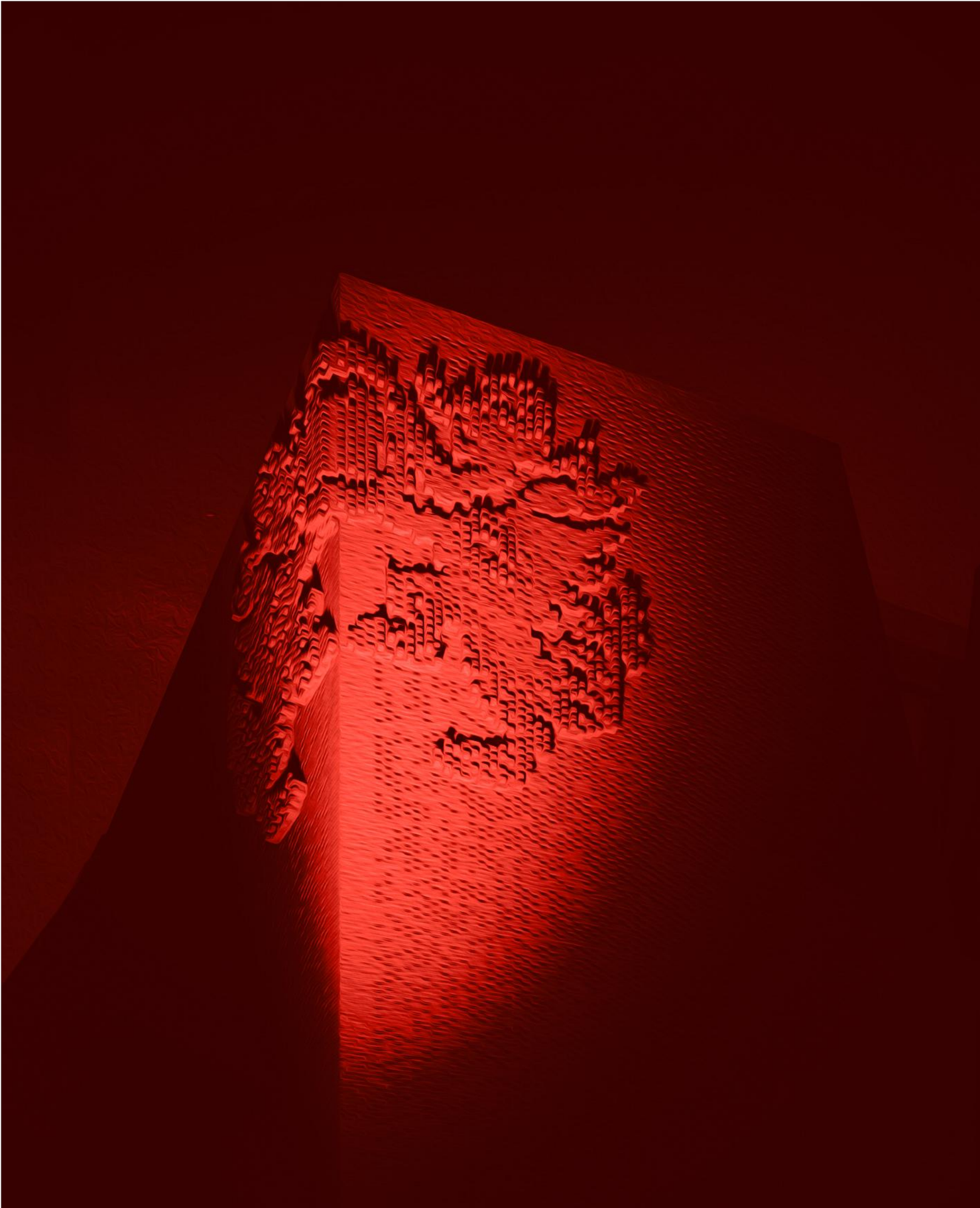


BURO HAPPOLD

# STŌK CAE RAS STADIUM: KOP Stand Redevelopment

## RIBA Stage 3 Nature & Biodiversity Report

**WRX-BHE-KOP-ZZZ-RP-EV-000300**

**0065004**

4 November 2025

Revision P03

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| P03 | RIBA Stage 3 Nature & Biodiversity Report Final | AR | 04/11/2025 | MLS |

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# 1 Nature & Biodiversity Executive Summary

Buro Happold has been commissioned by Populous to produce a report 'Scheme of Net Biodiversity Benefit' to discharge condition 14 of planning consent WRR P/2022/0725 for the KOP Stand Redevelopment of the Wrexham FC Expansion Stadium in Wrexham, Wales. This report addresses the net benefit for biodiversity and the long-term management and maintenance of the proposed biodiversity enhancements.

The proposals for the site have been developed using a step-wise approach to maintain and enhance biodiversity, strengthen ecological networks, and deliver a Net Benefit for Biodiversity (NBB). This approach follows the hierarchy of avoiding, minimising, mitigating, and, as a last resort, compensating for adverse environmental impacts. NBB and ecosystem resilience of the site, both pre- and post-development, have been assessed using a DECCA framework.

Currently, the site has limited ecological value, with minimal habitat extent and connectivity, offering few opportunities to support a resilient and diverse ecosystem.

Post-development habitat creation and habitat features contributing to NBB will enhance, support and benefit the local biodiversity, such as pollinators and birds, by creating diverse and interconnected green spaces. Post-development habitats and habitat features include:

- Rain gardens
- Tree planting
- Wildflower meadow planting
- Green walls
- Incorporation of bird boxes and insect hotels.

The proposed habitats and enhancements will not only improve ecological resilience but also offer valuable recreational and educational opportunities for the community. These measures contribute significantly to NBB and align with local and planning policies.


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# 2 Introduction

## 2.1 Background

This 'Scheme of Net Biodiversity Benefit ' report has been produced by Buro Happold on behalf of Populous, to discharge condition 14 of planning consent WRR P/2022/0725 for the KOP Stand Redevelopment of the Wrexham FC Expansion Stadium in Wrexham, Wales.

