Preliminary Ecological Appraisal (PEA) and Baseline Biodiversity Net Gain (BNG) Assessment

Site:

Boscawen Park, Truro, Cornwall

Grid Reference: SW 8344 4357

14th February 2024

Plan for Ecology Ltd

Tremough Innovation Centre

Tremough Campus, Penryn, Cornwall, TR10 9TA

Tel: 01326 218839

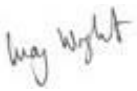
www.planforecology.co.uk

Document Control:

Site Name:	Boscawen Park, Truro, Cornwall TR1 1SG
OS Grid Reference:	SW 8344 4357
Report Authors:	Nicola Dyer BSc (Hons) MSc MCIEEM
Document Approved By:	Dr Lucy Wright BSc (Hons) MSc PhD MCIEEM
Client:	Ward Williams Associates
Report Reference Number:	P4E3259- P4E3260
Version:	01
Date:	14th February 2024

Declaration:

"The information, evidence and advice, which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology & Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions."

Nicola Dyer	
Lucy Wright	

Report Lifespan:

Ecological features can change over time, particularly if site management/ use changes. At the time of writing, Cornwall Council considers reports to be valid for 12 months (until January 2025), unless stated otherwise.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

CONTENTS

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

1.0 Non-Technical Summary

Ward Williams Associates commissioned Plan for Ecology Ltd to undertake a Preliminary Ecological Appraisal and baseline Biodiversity Net Gain (BNG) assessment of land at Boscawen Park Truro, Cornwall TR1 1SG (OS Grid Ref: SW 8344 4357) in October 2023. The ecological assessment was required to inform a proposal to upgrade the recreational facilities and undertake landscaping works.

The Preliminary Ecological Appraisal (PEA) comprised a desk study and a Phase 1 survey, including a UK Habitat Classification survey and an assessment of the potential of the site to support protected species. This PEA report describes and evaluates the results of the desk study and survey in accordance with the Chartered Institute for Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (CIEEM, 2017; 2018). Where the impact of the proposed scheme on an ecological receptor(s) can be determined without further survey or design information, an ecological impact assessment is undertaken within the PEA report. Where the impact of the scheme on an ecological receptor(s) cannot be determined, then this is clearly stated. It will be necessary to upgrade the PEA report to a full Ecological Impact Assessment (EcIA) on receipt of the further survey and/or design information.

The baseline BNG assessment was carried out according to current Statutory Metric guidance (DEFRA, 2024). A condition assessment of habitats identified by the UK Habitat Classification survey was undertaken and data was entered into the Statutory Metric calculator tool to calculate the baseline biodiversity units for the site. This was used to calculate the number of biodiversity units that would be required by a future development in order to achieve a 10% BNG. The report includes recommendations for habitat enhancement and creation which could be incorporated into the development design.

The site at Boscawen Park, measuring *c.* 7.74 ha, comprises land within the red line boundary shown on Map 1 above. It includes the main park and the ornamental pond to the east of Malpas Road but excludes the tennis courts and the cricket club grounds. The site is located on the southern margin of the city of Truro on the south Cornwall coast.

Boscawen Park borders the Truro River to the north, south and west; the river is tidal at this location and forms part of the Fal Estuary which is designated as a site of conservation significance mainly for its intertidal habitats and wintering bird populations. The northern section of Boscawen Park lies within the Fal and Helford Special Area for Conservation (SAC) and Malpas Estuary Site of Special Scientific Interest (SSSI) and the western and southern boundaries border these designated sites. The southern boundary lies close to a Cornwall Roadside Verge Inventory site. Habitats within the site are mainly modified and include amenity grassland, planted beds and a duck pond. Habitats of notable ecological value include the scattered trees (g 32) and intertidal mudflats (t2d). The site has the potential to support the following notable species: badger, hedgehog, bats (foraging, commuting and roosting), dormouse, otter, birds (breeding and wintering), reptiles, amphibians, invertebrates and vascular and non-vascular plants. Five non-native invasive plant species that requires legal control were recorded on-site.

Ecological constraints and opportunities are detailed on the accompanying 'Ecological Constraints and Opportunities Plan' (ECOP; Map 1) (below). The proposed development will incorporate or could incorporate the following mitigation measures:

- **Designated sites:** A Habitats Regulation Assessment will be required to fully assess the impacts of works within and adjacent to the Fal & Helford SAC. Consultation with Natural England will be required to fully assess the impacts within and adjacent to Malpas Estuary

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

SSSI and Natural England's permission sought to carry out the works. A Construction Environmental Management Plan (CEMP) will be required to outline the measures take to protect habitats and species during the construction period.

- **Scattered trees (loss and degradation):** If any trees have to be felled for safety reasons, these should be replaced with an equivalent or greater number. Native trees have a greater ecological value than ornamental species. Tree works and construction activities to follow the recommendations given in the Tree Survey report (Evolve Tree Consultancy, 2023) to safeguard retained trees during construction.

- **Intertidal mudflats (degradation)**: The intertidal mudflats lie within the Fal & Helford SAC and Malpas Estuary SSSI. The HRA and consultation with Natural England will be required to fully assess the impacts of the proposed works and design appropriate mitigation to protect this habitat.

- **All habitats:** Under the Environment Act 2021, all planning applications in England are required to achieve a minimum 10% Biodiversity Net Gain to be measured using the DEFRA Statutory Metric tool. This currently applies to major developments and will be introduced for minor developments from April 2024.

- Policy G3 of the Climate Emergency Development Plan (Cornwall Council, 2023[1]) requires all major developments to provide, through the retention of existing and/or the establishment of new, canopy coverage equal to at least 15% of the site area (excluding areas of the site that are priority habitat types).

- **Badger, hedgehog, and otter:** All excavated pits associated with the proposed development must be covered overnight and all trenches must have sloping planks (no greater than 45° angle) placed in them as a means of escape so that animals will not become trapped.

- All fences (temporary and permanent) must have a minimum 25cm gap below at regular intervals to permit movement of faunal species. NB: the minimum gap can be reduced to 13cm x 13cm if the purpose is to permit only hedgehog access post-development.

- **Badger:** Provide compensatory foraging habitat for loss of modified grassland by improving the site for badgers and including new hedges and shrub planting in the landscaping scheme, particularly using species that provide a source of berries and fruit.

- As badger has been recorded locally, a post-planning, pre-construction survey for badger will be required to identify if any setts have been created on-site since the Phase 1 survey and to ensure compliance with wildlife legislation.

- **Bats (foraging and commuting):** In accordance with the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023) the site is assessed as being of 'moderate suitability' for foraging and commuting bats. Further bat activity surveys are required to evaluate the species and populations using the site and assess the impacts of lighting. To meet current guidance, the surveys would comprise monthly transect and static monitoring between April and October (Collins, 2023).

- **Bats (roosting):** Trees with potential roost features for bats will be retained within the development but any tree works and/ or trees affected by artificial lighting may impact roosting bats. It will be necessary to undertake a detailed Ground Level Tree Assessment (GLTA) of trees to be impacted and, potentially, subsequent further climbing/emergence

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

surveys to confirm the presence/likely absence of roosting bats. The GLTA should be undertaken between November – March while potential roost features in trees are most visible. If any further surveys are required, climbing surveys can be undertaken at any time of year but emergence surveys must be timed between May – August (Collins, 2023).

- The demolition of buildings with potential roost features and buildings affected by artificial lighting may impact roosting bats. It will be necessary to undertake a detailed Preliminary Roost Assessment (PRA) which includes an internal and external building inspection, and potentially, subsequent further emergence surveys to confirm the presence/likely absence of roosting bats. The PRA can be undertaken at any time of year but emergence surveys (if required) must be timed between May – August (Collins, 2023).

- A sensitive lighting scheme will be key to mitigating impacts upon roosting, foraging and commuting bat species, particularly the retention of a dark corridor (<0.5 lux), at least 10m wide, along the estuary margins, reduction of artificial light levels to a minimum across the rest of the site and avoidance of any direct illumination onto trees or buildings that may support roosting bats. Careful design of floodlighting around the sports pitches will be required, based on the findings of the further bat surveys.

- **Dormouse:** A dormouse survey is not recommended because of the small extent of potential habitat on-site and low likelihood of dormouse presence but precautionary measures will be required for the removal woody vegetation and any tree/shrub works. Undertake clearance of woody vegetation during the winter months (October – February inclusive) to avoid the bird nesting season and when any dormice present will be hibernating at ground level. If this cannot be achieved, an Ecological Watching Brief will be required to search the vegetation prior to clearance for this species. If any dormice are found on-site, all works must cease immediately and a EPS licence obtained from Natural England to permit any works that disturb dormouse to proceed.

- **Otter:** Follow the recommendations for the Fal & Helford SAC/Malpas Estuary SSSI to protect otter habitat in the adjacent estuary. Follow the recommendations for bats and retain a dark corridor (<0.5 lux), at least 10m wide, along the estuary margins. The existing dogs on leads policy should be enforced to prevent disturbance, particularly along the northern boundary where there is easy access to the foreshore.

- **Birds (breeding):** Take precautionary measures to avoid disturbance to nesting birds. Avoid tree works, building demolition and any clearance of hedges, scrub and shrubs between March and August/ September when birds will be nesting, or precede the works with a detailed search for nesting birds, to be undertaken by an ecologist. If an active bird nest is found, then works must be delayed until nesting activity has ceased / the dependent young have fledged. Works are most likely to be delayed during the peak nesting period between April and July.

- Provide compensatory bird nesting habitat to replace that lost by including new hedges and native tree/shrub planting within the landscaping scheme.

- **Birds (wintering):** Follow the recommendations for the Fal & Helford SAC/Malpas Estuary SSSI to protect populations of waders and wildfowl and minimise disturbance in the adjacent estuary. The existing dogs on leads policy should be enforced to prevent disturbance of the foreshore, particularly along the northern boundary. Retain a dark corridor (<0.5 lux), at least 10m wide, along the estuary margins and design the floodlighting to minimise light spill across the site.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

- Provide compensatory wintering bird foraging habitat. The loss of modified grassland cannot be easily replaced but feeding opportunities for other wintering species can be created by planting a wide range of plants in the landscaping scheme that provide a source of berries and fruit.

- **Reptiles:** A reptile survey is not recommended because of the small extent of potential habitat but precautionary reptile avoidance measures (RAMs) will be required during vegetation clearance to avoid reptile injury.

    - Remove hedges and any scrub, shrubs, longer grassland or ruderal vegetation using hand-held tools to avoid injuring any reptiles sheltering within.
    - If any scrub or shrubs are to be removed, cut woody vegetation to 200mm above ground level during the winter (when birds will not be nesting) and cut the remaining scrub and shrubs to ground level during the summer (April – early October) when reptiles will be active and can move away from the disturbance.
    - Continue to maintain modified grassland at a short sward height of 100mm by cutting/grazing regularly to deter reptiles from moving in from other areas of the site. Prior to construction, if the sward has been allowed to grow, cut the sward to 200mm and leave for at least 24 hours to allow reptiles to disperse. Undertake a second cut to 100mm, cutting the sward slowly and in a single direction towards boundary features. Leave the sward undisturbed for 24 hours before commencing ground works.
    - If it is not feasible to carry out works as specified above, they must be conducted under an Ecological Watching Brief.

- **Amphibians:** There is a low risk that amphibians are present in the pond because of duck predation. Dredge the pond in late summer or early autumn, if possible, when aquatic species are less active. The main amphibian breeding period in Cornwall (January – March) must be avoided. Leave dredged material on the bank for 24hrs to allow amphibians to escape and move back to the pond. Across the rest of the site, follow recommendations for reptiles to minimise the risk of injury to amphibians during site works.

- **Fish:** Follow mitigation recommendations for amphibians to minimise impacts to any eel present in the pond; the presence of eel is considered low risk because of duck predation.

- **Invertebrates:** Follow mitigation recommendations for the Fal & Helford SAC to protect invertebrates in the adjacent estuary. Follow mitigation recommendations for amphibians to minimise impacts to aquatic invertebrates in the pond. Follow recommendations for habitats to maintain invertebrate habitat within the site.

- **Vascular, non-vascular plants and fungi**: Follow recommendations for habitats. The landscaping scheme will increase the diversity of vascular plants; native plants should be included wherever possible.

- **Invasive and injurious plants**: Up to five non-native invasive plant species have been recorded on-site that require legal control under Schedule 9 WCA 1981 (as amended). It is recommended that an Invasive Plant Survey is undertaken at a more favourable time of year to identify all species present and confirm their locations.

- Three plants listed as injurious under the Weeds Act 1959 are also present on-site: spear thistle, broad-leaved dock and common ragwort. Measures should be taken to prevent

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

them spreading to agricultural land. Control measures comprise targeted weed control (i.e. seasonal mowing, pulling or herbicide application).

- An Invasive Species Control Plan will be required to support the planning application (Cornwall Council, 2023[2]). A post-planning, preconstruction survey for plant species listed under Schedule 9 WCA 1981 will be required to ensure compliance with wildlife legislation.

- **Further surveys:** Further pre-planning surveys and assessments are required as follows: bat surveys (roosting, foraging and commuting) and invasive plant survey, a Habitat Regulations Assessment, Invasive Species Control Plan and a completed Biodiversity Net Gain assessment. A Cornwall Canopy Calculator is to be completed by the landscape architect or arboriculturalist. Post-planning, pre-construction surveys for badger and invasive plant species will be required to comply with wildlife legislation. During construction, an Ecological Watching Brief may be required if site works are likely to affect protected species.

- **Biodiversity Enhancements**: The baseline BNG assessment found that the site currently supports 74.36 habitat biodiversity units and 0.86 hedgerow biodiversity units. There is opportunity to incorporate features that are predicted to enhance the site for biodiversity and achieve a 10% BNG. See 'Ecological Constraints and Opportunities Plan' (ECOP; Map 1) below.

Table 1: The baseline statement of predicted change (habitat losses and gains)

Ecological Receptor	Ecological Value	Loss (approximate)	Gain (approximate)
Fal and Helford SAC	International; Conservation Regulations 2017 (as amended) and Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	TBC	TBC
Malpas Estuary SSSI	National; Wildlife and Countryside Act 1981	TBC	TBC
Cornwall Roadside Verge Inventory site (BS30)	County; local planning policy	None	None
Non-native and ornamental hedgerow (h2b)	Within the Zone of Influence	None	TBC – gain possible with new Cornish hedges
Scattered trees (g 32)	Local	None	TBC – gain possible with native tree and shrub planting
Intertidal mudflats (t2d)	International	None	None

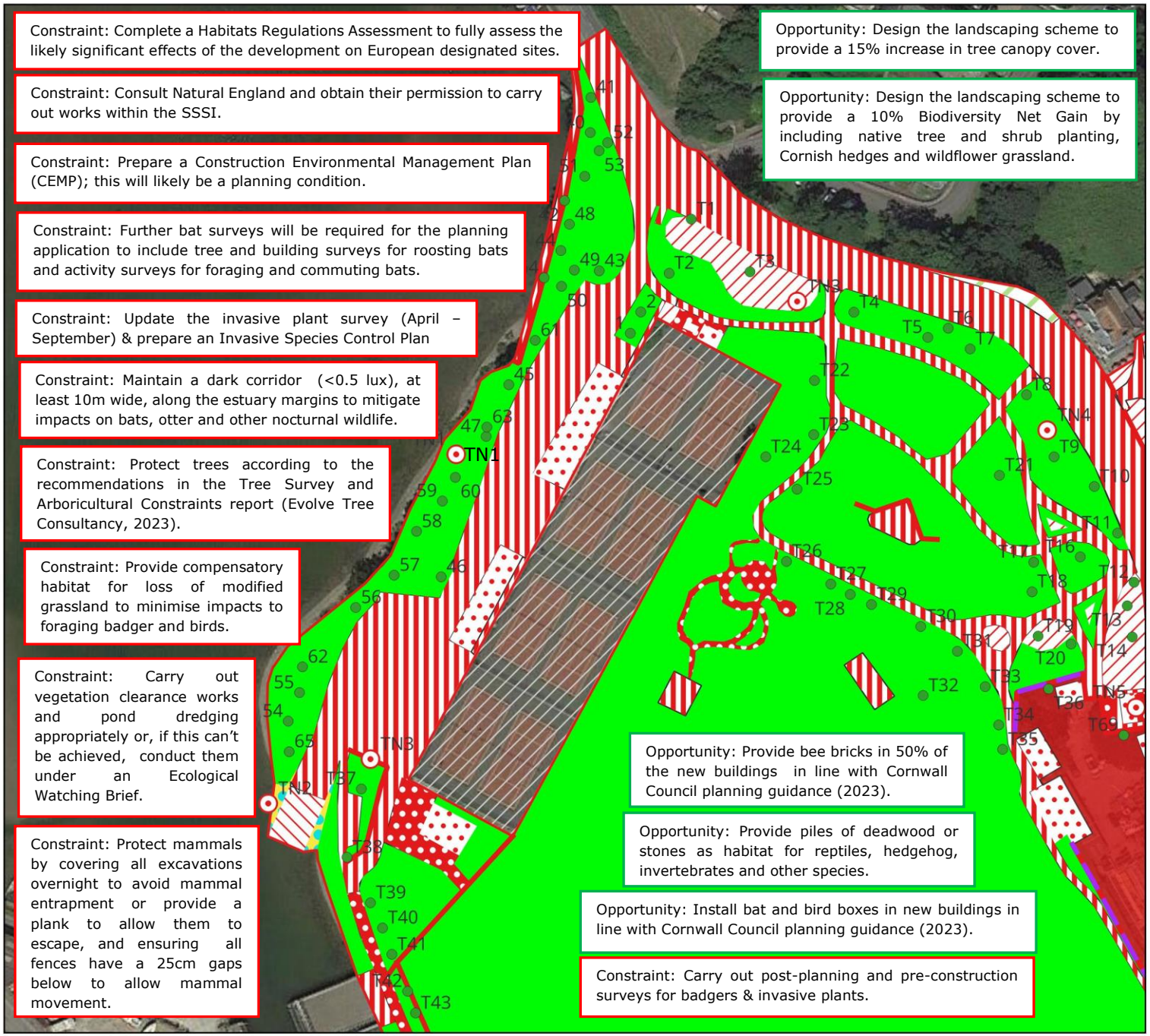
Ecological Receptor	Ecological Value	Loss (approximate)	Gain (approximate)
Line of trees (w1g6)	Within the Zone of Influence	TBC	TBC – gain possible with native tree and shrub planting
Bramble scrub (h3d)	Within the Zone of Influence	TBC	TBC – gain possible with native tree and shrub planting
Modified grassland (g4 100)	Within the Zone of Influence	c. 0.7ha	TBC – gain possible with wildflower grassland
Other neutral grassland; ruderal (g3c 81)	Within the Zone of Influence	TBC	TBC – gain possible with wildflower grassland
Urban; flower bed; introduced shrub (u1 846 847)	Within the Zone of Influence	TBC	TBC – gain possible with native species planting
Other standing water; ornamental pond (r1g 46)	Within the Zone of Influence	None	TBC – gain possible with pond remodelling and native species planting
Artificial unvegetated, unsealed surface (u1c)	Negligible	TBC	TBC – gain likely
Developed land; sealed surface (u1b)	Negligible	TBC	TBC – gain certain
Buildings (u1b5)	Negligible	TBC	TBC – gain certain
Built linear feature (u1e)	Within the Zone of Influence	TBC	TBC – gain certain

The residual impact of the proposed development cannot be determined until the results of the recommended further surveys and assessments are available. This Preliminary Ecological Appraisal will be upgraded to an Ecological Impact Assessment (EcIA) following provision of the final site layout, further survey information for bats (roosting, foraging and commuting), an updated invasive species survey, a Habitat Regulations Assessment and further consultation with Natural England.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

2.0 Ecological Constraints and Opportunities Plan (ECOP)

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.



Map 1. Ecological Constraints and Opportunities Plan

Key

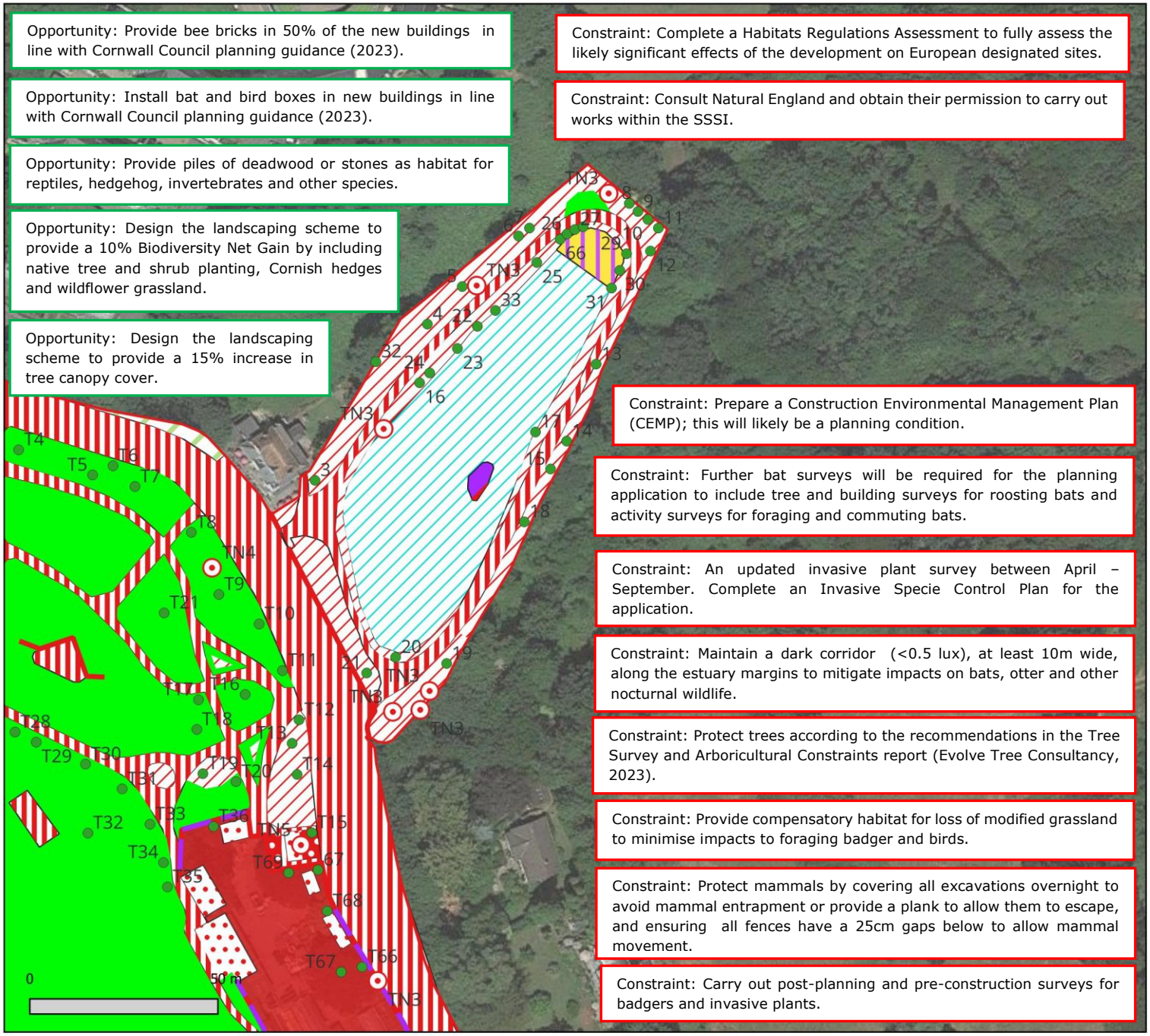
- g 32 - scattered trees
- TN - target note
- h2b - non-native ornamental hedge
- site boundary
- u1e - built linear feature
- g3c 81 - other neutral grassland;ruderal
- g4 - modified grassland
- u - urban (mixed habitats)
- u1 846 847 - flower beds & intro.shrubs
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1c - artificial unveg. unsealed surface
- t2d - intertidal mudflats
- u1b - intertidal hard structure

Target Notes

1. Area of the site that lies within the designated SAC/SSSI
2. Intertidal mudflats – habitat of international value
3. Invasive plant – (Schedule 9 WCA 1981)
4. Numerous mature trees of local value provide habitat for roosting bats and nesting birds.
5. Toilet block with bat roost potential

N

Date: 30.01.24



Map 1. Ecological Constraints and Opportunities Plan

Key

- g 32 - scattered trees
- TN - target note
- h2b - non-native ornamental hedge
- u1e - built linear feature
- f2d - aquatic marginal vegetation
- g3c 81 - other neutral grassland;ruderal
- g4 - modified grassland
- h3d - bramble scrub
- r1g 46 - ornamental pond
- u - urban (mixed habitats)
- u1 846 847 - flower beds & intro.shrubs
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1c - artificial unveg. unsealed surface

Target Notes

1. Area of the site that lies within the designated SAC/SSSI
2. Intertidal mudflats – habitat of international value
3. Invasive plant – (Schedule 9 WCA 1981)
4. Numerous mature trees of local value provide habitat for roosting bats and nesting birds.
5. Toilet block with bat roost potential

N

Date: 30.01.24

Map 1. Ecological Constraints and Opportunities Plan

Key

- g 32 - scattered trees
- TN - target note
- h2b - non-native ornamental hedge
- site boundary
- u1e - built linear feature
- w1g6 - line of trees
- g4 - modified grassland
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1c - artificial unveg. unsealed surface
- t2d - intertidal mudflats
- u1b - intertidal hard structure

Target Notes

1. Area of the site that lies within the designated SAC/SSSI
2. Intertidal mudflats – habitat of international value
3. Invasive plant – (Schedule 9 WCA 1981)
4. Numerous mature trees of local value provide habitat for roosting bats and nesting birds.
5. Toilet block with bat roost potential

N

Date: 30.01.24

Constraint: Complete a Habitats Regulations Assessment to fully assess the likely significant effects of the development on European designated sites.

