnum	Syringa vulgaris	Lilac
Ceanothus spp	Californian lilac	Mahonia spp	Mahonia
Pyracantha spp	Firethorn	Philadelphus spp	Mock orange
Viburnum tinus	Laurustinus	Amelanchier canadensis	Serviceberry
Chaenomeles japonica	Japanese quince	Jasminium officinale	White jasmine
Herbaceous Species			
Arabis alpina	Alpine rock-cress	Sedum telephium	Orpine
Angelica archangelica	Angelica	Centaurea montana	Perennial cornflower
Lunaria annua	Annual honesty	Lunaria rediviva	Perennial honesty
Aubretia deltoidea	Aubretia	Helianthus decapetalus	Perennial sunflower
Sedum 'Purple Emperor'	Autumn Stonecrop	Phlox paniculata	Phlox
Borago officinalis	Borage	Limnanthes douglasii	Poached-egg plant
Eschscholtzia californica	California poppy	Echinacea purpurea	Purple coneflower
Erigeron canadensis	Canadian Fleabane	Verbena bonariensis	Purple-top vervain
Iberis sempervirens	Candytuft	Silene dioica	Red campion
Helleborus niger	Christmas rose	Centranthus ruber	Red valerian
Malva sylvestris	Common mallow	Rosmarinus officinalis	Rosemary
Papaver rhoeas	Common poppy	Salvia officinalis	Sage
Cosmos bipinnatus	Cosmos	Hebe recurva	Shrubby veronica

Oenothera biennis Myosotis sylvatica Tagetes spp Echinops ritro Verbascum thapsus Anemone blanda Aptenia cordifolia Althaea rosea Hyssopus officinalis Sedum spectabile Phacelia tanacetifolia Aster x versicolor Lavandula angustifolia Helleborus orientalis Leucanthemum vulgare Origanum vulgare

Evening primrose Wood forget-me-not French marigold Globe thistle Great mullein Grecian windflower Heart-Leaf Ice-plant Hollyhock Hyssop Ice plant Lacy phacelia Late Michaelmas-daisy Lavender Lenten rose Ox-eye daisy Marjoram

Antirrhinum majus Saponaria officinalis Mentha spicata Crocus chrysanthus Helianthus annuus Lobularia maritime Monarda didyma Hesperis matronalis Dianthus barbatus Coreopsis spp Nicotiana affinis Cheiranthus cheiri Eranthis hyemalis Alyssum saxatile Lysimachia vulgaris Snapdragon Soapwort Spear mint Spring crocus Sunflower Sweet alyssum Sweet bergamot Sweet rocket Sweet William Tickseed Tobacco plant Wallflower Winter aconite Yellow alyssum Yellow loose-strife

Sources: *Plants for wildlife friendly Gardens* (Natural England), *Planting Gardens for Birds* (RSPB), *Gardening for Bats* (Bat Conservation Trust) and *Starting a Butterfly Garden* (School Garden Company).

APPENDIX 3: LOCATION OF BIRD AND BAT BOXES