Pre-occupation condition 14 states:

> *'Before the development hereby permitted is substantially complete a scheme of net biodiversity benefit shall be implemented in accordance with details first submitted to and approved in writing by the Local Planning Authority. The details shall include a scheme of long term management and maintenance. The approved measures for biodiversity gain shall thereafter be permanently retained and management and maintained in accordance with the approved scheme of long term management and maintenance.'*

## 2.2 Site context

The proposed development site is located at Mold Road, Wrexham, LL11 2AH (central grid reference: SJ 32879 50949), hereafter referred to as the 'site' (Figure 2-1). The site currently includes a temporary stand and the adjacent land to the east, which features a temporary fan zone area.

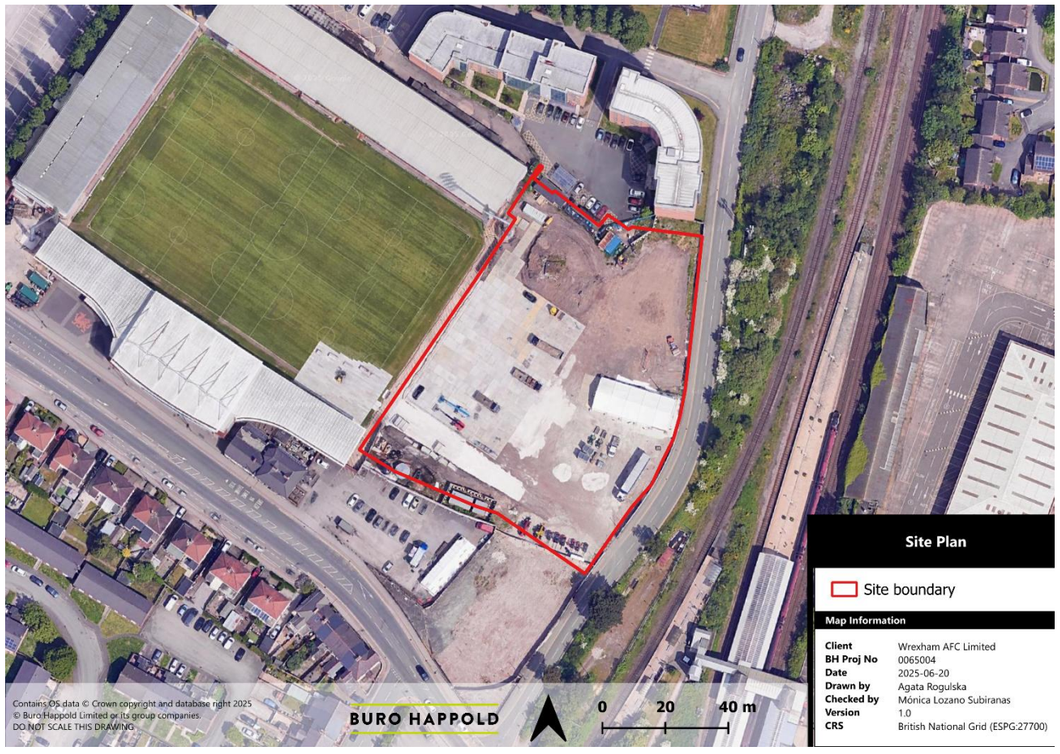



**Figure 2—1 Development site**

The site is situated in an urban area in the northwest part of the City of Wrexham. It is bordered to the south by Mold Road, to the east by Crispin Lane, and to the west and north by Wrexham Glyndwr University and its associated grounds. The wider landscape around the stadium includes a mix of urban and green spaces. A railway with an adjacent strip of woodland runs to the east of the site, just beyond Crispin Lane (Figure 2—2).

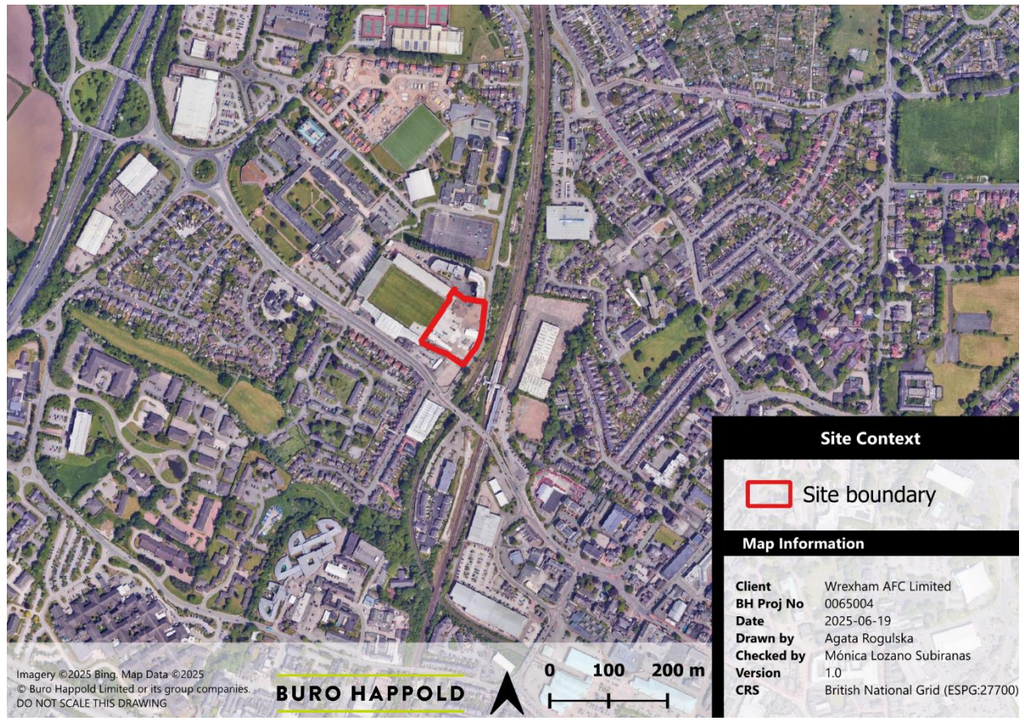



**Figure 2—2 Site context within the wider landscape**


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## 2.3 Site Proposal

The current proposals comprise the development of a new KOP stand. It will feature five levels, ranging from the ground floor up to level four, including a roof level which comprises an open terrace and plant space. The stand is proposed to have two scissor stair cores that extend from the ground floor all the way to the fourth floor with one stair from each core continuing up to the roof level.