Constraint: Consult Natural England and obtain their permission to carry out works within the SSSI.

Constraint: Prepare a Construction Environmental Management Plan (CEMP); this will likely be a planning condition.

Constraint: Further bat surveys will be required for the planning application to include tree and building surveys for roosting bats and activity surveys for foraging and commuting bats.

Constraint: An updated invasive plant survey will be required between April – September. Complete an Invasive Species Control Plan for the application.

Constraint: Maintain a dark corridor (<0.5 lux), at least 10m wide, along the estuary margins to mitigate impacts on bats, otter and other nocturnal wildlife.

Constraint: Protect trees according to the recommendations in the Tree Survey and Arboricultural Constraints report (Evolve Tree Consultancy, 2023).

Constraint: Provide compensatory habitat for loss of modified grassland to minimise impacts to foraging badger and birds.

Constraint: Protect mammals by covering all excavations overnight to avoid mammal entrapment or provide a plank to allow them to escape, and ensuring all fences have a 25cm gaps below to allow mammal movement.

Constraint: Carry out post-planning and pre-construction surveys for badgers and invasive plants.

Opportunity: Install bat and bird boxes in new buildings in line with Cornwall Council planning guidance (2023).

Opportunity: Provide bee bricks in 50% of the new buildings in line with Cornwall Council planning guidance (2023).

Opportunity: Provide piles of deadwood or stones as habitat for reptiles, hedgehog, invertebrates and other species.

Opportunity: Design the landscaping scheme to provide a 10% Biodiversity Net Gain by including native tree and shrub planting, Cornish hedges and wildflower grassland.

Opportunity: Design the landscaping scheme to provide a 15% increase in tree canopy

Map 1. Ecological Constraints and Opportunities Plan

Key

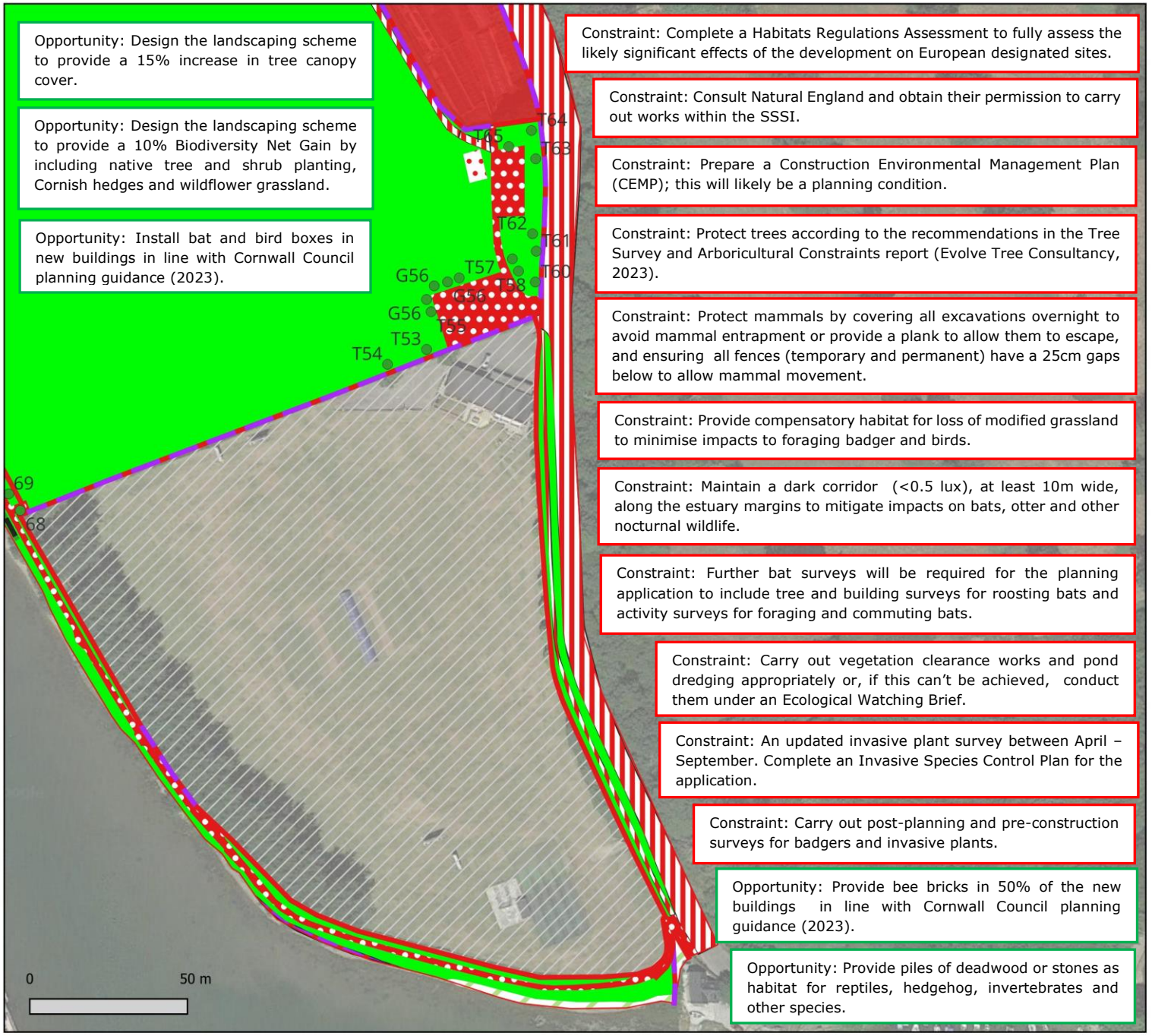
- g 32 - scattered trees
- TN - target note
- h2b - non-native ornanmental hedge
- site boundary
- u1e - buiit linear feature
- g4 - modified grassland
- r1g 46 - ornamental pond
- u - urban (mixed habitats)
- u1 846 847 - flower beds & introd. shrub
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1c - artificial unveg. unsealed surface

Target Notes

1. Area of the site that lies within the designated SAC/SSSI
2. Intertidal mudflats – habitat of international value
3. Invasive plant – (Schedule 9 WCA 1981)
4. Numerous mature trees of local value provide habitat for roosting bats and nesting birds.
5. Toilet block with bat roost potential

N

Date: 30.01.24



Opportunity: Design the landscaping scheme to provide a 15% increase in tree canopy cover.

Opportunity: Design the landscaping scheme to provide a 10% Biodiversity Net Gain by including native tree and shrub planting, Cornish hedges and wildflower grassland.

Opportunity: Install bat and bird boxes in new buildings in line with Cornwall Council planning guidance (2023).

Constraint: Complete a Habitats Regulations Assessment to fully assess the likely significant effects of the development on European designated sites.

Constraint: Consult Natural England and obtain their permission to carry out works within the SSSI.

Constraint: Prepare a Construction Environmental Management Plan (CEMP); this will likely be a planning condition.

Constraint: Protect trees according to the recommendations in the Tree Survey and Arboricultural Constraints report (Evolve Tree Consultancy, 2023).

Constraint: Protect mammals by covering all excavations overnight to avoid mammal entrapment or provide a plank to allow them to escape, and ensuring all fences (temporary and permanent) have a 25cm gaps below to allow mammal movement.

Constraint: Provide compensatory habitat for loss of modified grassland to minimise impacts to foraging badger and birds.

Constraint: Maintain a dark corridor (<0.5 lux), at least 10m wide, along the estuary margins to mitigate impacts on bats, otter and other nocturnal wildlife.

Constraint: Further bat surveys will be required for the planning application to include tree and building surveys for roosting bats and activity surveys for foraging and commuting bats.

Constraint: Carry out vegetation clearance works and pond dredging appropriately or, if this can't be achieved, conduct them under an Ecological Watching Brief.

Constraint: An updated invasive plant survey between April – September. Complete an Invasive Species Control Plan for the application.

Constraint: Carry out post-planning and pre-construction surveys for badgers and invasive plants.

Opportunity: Provide bee bricks in 50% of the new buildings in line with Cornwall Council planning guidance (2023).

Opportunity: Provide piles of deadwood or stones as habitat for reptiles, hedgehog, invertebrates and other species.

Map 1. Ecological Constraints and Opportunities Plan

Key

- g 32 - scattered trees
- h2b - non-native ornanmental hedge
- site boundary
- u1e - buiit linear feature
- w1g6 - line of trees
- g3c 81 - other neutral grassland; ruderal
- g4 - modified grassland
- h3
- u - urban (mixed habitats)
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1c - artificial unveg. unsealed surface

Target Notes

1. Area of the site that lies within the designated SAC/SSSI
2. Intertidal mudflats – habitat of international value
3. Invasive plant – (Schedule 9 WCA 1981)
4. Numerous mature trees of local value provide habitat for roosting bats and nesting birds.
5. Toilet block with bat roost potential

N

Date: 30.01.24

3.0 Introduction

3.1 Background & Purpose of Survey

Ward Williams Associates commissioned Plan for Ecology Ltd to undertake a Preliminary Ecological Appraisal and baseline Biodiversity Net Gain assessment of land at Boscawen Park, Truro, Cornwall TR1 1SG (OS Grid Ref: SW 8344 4357) in October 2023. The ecological assessments were required to inform a master plan for the Park that aims to improve the recreational facilities and enhance the landscaping.

An indicative site layout is provided at Appendix 1. A location plan showing the designated sites of nature conservation importance within a 1km radius of the site is provided at Appendix 2. The UK habitat classification and Ecological Constraints & Opportunities Plan (ECOP) for the site is shown on Map 1 above.

Where the impact of the proposed scheme on an ecological receptor(s) can be determined without further survey or design information, an ecological impact assessment is undertaken within the Preliminary Ecological Appraisal (PEA) report. Where the impact of the scheme on an ecological receptor(s) cannot be determined, then this is clearly stated. It will be necessary to upgrade the PEA report to a full Ecological Impact Assessment (EcIA) on receipt of the further survey and/or design information.

3.2 Site Location & Description

The site, measuring *c.* 7.7 ha, comprises land within the red line boundary shown in Figure 1. Boscawen Park is located on the southern margin of the city of Truro, in mid-Cornwall. It comprises a public park and sports pitches of predominantly amenity grassland with a car park, footpaths and buildings. Landscaped areas include planted beds, numerous mature trees and a duck pond.

Figure 1. Site location

The site is bordered by the Truro River on the northern, western and southern boundaries; this section of the river is tidal and forms part of the Fal Estuary. The River and a small section of land at the northern end of the site are included within the Fal & Helford Special Area of Conservation (SAC) and Malpas Estuary Site of Special Scientific Interest (SSSI) and are legally protected. The site is bordered by Malpas Road to the east, beyond which lies woodland, farmland and housing. In the wider area, the site is surrounded by the urban development of Truro to the north, industrial development at Newham to the west and farmland with hedgerows, woodlands and settlements to the south and east. A plan showing the location of the site and designated sites of nature conservation importance is provided at Appendix 2.

3.3 Proposed Site Plans

It is proposed to enhance recreational facilities at the Park by constructing a new all-weather playing pitch, a sports hub and Winter Botanic Garden with parking area, performance space, water play garden and outdoor gym. Access around the Park will be improved by constructing a waterside boardwalk along the northern margin of the Park, stabilising the river edge and resurfacing the path on the western margin, and creating a seating area at the southern end of the Park with views over the estuary. Proposed landscaping will showcase the 'Cornish Botanic Gardens' style planting and arboretum and extend the gardens to the play area and sports hub, and the duck pond across Malpas Road to the east. An indicative site layout is provided at Appendix 1.

The master plan includes a bridge connection across the Truro River to link Boscawen Park to Newham; this is outside the scope of the current project and is not assessed in this report.

3.4 Project Administration

Site Name:	Boscawen Park, Truro, Cornwall TR1 1SG
OS Grid Reference:	SW 8344 4357
Client:	Ward Williams Associates
Planning Authority:	Cornwall Council
Report Reference Number:	P4E3259 – P4E3260
Site proposals:	Park improvements to enhance recreational facilities and landscaping.
Survey Dates:	29th November 2023 & 29th January 2024 (Phase 1 survey and Baseline habitat condition assessment)
Surveyor & Licence Numbers:	Nicola Dyer BSc (Hons) MSc MCIEEM (Bat licence no: 2019-40845-CLS-CLS

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

4.0 Methodology

This assessment has been carried out in accordance with the 'Guidelines for Preliminary Ecological Appraisal' produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017); BS42020-2013 Biodiversity – Code of Practice for Planning and Development, as adopted by local planning authorities (British Standard, 2013); and the CIEEM Guidelines for Ecological Impact Assessment (CIEEM, 2018).

4.1 Desk Study

The desk study is a search of all ecological records and site designations held by the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS, to 2024) within a 1km radius of the site. The distance between the site boundary and nearby European sites was measured using MAGIC http://www.magic.gov.uk (DEFRA *et al*, 2024) to determine if the site falls within a European site Zone of Influence. The Zone of Influence is identified as a 12.5km buffer around European sites that are vulnerable to recreational impacts (Cornwall Council, 2021); this buffer has been extended to all European sites for the purpose of this PEA.

The strategic significance of the site was assessed using the Net Gain Zones on LAGAS Natural Capital Information and Management Hub https://lagas.co.uk/app/product/netgain_vectorzones (accessed 17/01/24) to determine if the site lies within or has the potential to contribute to the Cornwall Nature Network.

4.2 Site Survey

The Phase 1 survey comprised a UK Habitat Classification survey of the site (UKHab Ltd, 2023) and an assessment of the suitability of the site to support legally protected species and species of conservation importance. The survey area boundary comprised land within the red line boundary shown on Map 1.

The surveyor also noted down the presence of invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended) within the site and within *c.*7m of the site boundary (where access was available), and evidence of badger within the site and within *c.*30m of the site boundary (where access was available), but a detailed survey for these species/ species groups was not undertaken.

Survey data was collected in the field and mapped using QGIS.

4.3 Evaluation

The methods and standards for site evaluation within the British Isles are defined in 'A Nature Conservation Review' (Ratcliffe, 2009). They are broadly used across the United Kingdom to rank sites, so priorities for nature conservation can be attained. The criteria are size, diversity, naturalness, rarity and fragility, with secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units.

The assessment judges features within the site in relation to other sites because a number of habitats may be of nature conservation importance when combined.

The legislative and planning policy context are important and have been given full consideration in this assessment.

There are also a number of other important considerations as follows:

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

- Designated Sites and Features e.g. Special Protection Areas (SPA), Specia Areas of Conservation (SAC), Sites of Special Scientific Interest (SSSI; ecologically important hedgerows etc.);
- Biodiversity Value (use of Biodiversity Action Plans and local development plans);
- Potential Value;
- Secondary or Supporting Value;
- Social or Economic Value; and
- Legal Designation.

Based on the criteria above and professional judgement, the likely value of ecological features is determined within a geographical context in accordance with the CIEEM Guidelines for Ecological Impact Assessment (CIEEM, 2018). Value is assigned in decreasing order of importance as follows: International (Europe), National (UK), Regional (Southwest), County, District, Parish, Local, Zone of Influence and Negligible.

This evaluation method identifies 'important ecological features' (considered to be of Local value and above) which could potentially be affected by the proposed development.

4.4 Impact Assessment

Where the impact of the proposed scheme on an ecological receptor(s) can be determined without further survey or design information, an ecological impact assessment is undertaken within the Preliminary Ecological Appraisal (PEA) report. Where the impact of the scheme on an ecological receptor(s) cannot be determined, then this is clearly stated.

Where an impact (positive or negative) on the integrity of a defined feature (habitat, species or ecosystem) was identified, the impact significance has been described in the following terms: major, moderate, minor and negligible.

The likelihood of the impact occurring was described as: certain / near certain (probability estimated at 95% chance or higher), probable (probability estimated above 50% but below 95%), unlikely (probability estimated above 5% but below 50%) and extremely unlikely (probability estimated below 5%).

Reference has also been made to the extent and magnitude of impact (i.e., area affected) and duration (short-term impacts associated with construction and long-term impacts associated with the operational phase of the development).

The impact significance of the proposed development on the integrity of the site as a whole has been determined using the framework described above. A significant effect is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general (CIEEM, 2018).

Site integrity has been defined as follows: 'The integrity of a site is the coherence of its ecological structure and function, across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified (CIEEM, 2018). Site integrity is dependent on the extent, magnitude and duration of impacts upon each ecological feature (habitats or species). The accumulative impact, across all features, is therefore used to determine overall impact significance on the integrity of the site, and in EIA terms. Available

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

guidance and information, such as the distribution and status of the species or features, and professional judgment have been used to determine impact significance.

4.5 Mitigation Recommendations

Recommendations are provided using the Mitigation Hierarchy (British Standard, 2013; CIEEM, 2018). The Mitigation Hierarchy seeks to avoid impacts, then to mitigate unavoidable impacts, and, as a last resort, to compensate for residual impacts that remain after implementation of avoidance and mitigation measures.

Where an identified adverse impact cannot be fully mitigated, the residual impact remains. This residual impact in combination with similar impacts locally could constitute a cumulative impact. Due to the small scale and nature of the proposed development, only cumulative impact arising from potential development of adjoining land is considered within this assessment.

4.6 Biodiversity Net Gain assessment

A baseline BNG assessment was carried out according to the most recent Statutory Metric 4.0 guidance (DEFRA, 2024). The Phase 1 survey classified habitats on-site according to the UK Habitat Classification (UKHab Ltd, 2023) and a habitat condition assessment was completed according to the Statutory Metric criteria to categorise habitats according to good, moderate or poor condition.

Baseline habitat data was entered into the Statutory Biodiversity Metric calculator spreadsheet, including characteristics such as area/length, condition and strategic significance. The baseline biodiversity units were calculated for habitats, hedges and watercourses (where present on-site).

Detailed landscaping and planting plans are not currently available and, therefore, a post-development BNG assessment was not undertaken at this stage. Once the plans are finalised, the post-development biodiversity units can be calculated and entered into the Statutory Biodiversity Metric calculator spreadsheet. The Metric can compare the baseline and post-development units to calculate the % BNG achieved as a result of the development.

This PEA report identifies potential biodiversity enhancements that could be included in a future development which would contribute to BNG.

4.7 Technical Competence

All survey work has been undertaken by Nicola Dyer BSc (Hons), MSc, MCIEEM. All mapping and mitigation recommendations have been undertaken / designed by Nicola Dyer. Nicola holds a BSc (Hons) in Environmental Science and an MSc in Environmental Impact Assessment. She has worked as a consultant ecologist for over 30 years and has been a full member of CIEEM since 1994. Nicola also holds the following protected species licences: bat licence (2019-40845-CLS-CLS), and is an accredited River Condition Assessment surveyor.

4.8 Limitations

The survey area boundary was defined by Ward Williams Associates and excluded the tennis courts and cricket club. Where the site borders the Truro River, the survey included land up to the bank edge and the bank face.

It is possible to undertake Phase 1 surveys at any time of year, with the optimal period between April – September. Many plant species remain visible all year round and can be readily identified

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

from their vegetative characteristics. It is usually possible to classify habitats, notably hedgerow, scrub and urban habitats, year-round due to the nature of the vegetation present.

November and January are sub-optimal times of year to undertake more detailed vegetation surveys, including invasive plant surveys and BNG baseline habitat condition assessments. This is because some species will not be visible (remaining quiescent below ground), and few will be in flower or with seed capsules present (important species identification features). Almost all the habitats recorded at Boscawen Park are urban and highly modified and the timing of the survey was not considered to be a significant limitation but, where any further surveys of specific habitats or species groups in the optimal period (April – September) is considered necessary to inform the PEA and BNG assessment, this is clearly stated in this report.

Boscawen Park is a highly modified site and contains a diverse assemblage of ornamental non-native plants in flower beds and shrubberies and as scattered trees. These species were not recorded as part of the Phase 1 survey unless relevant to the ecological assessment e.g., species of wildlife value or invasive.

Some areas of the site could not be accessed during the survey:

- Small areas of dense shrubberies, such as around the Duck Pond.
- Some sections of the bank face that borders the Truro River were not visible from the bank top.
- The Maintenance Yard on the eastern boundary. Views from the periphery of the yard and aerial photographs indicate that this area contains storage units, hard landscaping and polytunnels with scattered ruderal and ephemeral plants; the area was therefore provisionally classified as supporting urban habitats.

It is possible that some species may have been missed in these areas. However, overall, access restrictions are not considered to be a significant survey limitation and do not affect the site evaluation and BNG assessment.

The site lies within 10m of the Truro River. The river is tidal at this location and, therefore, a River Condition Assessment was not required to inform the Baseline BNG assessment.

The BNG assessment requires a Diameter at Breast Height (DBH) measurement of individual trees. Figures were taken from the Tree Survey report (Evolve Tree Consultancy, 2023). However, for additional trees outside the scope of the Tree Survey, measurements were taken where possible and estimated where access was restricted.

Weather conditions during the survey were in line with seasonal norms. There are no limitations to the survey associated with weather conditions.

A search for Tree Preservation Orders (TPO's) or Conservation Area status does not form part of this assessment.

Ecological features can change over time, particularly if site management/ use changes. At the time of writing, Cornwall Council considers reports to be valid for 12 months (until January 2025), unless stated otherwise.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

5.0 Assessment Results

5.1 Designated Sites and Local Conservation Initiatives

Within a 1km radius of the site, there are two statutory wildlife sites (that share the same boundary) and three non-statutory sites; these are described below and their locations shown in Appendix 2. Part of the site lies within a statutory designated area. Further details of the legislation and planning policies that are relevant to designated sites of nature conservation importance are provided at Appendix 5.

- **Fal & Helford Special Area of Conservation (SAC).** The northern margin of Boscawen Park lies within the SAC boundary (Figure 2) and the Park also borders the SAC to the west and south. This is a statutory European designated site that is protected under the Conservation Regulations 2017 (as amended) and Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. It is designated for four habitats that are listed on Annex I of the EC Habitats Directive 1992: Sandbanks which are slightly covered by sea water all the time, Mudflats and sandflats not covered by sea water at low tide, Large shallow inlets and bays and Atlantic salt meadows. It is also designated for the Annex II (EC Habitats Directive 1992) species, shore dock (*Rumex rupestris*).

- **Malpas Estuary Site of Special Scientific Interest (SSSI).** The northern margin of Boscawen Park lies within the SSSI boundary (Figure 2) and the Park also borders the SSSI to the west and south; the boundary of the SSSI overlaps the SAC in the vicinity of Boscawen Park. Malpas Estuary SSSI is protected under the Wildlife and Countryside Act (WCA) 1981 (as amended) and is designated primarily for wildfowl and wading birds. The Truro River section regularly supports nationally important numbers of black-tailed godwit (*Limosa limosa*) during autumn and winter. The site is also used for feeding by up to 500 dunlin (*Calidris alpina*), 200 shelduck (*Tadorna tadorna*), 300 teal (*Anas crecca*), and smaller numbers of other waders including redshank (*Tringa totanus*), greenshank (*T. nebularia*), curlew (*Numenius arquata*), whimbrel (*N. phaeopus*) and oystercatcher (*Haematopus ostralegus*). Tidal mudflats are the dominant habitat feature with areas of saltmarsh and semi-natural ancient woodland.

- **Trethowell Wood Ancient Woodland site.** Boscawen Park lies 0.7km north-east from this woodland site which is located along Calenick Creek on the western side of the estuary. It is identified as having ancient semi-natural woodland that has been in continuous existence since 1600AD, an irreplaceable habitat that is protected in the planning system.

- **Cornwall Roadside Verge Inventory site (BS 30).** Boscawen Park lies c. 7m from this roadside verge which is located at Sunny Corner, close to the southern boundary of the Park. It is designated for a nationally rare plant (species unknown).

- **Cornwall Roadside Verge Inventory site (BS 103).** Boscawen Park is located c. 0.65km from this roadside verge which is designated for a its population of balm-leaved figwort (*Scrophularia scorodonia*), a nationally scarce and Cornwall Red Data Book plant.

In the wider area, Boscawen Park lies within the Zone of Influence (12.5km) of three other European sites: Newlyn Downs SAC, Carrine Common SAC, and Falmouth Bay to St Austell Bay Special Protection Area (SPA).

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

- **Newlyn Downs SAC.** Boscawen Park is located 9.6km from the SAC. Newlyn Downs is designated for its habitats which are listed on Annex I of the EC Habitats Directive (1992): Temperate Atlantic wet heaths.

- **Carrine Common SAC.** The Park lies 2.9km from the SAC. This European site is designated for its habitats which are listed on Annex I of the EC Habitats Directive (1992): Temperate Atlantic wet heaths.

- **Falmouth Bay to St Austell Bay SPA**: Boscawen Park lies *c.*4.6km from this SPA and is connected to it hydrologically. The SPA covers the marine environment incorporating five shallow, sandy bays: Falmouth Bay, Gerrans Bay, Veryan Bay, Mevagissey Bay and St Austell Bay. It also includes Carrick Roads, an estuarine area which meets the sea between Falmouth and St Mawes, and part of the tidal Helford River. These marine habitats support important populations of rare wintering birds which are listed on Annex I of the EC Birds Directive (2006): Black throated diver (*Gavia arctica*), Great northern diver (*Gavia immer*) and Slavonian grebe (*Podiceps auritus*).

Figure 2. Northern margin of Boscawen Park which is covered by statutory designations

The indicative layout in Appendix 1 shows that works are proposed at the northern end of the Park within the boundary of the Fal & Helford SAC and Malpas Estuary SSSI. These include a new waterside boardwalk and enhanced waterside parkland space, and the remodelling of the entrance road and car park. It is also proposed to stabilise the water's edge along the western margin of the Park. These works will have a direct impact on habitats within the statutory designated sites.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Increased noise, vibration, activity and dust generated during construction could also impact the Fal & Helford SAC and Malpas Estuary SSSI, potentially affecting the wildfowl and wading birds for which the SSSI is designated. Construction works close to the edge of the estuary may impact water quality from surface runoff and spillage of contaminants from machinery; this could potentially affect water quality of the Fal & Helford SAC and Malpas Estuary SSSI, and the Falmouth Bay to St Austell Bay SPA which is located downstream. The proposed development is unlikely to affect Newlyn Downs SAC or Carrine Common SAC within the Zone of Influence because of the separation distance and lack of hydrological connections.

Once the site is operational, the new boardwalk on the northern boundary may increase the numbers of humans and dogs along the estuary foreshore in this part of the Park. This could result in localised disturbance within the Fal & Helford SAC and Malpas Estuary SSSI and potentially affect populations of wildfowl and wading birds for which the SSSI is designated.

As the proposed Park improvements have the potential to impact European sites, under the Conservation of Habitats and Species Regulations 2017 (as amended), and Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, it will be necessary to undertake a further Habitat Regulations Assessment (HRA) to assess the likely significant effects on designated features. A Stage 1 & 2 Appropriate Assessment will be required to inform the planning application. The nature of the impacts of the development on European sites **cannot be determined** without completion of the HRA. See further details in section 6.1.

The proposed Park improvements have the potential to impact a SSSI. Further consultation with Natural England will be required and permission obtained to undertake works within the SSSI boundary. Natural England will assess the impacts and advise on mitigation. Therefore, the nature of the impacts of the development on the SSSI **cannot be determined** without Natural England's advice.

Other designated sites within a 1km radius of the site include Trethowell Wood and Roadside Verge Inventory site (BS 103); these lie some distance from Boscawen Park and are unlikely to be affected by the development. Roadside Verge Inventory site (BS 30) lies close to the southern end of the Park where the southern waterside space is to be improved with new fitness equipment and planting. It is possible that increased dust generated during construction may impact the nationally rare plant that occurs on the verge. In the absence of mitigation, the nature of the impacts on the verge is considered to be **short-term, negative and of unlikely occurrence, of minor significance on a County scale.**

5.2 Strategic Significance

The strategic significance of each habitat feature is determined using the Net Gain Zones on LAGAS Natural Capital Information and Management Hub https://lagas.co.uk/app/product/netgain_vectorzones (accessed 17th January 2024). Those habitat features that fall within Zone 1: Existing Nature Network are categorized as 'within area formally identified in the local strategy'. Those habitat features that fall within Zone 2: Opportunity Area are categorized as 'location ecologically desirable but not in local strategy'. Those features that do not fall within Zones 1 and 2 are categorized as 'area/ compensation not ecologically desirable/ in local strategy'. In some instances, single habitat features sit partially within or outside of Zones 1 and 2. The resolution of the Net Gain Zones on LAGAS is relatively low in comparison to the resolution of habitat features within the Development Site. Where habitats straddle Net Gain Zones, the whole site is classified as the highest net gain zone so to apply the most conservative strategic significance. Most of Boscawen Park lies within Zone 1 and the northern margin lies

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

within a statutory designated area and therefore the whole site is considered to have strategic significance within the Nature Network (Figure 3).

The proposed Park improvements within Zone 1 could impact the Nature Network through the construction and operational activities described in 5.1 above. The Nature Network lies within the Fal & Helford SAC and Malpas Estuary SSSI and, therefore, the nature of the impacts of the development on **cannot be determined** without completion of the HRA and further consultation with Natural England.

Figure 3. Biodiversity Net Gain Zones falling within the site (LAGAS, January 2024).

5.3 UK Habitat Classification

A total of thirteen UKHab Classification habitat types (including secondary codes) were recorded within the site during the survey. These are listed below, and their distribution is shown on Map 1 above:

- Non-native and ornamental hedgerow (h2b)
- Scattered trees (g 32)
- Line of trees (w1g6)
- Bramble scrub (h3d)
- Modified grassland (g4 100)
- Other neutral grassland; ruderal (g3c 81)
- Urban; flower bed; introduced shrub (u1 846 847)
- Other standing water; ornamental pond (r1g 46)
- Intertidal mudflats (t2d)
- Artificial unvegetated, unsealed surface (u1c)
- Developed land; sealed surface (u1b)
- Buildings (u1b5)
- Built linear feature (u1e).

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Of the habitats within the site, scattered trees (g4 32) and intertidal mudflats (t2d) are considered to be of significant ecological value and are described further in section 5.3 Notable Habitats. Habitats of negligible or low ecological value are briefly described below.

The assemblage of plant species associated with each habitat including Latin names is provided in the table at Appendix 3.

Non-native and ornamental hedgerow (h2b)

Non-native hedgerows form the boundaries of the yard at the eastern side of the site and the cricket pitch (Figure 4). These comprise uniform blocks of garden privet, *Griselinia* sp. and conifer species. Although ornamental, the hedges provide dense woody vegetation cover that could be used by nesting birds, small mammals and other wildlife. This habitat is considered to be of ecological value '**within the Zone of Influence**'.

Line of trees (w1g6)

A line of young non-native trees are scattered along the western boundary where the site borders the estuary (Figure 5). These are too small to be included in the Tree Survey but form a buffer along the estuary and some cover for wildlife. This habitat is considered to be of ecological value '**within the Zone of Influence**'.

Bramble scrub (h3d)

A small strip of bramble is present along the southern boundary of the site, on the bank that borders the estuary; this had been cut at the time of the survey (Figure 6). There is also a small patch of bramble with scattered young trees and non-native species on the island of the duck pond. Scrub offers habitat for nesting birds and shelter for small mammals, reptiles and other wildlife. This habitat is considered to be of ecological value '**within the Zone of Influence**'.

Modified grassland (g4 100)

Modified grassland is the dominant habitat throughout the Park and occurs in amenity areas and on the sports pitches (Figure 7). This is managed by regular mowing to create a short, uniform sward. The grassland is species-poor, dominated by perennial rye-grass with occasional common bent, Yorkshire fog and cock's foot grasses. Herbaceous plants recorded include frequent white clover and occasional cat's-ear, daisy, dandelion and ribwort plantain. Although species-poor and regularly managed, modified grassland provides potential foraging habitat for birds, potentially including estuarine species, and for bats and badgers. This habitat is considered to be of ecological value '**within the Zone of Influence**'.

Other neutral grassland; ruderal (g3c 81)

Small areas of coarse neutral grassland with varying cover of ruderal plants are present at the southern end of the site (Figure 8), on a verge on Malpas Road and scattered around the polytunnels in the Maintenance Yard. This habitat contains a mix of occasional false oat-grass, black mustard, cow parsley, nettle, ivy, cleavers and hogweed. Other species recorded include locally abundant and invasive winter heliotrope (See 5.4 Vascular Plants) and locally frequent ground elder, pendulous sedge and lord-and-ladies. At the southern end of the site, the vegetation had been cut recently and species may be under-recorded here. Other neutral grassland and ruderal vegetation provides cover and foraging habitat for birds, small mammals, reptiles,

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

amphibians and invertebrates and is considered to be of ecological value '**within the Zone of Influence**'.

Urban; flower bed; introduced shrub (u1 846 847)

Planted beds are present throughout the Park, containing a mix of introduced shrubs and ornamental herbaceous plants (Figure 9). Several non-native invasive plants were recorded in this habitat (See 5.4 Vascular Plants). The more densely vegetated areas, such as around the pond, provide potential habitat for nesting birds and shelter for small mammals and other wildlife. This habitat is considered to be of ecological value '**within the Zone of Influence**'.

Other standing water; ornamental pond (r1g 46)

An ornamental duck pond lies in the north-east corner of the site (Figure 10), fed by a small stream on the north-east site boundary, drained via a culvert under Malpas Road and with no obvious connection to the estuary. The pond is of artificial construction with low, vertical, uniform banks. The water was turbid at the time of the survey and the depth is unknown. The pond supports very few marginal plants, mainly scattered at the north-eastern end where there is a shallow muddy shelf. Fool's water-cress and pendulous sedge are occasional here with rarely occurring giant rhubarb species (see 5.4 Vascular Plants) and hemlock water-dropwort. Water quality is likely to be nutrient-enriched from duck presence. It is recognised that ducks searching for food disturb the substrate, preventing light entering the water and inhibiting plant growth. Ducks will also graze plants, frogspawn and small invertebrates which reduces diversity and also removes vegetation cover for other wildlife. However, the pond does provide a valuable water resource for birds, foraging bats and mammals and it is considered to be of ecological value '**within the Zone of Influence**'.

Artificial unvegetated, unsealed surface (u1c)

Gravel /earth surfaces form the pathways along the southern and western margins of the park, around the duck pond and in play areas (Figure 11). This habitat is considered to be of '**negligible value**' for wildlife.

Developed land; sealed surface (u1b)

Hardstanding is present on Malpas Road, the access road into the Park, car parks, the Maintenance Yard and along pathways through the Park. This habitat is considered to be of '**negligible value**' for wildlife.

Buildings (u1b5)

A number of buildings were recorded in the Park, including the new pavilion and café, Truro canoe club store, scout hut, tennis club hut, toilet block and two disused sport's facility buildings (Figure 12). There are also temporary storage units in the Maintenance Yard. The buildings are considered to be of '**negligible value**' for wildlife. A further description of the suitability of the buildings for roosting bats and nesting birds is provided in section 5.4.

Built linear feature (u1e)

Stone walls are present along the northern boundary (Figure 13), at the duck pond entrance and around the walled seating area and adjacent to the green gym. There are also fences around the

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

sport's fields and cricket pitch and Maintenance Yard. Stone walls on the northern boundary support scattered vegetation and have gaps which could potentially be used by reptiles and invertebrates. These are considered to be of ecological value '**within the Zone of Influence**'.

Figure 4: Non-native and ornamental hedgerow (h2b)

Figure 5. Line of non-native young trees (w1g6) along the western site boundary; view north

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Figure 6. Bramble scrub (h3d) along the southern margin of the site; view east

Figure 7. Modified grassland (g4)

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Figure 8. Other neutral grassland and ruderal vegetation on the southern boundary (g3c 81); view south-east

Figure 9. Urban; flower bed; introduced shrub (u1 846 847)

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Figure 10: Ornamental duck pond (r1g 46); view west

Figure 11. Artificial unvegetated, unsealed surface (u1c); view north-east

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Figure 12. Buildings (u1b5)

Figure 13. Built linear feature (u1e) on northern boundary; view north-east

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

5.4 Notable Habitats

Scattered trees (g 32)

The trees are an important feature of Boscawen Park and comprise many large mature specimens of mostly non-native exotic species (Figure 14). A detailed BS5837:2012 Tree Survey and Arboricultural Constraints Plan has been produced to inform the development (Evolve Tree Consultancy, 2023); the survey covered the main Park but excluded the duck pond area to the east. A complete list of the trees and their reference numbers is provided in Appendix 4 and their locations shown on Map 1. The trees are a valuable ecological resource, providing a habitat for nesting birds, foraging, commuting and roosting bats and invertebrates.

The Park improvement scheme aims to retain all the trees, unless they require felling/pruning for safety or tree health reasons, according to the recommendations in the Tree Survey. Construction works could potentially affect trees in the long-term if any excavations, machinery or storage materials impinge upon the root protection areas. In the absence of mitigation, the nature of the impact on trees is considered to be **long-term negative impact of unlikely occurrence, of minor significance on a local scale.** Mitigation measures are provided in section 6.2 below.

Intertidal mudflats (t2d)

Two small areas of intertidal mudflats are located either side of the slipway on the western boundary (Figure 15); these are mostly below the Mean High Water mark and lie within the Fal & Helford SAC and Malpas Estuary SSSI. This habitat supported little vegetation but provides important feeding and resting areas for wildfowl and waders and also important nursery areas for fish. Intertidal mudflats are identified as a UK Biodiversity Action Plan (BAP) habitat and legally protected under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and the statutory site legislation. Although small in area, this habitat makes up part of the SAC and SSSI and is therefore considered to be of 'International Value'.

There are no proposals to carry out works to the slipway or intertidal areas within the site boundary. However, the proposed works along the northern and western boundaries of the Park could potentially affect the intertidal area indirectly through contamination from surface runoff or accidental spillages from machinery. The intertidal mudflats lie within the Fal & Helford SAC and Malpas Estuary SSSI and, therefore, the likely impacts of the development on intertidal mudflats **cannot be determined** without completion of a HRA and further consultation with Natural England (see section 5.1).

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Figure 14: Scattered trees along the northern boundary of the site (g3 32)

Figure 15: Intertidal mudflats (t2d) either side of the slipway; view north-east.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

5.5 Notable Species

Notable species and species groups with potential to use the site are described below. Further details of the legislation and planning policies that are relevant to species of nature conservation importance are provided at Appendix 5.

Badger

There are five records for badger (*Meles meles*) within a 1km radius of the site (ERCCIS, 2024), including one from the duck pond area of the site. Although widespread and common in Cornwall, badgers and their setts are legally protected under the Protection of Badgers Act 1992 (HM Government, 1992).

No badger setts or other signs of badger were observed during the survey. However, due to the presence of local records, it is possible that badgers may use the site for occasional foraging, in combination with surrounding woodland, farmland and gardens. Within the site, the extensive area of modified grassland and planted beds are most suitable for foraging, offering an easily accessible source of earthworms, and the hedges, scrub and shrubberies provide shelter for this species. The site is considered to be of value '**within the Zone of Influence'** for badger.

The landscaping works may affect any badgers travelling through the site if any animals become trapped or injured in excavations or their pathways are restricted by temporary fencing. The construction of the all-weather playing pitch, new play areas and boardwalk will replace *c.* 0.7ha of modified grassland and reduce the area of potential foraging habitat available for badgers, although the area lost is relatively small in the context of a wider badger territory. Post-development, the new winter garden and other planting will be beneficial to badgers and could provide additional foraging opportunities. However, the proposed floodlighting around the sports pitches will have a negative effect, deterring badgers from an extensive area of potential foraging habitat. In the absence of mitigation, the nature of the identified impacts on badger is considered likely to be **long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence.** See Section 6.3 below for mitigation measures.

Bats (Foraging & Commuting)

The ERCCIS desk study revealed records for four bat species within a 1km radius of the site (ERCCIS, 2024). These comprise four records for common pipistrelle (*Pipistrellus pipistrellus*), one record for soprano pipistrelle (*Pipistrellus pygmaeus*), one record for brown long-eared bat (*Plecotus auritus*) and one record for whiskered bat (*Myotis mystacinus*). All bat species are European Protected Species (EPS) and protected under the Conservation of Habitats and Species Regulations 2017 (as amended), Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedule 5 of the WCA 1981 (as amended). Some bat species are also identified as UK BAP priority species and protected under Section 41 of the NERC Act 2006.

Habitats across the Park provide a source of invertebrates for foraging bats, particularly the estuary margins, pond, scattered trees and tree lines, shrubberies, scrub and longer grassland. The open playing fields may also be used by some species. The estuary corridor provides a linear feature which is likely to be used as commuting route by bats travelling between their roosts and foraging territories. In accordance with the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023), the site is assessed as being of 'moderate suitability' for foraging and commuting bats because of its connectivity to the estuary.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

The proposed Park improvements will result in the loss of *c.* 0.7ha of modified grassland to create the all-weather pitch, new play areas and boardwalk. The new winter garden and other planting will provide some compensatory foraging habitat and it is recommended that the landscaping scheme includes a range of native trees, shrubs and herbaceous plant species to maintain foraging opportunities. The development will include the installation of multiple flood lights on the sports pitches and likely new lighting at the new Sport's Hub and car park on the eastern boundary and at the amphitheatre/performance area. Lighting may also be required during the construction phase. Artificial lighting has the potential to affect bat activity patterns by disturbing foraging areas and severing commuting routes. The value of the site for foraging/commuting bats and the likely impacts of the development **cannot be determined** without a further bat activity survey. See section 6.3.

Bats (Roosting)

An external assessment of the buildings for roosting bats was undertaken as part of the Phase 1 survey to identify any potential roost features, such as gaps under roof tiles, loose flashing or fascias (Table 2). **N.B**. A detailed Preliminary Roost Assessment inspection of the buildings was not carried out as part of the survey. Of the buildings on-site, only the toilet block was found to have some potential to support roosting bats with gaps under slates on northern aspect and a hole in the fascia over the doorway on the eastern aspect.

A basic inspection of the trees for any features that could support roosting bats was carried out as part of the Phase 1 survey and the BNG habitat condition assessment e.g. ivy, loose bark or crevices. **N.B.** A detailed Ground Level Tree Assessment of the trees was not completed as part of this survey. The current inspection found that many of the trees had ivy cover which could potentially be used by transient single bats and a low number of trees had loose bark and holes. Many of the trees with roost potential are native species and found mainly around the duck pond. Trees with some bat roost potential include T1, T2, T11, T20, T22, T48, T47, T53, T60, T63, T64 and trees 7, 11, 13, 14, 15, 17, 18, 18, 19, 22, 23, 24, 26-29, 31, 33, 67, 68, 71 and 76. These are shown on Map 1 and referenced in Appendix 4.

The site layout indicates that the toilet block and disused sport's pavilions will be demolished to construct the Sport's Hub and winter garden. All the trees will be retained within the landscaping scheme, apart from where they have to be removed/pruned because of tree health or safety concerns. If any works are proposed to any of the buildings or trees or they are likely to be affected by artificial lighting, a detailed Preliminary Roost Assessment of the buildings and a Ground Level Tree Assessment of the trees will be required to inform the works and, potentially, further surveys completed to confirm the presence/likely absence of roosting bats. The importance of the site for roosting bats, and the likely impact of the proposed development on these species, **cannot be determined** until the results of the recommended further surveys are available. See section 6.3.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Table 2. Building descriptions

Scout hut Single-storey with a pitched slate roof. UPVC fascias, window frames and doors. Rendered walls. No obvious bat access points or external roost features. No obvious signs of nesting birds.	
New pavilion and café Single-storey building with a metal pitched roof. Metal window frames and doors. Walls of mainly wooden cladding. No obvious bat access points or external roost features. No obvious signs of nesting birds.	
Tennis office Single-storey building with flat roof. Walls of wooden cladding. Metal doors and window frames. No obvious bat access points or external roost features. No obvious signs of nesting birds; the flat roof could potentially be used by gulls but the office is located in a busy part of the park which may deter nesting.	
Toilet block Single-storey older building with a pitched slate roof. Wooden fascias, doors and window frames. Rendered walls. Gaps under slates on northern aspect and a hole in the fascia over doorway on the eastern aspect. These features could allow bat access. No evidence of nesting birds.	
Canoe club Newly constructed single-storey with a low pitched metal roof. Walls are wooden cladding with wooden fascias. Metal doors. No obvious bat access points or external roost features. No evidence of nesting birds.	