Ground floor consists of a General Admission concourse with concessions, a mega store, a pub, a kitchen and the Dragon Pit. From this level occupants are able to access the seating via stepped vomitories and non-ambulant occupants have level access to seats at pitch level via a vomitory to the east of the stand. The first floor consists of staff areas such as media, officials and player spaces which has access to pitch level via an open stair.

The second floor is hospitality accommodation which connects via a central stair to the hospitality space and seating at level four. The Third floor is a Premium General Admission concourse also with concessions. The roof is to be used as a terrace with one stair from each stair core brought up to this level.

## 2.4 Aims and objectives

- Present the qualitative biodiversity value increase of the site
- Describe how the step-wise approach has been applied to the project
- Assess net benefit for biodiversity and ecosystem resilience using DECCA attributes.


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# 3 Methodology

The Environment (Wales) Act, the Well-Being of Future Generations Act and the Chief Planner's letter frame biodiversity with respect to its contribution to achieving ecosystem resilience. Natural Resources Wales (NRW) has developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act. This is referred to as **DECCA**: **D**iversity, **E**xtent, **C**ondition, **C**onnectivity and **A**spects of ecosystem resilience (Figure 3-1).

- **D**iversity: maintaining and enhancing diversity at every scale, including genetic, structural, habitat and between-habitat levels
- **E**xtent: incorporating measures which maintain and increase the area of semi-natural habitat/features and linkages between habitats
- **C**ondition: the condition of an ecosystem is affected by multiple and complex pressures acting both as short-term and longer-term types of disturbance. Both direct and wider impacts should be considered
- **C**onnectivity: the links between and within habitats, which may take the form of physical corridors, stepping stones in the landscape, or patches of the same or related vegetation types that together create a network that enables the flow or movement of genes, species and natural resources
- **A**spects of ecosystem resilience: ecosystem resilience is a product of the above four attributes. Adaptability, recovery and resistance to/from a disturbance are defining features of ecosystem resilience.

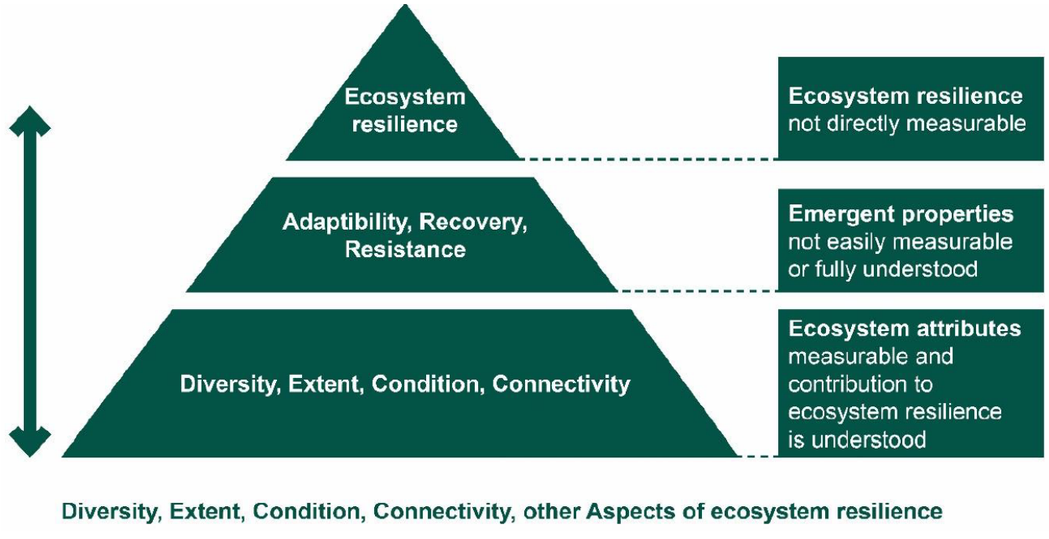



**Figure 3—1 DECCA framework showing the relationship between the attributes and the emergent properties of resilience (source: Terrestrial and freshwater Resilient Ecological Networks: a guide for practitioners in Wales, Natural Resources Wales, 2021)**

## 3.1 Data used

The following plans and documents have been used to prepare the NBB assessment and can be viewed in Appendices B-F:

- Preliminary Ecological Appraisal (Ramboll, 2022) – Appendix B
- Ecological Appraisal (Buro Happold, 2025) – Appendix C
- Landscape Planting Plan: WRX-POP-ZZZ-ZZZ-DR-LA-701005 (Populous, 2025) – Appendix D
- Landscape General Arrangement Plan: WRX-POP-ZZZ-ZZZ-DR-LA-701001 (Populous, 2025) – Appendix E
- Landscape Management Plan WRX-POP-ZZZ-ZZZ-SH-LA-709003 (Populous, 2025) – Appendix F
- Roof Plan: WRX-POP-KOP-L05-DR-AR-011005 (Populous, 2025) – Appendix G

## 3.2 Baseline habitats

The habitats and buildings present on-site at the time of the Phase 1 Habitat survey (Ramboll, August 2022) were cleared and demolished in 2023. Upon review of the legislation and planning policies, there is no reference to what baseline to use when habitat degradation of the onsite habitats have occurred in relation of the date of planning application submission. Therefore, it is assumed that the habitats recorded during the UK Habitat survey in 2024 will form the baseline and are used to carry out this NBB assessment.

The habitats were mapped using QGIS software. A summary of the habitats identified on-site in 2025, and their description are provided in Section 4.1 of this report.





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**Figure 3—2 2021 Phase 1 Habitat Map of the baseline habitat of the site (Ramboll, 2021)**

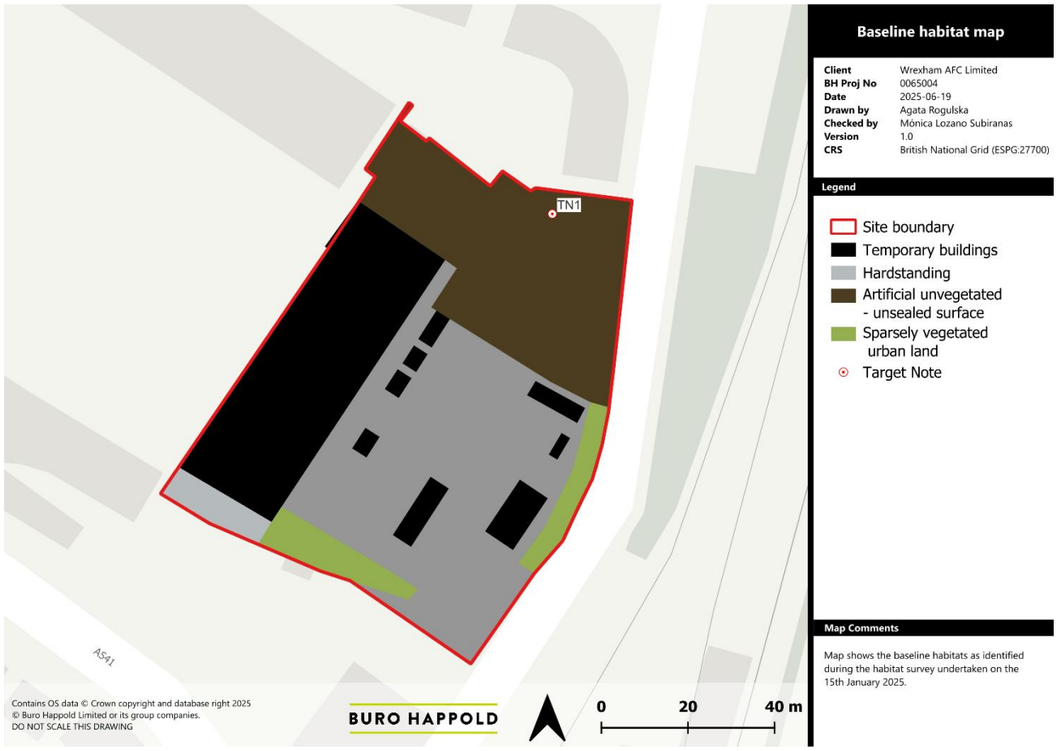



**Figure 3—3 2025 Baseline habitat survey of the site (Buro Happold, 2025)**

## 3.3 Post-development habitats

Post-development landscaping has been developed through ongoing workshops and consultations within the design team in order to best support the proposed development to increase ecosystem resilience. Key team members forming these discussions included the project ecologist and landscape architect to represent the most realistic and achievable post-development habitat types on site.

New landscaping across the site seeks to create habitats that provide biodiversity value across the site. The landscaping vision involves rain gardens, tree planting, and green walls on the roof terrace. The proposed soft landscaping for the post-development site, developed by Populous, is presented in Figure 4—2 and described in Table 4—2. Post-development landscape plans and species lists can be found in Appendices C and D.


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# 4 Net Benefit for Biodiversity Results

## 4.1 Baseline

### 4.1.1 Habitats

A UK Habitat Classification survey of the site was carried out on the 15th of January 2025. The survey found that the site is mostly dominated by hardstanding and a temporary stand. The site also comprises a fan zone with small storage units, artificial unvegetated / unsealed surface, and small areas of sparsely vegetated urban land with short ephemeral and perennial vegetation, stones, and rubble. A butterfly bush (*Buddleja davidii*) stand was also recorded on-site.

The site is mostly deemed of semi-natural habitats, and the habitats recorded have limited ecological value. The hardstanding and bare ground provide minimal habitat for wildlife, while the sparsely vegetated urban land offers some ecological value but is constrained by its fragmented state. Overall, the baseline condition of the site is poor, with minimal habitat extent and limited connectivity, offering few opportunities to support a resilient and diverse ecosystem.

All habitats recorded on site during the UK Habitat Classification survey are described in Table 4—1 and illustrated in Figure 3—3.

**Table 4—1 Baseline habitats**

| Baseline Habitat | Description/notes | UK Hab Primary Code | UK Hab Secondary Code |
|---|---|---|---|
| Artificial unvegetated - unsealed surface | An area of bare ground is located in the northeast of the site. It has a vegetation cover of up to 10% and has not been sealed with impervious material. Before the site clearance, this area consisted of woodland, grassland, and ephemeral/perennial vegetation. | u1c (artificial unvegetated - unsealed surface) | 510 (bare ground) |
| Sparsely vegetated urban land | Two small areas of sparsely vegetated urban land characterized by short ephemeral and perennial vegetation, bare ground, stones, and rubble. Vegetation cover in these areas ranges from 10% to 50%. These unmanaged sections are fenced off from the temporary fan zone. | u1f (sparsely vegetated urban land) | 510 (bare ground)<br>81 (ruderal or ephemeral)<br>518 (neglected) |
| Hardstanding | The hardstanding area stretches eastward from the temporary stand to the road. This section includes the temporary fan zone, which features food stands, a bar area, a marquee, storage units and restrooms. | u1b (developed land; sealed surface) | 822 (recreation ground) |
| Buildings | Buildings include the temporary stand and temporary bar area, storage units, restrooms and a marquee.<br>The temporary stand is made from modular metal components and was installed to address the stadium's limited capacity issues before the construction of a new permanent 'KOP' Stand. | u1b5 (buildings) | 815 (commercial), 822 (recreation ground) |

## 4.2 The Step-wise Approach applied to the project

The proposals for the site have been underpinned by the **step-wise approach** (Figure 4-1), to seek maintaining and enhancing biodiversity, strengthen ecological networks, and deliver NBB. This approach aligns with the principles set out in the Planning Policy Wales (para. 6.4.11-6.415:

*'Planning authorities must follow a step- wise approach to maintain and enhance biodiversity, build resilient ecological networks and deliver net benefits for biodiversity by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort compensated for. Enhancement must be secured by delivering a biodiversity benefit primarily on site or immediately adjacent to the site, over and above that required to mitigate or compensate for any negative impact.'*

The step-wise approach applied throughout the project design follows the hierarchy of avoiding, minimising, mitigating, and, as a last resort, compensating for adverse environmental impacts:

- **Steps 1 and 2 - Avoid and Minimise Impacts:** a detailed ecological survey was conducted on 15th January 2025to identify the existing habitats and the presence of protected and priority species (refer to section 4.1.1 of this report). The site currently comprises no priority or high-value habitats that require preservation to support biodiversity. The site has limited potential to support priority species or provide connectivity for those
- **Step 3 - Mitigate and Restore:** the proposed landscape and enhancements will significantly contribute to achieving NBB, and will help strengthen ecological resilience within the site. Ecological enhancements include habitat creation of higher ecological value habitats compared to the existing baseline, and the incorporation of habitat features to support wildlife (refer to section 4.3 of this report for further details). Additionally, section 4.4 details the evaluation of ecosystem resilience using DECCA attributes, and section 5 outlines the long-term management plan for these biodiversity enhancements and habitats
- **Step 4 - Compensate on site:** on-site compensation is not required, as there are no habitats of high or moderate ecological value on-site.