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Disused sports pavilion (1) Single-storey older building of concrete construction. Rendered walls and a sloping flat roof with bitumen covering. Wooden fascias in good order. No obvious bat access points or external roost features. No obvious signs of nesting birds; the flat roof could potentially be used by gulls.	
Disused sports pavilion (2) Single-storey older building of concrete construction. Rendered walls and a sloping flat roof with bitumen covering. Wooden fascias in good order. No obvious bat access points or external roost features. No obvious signs of nesting birds; the flat roof could potentially be used by gulls.	

Dormouse

The desk study found no hazel dormouse (*Muscardinus avellanarius*) records within a 1km radius (ERCCIS, 2024). This species typically occurs in east and central Cornwall with fewer records in the west (Cornwall Mammal Group, 2023). Dormouse is a European Protected Species (EPS) and legally protected under the Conservation Regulations 2017 (as amended), and Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. It is also a UK and Cornwall BAP priority species for conservation and listed under Section 41 NERC Act 2006 as species of principal importance for conservation.

Hazel dormouse occurs within woodland, hedgerows and scrub habitats. Within the site, the trees and shrubs around the duck pond are linked to Moresk Forest to the east and are the most suitable habitat for this species but the remaining woody habitats on-site are small and fragmented. The Park is regularly used by visitors and dogs which cause disturbance and dormouse may be predated on by cats from adjacent residential properties. The site is considered to offer sub-optimal habitat for dormouse and to be of value '**within the Zone of Influence'**.

The proposed development will retain the trees and shrubs around the duck pond. The dense hedges around the Maintenance Yard will be removed to build the Sports Hub with the loss of a small area of sub-optimal dormouse habitat. Any dormice present could be disturbed by construction noise, vibration, human activity and by the proposed floodlighting on the sports pitches. In the absence of mitigation, the nature of the identified impacts on dormouse is considered likely to be **long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence.**

A further survey for dormouse is not recommended on the basis that suitable habitat on-site is too small and isolated to adequately survey for dormouse (Bright *et al*, 2006) and there is a low likelihood that dormouse is present on-site. However, a precautionary approach to vegetation clearance will be required. See mitigation recommendations in section 6.3 below.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Hedgehog

The ERCCIS desk study revealed six records for hedgehog (*Erinaceus europaeus*) within a 1km radius of the site (ERCCIS, 2024). This is a UK BAP priority species with legal protection under Section 41 NERC Act 2006 and Schedule 6 WCA 1981 (as amended).

The shrubberies, planted beds, hedges, scrub and longer grassland provide vegetation cover for hedgehog and the site is likely to be used for by this species for foraging, in combination with the adjacent woodland, farmland and gardens. The site is considered to be of value '**within the Zone of Influence'** for hedgehog.

The proposed development has potential to impact hedgehogs during the construction phase through injury and the obstruction of pathways through the site. Post-development, the new winter garden and other planting will increase the extent of potential hedgehog habitat. Floodlighting around the sport pitches is likely to impact the behaviour of this nocturnal species. In the absence of mitigation, the nature of the identified impact on hedgehog is considered to be **long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence.** See section 6.3 for mitigation measures.

Otter

There are ten records for otter (*Lutra lutra*) within a 1km radius of the site, including two from Boscawen Park (ERCCIS, 2024). Otter is a EPS and protected under the Conservation Regulations 2017 (as amended) and Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. It is also a UK and Cornwall BAP priority species for conservation and protected under Section 41 NERC Act 2006.

No evidence of otter was recorded on-site during the survey. Otter may be present in the Truro River and potentially come on land to rest and shelter. However, there is limited vegetation cover along the estuary margin and the paths are used regularly by walkers and dogs, making the habitat sub-optimal for otters. The ornamental pond is unlikely to support any fish or significant amphibian populations for foraging otters. However, the presence of otter on-site cannot be excluded because of the proximity of the estuary and it may pass through the site on occasion. The site is considered to be of value for otters '**within the Zone of Influence'**.

The landscaping works may affect any otters travelling through the site if any animals become trapped or injured in excavations or their pathways are restricted by temporary fencing. Construction works to improve pathways along the estuary and stabilise the estuary banks will result in a temporary increase in noise, vibration and human activity which could disturb otters and also cause a deterioration in water quality. Post-development, the proposed boardwalk on the northern boundary of the site may attract more visitors and dog walkers to the foreshore which is easily accessible in this part of the site; this could also increase disturbance to otters. The proposed floodlighting may spill onto the estuary margins will also have a detrimental effect on this species which is predominantly nocturnal. In the absence of mitigation, the nature of the identified impacts on otter is considered likely to be **long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence.** See section 6.3 below for mitigation measures.

Reptiles

The ERCCIS desk study revealed six records for slow worm (*Anguis fragilis*), three records for adder (*Vipera berus*), one record for common lizard (*Zootoca vivipara*) and one record for grass

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

snake (*Natrix helvetica*) within a 1km radius of the site (ERCCIS, 2024). All reptile species are legally protected under the WCA 1981 (as amended) and S41 NERC Act 2006.

Most of the Park comprises modified grassland which is unsuitable for reptiles and potential habitat is restricted to the shrubberies and planted beds, scrub, hedges and longer grassland; these areas may be used for foraging and shelter. Gaps in stone walls may also be occupied. The site is considered to be of value for reptiles '**within the Zone of Influence'**.

The proposed development will remove the hedges around the Maintenance Yard and the scattered vegetation around the polytunnels but otherwise there will be minimal loss of potential reptile habitat. However, vegetation clearance and construction activities could potentially cause reptile injury. Post-development, the new landscaping will provide additional potential reptile habitat in the winter garden and around the play area that could be beneficial for reptiles. The proposed floodlighting and other external lights at the Sports Hub and performance space could potentially alter reptile circadian rhythms and disorientate individuals. In the absence of mitigation, the nature of the identified impact on reptile species is considered to be **long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence.** No further reptile surveys are recommended because of the small extent of potential reptile habitat on-site but mitigation and a precautionary approach to vegetation clearance will be required. See section 6.3 below for mitigation measures.

Amphibians

The desk study returned two records for common toad (*Bufo bufo*) and one record for common frog (*Rana temporaria*) and palmate newt (Lissotriton helveticus) within a 1km radius of the site (ERCCIS, 2023). Common toad is a UK BAP priority species and is protected under Section 41 NERC Act 2006.

The ornamental pond provides potentially suitable breeding habitat for amphibians but numbers are likely to be limited by the large duck population which will eat spawn and tadpoles. Across the rest of the site, adult frogs and toads may shelter and forage in the shrubberies, planted beds, hedges and longer grassland during their terrestrial phase. The site is considered to be of value for amphibians '**within the Zone of Influence'**.

The pond will be retained within the development and potentially managed by dredging. Any amphibians sheltering within sludge and leaf litter could be harmed during this process. Clearance of ruderal vegetation in the Maintenance Yard could impact any amphibians sheltering in /around the polytunnels but the landscaping works across the rest of the site are likely to have minimal impacts. The proposed increase in artificial lighting could attract and disorientate amphibians. In the absence of mitigation, the nature of the identified impact on amphibian species is considered to be **long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence.** No further amphibian surveys are recommended but a precautionary approach to the pond works and vegetation clearance will be required. See section 6.3 below for mitigation measures.

Birds

The desk study found records of one hundred and nine bird species of conservation concern within a 1km radius of the site (ERCCIS, 2023). Many of these are wetland species which feed in the estuary; Malpas Estuary SSSI is primarily designated for its assemblage of wildfowl and wading birds and the Truro River section regularly supports nationally important numbers of black-tailed

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

godwit (*Limosa limosa*) during autumn and winter. Breeding and wintering bird species of conservation concern recorded within a 1km radius are listed in Table 3 below.

All wild bird species are legally protected whilst nesting under the WCA 1981 (as amended) and those listed on Schedule 1 WCA 1981 have special protection while nesting. Many bird species are also protected under the NERC Act 2006 and other legislation throughout the year.

Breeding birds: The desk study found records of dunnock, house sparrow, song thrush, linnet and starling from Boscawen Park and all these species could breed within the site. The hedgerows, trees, shrubberies and scrub are likely to be used by a range of nesting birds, including species of conservation concern, during the breeding season (March – August/September), particularly around the duck pond where there is more woody cover and habitat connectivity to Moresk Forest. Buildings may also be used for nesting; those with flat roofs may support gulls. Most of the grassland within the Park is too short and uniform to support ground-nesting birds. There is no suitable breeding habitat for the Schedule 1 WCA 1981 kingfisher (*Alcedo atthis*) which occurs locally. Boscawen Park is considered to be of '**Local Value'** for breeding birds.

Wintering birds: The Park also provides a source of berries, fruit, seeds and invertebrates for foraging birds throughout the year and is likely to support wintering and migratory populations, including species from the adjacent estuary. It is feasible that geese, waders and gulls could use the short, modified grassland on the sports pitches for foraging and roosting, particularly at high tide. N.B. The desk study data does not differentiate between sightings made from Boscawen Park (i.e. in the estuary) or within the Park itself and therefore bird numbers within the site boundary are unknown. However, the Park has a high level of disturbance from visitors and dogs and regular use of the sports pitches makes the site less suitable for these species. Boscawen Park is considered to be of **'Local Value'** for wintering birds, mainly because of its connectivity to the Truro River.

The Park improvement works will have a short-term increase in noise, vibration and activity which could disturb breeding birds within the site and wintering waders and wildfowl in the estuary. The proposals will retain the trees but any necessary tree health or safety works or other shrub clearance could disturb breeding birds if undertaken in the nesting season (March – August/September). The proposed artificial sports pitch will reduce the area of modified grassland for foraging and roosting birds by up to 0.7ha but, given the level of current site disturbance and likely level of use, this is considered unlikely to affect local estuarine populations. The landscaping scheme includes additional planting which may benefit both breeding and wintering birds.

The development will include the installation of multiple flood lights on the sports pitches and likely new lighting at the new Sports Hub and car park on the eastern boundary and at the amphitheatre/performance area. Lighting may also be required during the construction phase. The effects of light pollution on birds include disorientation, alterations in reproductive physiology, disruption of circadian rhythms, and changes of flight behaviour (Cabrera-Cruz *et al*, 2018). Floodlighting may cause light spill onto the Truro River and indirectly impact nationally significant populations of waders and wildfowl in the Malpas Estuary SSSI.

In the absence of mitigation, the nature of the identified impacts on breeding bird species is considered to be **long-term, negative, of likely occurrence, and of minor significance on a local scale.** No further breeding bird surveys are recommended but measures to avoid and mitigate the potential impacts on birds will be required. See Section 6.3 below for mitigation measures.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

The nature of indirect impacts of the development on wintering birds in the Malpas Estuary SSSI **cannot be determined** without further consultation with Natural England. See section 6.3 below for mitigation measures.

Table 3: Bird species of conservation concern recorded within a 1km radius of the site

Species Scientific	Species Venacular	Seasonality in UK	International & National designation	National & Local Status
Recurvirostra avosetta	Avocet	R	Bern-A2, BirdsDir-A1, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Amber; Cornwall RDB
Limosa lapponica	Bar-tailed Godwit	W (mostly); R (some on larger estuaries)	BirdsDir-A1,BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Bird-Amber; Cornwall RDB
Turdus merula	Blackbird	R	BirdsDir-A2.2	
Chroicocephalus ridibundus	Black-headed Gull	R	BirdsDir-A2.2, CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-LC_Breeding,Bird_RedList_GB_post2001-VU_NonBreeding; Cornwall RDB
Limosa limosa	Black-tailed Godwit	R	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Red, Bird_RedList_GB_post2001-EN_Breeding,Bird_RedList_GB_post2001-LC_NonBreeding; Cornwall RDB
Cyanistes caeruleus	Blue Tit	R	Bern-A2	
Branta bernicla	Brent Goose	W	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Bird-Amber
Pyrrhula pyrrhula	Bullfinch	R		Bird-Amber
Buteo buteo	Buzzard	R	CMS_A2, ECCITES-A	
Branta canadensis	Canada Goose	R	BirdsDir-A2.1, CMS_A2; WACA Sch 9 Pt 1	
Corvus corone	Carrion Crow	R	BirdsDir-A2.2	
Bubulcus ibis	Cattle Egret	R	CMS_AEWA-A2, ECCITES-A	Bird-Amber
Periparus ater	Coal Tit	R	Bern-A2	
Streptopelia decaocto	Collared Dove	R	BirdsDir-A2.2	Bird_RedList_GB_post2001-NT_Breeding
Larus canus	Common Gull	R	BirdsDir-A2.2, CMS_AEWA-A2	Bird-Amber
Actitis hypoleucos	Common Sandpiper	W	CMS_A2,CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-VU_Breeding; Cornwall RDB
Fulica atra	Coot	R	BirdsDir-A2.1, CMS_AEWA-A2	Bird_RedList_GB_post2001-NT_Breeding,Bird_RedList_GB_post2001-NT_NonBreeding
Phalacrocorax carbo	Cormorant	R	CMS_AEWA-A2	Bird_RedList_GB_post2001-LC_NonBreeding,Bird_RedList_GB_post2001-NT_Breeding
Numenius arquata	Curlew	R	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	England_NERC_S.41, BAP-2007, Bird-Red, Bird_RedList_GB_post2001-EN_Breeding; Cornwall RDB

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Species Scientific	Species Venacular	Seasonality in UK	International & National designation	National & Local Status
Calidris ferruginea	Curlew Sandpiper	PM	Bern-A2, CMS_A2,CMS_AEWA-A2	Bird-Amber
Cinclus cinclus	Dipper	R	Bern-A2	Bird-Amber, Bird_RedList_GB_post2001-NT_Breeding
Calidris alpina	Dunlin	R	Bern-A2, CMS_A2,CMS_AEWA-A2	Bird-Red, Bird_RedList_GB_post2001-EN_NonBreeding,Bird_RedList_GB_post2001-VU_Breeding; Cornwall RDB
Prunella modularis	Dunnock	R	Bern-A2	Bird-Amber
Gulosus aristotelis	European Shag	R	Bern-A2	Bird-Red, Bird_RedList_GB_post2001-EN_Breeding
Turdus pilaris	Fieldfare	W	BirdsDir-A2.2; WACA-Sch1_part1	Bird-Red, Bird_RedList_GB_post2001-CR(PE)_Breeding,Bird_RedList_GB_post2001-LC_NonBreeding
Regulus ignicapilla	Firecrest	W	Bern-A2; WACA-Sch1_part1	
Mareca strepera	Gadwall	R	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2	Bird-Amber; Cornwall RDB
Regulus regulus	Goldcrest	R	Bern-A2	
Pluvialis apricaria	Golden Plover	R	BirdsDir-A1,BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Cornwall RDB
Carduelis carduelis	Goldfinch	R	Bern-A2	
Mergus merganser	Goosander	R	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Cornwall RDB
Larus marinus	Great Black-backed Gull	R	BirdsDir-A2.2, CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-EN_NonBreeding,Bird_RedList_GB_post2001-LC_Breeding
Stercorarius skua	Great Skua	S	CMS_AEWA-A2	Bird-Amber
Dendrocopos major	Great Spotted Woodpecker	R	Bern-A2	
Parus major	Great Tit	R	Bern-A2	
Tringa ochropus	Green Sandpiper	W, PM	Bern-A2, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Amber, Bird_RedList_GB_post2001-EN_Breeding,Bird_RedList_GB_post2001-EN_NonBreeding; Cornwall RDB
Picus viridis	Green Woodpecker	R	Bern-A2	
Chloris chloris	Greenfinch	R	Bern-A2	Bird-Red, Bird_RedList_GB_post2001-EN_Breeding
Tringa nebularia	Greenshank	R	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Amber; Cornwall RDB

Species Scientific	Species Venacular	Seasonality in UK	International & National designation	National & Local Status
Ardea cinerea	Grey Heron	R	CMS_AEWA-A2	Bird_RedList_GB_post2001-LC_NonBreeding,Bird_RedList_GB_post2001-NT_Breeding
Motacilla cinerea	Grey Wagtail	R	Bern-A2	Bird-Amber, Bird_RedList_GB_post2001-NT_Breeding
Larus argentatus	Herring Gull	R	BirdsDir-A2.2, CMS_AEWA-A2	Bird-Red, Bird_RedList_GB_post2001-DD_Breeding,Bird_RedList_GB_post2001-EN_NonBreeding
Falco subbuteo	Hobby	R	Bern-A2, CMS_A2, ECCITES-A; WACA-Sch1_part1	Cornwall RDB
Delichon urbicum	House Martin	S	Bern-A2	Bird-Red, Bird_RedList_GB_post2001-VU_Breeding
Passer domesticus	House Sparrow	R		England_NERC_S.41, BAP-2007, Bird-Red
Coloeus monedula	Jackdaw	R	BirdsDir-A2.2	
Garrulus glandarius	Jay	R	BirdsDir-A2.2	
Falco tinnunculus	Kestrel	R	Bern-A2, CMS_A2, ECCITES-A	Bird-Amber, Bird_RedList_GB_post2001-VU_Breeding
Alcedo atthis	Kingfisher	R	Bern-A2, BirdsDir-A1; WACA-Sch1_part1	
Rissa tridactyla	Kittiwake	R	CMS_AEWA-A2, OSPAR	Bird-Red, Bird_RedList_GB_post2001-CR_Breeding; Cornwall RDB
Calidris canutus	Knot	W	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Bird-Amber; Cornwall RDB
Vanellus vanellus	Lapwing	R (W only in Cornwall)	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	England_NERC_S.41, BAP-2007, Bird-Red, Bird_RedList_GB_post2001-EN_Breeding,Bird_RedList_GB_post2001-VU_NonBreeding; Cornwall RDB
Larus fuscus	Lesser Black-backed Gull	R	BirdsDir-A2.2, CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-DD_Breeding
Tringa flavipes	Lesser Yellowlegs	V	CMS_A2	
Linaria cannabina	Linnet	R	Bern-A2	Bird-Red, Bird_RedList_GB_post2001-NT_Breeding
Egretta garzetta	Little Egret	R	Bern-A2, BirdsDir-A1, CMS_AEWA-A2, ECCITES-A	Cornwall RDB
Tachybaptus ruficollis	Little Grebe	R	CMS_AEWA-A2	Cornwall RDB
Calidris minuta	Little Stint	PM	Bern-A2, CMS_A2,CMS_AEWA-A2	
Pica pica	Magpie	R	BirdsDir-A2.2	
Anas platyrhynchos	Mallard	R	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-LC_Breeding,Bird_RedList_GB_post2001-NT_NonBreeding

Species Scientific	Species Venacular	Seasonality in UK	International & National designation	National & Local Status
Poecile palustris	Marsh Tit	R	Bern-A2	Bird-Red, Bird_RedList_GB_post2001-VU_Breeding
Anthus pratensis	Meadow Pipit	R	Bern-A2	Bird-Amber
Ichthyaetus melanocephalus	Mediterranean Gull	R	Bern-A2, BirdsDir-A1, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Amber; Cornwall RDB
Turdus viscivorus	Mistle Thrush	R	BirdsDir-A2.2	Bird-Red, Bird_RedList_GB_post2001-VU_Breeding
Gallinula chloropus	Moorhen	R	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-VU_Breeding
Cygnus olor	Mute Swan	R	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	
Sitta europaea	Nuthatch	R	Bern-A2	
Pandion haliaetus	Osprey	S	BirdsDir-A1, CMS_A2, ECCITES-A; WACA-Sch1_part1	Bird-Amber, Bird_RedList_GB_post2001-NT_Breeding
Haematopus ostralegus	Oystercatcher	R	BirdsDir-A2.2, CMS_AEWA-A2	Bird-Amber; Cornwall RDB
Calidris melanotos	Pectoral Sandpiper	PM	CMS_A2	
Falco peregrinus	Peregrine	R	Bern-A2, BirdsDir-A1, CMS_A2, ECCITES-A; WACA-Sch1_part1	Cornwall RDB
Phasianus colchicus	Pheasant	R	BirdsDir-A2.1	
Motacilla alba	Pied Wagtail	R	Bern-A2	
Aythya ferina	Pochard	R	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2	Bird-Red, Bird_RedList_GB_post2001-EN_Breeding,Bird_RedList_GB_post2001-EN_NonBreeding; Cornwall RDB
Calidris maritima	Purple Sandpiper	W	Bern-A2, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Red, Bird_RedList_GB_post2001-CR_Breeding,Bird_RedList_GB_post2001-EN_NonBreeding; Cornwall RDB
Mergus serrator	Red-breasted Merganser	R	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-VU_NonBreeding
Tringa totanus	Redshank	R	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-NT_NonBreeding,Bird_RedList_GB_post2001-VU_Breeding; Cornwall RDB
Turdus iliacus	Redwing	W	BirdsDir-A2.2; WACA-Sch1_part1	Bird-Amber, Bird_RedList_GB_post2001-CR_Breeding,Bird_RedList_GB_post2001-LC_NonBreeding
Emberiza schoeniclus	Reed Bunting	R	Bern-A2	England_NERC_S.41, BAP-2007, Bird-Amber
Erithacus rubecula	Robin	R	Bern-A2	

Species Scientific	Species Venacular	Seasonality in UK	International & National designation	National & Local Status
Columba livia	Rock Dove	R	BirdsDir-A2.1, ECCITES-A	
Corvus frugilegus	Rook	R	BirdsDir-A2.2	Bird-Amber, Bird_RedList_GB_post2001-NT_Breeding
Aythya marila	Scaup	W	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	England_NERC_S.41, BAP-2007, Bird-Red, Bird_RedList_GB_post2001-EN_NonBreeding
Tadorna tadorna	Shelduck	R	Bern-A2, CMS_A2,CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-EN_Breeding,Bird_RedList_GB_post2001-EN_NonBreeding; Cornwall RDB
Spatula clypeata	Shoveler	R	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2, ECCITES-C	Bird-Amber; Cornwall RDB
Alauda arvensis	Skylark	R	BirdsDir-A2.2	England_NERC_S.41, Bird-Red
Gallinago gallinago	Snipe	R	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-LC_Breeding,Bird_RedList_GB_post2001-NT_NonBreeding; Cornwall RDB
Turdus philomelos	Song Thrush	R	BirdsDir-A2.2	Bird-Amber
Accipiter nisus	Sparrowhawk	R	CMS_A2, ECCITES-A	Bird-Amber, Bird_RedList_GB_post2001-NT_Breeding
Platalea leucorodia	Spoonbill	R	Bern-A2, BirdsDir-A1, CMS_A2,CMS_AEWA-A2, ECCITES-A; WACA-Sch1_part1	Bird-Amber, Bird_RedList_GB_post2001-EN_NonBreeding; Cornwall RDB
Tringa erythropus	Spotted Redshank	R; PM	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2	Bird-Amber, Bird_RedList_GB_post2001-EN_NonBreeding; Cornwall RDB
Sturnus vulgaris	Starling	R	BirdsDir-A2.2	Bird-Red, Bird_RedList_GB_post2001-LC_NonBreeding,Bird_RedList_GB_post2001-VU_Breeding
Columba oenas	Stock Dove	R	BirdsDir-A2.2	Bird-Amber
Saxicola rubicola	Stonechat	R	Bern-A2	
Hirundo rustica	Swallow	S	Bern-A2	
Apus apus	Swift	S		Bird-Red, Bird_RedList_GB_post2001-EN_Breeding
Strix aluco	Tawny Owl	R	Bern-A2, ECCITES-A	Bird-Amber, Bird_RedList_GB_post2001-NT_Breeding
Anas crecca	Teal	W (mostly); R (some)	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2, ECCITES-C	Bird-Amber; Cornwall RDB
Passer montanus	Tree Sparrow	R		England_NERC_S.41, BAP-2007, Bird-Red, Bird_RedList_GB_post2001-VU_Breeding

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Species Scientific	Species Venacular	Seasonality in UK	International & National designation	National & Local Status
Aythya fuligula	Tufted Duck	R	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2	Cornwall RDB
Bombycilla garrulus	Waxwing	W	Bern-A2	
Numenius phaeopus	Whimbrel	PM	BirdsDir-A2.2, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Red, Bird_RedList_GB_post2001-CR_Breeding; Cornwall RDB
Curruca communis	Whitethroat	S		Bird-Amber
Cygnus cygnus	Whooper Swan	W (mostly); R (some)	Bern-A2, BirdsDir-A1, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Amber, Bird_RedList_GB_post2001-EN_Breeding,Bird_RedList_GB_post2001-LC_NonBreeding
Mareca penelope	Wigeon	W	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2, ECCITES-C	Bird-Amber, Bird_RedList_GB_post2001-LC_NonBreeding,Bird_RedList_GB_post2001-NT_Breeding; Cornwall RDB
Phylloscopus trochilus	Willow Warbler	S		Bird-Amber
Tringa glareola	Wood Sandpiper	S; PM	Bern-A2, BirdsDir-A1, CMS_A2,CMS_AEWA-A2; WACA-Sch1_part1	Bird-Amber, Bird_RedList_GB_post2001-EN_Breeding
Scolopax rusticola	Woodcock	R (mostly); W (some)	BirdsDir-A2.1, CMS_A2,CMS_AEWA-A2	Bird-Red, Bird_RedList_GB_post2001-LC_NonBreeding,Bird_RedList_GB_post2001-VU_Breeding
Columba palumbus	Woodpigeon	R	BirdsDir-A2.1	Bird-Amber
Troglodytes troglodytes	Wren	R	Bern-A2	Bird-Amber

Key

Seasonality: R – resident; W – winter; S- summer; PM – passage migrant; V - vagrant

WACA-Sch1_part1	Schedule 1 of the Wildlife and Countryside Act 1981
BirdsDir-A1	EC Birds Directive 79/409/EEC – Annex 1
BirdsDir-A2.1	EC Birds Directive 79/409/EEC – Annex 2.1
BirdsDir-A2.2	EC Birds Directive 79/409/EEC – Annex 2.2
Bern-A2	Bern Convention – Annex 2
CMS_A2; CMS_AEWA-A2	Convention on Migratory Species – Annex 2
RedList_GB_post2001-CR_Breeding	British Red Data List – critically endangered breeding population
RedList_GB_post2001-EN_Breeding	British Red Data List – endangered breeding population
RedList_GB_post2001-NT_Breeding	British Red Data List – near threatened breeding population
RedList_GB_post2001-VU_Breeding	British Red Data List – vulnerable breeding population
RedList_GB_post2001-VU_NonBreeding	British Red Data List – vulnerable non-breeding population
RedList_GB_post2001-LC_NonBreeding	British Red Data List – least concern non-breeding population
England_NERC_S.41	Protected under Section 41 of the Natural Environment and Rural Communities Act 2006
BAP-2007	Included in the UK Biodiversity Action Plan (2007)
Bird-Red	BTO list of globally threatened species
Bird-Amber	BTO list of species with an unfavourable conservation status in Europe
Cornwall RDB	Cornwall Red Data Book

Fish

There are two records of European eel (*Anguilla anguilla*) from within a 1km radius of the site, with one from Boscawen Park and the other from Sunny Corner just outside the southern boundary of

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

the site (ERCCIS, 2024). European eel occurs in a variety of freshwater and estuarine habitats and is protected under The Eels (England and Wales) Regulations 2009, the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic 2008 and the NERC Act 2006.