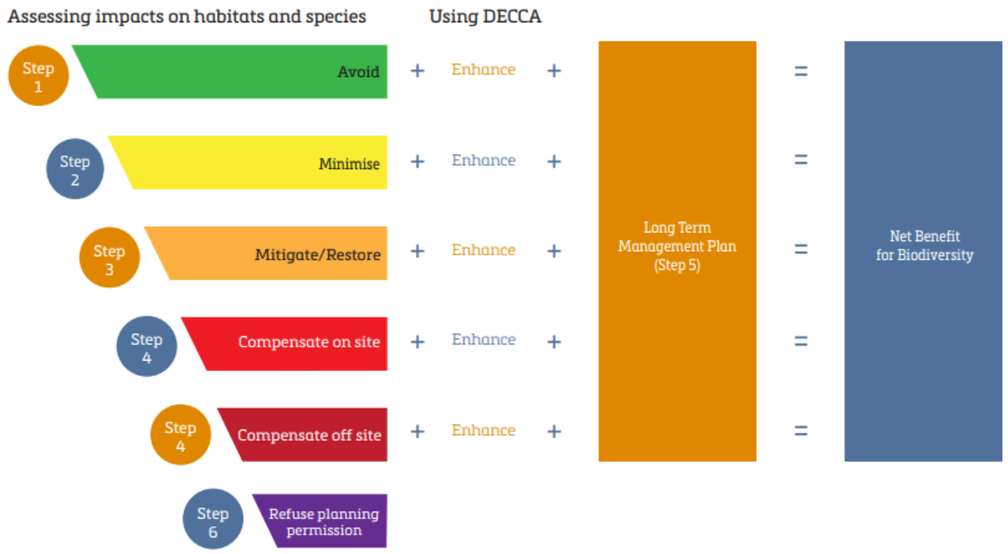



**Figure 4—1 Summary of the step-wise Approach (source: Planning Policy Wales, 2024)**


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## 4.3 Post-development

### 4.3.1 Habitats and habitat features

Post-development habitat creation and habitat features (e.g., bird boxes) contributing to NBB are proportionate to the scale and nature of the development. The proposed habitats and habitat features will enhance, support and benefit the local biodiversity, such as pollinators and birds, by creating diverse and interconnected green spaces. Post-development habitats and habitat features include:

- Rain gardens within the public realm in front of the stadium, incorporating native and damp-tolerant species of grasses, shrubs, and flowering plants. These can improve water quality and provide habitats for various species
- Tree planting
- Wildflower meadow planting
- Green walls comprising vertical climbers and flowering plants
- Incorporation of bird boxes and insect hotels across the site within landscaped areas, which will further enrich habitat quality by providing essential nesting and resting sites.

The proposed habitats and enhancements will not only improve ecological resilience but also offer valuable recreational and educational opportunities for the community. Overall, these measures contribute significantly to NBB, are locally relevant and align with the Local Planning Guidance Note No. 32 - Biodiversity & Development, part of the Wrexham Local Development Plan.

Proposed habitats contributing to NBB are described Table 4—2 and presented in Figure 4—2

Proposed habitat features contributing to NBB are described in Table 4—3, and the proposed locations of these features are presented in Figure 4—3.

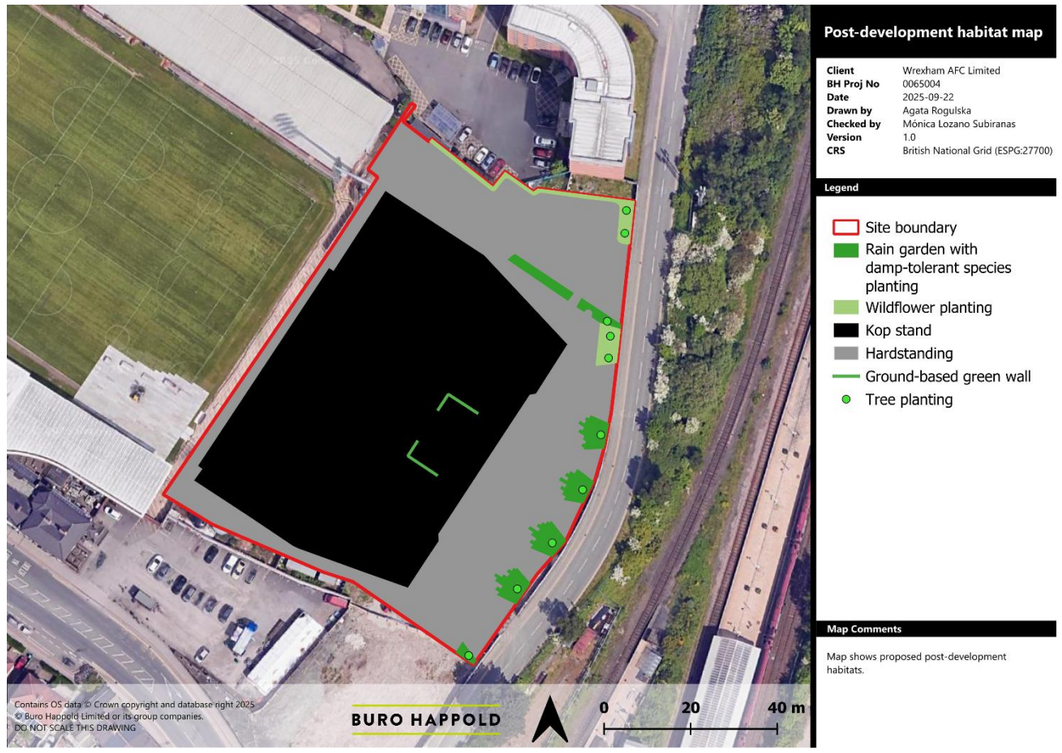



**Figure 4—2 Post-development habitats**


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**Table 4—2 Post-development habitats**

| Post-development Habitat | Description/notes | UK Hab Primary Code |
|---|---|---|
| Rain gardens | The proposed rain gardens within the public realm are designed to follow the natural slope of the land and are strategically placed between stepped areas. These gardens will feature a variety of plant species, including shrubs such as dogwood (*Cornus sanguinea*), alder buckthorn (*Frangula alnus*), and holly (*Ilex aquifolium*); grasses like tufted hair grass (*Deschampsia cespitosa*), meadowsweet (*Filipendula ulmaria*), and purple loosestrife (*Lythrum salicaria*); and bulb planting including summer snowflake (*Leucojum aestivum*), wild daffodil or lent lily (*Narcissus pseudonarcissus*), and snake's head fritillary (*Fritillaria meleagris*). The species mix has been selected for its adaptability to the local climate and its ability to thrive in the rain garden environment, contributing to both the aesthetic appeal and ecological function of the landscape. | g (grassland) |
| Wildflower meadow | Wildflower planting will be incorporated along the northern site boundary and will include meadow species such as common knapweed (*Centaurea nigra*), meadowsweet (*Filipendula ulmaria*), selfheal (*Prunella vulgaris*), meadow buttercup (*Ranunculus acris*), yellow rattle (*Rhinanthus minor*), common sorrel (*Rumex acetosa*), and tufted vetch (*Vicia cracca*). | g3c (other neutral grassland) |
| Tree planting | Twelve trees will be planted within the landscape areas and will include three species: silver birch (*Betula pendula*), field maple (*Acer campestre*), and juneberry (*Amelanchier lamarckii*). | u (urban) |
| Ground- based green walls | Installation of green walls on the roof level is proposed. The screen will include native vertical climbers common ivy (*Hedera helix*), jasmine *(Jasminum officinale),* and a flowering shrub, mountain hydrangea *(Hydrangea serrata 'White').* | u1b5 (buildings) |
| New KOP stand | The new KOP stand will feature five levels, ranging from the ground floor up to level four, including a roof level which comprises an open terrace and plant space. | u1b5 (buildings) |
| Hardstanding | In the form of the plaza in front of the stadium. | u1b (developed land; sealed surface) |

**Table 4—3 Post-development habitat features**

| Proposed habitat feature | Description |
|---|---|
| Bird boxes | It is recommended to install two generalist bird boxes to provide nesting opportunities for common species. An example of a suitable type is the Vivara Pro Woodstone 32 mm Nest Box. These should ideally be mounted on trees within planting areas at a height of approximately 2–4 m, facing between north and east to reduce exposure to strong sunlight and prevailing winds. |
| Insect hotels | It is suggested to include two generalist insect hotels or log piles to support invertebrates and pollinators. Insect hotels should be placed at least 1 m above ground, facing south or southeast for sunlight, and located near flowering plants. For log piles, a damp, shady area is recommended, with logs stacked loosely to create gaps for insects. |

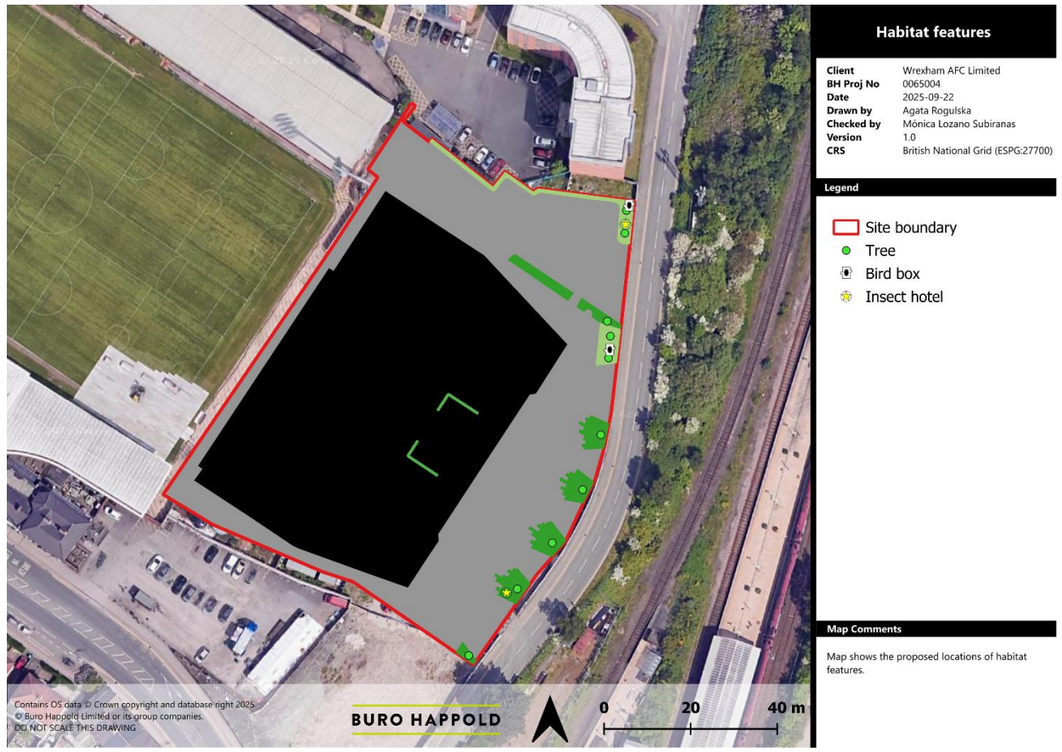



**Figure 4—3 Proposed locations of habitat features**

## 4.4 DECCA framework

The Environment (Wales) Act, the Well-Being of Future Generations Act, and the Chief Planner's letter highlight the importance of biodiversity in promoting ecosystem resilience. Natural Resources Wales (NRW) has created a framework to assess ecosystem resilience, which is based on five key attributes outlined in the Environment (Wales) Act. This framework is known as DECCA, which stands for: **D**iversity, **E**xtent, **C**ondition, **C**onnectivity and **A**spects of ecosystem resilience.