Young eels move from the estuarine environment to swim up rivers where they remain for a number of years to become fully mature before returning to the sea to breed. This species is able to travel overland and move between unconnected waterbodies and also leave the water to feed on slugs and worms. Within the site, European eel could potentially occur on the estuary margins and pond, although duck predation reduces the suitability of pond habitat. The site is considered to be of value for European eel **'within the Zone of Influence'.**

The proposed landscaping works may include dredging the pond which could cause injury to any eels present. Construction works to improve pathways along the estuary and stabilise the estuary banks could result in a deterioration in water quality which could affect the eel population in the estuary. In the absence of mitigation, the nature of the identified impact on European eel is considered to be **long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence**. See Section 6.2 below for mitigation measures.

Invertebrates

The ERCCIS desk study revealed records for thirteen invertebrate species of conservation significance within a 1km radius of the site (ERCCIS, 2024), including several species of S41 NERC Act 2006 moths (Table 4). Within the site, the hedgerows, mature trees and pond have potential to support a diversity of invertebrate species. Modified grassland in the field is unlikely to be of importance for this species group. The site is considered to be of value for invertebrates **'within the Zone of Influence'**.

The proposed improvement works will remove up to 0.7ha of modified grassland and include vegetation clearance in the Maintenance Yard, potential pond dredging and planting that will impact invertebrate habitats. Construction activities along the estuary banks could potentially contaminate the adjacent intertidal mudflats and affect their associated invertebrate fauna. The proposed floodlighting and other external lights at the Sports Hub and performance space could potentially disturb invertebrate feeding, breeding and movement patterns, including nocturnal moth species, and may reduce and fragment populations. The landscaping scheme will create new habitats which may be beneficial to invertebrates. In the absence of mitigation, the nature of the identified impact on invertebrates is considered to be **long-term, negative, of likely occurrence, and of minor significance within the Zone of Influence.** See Section 6.2 below for mitigation measures.

Table 4. Invertebrate species recorded within a 1km radius of the site

Species Group	Species Scientific	Species Venacular	International & National Designation	National & Local Status
insect - butterfly	*Lasiommata megera*	Wall		England_NERC_S.41, BAP-2007, RedList_GB_post2001-NT
insect - hymenopteran	*Cynips longiventris*			Cornwall RDB
insect - moth	*Acronicta rumicis*	Knot Grass		England_NERC_S.41, BAP-2007
insect - moth	*Luffia lapidella*	Virgin Smoke		Cornwall RDB
insect - moth	*Diarsia rubi*	Small Square-spot		England_NERC_S.41, BAP-2007

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Species Group	Species Scientific	Species Venacular	International & National Designation	National & Local Status
insect - moth	*Spilosoma lutea*	Buff Ermine		England_NERC_S.41, BAP-2007
insect - moth	*Spilosoma lubricipeda*	White Ermine		England_NERC_S.41, BAP-2007
insect - stick insect (Phasmida)	*Acanthoxyla prasina subsp. inermis*	Unarmed Stick-insect		RedList_GB_post2001-NE; Cornwall RDB
insect - true fly (Diptera)	*Platycheirus immarginatus*			Nationally Scarce; Cornwall RDB
annelid	*Prionospio fallax*			Cornwall RDB
annelid	*Caulleriella killariensis*			Cornwall RDB
annelid	*Paranais litoralis*			Cornwall RDB
crustacean	*Ceriodaphnia dubia*			Cornwall RDB

Key:

RedList_GB_post2001-EN_Breeding	British Red Data List – endangered breeding population
RedList_GB_post2001-NT_Breeding	British Red Data List – near threatened breeding population
RedList_GB_post2001-VU_Breeding	British Red Data List – vulnerable breeding population
England_NERC_S.41	Protected under Section 41 of the Natural Environment and Rural Communities Act 2006
BAP-2007	Included in the UK Biodiversity Action Plan (2007)
Cornwall RDB	Cornwall Red Data Book

Vascular Plants

The desk study found records of thirty-two vascular plant species of conservation importance within a 1km radius of the site (Table 5). Species associated with woodland, intertidal and neutral grassland habitats could potentially occur within the site margins and duck pond area which contains more native plants and are connected to semi-natural habitat off-site. Vascular plant species of conservation concern previously recorded in Boscawen Park include the nationally rare true fox sedge (*Carex vulpina*) and upright spurge (*Euphorbia serrulata*), nationally scarce balm-leaved figwort (*Scrophularia scorodonia*) and Cornwall Red Data book corn spurrey (*Spergula arvensis*), field woundwort (*Stachys arvensis*), and good king henry (*Chenopodium bonus-henricus*).

The Phase 1 survey in November 2023 recorded eight-two vascular plants (Appendix 3) and a list of trees recorded by the combined Tree Survey (Evolve Tree Consultancy, 2023) and the Phase 1 survey is provided in Appendix 4. The number of vascular plants recorded is considered a moderate diversity for the size of the site and range of habitats present, although additional species are likely to be recorded in the spring and summer. No plants of conservation importance were recorded in November 2023 but it is possible that species may be present in the optimal season for botanical recording (April – September). The site is considered to be of **'Local Value'** for vascular plant species based on historical records of notable species and the range of mature trees present.

The proposed improvements will result in the loss of mainly modified grassland, a habitat of low value for vascular plants. However, habitat disturbance and increased dust during construction could affect the diversity of vascular plants across the Park and potentially impact nationally notable species that have been recorded on-site. In the absence of mitigation, the nature of the likely impact on vascular plants is considered to be **short-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence.** See Section 6.2 below for mitigation measures.

Table 5. Vascular plant species of conservation significance recorded within 1km of the site

Species Scientific	Species Venacular	International & National Designation	National & Local Status
Pinus sylvestris	Scots Pine		Nationally Scarce
Asplenium obovatum subsp. lanceolatum			Cornwall RDB
Sanicula europaea	Sanicle		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Fragaria vesca	Wild Strawberry		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Knautia arvensis	Field Scabious		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Linaria supina	Prostrate Toadflax		Cornwall RDB
Euphorbia serrulata	Upright Spurge	ECCITES-B	Nationally Rare
Stachys arvensis	Field Woundwort		RedList_ENG_post2001-NT,RedList_GB_post2001-NT; Cornwall RDB
Oenanthe lachenalii	Parsley Water-dropwort		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Hyacinthoides non-scripta	Bluebell	WACA-Sch8	
Chamaemelum nobile	Chamomile		England_NERC_S.41, BAP-2007, RedList_ENG_post2001-VU,RedList_GB_post2001-VU; Cornwall RDB
Jacobaea aquatica	Marsh Ragwort		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Brassica oleracea var. oleracea	Wild Cabbage		Cornwall RDB
Carex vulpina	True Fox-sedge		England_NERC_S.41, BAP-2007, Nationally Rare, RedList_ENG_post2001-VU,RedList_GB_post2001-VU
Spergula arvensis	Corn Spurrey		RedList_ENG_post2001-VU,RedList_GB_post2001-VU; Cornwall RDB
Misopates orontium	Weasel's-snout		RedList_ENG_post2001-VU,RedList_GB_post2001-VU; Cornwall RDB
Melittis melissophyllum	Bastard Balm		England_NERC_S.41, BAP-2007, Nationally Scarce, RedList_ENG_post2001-VU,RedList_GB_post2001-VU; Cornwall RDB
Scrophularia scorodonia	Balm-leaved Figwort		Nationally Scarce; Cornwall RDB
Prunus cerasus	Dwarf Cherry		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Chenopodium bonus-henricus	Good-King-Henry		RedList_ENG_post2001-VU,RedList_GB_post2001-VU; Cornwall RDB
Erica cinerea	Bell Heather		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Solidago virgaurea	Goldenrod		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Fumaria occidentalis	Western Ramping-fumitory		Nationally Scarce; Cornwall RDB
Montia fontana subsp. variabilis			WL
Vicia sativa subsp. segetalis	Common Vetch		WL
Mentha suaveolens	Round-leaved Mint		Nationally Scarce, RedList_ENG_post2001-NT,RedList_GB_post2001-DD
Jasione montana	Sheep's-bit		RedList_ENG_post2001-VU,RedList_GB_post2001-LC
Lathyrus linifolius	Bitter-vetch		RedList_ENG_post2001-NT,RedList_GB_post2001-LC

Species Scientific	Species Venacular	International & National Designation	National & Local Status
Betula pubescens subsp. pubescens			WL
Valeriana officinalis	Common Valerian		RedList_ENG_post2001-NT,RedList_GB_post2001-LC,WL
Cichorium intybus	Chicory		RedList_ENG_post2001-VU,RedList_GB_post2001-LC
Calluna vulgaris	Heather		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Oxalis acetosella	Wood-sorrel		RedList_ENG_post2001-NT,RedList_GB_post2001-LC
Briza minor	Lesser Quaking-grass		Nationally Scarce
Festuca arenaria	Rush-leaved Fescue		Nationally Scarce; Cornwall RDB

Key:

RedList_GB_post2001-EN	British Red Data List - endangered species
RedList_GB_post2001-VU	British Red Data List - vulnerable species
RedList_GB_post2001-LC	British Red Data List – species of least concern
RedList_GB_post2001-DD	British Red Data List – data deficient
RedList_ENG_post2001-EN	England Red Data list of endangered species
RedList_ENG_post2001-NT	England Red Data list of near threatened species
RedList_ENG_post2001-VU	England Red Data list of vulnerable species
England_NERC_S.41	Section 41 of the Natural Environment and Rural Communities Act 2006
BAP-2007	Included in the UK Biodiversity Action Plan (2007)
Nationally rare	Occurring in 1-15 10 x 10km hectads of the OS national grid
Nationally Scarce	Occurring in 16-100 10 x 10km hectads of the OS national grid
Cornwall RDB	Cornwall Red Data Book
WL	British Red Data List -Waiting list for designation

Invasive Plants

In the UK, a number of non-native invasive plant species are listed on Schedule 9 of the WCA 1981 (as amended) or Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019 making it an offence to cause them to spread to the wild. The desk study revealed records for several non-native invasive species within a 1km radius of the site (ERCCIS, 2024) which are listed in Table 6.

Table 6. Non-native invasive vascular plants recorded within a 1km radius

Species Scientific	Species Venacular	International & National Designation	National & Local Status
Allium triquetrum	Three-cornered Garlic	WCA Sch 9 Pt 2	
Cotoneaster simonsii	Himalayan Cotoneaster	WCA Sch 9 Pt 2	
Fallopia japonica	Japanese Knotweed	WCA Sch 9 Pt 2	
Crocosmia pottsii x aurea = C. x crocosmiiflora	Montbretia	WCA Sch 9 Pt 2	
Lamiastrum galeobdolon subsp. argentatum	Variegated yellow archangel	WCA Sch 9 Pt 2	
Impatiens glandulifera	Himalayan Balsam	IASO Sch2 Pt2	
Rhododendron ponticum	Rhododendron	WCA Sch 9 Pt 2	

Key:

WCA Sch 9 Pt 2	Wildlife and Countryside Act 1981 – Schedule 9
IASO Sch 2 Pt 2	Invasive Alien Species (Enforcement and Permitting) Order 2019 – Schedule 2

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

The Phase 1 survey recorded up to six species of non-native invasive plants that require legal control, mainly located around the duck pond and in planted beds: variegated yellow archangel (*Lamiastrum galeobdolon subsp. argentatum*), montbretia (*Crocosmia x crocosmiiflora*), three-cornered garlic (*Allium triquetrum*), rhododendron (possibly Schedule 9 WCA 1981 *Rhododendron ponticum*), and two cotoneaster species (possibly both Schedule 9 WCA 1981 species). Giant rhubarb was recorded around the pond but this is considered likely to be Brazilian giant rhubarb (*Gunnera maniculata*) rather than the Schedule 9 WCA 1981 species, *G. tinctoria*. The locations of invasive plants are shown provisionally as Target Note 3 on Map 1. It is recommended that an invasive species survey is completed at a more favourable time of year to confirm the species and their locations.

The survey also recorded three plants listed as injurious under the Weeds Act 1959 on-site: common ragwort (*Senecio jacobaea*), spear thistle (*Cirsium vulgare*) and broad-leaved dock (*Rumex obtusifolius*). Under this legislation, it is an offence to cause these species to spread because they are harmful to agriculture. Although not requiring legal control, non-native invasive winter heliotrope (*Petasites fragrans*) was recorded on-site and is particularly dominant at the southern end of the site.

The proposed development will involve vegetation clearance, earthworks and pond dredging, all of which may cause the spread of non-native invasive plant species, both within the Park and off-site if attached to vehicles or machinery. In the absence of mitigation, the nature of the likely impact on invasive plants is considered to be **long-term, negative, of likely occurrence, and of minor significance within the Zone of Influence.** See Section 6.2 below for mitigation measures.

Development of the site should include measures to control these species. See Section 6.3 below for mitigation measures.

Non-Vascular Plants and Fungi

The ERCCIS desk study revealed records ten species of conservation significance within a 1km radius of the site including five species of fungus and five species of moss (ERCCIS, 2024) (Table 7). None of the records come specifically from Boscawen Park but species that occur on trees or walls could potentially be present on-site.

A detailed survey for non-vascular plants and fungi was outside the scope of the Phase 1 survey. The mature trees and stone walls are likely to support a moderate diversity of common species and rarities may potentially be present. However, the site lacks suitable habitats, such as ancient woodland or metalliferous mine waste, which typically support the most diverse assemblages of lower plant species. The site is considered to be of value for non-vascular plants and fungi '**within the Zone of Influence'.**

All the trees will be kept apart from any which require felling/pruning for tree health or safety reasons. Habitat disturbance and increased dust during construction could have an impact on lower plants present. In the absence of mitigation, the nature of the likely impact on non-vascular plants is considered to be **short-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence.** See Section 6.2 below for mitigation measures.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Table 7. Non-vascular plants and fungi recorded within a 1km radius

Species Group	Species Scientific	Species Venacular	International & National Designation	National & Local Status
Fungus	*Clathrus archeri*	Devil's Fingers		Cornwall RDB
Fungus	*Piptoporus quercinus*	Oak Polypore	WACA-Sch8	England_NERC_S.41, BAP-2007
Fungus	*Perenniporia ochroleuca*			Cornwall RDB
Fungus	*Marasmius epiphylloides*	Ivy Parachute		Cornwall RDB
Fungus	*Terana coerulea*	Cobalt Crust		Cornwall RDB
Moss	*Tortula cuneifolia*	Wedge-leaved Screw-moss		England_NERC_S.41, BAP-2007, Nationally Rare; Cornwall RDB
Moss	*Tortula atrovirens*	Rib-leaf Moss		Cornwall RDB
Moss	*Pogonatum aloides*	Aloe Haircap		Cornwall RDB
Moss	*Plagiothecium denticulatum var. denticulatum*			Cornwall RDB
Moss	*Tortula viridifolia*	Bristly Pottia		Cornwall RDB

Key:

England_NERC_S.41	Section 41 of the Natural Environment and Rural Communities Act 2006
BAP-2007	Included in the UK Biodiversity Action Plan (2007)
Nationally rare	Occurring in 1-15 10 x 10km hectads of the OS national grid
Cornwall RDB	Cornwall Red Data Book

6.0 Mitigation Recommendations

Recommendations are provided using the Mitigation Hierarchy in accordance with BS42020-2013 (British Standard, 2013) and BS 8683-2021 (British Standard, 2021). The Mitigation Hierarchy seeks to avoid impacts, then to mitigate unavoidable impacts, and, as a last resort, to compensate for residual impacts that remain after implementation of avoidance and mitigation measures. The mitigation measures listed below should be secured through appropriate planning conditions.

6.1 Designated Sites

The site partially lies within the Fal & Helford SAC and the proposed development could potentially affect this designated site and the Falmouth Bay and St Austell Bay SPA which it is linked to hydrologically. The site partially lies within Malpas Estuary SSSI and close to a Cornwall Roadside Verge Inventory site. The following measures will be implemented to avoid and mitigate for potential indirect impacts to the designated features of these protected sites:

1. A Habitat Regulations Assessment (HRA) will be required in accordance with the Conservation of Habitats and Species Regulations 2017 (as amended) to determine if a plan or project may affect the conservation objectives of the European sites. HRA is a staged process; as a minimum, Screening (Stage 1) and Appropriate Assessment (Stage 2) will be required to ascertain that adverse effects of the proposed development on the integrity of the European sites can be ruled out. The HRA process will identify detailed measures to avoid, mitigate and compensate for any adverse impacts, including potentially noise, vibration, runoff and lighting.

2. Natural England must be consulted regarding works within the SAC and SSSI and the SSSI Impact Risk Zone adjacent to the designated area. Natural England will be a statutory consultee in the planning process and may request specific mitigation to protect the SAC/SSSI. It is also necessary to apply for Natural England's permission to carry out the works Give notice and get consent for a planned activity on a SSSI - GOV.UK (www.gov.uk)

3. Follow the above recommendations to maintain the strategic significance of the site within the Nature Network.

4. Measures must be taken to minimise dust generated during construction that may affect the designated roadside verge close to the southern boundary of Boscawen Park. It is recommended that a Construction Environmental Management Plan (CEMP) is prepared to outline the measures take to protect habitats and species during the construction period. This is likely to be made a planning condition.

6.2 Habitats

Of the habitats within the site, the scattered mature trees (g 32) and intertidal mudflats (t2d) are considered to be of notable ecological value. Mitigation recommendations for these habitats are detailed below. Mitigation for low value habitats, such as modified grassland, is required where these habitats are important for protected species (see section 6.3 below).

5. **Scattered trees (degradation):** If any trees have to be felled for safety reasons, these should be replaced with an equivalent or greater number. Native trees have more ecological value than ornamental species. Tree works and construction activities to follow the recommendations given in the Tree Survey report (Evolve Tree Consultancy, 2023) to safeguard retained trees during construction.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

6. **Intertidal mudflats (degradation)**: The intertidal mudflats lie within the Fal & Helford SAC and Malpas Estuary SSSI. The HRA and consultation with Natural England will be required to fully assess the impacts of the proposed works and design appropriate mitigation to protect this habitat.

7. **All habitats:** Under the Environment Act 2021, all planning applications in England are required to achieve a minimum 10% Biodiversity Net Gain to be measured using the DEFRA Statutory Metric tool. This currently applies to major developments and will be introduced for minor developments from April 2024 (see section 6.4).

8. Policy G3 of the Climate Emergency Development Plan (Cornwall Council, 2023[1]) requires all major developments to provide, through the retention of existing and or / the establishment of new, canopy coverage equal to at least 15% of the site area (excluding areas of the site that are priority habitat types).

6.3 Species

The site proposals have potential to impact badger, hedgehog, bats (roosting, foraging and commuting), dormouse, otter, birds (breeding and wintering), reptile and amphibian species, invertebrates and vascular and non-vascular plants. Impacts on these species/ species groups will be avoided and/or mitigated by following the recommendations detailed below**.**

9. **Badger, hedgehog, and otter:** All excavated pits associated with the proposed development must be covered overnight and all trenches must have sloping planks (no greater than 45° angle) placed in them as a means of escape so that animals will not become trapped.

10. All fences (temporary and permanent) must have a minimum 25cm gap below at regular intervals to permit movement of faunal species. NB: the minimum gap can be reduced to 13cm x 13cm if the purpose is to permit only hedgehog access post-development.

11. **Badger:** Provide compensatory foraging habitat for loss of modified grassland by improving the site for badgers and including new hedges and shrub planting in the landscaping scheme, particularly using species that provide a source of berries and fruit.

12. As badger has been recorded locally, a post-planning, pre-construction survey for badger will be required to identify if any setts have been created on-site since the Phase 1 survey and to ensure compliance with wildlife legislation.

13. **Bats (foraging and commuting):** In accordance with the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023) the site is assessed as being of 'moderate suitability' for foraging and commuting bats. Further bat activity surveys are required to evaluate the species and populations using the site and assess the impacts of lighting. To meet current guidance, the surveys would comprise monthly transect and static monitoring between April and October (Collins, 2023).

14. **Bats (roosting):** Trees with potential roost features for bats will be retained within the development but any tree works and /or trees affected by artificial lighting may impact roosting bats. It will be necessary to undertake a detailed Ground Level Tree Assessment (GLTA) of trees to be impacted and, potentially, subsequent further climbing/emergence surveys to confirm the presence/likely absence of roosting bats.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

The GLTA should be undertaken between November – March while potential roost features in trees are most visible. If any further surveys are required, climbing surveys can be undertaken at any time of year but emergence surveys must be timed between May – August (Collins, 2023).

15. The demolition of buildings with potential roost features and buildings affected by artificial lighting may impact roosting bats. It will be necessary to undertake a detailed Preliminary Roost Assessment (PRA) which includes an internal and external building inspection, and potentially, subsequent further emergence surveys to confirm the presence/likely absence of roosting bats. The PRA can be undertaken at any time of year but emergence surveys (if required) must be timed between May – August (Collins, 2023).

16. A sensitive lighting scheme will be key to mitigating impacts upon roosting, foraging and commuting bat species, particularly the retention of a dark corridor (<0.5 lux), at least 10m wide, along the estuary margins, reduction of artificial light levels to a minimum across the rest of the site and avoidance of any direct illumination onto trees or buildings that may support roosting bats. Careful design of floodlighting around the sports pitches will be required, based on the findings of the further bat surveys.

17. **Dormouse:** A dormouse survey is not recommended because of the small extent of potential habitat on-site and low likelihood of dormouse presence but precautionary measures will be required for the removal woody vegetation and any tree/shrub works. Undertake clearance of woody vegetation during the winter months (October – February inclusive) to avoid the bird nesting season and when any dormice present will be hibernating at ground level. If this cannot be achieved, an Ecological Watching Brief will be required to search the vegetation prior to clearance for this species. If any dormice are found on-site, all works must cease immediately and a EPS licence obtained from Natural England to permit any works that disturb dormouse to proceed.

18. **Otter:** Follow the recommendations for the Fal & Helford SAC/Malpas Estuary SSSI to protect otter habitat in the adjacent estuary. Follow the recommendations for bats and retain a dark corridor (<0.5 lux), at least 10m wide, along the estuary margins. The existing dogs on leads policy should be enforced to prevent disturbance, particularly along the northern boundary where there is easy access to the foreshore.

19. **Birds (breeding):** Take precautionary measures to avoid disturbance to nesting birds. Avoid tree works, building demolition and any clearance of hedges, scrub and shrubs between March and August/ September when birds will be nesting, or precede the works with a detailed search for nesting birds, to be undertaken by an ecologist. If an active bird nest is found, then works must be delayed until nesting activity has ceased / the dependent young have fledged. Works are most likely to be delayed during the peak nesting period between April and July.

20. Provide compensatory bird nesting habitat to replace that lost by including new hedges and native tree/shrub planting within the landscaping scheme.

21. **Birds (wintering):** Follow the recommendations for the Fal & Helford SAC/Malpas Estuary SSSI to protect populations of waders and wildfowl and minimise disturbance in the adjacent estuary. The existing dogs on leads policy should be enforced to prevent disturbance of the foreshore, particularly along the northern boundary. Retain

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

a dark corridor (<0.5 lux), at least 10m wide, along the estuary margins and design the floodlighting to minimise light spill across the site.

22. Provide compensatory wintering bird foraging habitat. The loss of modified grassland cannot be easily replaced but feeding opportunities for other wintering species can be created by planting a wide range of plants in the landscaping scheme that provide a source of berries and fruit.

23. **Reptiles:** A reptile survey is not recommended because of the small extent of potential habitat but precautionary reptile avoidance measures (RAMs) will be required during vegetation clearance to avoid reptile injury.

    - Remove hedges and any scrub, shrubs, longer grassland or ruderal vegetation using hand-held tools to avoid injuring any reptiles sheltering within.
    - If any scrub or shrubs are to be removed, cut woody vegetation to 200mm above ground level during the winter (when birds will not be nesting) and cut the remaining scrub and shrubs to ground level during the summer (April – early October) when reptiles will be active and can move away from the disturbance.
    - Continue to maintain modified grassland at short sward height of 100mm by cutting/grazing regularly to deter reptiles from moving in from other areas of the site. Prior to construction, if the sward has been allowed to grow, cut the sward to 200mm and leave for at least 24 hours to allow reptiles to disperse. Undertake a second cut to 100mm, cutting the sward slowly and in a single direction towards boundary features. Leave the sward undisturbed for 24 hours before commencing ground works.
    - If it is not feasible to carry out works as specified above, they must be conducted under an Ecological Watching Brief.

24. **Amphibians:** There is a low risk that amphibians are present in the pond because of duck predation. Dredge the pond dredging in late summer or early autumn, if possible, when aquatic species are less active. The main amphibian breeding period in Cornwall (January – March) must be avoided. Leave dredged material on the bank for 24hrs to allow amphibians to escape and move back to the pond. Across the rest of the site, follow recommendations for point 12. Reptiles above to minimise the risk of injury to amphibians during site works.

25. **Fish:** Follow mitigation recommendations for Amphibians, above, to minimise impacts to any eel present in the pond; the presence of eel is considered low risk because of duck predation.

26. **Invertebrates:** Follow mitigation recommendations for the Fal & Helford SAC to protect invertebrates in the adjacent estuary. Follow mitigation recommendations for Amphibians above to minimise impacts to aquatic invertebrates in the pond. Follow recommendations for habitats to maintain invertebrate habitat within the site (Section 6.2).

27. **Vascular, non-vascular plants and fungi**: Follow recommendations for habitats (Section 6.2). The landscaping scheme will increase the diversity of vascular plants, although mainly non-native, ornamental species are likely to be used.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

28. **Invasive and injurious plants**: Up to five non-native invasive plant species have been recorded on-site that require legal control under Schedule 9 WCA 1981 (as amended). It is recommended that an Invasive Plant Survey is undertaken at a more favourable time of year to identify all species present and confirm their locations.

29. Three plants listed as injurious under the Weeds Act 1959 are also present on-site: spear thistle, broad-leaved dock and common ragwort. Measures should be taken to prevent them spreading to agricultural land. Control measures comprise targeted weed control (i.e. seasonal mowing, pulling or herbicide application).

30. An Invasive Species Control Plan will be required to support the planning application (Cornwall Council, 2023[2]). A post-planning, preconstruction survey for plant species listed under Schedule 9 WCA 1981 will be required to ensure compliance with wildlife legislation.

6.4 Further surveys

On the basis of the indicative proposals at Appendix 1, further surveys are required prior to planning for roosting bats, foraging and commuting bats, and invasive plants. Further assessments are required to inform a planning application: Habitat Regulations Assessment, Invasive Species Control Plan and a completed Biodiversity Net Gain assessment. A Cornwall Canopy Calculator is to be completed by the landscape architect or arboriculturalist.

Post-planning, preconstruction surveys for badger and invasive plant species will be required. During construction, an Ecological Watching Brief may be required if site works are likely to affect protected species.

6.5 Monitoring

Ecological monitoring requirements will be determined following the results of the recommended further protected species surveys. Ecological monitoring of the site will likely be required to inform the CEMP, LEMP and any other planning conditions. Ecological monitoring of the site post-development is likely to be required to ensure that the adopted mitigation measures, including any new habitat creation are successfully implemented.

6.6 Habitat Loss/ Gain Summary

Please refer to the habitat loss/ gain summary balance table (Table 1), located within the non-technical summary, for the baseline statement of predicted change resulting from the proposed development.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

7.0 Impact Assessment

Table 8: Assessment of Impact of the proposed development on features of ecological importance before and after mitigation. Receptors are shaded orange where the significance of the effect of residual impact after mitigation cannot be determined due to outstanding survey or assessment requirements.

Feature	Characterisation of unmitigated impact	Effect without mitigation	Mitigation (Points 1 – 30 Sections 6.0 – 6.3)	Significance of effect of residual impact after mitigation
Fal & Helford SAC	Loss and degradation (construction and operational)	TBC following completion of HRA	1,2	TBC following completion of HRA
Malpas Estuary SSSI	Loss and degradation (construction and operational)	TBC following consultation with Natural England	2	TBC following consultation with Natural England
Cornwall Nature Network	Loss and degradation (construction and operational)	Long-term, negative and of near certain occurrence, of minor significance on an International scale.	3	TBC following completion of HRA & consultation with Natural England
Cornwall Roadside Verge (BS 30)	Degradation (construction)	Short-term, negative and of unlikely occurrence, of minor significance on a County scale	4	Neutral
Scattered trees	Degradation (construction)	Long-term negative impact of unlikely occurrence, of minor significance on a local scale.	5, 7, 8	Neutral – opportunity for enhancement
Intertidal mudflats	Loss and degradation (construction)	TBC following completion of HRA	6, 7	TBC following completion of HRA & consultation with Natural England
Badger	Harm or disturbance to individual animals Loss of potential foraging habitat (construction)	Long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence	9, 10, 11, 12	Neutral
Bats (foraging, commuting)	Loss and degradation of potential foraging and commuting habitat (construction and operational)	TBC following completion of further survey	13, 16	TBC following completion of further survey
Bats (roosting)	Loss and degradation of potential roosting habitat (construction and operational)	TBC following completion of further survey	14, 15, 16	TBC following completion of further survey

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Feature	Characterisation of unmitigated impact	Effect without mitigation	Mitigation (Points 1 – 30 Sections 6.0 – 6.3)	Significance of effect of residual impact after mitigation
Dormouse	Harm or disturbance to individual animals (construction)	Long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence	17	Neutral – opportunity for habitat enhancement
Otter	Harm or disturbance to individual animals (construction & operation)	Long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence	9, 10, 18	Neutral
Hedgehog	Harm or disturbance to individual animals (construction)	Long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence	9, 10	Neutral – opportunity for enhancement
Birds (breeding)	Loss or disturbance to nesting habitat (construction and operational)	Long-term, negative, of likely occurrence, and of minor significance on a local scale	19, 20	Neutral – opportunity for habitat enhancement
Birds (wintering)	Loss or disturbance to foraging habitat (construction and operational)	TBC following consultation with Natural England	21, 22	TBC following consultation with Natural England
Reptiles	Harm or disturbance to individual animals (construction and operation) Degradation of suitable habitat (operational)	Long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence	23	Neutral – opportunity for habitat enhancement
Amphibians	Harm or disturbance to individual animals (construction) Degradation of suitable habitat (operational)	Long-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence	24	Neutral – opportunity for habitat enhancement
Fish	Degradation of suitable habitat (operational)	Long-term, negative, of unlikely occurrence, and of minor significance	25	Neutral

Feature	Characterisation of unmitigated impact	Effect without mitigation	Mitigation (Points 1 – 30 Sections 6.0 – 6.3)	Significance of effect of residual impact after mitigation
		within the Zone of Influence		
Invertebrates	Harm or disturbance to individual animals (construction) Degradation of suitable habitat (operational)	Long-term, negative, of likely occurrence, and of minor significance within the Zone of Influence	26	Neutral – opportunity for habitat enhancement
Vascular plants	Loss of or degradation of suitable habitat (construction and operational)	Short-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence	27	Neutral – opportunity for habitat enhancement
Invasive plants	Loss of or degradation of suitable habitat (construction)	Long-term, negative, of likely occurrence, and of minor significance within the Zone of Influence	28, 29, 30	Neutral – opportunity for habitat enhancement
Non-vascular plants	Loss of or degradation of suitable habitat (construction)	Short-term, negative, of unlikely occurrence, and of minor significance within the Zone of Influence	27	Neutral – opportunity for habitat enhancement

7.1 Residual Impacts

The residual impact of the proposed development cannot be determined until the results of the recommended further surveys are available. This Preliminary Ecological Appraisal will be upgraded to an Ecological Impact Assessment (EcIA) following provision of the final site layout and further information for the Fal & Helford SAC, Malpas Estuary SSSI, intertidal habitat, wintering birds and roosting, foraging and commuting bats.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

8.0 Biodiversity Net Gain Assessment

Biodiversity Net Gain (BNG) is an approach to development and/or land management that aims to leave the natural environment in a measurably better state than it was beforehand. To avoid a net loss, ecological impacts should be minimised by applying the Mitigation Hierarchy approach: firstly to avoid impacts, then to reduce impacts and finally to compensate for impacts. Biodiversity enhancements are additional to the mitigation/compensation measures that are required to offset impacts and should be incorporated within development schemes to achieve a BNG, as required by the Environment Act 2021 and the Local Planning Authority. Cornwall Council requires all major developments to achieve a 10% BNG which is measured using the Statutory Biodiversity Metric and this is extended to minor developments in April 2024.

In order to calculate % BNG, the pre-development baseline habitats and the post-development predicted habitats are evaluated according to the latest Statutory Metric criteria, using characteristics such as area or length, condition and strategic value (DEFRA, 2024). The Metric calculates the pre-development and post-development biodiversity units and compares these values to calculate the % BNG.

8.1 Baseline BNG Assessment

A baseline BNG habitat condition assessment of the site was carried out on 29th November 2023 and 29th January 2024 according to the methodology described in section 4.6. Baseline habitat data was entered into Statutory Metric calculator tool to calculate the number of pre-development biodiversity units present on the site for habitats (measured by area) and hedges (measured by length). No watercourses were present on-site; the Truro River is an intertidal habitat at this location and therefore, although landscaping works are proposed within 10m of the banks, a River Condition Assessment for freshwater rivers and streams, was not required to inform the BNG calculations.

A summary of the survey results is presented in Table 9 and a copy of the Statutory Metric calculator Excel spreadsheet accompanies this PEA report. The site baseline is evaluated as having **74.36 habitat biodiversity units** and **0.86 hedge biodiversity units**.

8.2 Post-development BNG Assessment

An indicative layout is presented in Appendix 1.The final layout and a detailed landscaping scheme and planting plan are not yet available to calculate the post-development biodiversity units and the % BNG delivered by the scheme and therefore the Biodiversity Metric currently indicates a net loss. Any future development will need to achieve at least a 10% BNG in both habitats and hedges i.e. **81.80 habitat biodiversity units** and **0.95 hedge biodiversity units**.

8.3 Opportunity for Biodiversity Enhancements

The following recommendations for biodiversity enhancements could be included within the Park improvement scheme which will contribute towards the post-development biodiversity value and the attainment of a 10% BNG.

Habitats: Habitats within the Park can be enhanced through the following:

- Planting native trees and shrubs and compliance with Policy G3 of the Climate Emergency Development Plan to increase tree canopy cover to at least 15% of the site area. A Cornwall Canopy Calculator will be required for the planning application.
- Incorporating wildflower grassland within the landscaping scheme;

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

- Creating new Cornish hedgerows, planted with native trees and shrubs, to improve habitat connectivity;
- Incorporating pond improvements by re-grading the margins to encourage the development of a marginal and aquatic flora which will attract wildlife, although the continued presence of duck grazing and predation is a significant limitation.

Bats and Birds: In accordance with the Cornwall Planning for Biodiversity Guide (Cornwall Council 2023), one bird box or bat box per unit per new building should be provided, with at least 75% of boxes to be incorporated into the fabric of the buildings. Bat and bird boxes can also be installed in trees. Bat boxes must be located 4m above ground level on a south or west elevation, and bird boxes at least 2m above ground level on an east or north elevation. Suitable products are available at https://www.nhbs.com, https://www.greenandblue.co.uk and https://www.wildcare.co.uk.

Invertebrates: In accordance with the Cornwall Planning for Biodiversity Guide (Cornwall Council, 2023), bee bricks should be incorporated into 50% of the new buildings. Bee bricks must be located *c.* 1m above ground level on a south or south-westerly elevation and should not be shaded. Alternatively (or in addition to bee bricks), bee posts can be installed in landscaped parts of the site.

Reptiles, amphibians, hedgehog and invertebrates: The provision of log or stone piles will create shelter and hibernation habitat for a range of species. Piles should be located within quiet areas of the Park, close to hedges, shrubberies or long grassland.

All habitats and species: The successful eradication of invasive non-native plant species will enhance the biodiversity value of the site and help to protect semi-natural habitats within the wider area. The implementation of a Landscape and Ecology Management Plan (LEMP) or Habitat Management and Monitoring Plan (HMMP) will ensure that habitats and wildlife features are managed appropriately in the long-term. This is likely to be made a planning condition.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Table 9. Baseline BNG Results

On-site baseline	*Habitat units*	74.36
	Hedgerow units	0.86
	Watercourse units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00
	Hedgerow units	0.00
	Watercourse units	0.00
On-site net change (units & percentage)	*Habitat units*	-74.36
	Hedgerow units	-0.86
	Watercourse units	0.00
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	Watercourse units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00
	Hedgerow units	0.00
	Watercourse units	0.00
Off-site net change (units & percentage)	*Habitat units*	0.00
	Hedgerow units	0.00
	Watercourse units	0.00
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-74.36
	Hedgerow units	-0.86
	Watercourse units	0.00
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00
	Hedgerow units	0.00
	Watercourse units	0.00

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

9.0 Bibliography

Baker, J., Hoskin, R. and Butterworth, T. (2019) Biodiversity Net Gain. Good Practice Principles for Development. A Practical Guide. CIRIA, 2019. ISBN: 978-0-86017-791-3.

BSI (British Standards) (2005) BS 5837:2005 Trees in relation to Construction. BSI.

BSI (2013) BS 42020: 2013 Biodiversity: Code of Practice for Planning and Development. BSI.

BSI (2021) BS 8683: 2021 Process for designing and implementing Biodiversity Net Gain — Specification. BSI.

Bright *et al.,* (2006) Dormouse Conservation Handbook. English Nature (now Natural England).

British Ornithologists' Union (2022). The British List: A Checklist of Birds in Britain (10th Edition). Ibis 164: 860 -910

Cabrera-Cruz, S.A., Smolinsky, J.A. & Buler, J.J. (2018) Light pollution is greatest within migration passage areas for nocturnally-migrating birds around the world. *Sci Rep* **8**, 3261 (2018). https://doi.org/10.1038/s41598-018-21577-6

CBI (1998) Cornwall's Biodiversity Volume 2: Action Plans. Cornwall Wildlife Trust, Truro.

CBI (1997) Cornwall's Biodiversity Volume 1: Audit and Priorities. Cornwall Wildlife Trust, Truro.

CBI (2010) Cornwall's Biodiversity Action Plan Volume 4: Priority Projects. Cornwall Wildlife Trust, Truro.

CBI (2004) Cornwall's Biodiversity Volume 3: 2004 Action Plans. Cornwall Wildlife Trust, Truro.

Cheffings C.M. & Farrell L. (2005) The Vascular Plant Red Data List for Great Britain. Species Status 7: 1-116. JNCC, Peterborough.

Church J. M. Hodgetts N.G. Preston C. D. & Stewart N. F. (2004). British Red Data Books: Mosses and Liverworts. JNCC, Peterborough.

Church J. M. Coppins B. J. Gilbert O. L. James P. W. & Stewart N. F. (1996) British Red Data Books: Lichens. JNCC, Peterborough.

CIEEM [Chartered Institute of Ecology and Environmental Management (revised 2017) Guidelines for Preliminary Ecological Appraisal. 2nd Edition. CIEEM.

CIEEM [Chartered Institute of Ecology and Environmental Management (2018) Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland. CIEEM.

CIEEM [Chartered Institute of Ecology and Environmental Management] (2019). Advice Note on the Lifespan of Ecological Reports and Surveys. April 2019. CIEEM, Winchester.

CISBFR [Cornwall and the Isles of Scilly Federation of Biological Recorders] (2009) Red Data Book for Cornwall and the Isles of Scilly 2nd edition. Croceago Press, Praze-an-Beeble

Collins, J (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). Bat Conservation Trust, London. ISBN-978-1-7395126-0-6

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Cornwall Council (2016) Cornwall Local Plan Strategic Policies 2010-2030. Cornwall Council. Truro.

Cornwall Council (2023) Cornwall Planning for Biodiversity Guide https://www.cornwall.gov.uk/media/v1roqk0x/planning-for-biodiversity.pdf

Cornwall Council (2021) Terrestrial European Sites Supplementary Planning Document (SPD) https://www.cornwall.gov.uk/media/wmvnoxzz/european-sites-mitigation-spd-july-2021-marine-and-terrestrial-sites.pdf

Cornwall Council (2022) Biodiversity Net Gain: A how to guide for the development process https://www.cornwall.gov.uk/media/muhmug45/draft-biodiversity-net-gain-guidance-for-developers-and-planners-web.pdf

Cornwall Council (2023[1]) Climate Emergency Development Plan https://old.cornwall.gov.uk/media/24212257/environmental-growth-strategy_jan17_proof.pdf

Cornwall Council (2023[2]). Validation Guide. Version 1.3. November 2023. Validation Guide Version 1.3 (cornwall.gov.uk)

Cornwall Wildlife Trust [CWT] (2007) Biodiversity and Geological Conservation: Planning Good Practice Guidance for Cornwall. CWT.

DEFRA *et al* (2024). Multi Agency Geographic Information for the Countryside (MAGIC). Available at: http://magic.defra.gov.uk/

DEFRA (2024). Statutory biodiversity metric tools and guides Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)

European Commission (1992) Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. European Commission.

European Commission (2009) Directive 2009/147/EC on the conservation of wild birds. European Commission.

ERCCIS [Environmental Records Centre for Cornwall and the Isles of Scilly] (to 2024) Erecords computer database. Cornwall Wildlife Trust. Unpublished.

Evolve Tree Consultancy (2023) Tree Survey and Arboricultural Constraints. Phase 2. Land at Boscawen Park, Malpas Road, Truro TR1 1SG. Reference EV-4355-TS CA AIA. November 2023.

HM Government (1981 as amended) The Wildlife and Countryside Act 1981 (as amended). HMSO, London.

HM Government (1992) Protection of Badgers Act 1992. HMSO, London.

HM Government (1997) Statutory Instrument 1997 No.1160. The Hedgerow Regulations 1997. HMSO, London.

HM Government (2000) The Countryside and Rights of Way Act 2000. HMSO, London.

HM Government (2006) The Natural Environment and Rural Communities Act 2006. HMSO, London.

HM Government (2017) The Conservation of Habitats and Species Regulations 2017 (as amended). HMSO, London.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

HM Government (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. HMSO, London.

HM Government (2021) Environment Act 2021. HSMO, London

Gent A.H. & Gibson S.D. (1998) Herpetofauna Worker's Manual. JNCC, Peterborough.

JNCC [Joint Nature Conservation Committee] (2011) UK BAP Priority Species and Habitats. Available at: http://jncc.defra.gov.uk

JNCC (2011) Species Status Assessment Project. Available at: http://jncc.defra.gov.uk

Ministry of Housing, Communities and Local Government (2023) National Planning Policy Framework - GOV.UK (www.gov.uk)

Mitchell-Jones, A J & McLeish, A P., (Edits) (1999). The Bat Workers' Manual. Joint Nature Conservation Committee, Peterborough.

Natural England Advice Note (2022) https://www.gov.uk/guidance/hazel-dormice-advice-for-making-planning-decisions

Natural England (2022) https://www.gov.uk/guidance/reptiles-advice-for-making-planning-decisions

Natural England (2023). The Biodiversity Metric 4.0. Archive Site for Legacy Biodiversity Metrics (naturalengland.org.uk)

Natural England, DEFRA and Environment Agency (2022). How to stop invasive non-native plants from spreading - GOV.UK (www.gov.uk)

Natural England (2019). *Bats: surveys and mitigation for development projects. Standing advice for local planning authorities to assess impacts of development on bats.* Published 28 March 2015; updated 4 March 2019. Available at: https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects

ODPM [Office of the Deputy Prime Minister] (2005) Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

Poland J. & Clement E. (2009) The Vegetative Key to the British Flora. Poland & BSBIO, Southampton.