Post-development biodiversity habitats and enhancements are proportional to the extent and impact of the development and contribute to a larger, more joined-up approach to creating a resilient and biodiverse ecological network in Wales.


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### 4.4.1 Assessment of the site's ecosystem resilience using DECCA attributes

The proposed habitats and enhancements were assessed against five key attributes of the DECCA framework, as presented in Table 4—4.

**Table 4—4 Assessment of ecosystem resilience using DECCA**

| DECCA criteria assessed against | Baseline | Post-development |
|---|---|---|
| **Diversity** | The site exhibits a low level of diversity, with only a small patch of sparsely vegetated urban land and areas of bare ground and hardstanding. | **Improved diversity by creation of new habitats**. This includes the creation of rain gardens with a variety of native and damp-tolerant species and diverse structures (short and long grass, scrub, young trees, and semi-mature trees), wildflower meadows and green walls with vertical planters. These encourage a variety of species to thrive, providing sources of food and shelter.<br>**Improved diversity by planting a variety of native species**. Incorporating native plants, trees, and shrubs to support local wildlife and promote a balanced ecosystem.<br>**Improved diversity by promoting pollinators.** Planting wildflower meadows with species that attract pollinators like bees and butterflies. This not only supports these species but also enhances plant diversity through pollination.<br>**Improved diversity by implementation of green infrastructure.** Incorporating rain gardens within the public realm, and green walls on the terrace will contribute to increased green infrastructure in the local area. |
| **Extent** | The extent of natural habitats is very limited, consisting mainly of a small area of sparse vegetation. The rest of the site comprises bare ground and hardstanding. | **Improved extent by increasing the area of semi-natural habitats and green infrastructure**. The extent of post-development habitats of higher ecological value is significantly larger than the baseline. These areas will provide more space for species to use the site and thrive, and will also serve as recreational spaces for people. |
| **Condition** | The condition of the existing site is poor, due to the limited semi-natural habitats present on-site. | **Improved condition by introducing rain gardens**. Incorporating rain gardens with a variety of native and damp-tolerant species can contribute to enhance soil moisture retention, reduce runoff, and improve water quality.<br>**Improved condition by incorporating green infrastructure**. Adding a green walls with vertical planters can contribute to improve air quality and reduce urban heat island effect. It will also encourage more biodiversity to use the site, providing food and shelter.<br>**Improved condition by planting wildflowers and incorporating insect hotels**. Incorporating wildflower meadows will increase plant diversity and provide food for pollinators and other beneficial insects, which will attract other species, such as birds. Insect hotels will also provide habitats and shelter for these species. These actions will encourage more biodiversity to the site and contribute to lead to a healthier and more resilient ecosystems than the existing baseline. |
| **Connectivity** | The site consists mainly of bare ground and hardstanding, with fragmented patches of sparsely vegetated urban land. Therefore, habitat connectivity is currently minimal to none within the site or the wider landscape. | **Improved connectivity by creating green corridors**. Incorporating the habitats and enhancements proposed strategically across the site, will contribute to increase connectivity across the site and the wider landscape, enhancing ecological linkages.<br>**Improved connectivity by installing insect hotels and bird boxes.** Placing insect hotels and bird boxes strategically throughout the site within the proposed habitats, will create stepping stones for insects and birds, facilitating their movement and interaction between different habitat areas. |
| **Aspects of ecosystem resilience** | The site exhibits low resilience due to limited diversity, extent, condition, and connectivity of habitats. | **Improved resilience through the integration of green infrastructure, creation of habitats, enhancement of habitat extent, condition, and connectivity**. These measures contribute to make the site more resilient to climate change and can provide numerous co-benefits both for people and nature, including improved air and water quality, management of stormwater, increased biodiversity, and enhanced recreational spaces for the public. Overall, these interventions contribute to improved adaptability, recovery and resistance of the ecosystem capable of withstanding environmental stresses and supporting both wildlife and human well-being. |


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# 5 Management and Maintenance of Biodiversity Enhancements

## 5.1 Habitat features and monitoring

The proposed habitat features comprise bird boxes and invertebrate features, and the indicative location of these can be found in Figure 4-3.

### 5.1.1 Habitat Features Monitoring

All habitat features will be checked as part of ongoing annual inspections. This will comprise an annual check for a minimum period of 5 years to confirm that the habitat features are in place and in sound condition. If any issues are encountered (i.e., boxes are broken or stolen), this will be notified to the ecologist, who will then assess and provide advice on suitable replacement. Additionally, it is recommended clearing out the bird boxes that can be opened to encourage them to be used again in the future years (see Table 5-1 for specific maintenance measures for bird boxes). This will comprise removing nesting material and scraping out old nesting material inside the boxes.

Consideration will be given to wildlife disturbance while undertaking routine maintenance operations and measures taken to reduce the risk of this occurring. Therefore, maintenance operations for bird boxes will be carried out in winter, which is outside the nesting bird season (between March and August inclusive) to reduce the possibility of disturbing nesting birds, and maintenance of insect hotels will be avoided during autumn and winter (November–February) to prevent disruption to overwintering invertebrates. If cleaning is required, it will be undertaken in early spring, focusing only on the removal of tubes blocked by parasites or mould, while preserving viable nesting material.