Preston C. D. Pearman D. A. & Dines T. D. (2002) New Atlas of the British and Irish Flora. Oxford Unity Press Inc., New York

Ratcliffe, D. (2009) A Nature Conservation Review. Cambridge University Press. Cambridge.

Reason, P.F. and Wray, S. (2023) UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. CIEEM, Ampfield.

Stace C. (2010) New Flora of the British Isles – Third edition. Cambridge University Press, Cambridge.

UKHab Ltd (2023) The UK Habitat Classification. Version 2.0. ukhab – UK Habitat Classification

Wiggington M.J. (1999) British Red Data Book. Vascular Plants. 3rd Edition. JNCC, Peterborough.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

10.0 Appendix 1: Indicative Site Proposals

Boscawen Park

Site Wide Masterplan

1. Gateway to Boscawen Park to create a sense of arrival and 'welcome. Sculpture/ public art feature.

2. New cafe/ Tennis Pavilion (by others- with recent planning permission) & Existing Scout hut to be retained.

3. New waterside boardwalk and waterside parkland space for informal recreation & occasional event space. Maximise views to Truro. (Requires relocation of car parking.)

4. Canoe Club.

5. Proposed Bridge connection to Newham to create Truro Loops 'Loop One' (outside this project scope).

6. Existing outdoor Sports pitches to be retained- this includes:
1 x full size (11-a-side) pitch, 1x 7-a-side) & 1 x 5-a-side pitch, & Second's Cricket Oval, all to be re-surfaced with turf, incorporating drainage layer to maintain year round use as formal club use and hire, and informal kick-about space.

7. New all weather playing pitch: 3G surface with fencing. (note: surface to be eco- surfacing to meet EA standards as required).

8. Play space to be improved play area with further natural play and opportunities for older ages adventure- play including parkour, climbing & adventure, which is sculptural and unique. Provide additional sheltered seating / picnic spaces within garden setting to interface between sports pitches and play space.

9. Enhance Boscawen Park's stunning ornamental parkland 'Gardens' setting. Create striking planting displays showcasing 'Cornish Botanic Gardens' style parkland setting, and arboretum. Extend gardens to play area and around Sports Hub, and across the road around the 'Duck pond'.

10. Remodel 'Performance space' to accommodate year-round events. Provide permanent shelter and amphitheatre style seating area set within the park & Gardens setting. Remove large stone wall to open views across park & create amore user friendly performance space. Consider permanent shelter. Hard surfaced / covered area for all weather outdoor fitness space (ie- outdoor yoga and boot camp).

11. Sports hub and Botanic Winter Garden, to include:
Reception, with public toilets.
Winter gardens, to accommodate cafe/ adventure play with climbing wall and rope walk and indoor sensory gardens.
Multi-use studios for classes, events etc.
Changing facilities for sports events.
Restaurant / cafe to upper storey with views across park and into winter gardens.

12. Water Play gardens - Rock boulders and water and jumping- jets to create informal play 'splash park and striking entrance feature to the gardens and winter gardens.

13. Access and drop-off road to sports hub building. Coach and bus turning and drop-off provided, gravel car parking to south of new sports hub building. Coach parking allowed for on road- side (subject to Cornwall Council Highways consent).

14. Stabilise river edge and resurface waterside Path to a min. 2m wide shared- surface path, to accommodate walkers and joggers. Outer loop path is approx 1 mile, 2m wide shared path, with a series of smaller inner trails with new timber fitness/ outdoor gym equipment. The paths through the park provide a range of trails to explore for different users i.e: Nature , Botanical & Active Trails.

15. Southern Waterfront park space, with new timber fitness equipment provided, seating and gardens to maximise views over Carrick Roads and Malpas. This space to the southern end of the site is to remain a quiet and tranquil space, with views across Carrick Roads to the AONB landscape.

16. Create connection to the duck ponds and gardens across Malpas Road. Opportunity to dredge and improve the ponds, and enhance footpath connections to Moresk Forest and beyond (outside this project scope).

17. Remodel vehicular road and carparking to accomodate waterside walk and improved waterfront parkland.

18. Existing Cricket Club and pavilion to be retained (outside the scope of this project).

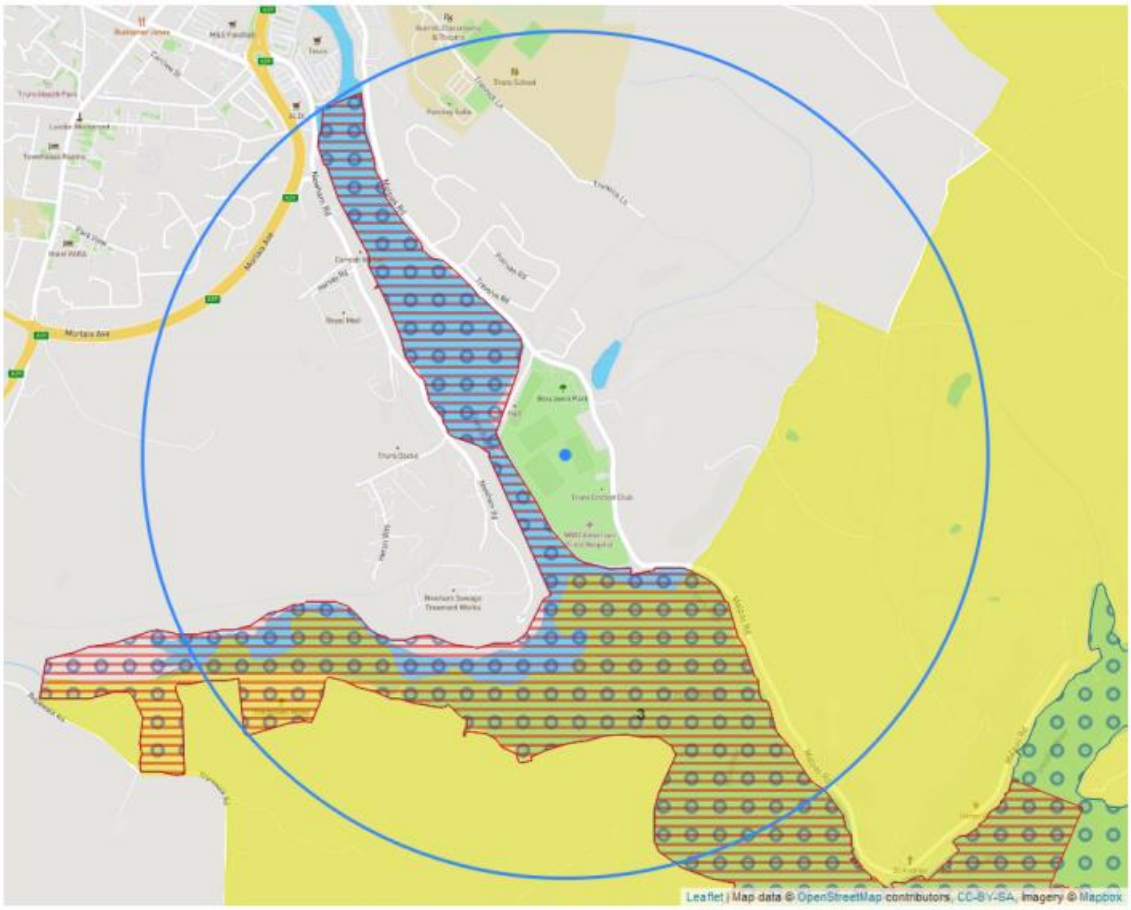
MEI LOCI

5

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

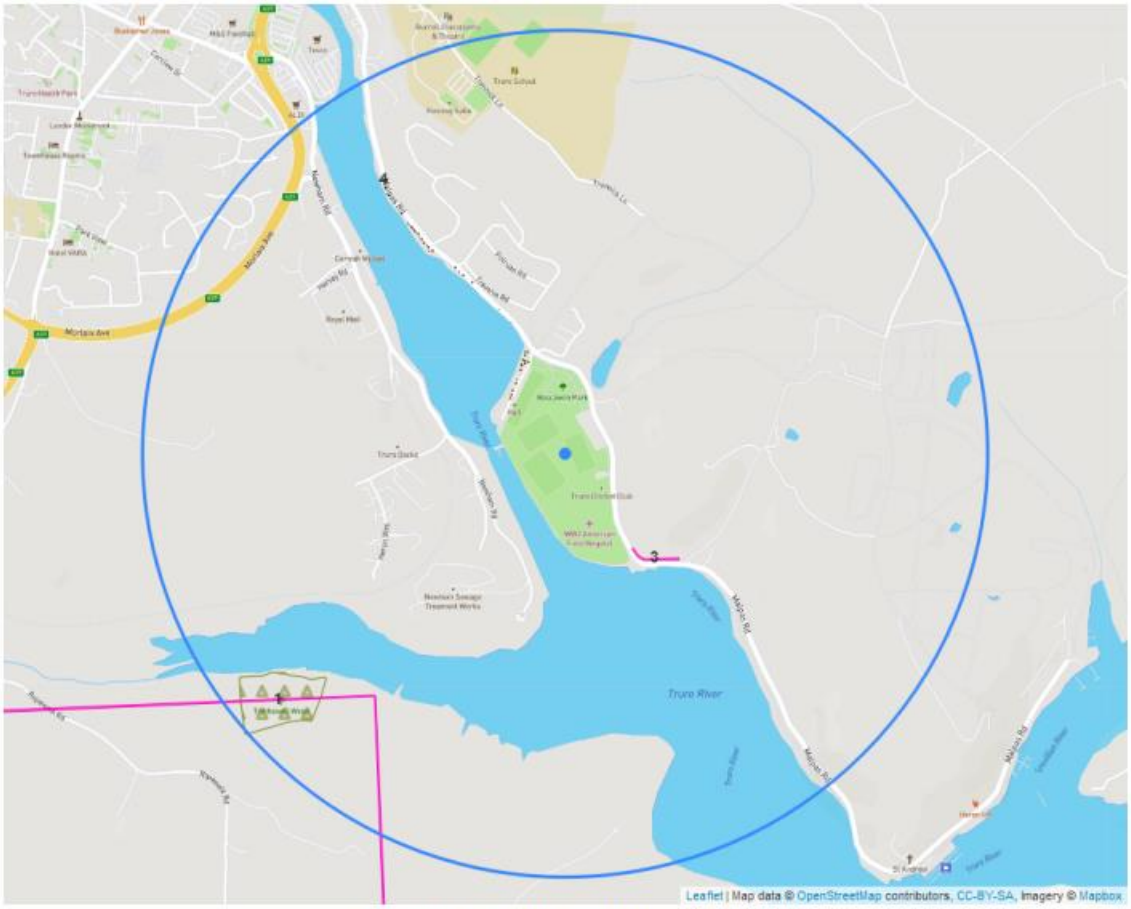
11.0 Appendix 2: Location of Site & Designated Sites

Statutory Sites Map



Location	Site Code	Site Type	Site Name	Colour
1	6	AONB	Cornwall	
2	UK0013112	SAC	Fal & Helford	
3	1001290	SSSI	Malpas Estuary	

Non-Statutory Sites & Reserves Map



Location	Site Code	Site Type	Site Name	Colour
1	AW697	Ancient Woodland	TRETHOWELL WOOD	
2	BS 103	CRVI Bio	n/a	
3	BS 30	CRVI Bio	n/a	
4	8K7B3/163T26	TPO Site	Malpas Road,Truro	

12.0 Appendix 3: UKHab Vascular Plant List

DAFOR is a nominative scale where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare. L = Locally; or combination of. **NB:** P = present, abundance could not be determined due to poor access.

N.B. Non-native ornamental species are not included in this Appendix unless relevant to the ecological assessment. A separate list of tree species (native and non-native) recorded by the combined Tree Survey (Evolve Tree Consultancy, 2023) and the UKHab survey is presented in Appendix 4.

Latin name	**Common name**	Non-native hedgerow (h2b)	Intertidal mudflats (t2d)	Urban; flower bed & introduced shrub (u1 846 847)	Other neutral grassland; ruderal (g3 81)	Modified grassland (g4)	Ornamental pond (r1g 46)	Bramble scrub (h3d)	Built linear feature; wall (u1e)	Scattered trees (g 32)
Acer pseudoplatanus	Sycamore									R/O
Achillea millefolium	Yarrow					R				
Aesculus hippocastanum	Horse chestnut									R
Agrostis capilllaris	Common bent					O			R	
Allium triquetrum	Three cornered garlic	O/LA								
Alnus glutinosa	Alder									R/LA
Angelica sylvestris	Wild angelica			R						
Anthriscus sylvestris	Cow parsley				O					
Apium nodiflorum	Fool's watercress						R/LA			
Arrhenatherum elatius	False oat-grass				O	R				
Asplenium adiantum-nigrum	Black spleenwort								O	
Asplenium scolopendrium	Hart's tongue fern			R					O	
Aster trifolium	Sea aster					R				
Bellis perennis	Daisy					O				
Beta vulgaris	Sea beet		R			R				
Betula pendula	Silver birch									R
Brassica nigra	Black mustard				O			R		
Buddleia davidii	Buddleia			R						
Carex pendula	Pendulous sedge			R/O			O			
Castanea sativa	Sweet chestnut									R
Centaurea nigra	Black knapweed				R					
Cirsium vulgare	Spear thistle							R		
Corylus avellana	Hazel			R						
Cotoneaster horizontalis	Wall cotoneaster			R						
Cotoneaster sp.	Cotoneaster species								R	
Crataegus monogyna	Hawthorn									R
Crocosmia x crocosmiiflora	Montbretia			R						
Cymbalaris muralis	Ivy-leaved toadflax								O	
Dactylis glomerata	Cock's-foot					O/F			O	
Digitalis purpurea	Foxglove									

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Latin name	Common name	Non-native hedgerow (h2b)	Intertidal mudflats (t2d)	Urban; flower bed & introduced shrub (u1 846 847)	Other neutral grassland; ruderal (g3 81)	Modified grassland (g4)	Ornamental pond (r1g 46)	Bramble scrub (h3d)	Built linear feature; wall (u1e)	Scattered trees (g 32)
Dryopteris affinis	Scaly male fern			R					R	
Epilobium sp.	Willowherb species				R					
Fagus sylvatica	Beech									R/O
Festuca rubra	Red fescue					R/LA			O	
Fraxinus excelsior	Ash									O
Galium aparine	Cleavers					R		A		
Galium mollugo	Hedge bedstraw				R					
Geranium molle	Dove's-foot cranesbill					R				
Griselinia sp.	Griselinia species	D								
Gunnera manicata	Brazilian giant rhubarb			R/LO			R			
Hedera helix	Ivy	F		O						
Heracleum sphondylium	Hogweed				O					
Holcus lanatus	Yorkshire fog					O				
Hypochaeris radicata	Common cat's-ear					R/O			O	
Iris foetidissima	Stinking iris					R				
Lamiastrum galeobdolon argentatum	Variegated yellow archangel			R						
Leucanthemum vulgare	Ox-eye daisy				R					
Ligustrum ovalifolium	Garden privet	D								
Lolium perennis	Perennial rye-grass					D				
Lonicera periclymenum	Honeysuckle	R								
Malva sp.	Mallow species					R				
Oenanthe crocata	Hemlock water-dropwort					R	R			
Parietaria officinalis	Pellitory of the wall					R			R	
Petasites fragrans	Winter heliotrope				O/LD					
Pinus radiata	Monterey pine									F
Pinus sylvestris	Scot's pine									R
Plantago lanceolata	Ribwort plantain					R/O			R	
Plantago major	Greater plantain					R				
Poa annua	Annual meadow-grass					R				
Prunus sp.	Cherry									R
Quercus petraea	Sessile oak (seedling)								R	
Quercus sp.	Oak species									R/O
Ranunculus ficaria	Lesser celandine					R				
Ranunculus repens	Creeping buttercup			R		O			R	
Rhododendron sp.	Rhododendron species			R						
Rosa arvensis	Field rose	R							R	
Rosa canina	Dog rose				R					
Rubus fruticosus	Bramble			R				D	R	
Rumex obtusifolium	Broad-leaved dock				O		R	R/O		
Senecio jacobaea	Common ragwort					R				

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Latin name	Common name	Non-native hedgerow (h2b)	Intertidal mudflats (t2d)	Urban; flower bed & introduced shrub (u1 846 847)	Other neutral grassland; ruderal (g3 81)	Modified grassland (g4)	Ornamental pond (r1g 46)	Bramble scrub (h3d)	Built linear feature; wall (u1e)	Scattered trees (g 32)
Silene dioica	Red campion							R		
Sonchus oleraceus	Smooth sowthistle				R					
Spergularia sp.	Sea spurrey		R							
Stachys officinalis	Betony				R					
Stellaria graminea	Chickweed					R				
Taraxacum officinale	Dandelion					R/ O				
Trifolium repens	White clover					F				
Tripleurospermum maritimum	Sea mayweed					R				
Ulex europaeus	European gorse				R			R		
Umbilicus rupestris	Navelwort								A	
Urtica dioica	Nettle			R		R				
Veronica chamaedrys	Germander speedwell					R				

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

13.0 Appendix 4: List of individual trees recorded for BNG assessment

Tree Survey (Evolve Tree Consultancy, 2023)

Tree reference number	Species name
T1	Scot western balsam
T2	western balsam
T3	Maidenhair tree
T4	Red maple
T5	Beech
T6	western balsam
T7	Tulip tree
T8	Horse chestnut
T9	Tulip tree
T10	Sweet gum
T11	Caucasian lime
T12	Caucasian lime
T13	Silver birch
T14	Tulip tree
T15	London plane
T16	Lawsons cypress
T17	Ornamental cherry
T18	Ornamental cherry
T19	Silver birch
T20	Ornamental rowan
T21	Atlantic cedar
T22	Sweet chestnut
T23	Walnut
T24	Beech
T25	Himalayan birch
T26	Corsican pine
T27	Corsican pine
T28	Corsican pine
T29	Monterey pine
T30	Scot's pine
T31	Monterey pine
T32	**Not found**
T33	Monterey pine
T34	Monterey pine
T35	Monterey pine
T36	Beech

Additional trees recorded within the site boundary (January 2024)

Tree reference number	Species name
1	Cherry
2	Cherry
3	Ash
4	London plane
5	Pine
6	Pine
7	Oak
8	Conifer
9	Conifer
10	Conifer
11	Sycamore
12	Beech
13	Oak
14	Oak
15	Oak
16	Conifer
17	Alder
18	Alder
19	Oak
20	Conifer
21	Non-native
22	Conifer
23	Ash
24	Ash
25	Alder
26	Alder
27	Alder
28	Alder
29	Alder
30	Alder
31	Alder
32	Sycamore
33	Alder
40	Monterey pine
41	Monterey pine
42	Monterey pine

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Tree reference number	Species name
T37	Horse chestnut
T38	Ash
T39	Ash
T40	Ash
T41	Ash
T42	western balsam
T43	Ash
T44	Ash
T45	Western balsam
T46	Shore pine
T47	Western balsam
T48	Monterey pine
G49	**See individual trees (68-81) in next table**
G50	**Outside site boundary**
G51	**Outside site boundary**
G52	**Outside site boundary**
T53	Lombardy poplar
T54	Lombardy poplar
T55	Horse chestnut
G56	Hawthorn x 3
T57	Norway maple
T58	Sycamore
T59	Horse chestnut
T60	Lawsons cypress
T61	Lawsons cypress
T62	Sycamore
T63	Monterey pine
T64	Monterey pine
T65	Sycamore
T66	London plane
T67	Beech
T68	Indian bean tree
T69	Beech

Tree reference number	Species name
43	Beech
44	Monterey pine
45	Monterey pine
46	Monterey pine
47	Monterey pine
48	Monterey pine
49	Monterey pine
50	Monterey pine
51	Monterey pine
52	Monterey pine
53	Monterey pine
54	Monterey pine
55	Monterey pine
56	Monterey pine
57	Monterey pine
58	Monterey pine
59	Monterey pine
60	Monterey pine
61	Monterey pine
62	Monterey pine
63	Monterey pine
64	Monterey pine
65	Monterey pine
66	Alder
67	Beech
68	Ash
69	Western balsam
70	Ash
71	Western balsam
72	Monterey pine
73	Ash
74	Western balsam
75	Ash
76	Western balsam
77	Ash
78	Western balsam
79	Ash
80	Ash

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

14.0 Appendix 5: Legislation and Planning Policy

Protected Habitats, Species and Designated Sites

- **The Conservation of Habitats and Species Regulations (HM Government, 2017) (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (HM Government, 2019))**, referred to here after as the '**Habitat Regulations**', encompasses Special Areas of Conservation (SACs) and provides additional protection for Special Protected Areas (SPA's), RAMSAR Sites and European Protected Species (EPS). Protection is afforded from direct and indirect impacts, particularly where mobile wildlife populations for which the SAC is designated may be significantly affected. A Habitats Regulations Assessment/Appropriate Assessment must be completed by the competent authority, based on sufficient information provided by the applicant, to meet Regulation 63 of the Habitats Regulations. The Waddenzee judgement ruled that a plan or project may be authorised only if a competent authority has made certain that the plan or project will not adversely affect the integrity of the site. A decision can only be reached "where no reasonable scientific doubt remains as to the absence of such effects". Competent authorities must be "convinced" that there will not be an adverse effect. Where doubt remains as to the absence of adverse effects, the plan or project must not be authorised, subject to the procedure outlined in the Habitats Regulations regarding imperative reasons of overriding public interest.
- **The Countryside and Rights of Way (CRoW) Act (HM Government, 2000, as amended)** The CROW Act places a statutory duty on Statutory Nature Conservation Organisations (SNCO) to have regard to biodiversity conservation and to promote conservation action by others. Section 74 of the Act requires the preparation and maintenance of lists of priority species and habitats. It also places a statutory duty on public bodies to conserve SSSIs and enhance their value, and provides SNCOs with the power to impose Management Schemes on owners of SSSIs. The CROW Act strengthens the legal protection for threatened species with regard to killing, injuring, disturbing or destroying places used for shelter and protection.
- **The Hedgerows Regulations (1997)** The Hedgerow Regulations 1997 were made under Section 97 of the Environment Act 1995 (HM Government, 1995) and took effect on 1 June 1997. They introduced arrangement for local planning authorities (LPAs) to protect important countryside hedgerows through a system of notification. Such hedgerows are frequently valuable because of their historical, ecological and landscape characteristics.

  Under the Hedgerow Regulations 1997, an offence occurs when:

  - A person intentionally or recklessly removes, or causes or permits another person to remove, a hedgerow in contravention of regulation 5(1) or (9); and when
  - A person contravenes or fails to comply with regulation 6(2).
  - A hedgerow is a boundary line of shrubs or trees and is 'important', and protected, under the Hedgerow Regulations 1997 if it meets a specific criterion (see Table 1 and Appendix 1). Cornish hedgerows do not necessarily meet the criteria of the Hedgerow Regulations 1997 but are typically of great historic, landscape and biodiversity value. The Hedge (and wall) Importance Test (HIT), developed by the Guild of Cornish Hedgers, is an alternative measure of value and is required to inform planning decisions impacting hedgerows in Cornwall (Cornwall Council, 2018).
- **The Natural Environment and Rural Communities (NERC) Act (HM Government,**

2006) bestows a legal duty on public authorities to conserve biodiversity. The Section 40 duty requires Local Authorities to have regard to the purpose of conserving biodiversity. This particularly relates to Section 41 Habitats and Species of Principal Importance (sometimes called 'priority habitats' or 'priority species'.

- **The Protection of Badgers Act (1992)** protects badgers as specified below.
- **The Wildlife and Countryside Act (HM Government 1981, as amended)** encompasses the protection of wildlife (fauna and flora), SSSIs, SPAs, National Nature Reserves (NNRs) and RAMSAR Sites.

Badgers: Badgers are legally protected under the Protection of Badgers Act 1992. As a result of this statutory legislation it is an offence to:

- Purposely kill, injure or take a badger;
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett;
- Disturb a badger when occupying a sett.

Birds: In Britain the nests (whilst in use or being built) and eggs of wild birds are protected against taking, damage and destruction under the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981).

Some species (i.e. barn owl) are also listed on Schedule 1 of the Wildlife and Countryside Act (HM Government, 1981 as amended); it is an offence to:

- Intentionally capture, injure or kill a Schedule 1 listed species;
- Intentionally or recklessly disturb a Schedule 1 listed species whilst nesting;
- Intentionally or recklessly disturb a dependent young Schedule 1 listed species.

European Protected Species (EPS) (Bat, dormouse, otter, water vole, sand lizard, smooth snake & great crested newt): EPS are listed on Annex IV(a) of the European Communities Habitats Directive.

In Britain protection of EPS is achieved through their inclusion on Schedule 2 of the Conservation and Habitats Regulations 2017 (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (HM Government, 2019)), Schedule 5 of the Wildlife and Countryside Act 1981 (1981, as amended) and Schedule 12 of the Countryside and Rights of Way Act 2000 (HM Government, 1981, 2000 & 2017).

As a result of this statutory legislation, it is an offence to:

- Deliberately capture, injure or kill an EPS;
- Intentionally or recklessly disturb an EPS in its place of rest/ breeding Site;
- Intentionally or recklessly damage, destroy or obstruct access to a EPS place of rest/ breeding Site (even if the EPS is not occupying the resting / breeding place at the time);
- Possess or sell or exchange an EPS (dead or alive) or part of an EPS.

Reptiles (adder, common lizard, slow worm and grass snake): reptiles are protected under Schedule 5 (section 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to kill and/ or injure reptiles, and sell or transport for the purpose of sale. Sand lizard and smooth snake are also EPS (see above legal protection of EPS).

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Invasive plants: The WCA 1981 states that if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence. Anyone convicted of an offence under Section 14 of the WCA 1981 may face a fine of £5,000 and/or 6 months imprisonment, or 2 years and/or unlimited fine or indictment. The following legislation is relevant to invasive plants:

Control of Pesticides Regulations (CoPR) 1986: CoPR 1986 require any person who uses a pesticide to take all reasonable precautions to protect the health of human beings, creatures and plants, safeguard the environment and in particular avoid the pollution of water. For application of pesticides in or near water, approval from the Environment Agency should be sought before use.

Environmental Protection Act 1990 (EPA 1990): EPA 1990 contains a number of legal provisions concerning 'controlled waste', which is set out in Part II. Material containing the propagules of species listed on Schedule 9 is classified as controlled waste and must be safely disposed of at an appropriately licensed landfill site in accordance with the Environmental Protection Act 1990 (Duty of Care) Regulations 1991. Section 33 (1a) and (1b) create offences to do with the deposit, treating, keeping or disposing of controlled waste without a license. Exemptions from licensing are available in some circumstances, and are set out in Schedule 3 to the Waste Management Licensing Regulations 1994 as amended, which makes it an offence to keep, treat or dispose of controlled waste in a manner likely to cause pollution of the environment or harm to human health. Anyone convicted is subject to a maximum fine of £20,000 and/or 6 months imprisonment and if prosecuted under the Crown court, this escalates to an unlimited fine and/or a maximum of two years imprisonment. Section 34 places duties on any person who imports, produces, carries, keeps, treats or disposes of controlled waste. Waste must be handled responsibly and in accordance with the law at all stages between its production and final recovery or disposal. Waste must be transferred to an authorized person i.e. either a registered carrier or exempted from registration by the Controlled Waste (Registration of Carriers and Seizure of Vehicle Regulations 1991). A waste transfer note must be completed and signed giving a written description of the waste, which is sufficient to enable the receiver of the waste to handle it in accordance with his or her own duty of care. The provisions concerning waste transfer notes are set out in the Environmental Protection (Duty of Care) Regulations 1991(as amended). Failure to comply with these provisions is an offence, with a penalty of a fine not exceeding £5000 up to an unlimited fine in Crown court.

Hazardous Waste Regulations 2005 (HWR 2005): HWR 2005 contains provisions about the handling and movement of hazardous waste. Consignment notes must be completed when any hazardous waste is transferred, which include details about the hazardous properties and any special handling requirements. If a consignment note is completed, a waste transfer note is not necessary. Material containing knotweed that has been treated with herbicide may be classified as hazardous waste.

Waste Management Licensing Regulations (WMLR 1994): WMLR state that failure to use a licensed operative could leave you liable to prosecution. The 'waste relevant objectives' are described in paragraph 4 of Schedule 4. These objectives require that waste is recovered or disposed of "without endangering human health and without using processes or methods which could harm the environment and in particular without risk to water, air, soil, plants or animals; or causing nuisance through noise or odours; or diversely affecting the countryside or places of special interest".

OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic, 2008: Protection of the OSPAR List of Threatened and/or Declining Species and Habitats as agreed by the Convention.

The Eels (England and Wales) Regulations 2009: The Regulations implement the EC Regulation 1100/2007 to establish measures for the recovery of the stock of European eel. The apply to any

works that may abstract/discharge water, impound watercourses e.g. dams or weirs or cause an obstruction to the passage of eels.

Statutory Designated Sites

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are of International nature conservation importance.

Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) are of National importance. Development proposals with potential to affect a SAC, SSSI or NNR require permission from Natural England.

Local Nature Reserves (LNRs) are protected from development; the Local authority is responsible for LNRs.

Non-Statutory Designations

Non-statutory Sites include **County Wildlife Sites (CWS)**, **Site of Nature Conservation Interest (SNCI), Site of Importance for Nature Conservation (SINC), County Geology Sites (CGS)**, **Roadside Verge Audit Biological Sites** and **Ancient Woodlands**. CWSs, SNCI, SINC and CGSs are of at least county importance for wildlife/geology; all are given increased protection through the planning process.

Biodiversity Action Plans (BAPs): BAPs distinguish National and County level priority habitats and species for conservation. The list of habitats and species of principal importance under Section 41 NERC Act (2006) in England includes 56 habitats and 943 species first identified as priority habitats and species. The Local Authority has a duty to conserve habitats and species of principal importance; these habitats and species were previously identified as UK BAP priority habitats and species under Section 74 of the CRoW Act (2000).

Red Data Books & Lists: detail the status of species in relation to threat.

Planning Context

The local planning authority has a statutory obligation to consider impacts upon protected species resulting from development. Paragraph 99 ODPM Circular 06/2005 states: '*It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development. Where this is the case, the survey should be completed and any necessary measures to protect the species should be in place, through conditions and/or planning obligations, before the permission is granted*'.

National Policy: The National Planning Policy Framework (NPPF) was revised in September 2023 and sets out the government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous National Planning Policy Framework published in March 2012, revised in July 2018, 2019 and updated in September 2023.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Chapter 15 of the NPPF (2023) 'conserving and enhancing the natural environment' sets out how the planning system should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Of particular note are the following paragraphs:

NPPF Paragraph 174 states. Planning policies and decisions should contribute to and enhance the natural and local environment by:

> a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
>
> b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
>
> c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
>
> d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
>
> e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
>
> f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

NPPF Paragraph 175 states. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

NPPF Paragraph 176 states. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks. Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

NPPF Paragraph 177 states. When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;

b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and

c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

NPPF Paragraph 178 states. Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 176), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character. Habitats and biodiversity

NPPF Paragraph 179 states. To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity. English National Parks and the Broads: UK Government Vision and Circular 2010 provides further guidance and information about their statutory purposes, management and other matters. For the purposes of paragraphs 176 and 177, whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined. Circular 06/2005 provides further guidance in

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system. Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

NPPF Paragraph 180 states: When determining planning applications, local planning authorities should apply the following principles:

> a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
>
> b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
>
> c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons63 and a suitable compensation strategy exists; and
>
> d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

NPPF Paragraph 181 states. The following should be given the same protection as habitats sites:

> a) potential Special Protection Areas and possible Special Areas of Conservation;
>
> b) listed or proposed Ramsar sites; and
>
> c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

NPPF Paragraph 182 states. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Local Policy - Cornwall

Cornwall Local Strategic Plan Policies 2010 - 2030

The latest Local Plan was adopted on 22nd November 2016. The key relevant policies from the Local Plan relating to ecology and nature conservation are Policy 22 (European Protected Sites) and Policy 23 (Natural Environment).

Policy 22 is detailed below:

For residential development and student and tourist accommodation, mitigation measures for recreational impacts on European Sites will be required where development is proposed within the

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

identified zones of influence around those European Sites that are vulnerable to adverse recreational impacts. Residential development, student, and tourist accommodation within these zones of influence will be required to provide for appropriate management, mitigation and monitoring on Site, and/ or financial contributions towards off site mitigation and management. This will need to be agreed and secured prior to approval of the development.

Policy 22 is reinforced with the pending Cornwall Council European Sites Supplementary Planning Document (SPD).

Policy 23 comprises a number of measures for development proposals including:

Development should conserve, protect and where possible enhance biodiversity and geodiversity interests and soils commensurate with their status and giving appropriate weight to their importance (3).

All development must ensure that the importance of habitats and designated sites are taken into account and consider opportunities for the creation of a local and county-wide biodiversity network of wildlife corridors which link County Wildlife Sites and other areas of biodiversity importance (3).

The highest level of protection will be given to potential and existing Special Protection Areas, candidate and existing Special Areas of Conservation and listed or proposed RAMSAR sites (3a).

Development proposals within or outside an SSSI or Marine Conservation Zone which would be likely to adversely affect the site (either individually or in combination with other developments) will not be permitted unless the benefits of the development, at this site, clearly outweigh both the adverse impacts on the site and any adverse impacts on the wider network of SSSI and Marine Conservation Zones (3b).

Development likely to adversely affect locally designated sites, their features or their function as part of the ecological network, including County Wildlife Sites, Local Geological Sites and sites supporting Biodiversity Action Plan habitats and species, will only be permitted where the need and benefits of the development clearly outweigh the loss and the coherence of the local ecological network is maintained (3c).

Adverse impacts on European and UK protected species and Biodiversity Action Plan habitats and species must be avoided wherever possible (i) subject to the legal tests afforded to them, where applicable (ii) otherwise, unless the need for and benefits clearly outweigh the loss (3d).

Development must avoid the loss or deterioration of ancient woodland and veteran trees, unless the need for, or benefits of, development on that site clearly outweigh the loss (3e).

Development should avoid adverse impact on existing features as a first principle and enable net gains by designing in landscape and biodiversity features and enhancements, and opportunities for geological conservation alongside new development. Where adverse impacts are unavoidable they must be adequately and proportionately mitigated. If full mitigation cannot be provided, compensation will be required as a last resort (4).

Cornwall Council Planning for Biodiversity Document

This document was adopted on 16th October 2018 by Cornwall Council and is a material consideration in planning decisions. It is supplementary to policies of the Cornwall Local Plan: Strategic Policies (2016). Considering the amended NPPF (2018) and the Council's approach to calculating and securing Environmental/Biodiversity Net Gain, the document will be reviewed

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

alongside engagement on the Council's approach to Net Gain and adopted in a revised form as a Supplementary Planning Document, forming part of a suite of adopted guidance designed to promote good practice in the built and natural environment in Cornwall.

Cornwall Council Terrestrial European Sites Supplementary Planning Document (SPD)

'*This SPD provides a solution for Appropriate Assessment and mitigation for those submitting planning applications that fall within the zones of influence of European protected sites in Cornwall, and where recreational disturbance is the only Habitat Regulations issue. It sets out a strategic approach to the provision of mitigation for an increase in potentially harmful recreational impacts arising from new housing and tourism growth. The intention of this strategically led mitigation is to provide the best joined up solution for the European sites management to ensure their future conservation status. This approach addresses the requirements of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and in doing so provides individual developers with a standard solution to Appropriate Assessment and mitigation. This SPD explains where Appropriate Assessment and mitigation of recreational impacts is required and why and sets out the solutions to achieving this*'.

Biodiversity Net Gain: A how to guide for the development process - https://www.cornwall.gov.uk/media/muhmug45/draft-biodiversity-net-gain-guidance-for-developers-and-planners-web.pdf

'*This aim of this document is to enable developers and planners to understand how Biodiversity Net Gain will apply to planning applications in Cornwall. The document will overview the core concepts of Biodiversity Net Gain and Biodiversity Metrics, describe the typical process for successful validation of planning applications and explain what steps developers need to take to have a successful Net Gain application. It will also give guidance on fulfilling ongoing Biodiversity Net Gain requirements into the future and what to do when struggling to achieve Biodiversity Net Gain onsite*'.

Draft Chief Planning Officers Advice Note: Biodiversity Net Gain in Cornwall - https://old.cornwall.gov.uk/media/43031716/draft-chief-planning-officer-note-biodiversity-net-gain.pdf

The Environment Act (2021) requires all developments to achieve a minimum 10% Biodiversity Net Gain. Cornwall Council has adopted this policy as set out in the Draft Chief Planning Officers Advice Note and requires all major developments to quantify and describe habitat loss using the latest Biodiversity Metric and achieve a minimum 10% biodiversity net gain.

Cornwall's Environmental Growth Strategy 2020 – 2065 - https://old.cornwall.gov.uk/media/24212257/environmental-growth-strategy_jan17_proof.pdf

Cornwall's Environmental Growth Strategy provides a long-term framework for Cornwall and the Isles of Scilly to not just conserve, but to grow nature in line with the Environment Act (2021). Environmental growth is about both protecting and enhancing nature, ensuring that there is more of it, and that it is bigger, better, more diverse, and more connected. A Nature Recovery Network has been identified and mapped by LAGAS Natural Capital Information and Management Hub.

Climate Emergency Development Plan Document (Anticipate adoption date: 21st Feb 2023 - https://www.cornwall.gov.uk/media/1pzjuzln/appendix-3-finalclimate-emergency-dpd-appendix-3-final-with-map_p1.pdf)

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Policy C1 - Climate Change Principles: Development in Cornwall should represent sustainable development and manage our natural, historic and cultural assets wisely for future generations. Of particular relevance are the following objectives:

2. Mitigate against and improve resilience to the effects of climate change;

3. Contribute positively to the health, wellbeing and resilience of our communities and the natural world;

4. Use and reuse land efficiently and minimise impact of development on soils through over compaction, pollution or reduction in the quality of soil and encourage regenerative practice to conserve the capacity of soils for sustainable production of food, water, raw materials and energy;

5. Contribute positively to environmental growth, protecting irreplaceable habitats and the integrity of ecosystems, restoring natural processes and strengthening nature recovery networks, and ensuring a net gain for biodiversity.

7. Conserve and enhance our natural and historic environment and cultural heritage according to their international, national and local significance and increase built and natural environment distinctiveness through locally distinctive, high quality and sustainable design and multi-functional green infrastructure provision;

8. Avoid or minimise light, water, air and noise pollution and improve or maintain air and water quality;

9. Protect and enhance carbon storage in our natural environment (including the marine environment); and

10. Regenerate, improve or maintain the natural functioning of coastal and river processes, avoiding areas at risk of flooding and coastal change and further reducing flood risk elsewhere wherever possible.

Policy G1 - Green Infrastructure Design and Maintenance: Green infrastructure should be central to the design of schemes, ensuring permeability of the site for wildlife and people and creating a multi-functional network of spaces and uses. All developments should be planned around the protection and enhancement of nature. Development proposals will be expected, where appropriate to the scale and nature of the development, to meet the following principles of green infrastructure design:

1. The green infrastructure should form a multifunctional network through the creation of linear and other green infrastructure features to provide and enhance natural connections using important local character features, including existing planting, trees, groups of trees, copses, wetland, hedgerows and opportunities for wild food foraging as the key starting point for green infrastructure proposals and retain, reinforce and embed them into the design of the development to create distinctive places with permeable boundaries that reference, reflect and enhance the local environment; and

2. The green infrastructure shall be accessible for all with high levels of accessibility in public areas, and promote health, wellbeing, community and cohesion and active living; and

3. The green infrastructure shall incorporate sustainable drainage and blue infrastructure wherever possible and create better places for people and wildlife; and

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

4. The green infrastructure shall be resilient to climate change, minimise the development's environmental impact and enhance the quality of water, soil and air, aiding resilience and adaptation to climate change; and

5. Priority shall be given in landscaping schemes and natural planting to at least 50% pollinator friendly planting of predominantly native species; and

6. Street trees and other greening shall be integrated into street design and public open spaces wherever possible while remaining sympathetic to the historic environment. Streets should be designed to accommodate tree pits, whilst maintaining the space for the necessary runs of services (e.g. water, electric, sewerage); and,

7. The design and maintenance of green infrastructure shall conserve and enhance the historic environment and contribute to local distinctiveness; and

8. Homes should have access to a well-proportioned and well-orientated garden (generally equal in size to the footprint of the house) or other communal green space that provides a cohesive and useable space which is suited to a range of activities and space for nature; and,

9. The development shall make provision for long-term post-development management and maintenance for all green infrastructure, including provision for community representation and management; and,

10. The development proposal shall include a scheme for the provision of bird and bat boxes and bee bricks tailored to habitat conditions existing on or being created on and/or adjoining the site including the location and clustering (as appropriate) of those measures. These should normally be provided at the rate of one measure per unit, provided in the most suitable locations, either as single units or a cluster of such (e.g. close to hedgerows and flightpaths).

Policy G2 - Biodiversity Net Gain: 1. All development proposals (except those defined as exempt in secondary legislation) must achieve a minimum of 10% Biodiversity Net Gain (or any higher percentage mandated by national policy/legislation) over the pre-development site value as measured by the latest version of the DEFRA Biodiversity Metric.

In advance of national mandating of biodiversity net gain this policy shall only apply to major development proposals.

2. Proposals for Biodiversity Net Gain must:

a) be supported by core biodiversity gain information;

b) be secured for at least a 30 year period from the substantive completion of the development;

c) be delivered in accordance with an agreed management plan;

d) follow the mitigation hierarchy set out in National Policy and Local Plan Policy 23(3) and (4) and demonstrate evidence of adequate avoidance and mitigation measures. Biodiversity net gain should be additional to any habitat creation required to mitigate or compensate for impacts; and

e) aim to achieve the required net gain onsite within the site boundary.

3. where a proposal adequately demonstrates in the Biodiversity Gain Plan that the mitigation hierarchy has been followed and the required net gain, or any compensation for lost biodiversity

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

cannot be achieved onsite within the site boundary, it must secure the alternative provision of the required biodiversity units as registered offsite gains through:

a) the purchase of registered offsite biodiversity units to enable provision to be made by an approved biodiversity provider; provided the in-perpetuity management and monitoring of the receptor site can be assured; or

b) direct provision of the habitat types in a suitable location by the applicant provided the in-perpetuity management and monitoring of the offset site can be assured; or

c) a Biodiversity Offset Contribution to the Cornwall Council Habitat Bank.

d) the purchase of statutory Biodiversity Credits from National Government.

4. The receptor site for any local offsite biodiversity gains should have regard to the local priorities for nature as set out in any adopted Local Nature Recovery Strategy to be provided, be in a suitable location where local climatic conditions suit the type of offset offsite habitat to be provided, informed by a comprehensive understanding of habitats and species associated with the site and should avoid the best and most versatile agricultural land.

Minor development (as defined in secondary legislation) shall demonstrate biodiversity net gains in accordance with a Cornwall Council approved Small Site Biodiversity Metric.

Policy G3 – Canopy: 1. All major development should provide, through the retention of existing and or / the establishment of new, canopy coverage equal to at least 15% of the site area (excluding areas of the site that are priority habitat types) in accordance with a Cornwall Council approved calculator or metric.

2. Any proposal to remove canopy on the site should be justified in accordance with the canopy mitigation hierarchy.

3. Where a pre-development site already contains canopy that exceeds the 15% requirement, the development proposal should ensure the retention of as much canopy as possible on site in line with the mitigation hierarchy and should justify the losses proposed. An alternative canopy cover percentage, as evidenced by a council approved canopy metric, should be agreed with the Local Authority.

4. Where there are significant ecological, historical, landscape or operational reasons to justify a canopy requirement of less than 15% on site and this can be fully evidenced, an alternative percentage of canopy provision shall be agreed with the Council.

5. Minor development sites (with the exception of householder development and Change of Use (not creating new dwellings or additional floorspace) are not required to demonstrate the 15% canopy target but should explore all options in relation to canopy provision, and take appropriate measures to both avoid or reduce harm to existing onsite trees. Proposals shall include where appropriate and practicable provision of new canopy.

6. New canopy should provide a mix of species that are resilient to pests, diseases and climate change and should be delivered in sustainable locations, in a manner that supports the growth and spatial requirements of canopy. New canopy should positively contribute to the climate resilience of the site in a manner which protects and enhances existing canopy.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.

Policy G4 – Local Nature Recovery Networks: Where development is sited within or adjacent to an adopted Local Nature Recovery Network it should demonstrate how the proposal will maintain and enhance the integrity and connectivity of the network and support the principles of the Local Nature Recovery Strategy.

Policy RE1 – Renewable and Low Carbon Energy: Proposals for renewable and low carbon energy-generating and distribution networks, will be supported in the context of sustainable development and climate change.

Policy CC1 – Coastal Vulnerability Zone: Relevant parts include:

1) New development including replacement buildings (unless classified as exempt) within the Coastal Vulnerability Zone will only be permitted where it can be demonstrated through a Coastal Vulnerability Assessment that it:

a) Is consistent with policy statements for the local policy unit in the current Shoreline Management Plan; and

b) would not impair the ability of communities and the natural environment /biodiversity to adapt sustainably to the impacts of coastal change (including coastal squeeze).

3) Soakaways and other infiltration based sustainable systems within 5 metres of the Cornwall Coastal Vulnerability Map (CCVM) zone or discharge of surface water over or down the face of a cliff will not be permitted unless demonstrated through a Coastal Vulnerability Assessment that the proposed drainage method would not adversely affect coastal stability.

Policy CC3 – Reduction of Flood Risk: Development proposals shall be designed to reduce flood risk to the application site and its surroundings.

Policy CC4 – Sustainable Drainage System (SuDS) Design: SuDS proposals shall prioritise the use of above non-buried SuDS, including retrofit SuDS and where feasible within existing town centres, commercial and retail areas, and redevelopment projects and shall be designed to achieve the following criteria:

1) Maximise the benefits to the sense of place, amenity and biodiversity; and

2) Reduce the overall level of flood risk on the site and the surrounding areas; and

3) Provide attractive, biodiverse and non-buried systems; and

4) Incorporate SuDS within greenspace, blue and green infrastructure, amenity, and biodiversity schemes to manage surface water flows, improve water quality, educate and improve the wellbeing of communities; and

5) Where built into public green or open space have sufficient room to provide a safe, naturalised system without the need for fencing or barriers; and

6) Provide for simple and straightforward maintenance, including the provision of a plan and mechanism for on-going maintenance.

Plan for Ecology Ltd, Tremough Innovation Centre, Tremough Campus, Penryn, Cornwall, TR10 9TA; Tel 01326 218839; Email info@planforecology.co.uk; Web www.planforecology.co.uk;
Company Number: 12071013.