**Table 5—1 Habitat features maintenance**

| Box type | No. | Location | Maintenance operation | Frequency | Time of the year for maintenance | Maintenance responsibility |
|---|---|---|---|---|---|---|
| Generalist bird boxes, e.g. Vivara Pro Woodstone 32 mm Nest Boxes  | 2no. | Mount on trees within the planting areas at a height of approx. 2 to 4 m, ideally facing between north and east to minimise exposure to strong sunlight and prevailing winds. | Remove the front panel for cleaning. Remove all nesting material and deposits. Inspect for damage. Ensure fixings are secure. | Annual check | October – February inclusive | Client/ Maintenance Team |
| Generalist Insect hotels or log piles  | 2no. | Place at least 1m above ground, facing south or southeast for sunlight, near flowering plants. For log piles, use a damp, shady area and stack logs loosely to create gaps. | Avoid disturbing features during winter (November–February). Avoid cleaning out insect hotels in autumn or winter. If cleaning is needed, do it in early spring and only remove tubes blocked by parasites or mould. Keep log piles moist by watering during dry periods. Never use pesticides or treated wood near features. Leave leaf litter and plant stems around features undisturbed until late spring. Inspect for structural safety but avoid unnecessary disturbance. | Annual check | Main check/refresh: March – April<br>Watering: during dry periods in summer | Client/ Maintenance Team |

### 5.1.2 Work Schedule for Ecological Monitoring

A work schedule, including a ten-year annual work plan, is shown in Table 5-2, which outlines the maintenance operations listed in Section 5.1.1, along with their frequency and the times throughout the year when they are required.

**Table 5—2 Ecological monitoring work schedule**

| Maintenance Operation | Frequency | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Generalist bird box check | Annually | | | | | | | | | | | | |
| Inspection of invertebrate features | Annually | | | | | | | | | | | | |

Time of the year to carry out maintenance work
Time of the year to avoid maintenance work

## 5.2 Maintenance Work Schedules for all Landscape Areas

The purpose of this section is to provide a framework and understanding of the management and maintenance principles and objectives of the long-term landscape management for the KOP Stand Redevelopment site. This includes key maintenance operations that will be necessary to ensure the long-term success of each of the different soft landscape typologies. Information on the management and maintenance of landscape features is based on the Landscape Management Plan prepared by Populous (Appendix E).

### 5.2.1 Trees and shrubs management and maintenance

| Action | Frequency/ Timing | Maintenance responsibility |
|---|---|---|
| New trees must be closely monitored at each maintenance visit to ensure they are upright, firm, stable and in good health. | Twice a year in the first two years following planting | Client/ Maintenance Team |
| Trees shall be maintained and watered to field capacity, taking into account prevailing weather conditions and hot, dry periods. They should be watered with the use of a hose being left to run slowly down the irrigation tube until the pit reaches full capacity. | Twice a year in the first two years following planting | Client/ Maintenance Team |


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| | | |
|---|---|---|
| Weed control shall be undertaken either by hand weeding or with a non-residual glyphosate-based herbicide. Remove all weeds from the site. | Twice per month between March and October as required | Client/ Maintenance Team |
| Any damaged or dying branches shall be removed using the standard methods appropriate for the work. Any dead, dying or defective trees shall be replaced in the following dormant winter period. | As required | Client/ Maintenance Team |
| Replacement tree and shrub planting shall take place in the following November-February, dormant winter period during suitable weather conditions. All stock shall be of the same size and species as originally specified. | As requires between November and February | Client/ Maintenance Team |
| All work shall be carried out by appropriately qualified horticultural operatives with adequate insurance. All work shall be carried out in accordance with the good horticultural practice and B.S. standards. All debris arising from the works shall be removed from the site. | As required | Client/ Maintenance Team |
| Mulch mats shall be re-pegged or replaced to ensure a minimum 50mm Mulch depth is maintained. | As required | Client/ Maintenance Team |
| Apply a slow-release fertiliser to all trees in March or April in accordance with the manufacturer's recommendations. Prune trees in accordance with good horticultural and arboricultural practices to remove dead, damaged or diseased material and promote well-balanced form and growth patterns. | In March or April in accordance with the manufacturer's recommendations | Client/ Maintenance Team |
| It is recommended to use organic fertilizers, applied at planting in the planting hole and repeated annually in February/March as a top-dress around the base of trees and shrubs. | Once a year in February or March | Client/ Maintenance Team |

### 5.2.2 Wildflower meadow management and maintenance

| Action | Frequency/ Timing | Maintenance responsibility |
|---|---|---|
| **General Maintenance** | | |
| Cutting is to be carried out using an appropriate large wheeled, rotary mower to avoid injury to reptiles. | At each mowing event | Client/ Maintenance Team |
| Remove any litter, debris, stones and earth clods larger than 25mm in any dimension prior to mowing. | Before each mowing | Client/ Maintenance Team |
| Sward heights are to be kept to a minimum of 15cm. | Ongoing | Client/ Maintenance Team |
| No fertiliser or nutrients are to be added. | Ongoing | Client/ Maintenance Team |
| Top dress if required with specified seed mix in the landscape planting schedule if slow to establish. | As needed | Client/ Maintenance Team |
| Allow cut grass to dry and disperse seed before removing arisings. | After each cut | Client/ Maintenance Team |
| **Year One Actions** | | |
| First cut to 5cm. | March/April (Spring Seeding: May) | Client/ Maintenance Team |
| Cut sward to a height of 5 cm every 2 months or when the sward reaches 15cm. | March–September | Client/ Maintenance Team |
| Final cut. | September/October | Client/ Maintenance Team |
| Allow cut grass to dry and disperse seed before removing arisings. | After each cut | Client/ Maintenance Team |
| Remove all cut material to avoid smothering the sward. | After each cut | Client/ Maintenance Team |
| Where persistent weeds are a problem, spot treat with Glyphosate or dig out. | As needed | Client/ Maintenance Team |
| Where persistent weeds are a problem, spot treat with Glyphosate or dig out. | Throughout Year One | Client/ Maintenance Team |
| **Post- Year One Maintenance** | | |
| One cut in September to 15cm and remove all cuttings from the site. | Annually in September | Client/ Maintenance Team |
| Remove all cuttings from the site after drying and seed dispersal. | After annual cut | Client/ Maintenance Team |
| Further cuts in the autumn period to remove untidy growth in an extended growing season. | Autumn (if needed) | Client/ Maintenance Team |
| The requirement of future years' maintenance is to maintain a species-diverse sward of value to wildlife. | Ongoing | Client/ Maintenance Team |

### 5.2.3 Rain gardens management and maintenance

| Action | Frequency/ Timing | Maintenance responsibility |
|---|---|---|
| Inspect inlet and outlet structures regularly to ensure water flows freely and is not blocked by debris or silt. | Once every two months (or after heavy rainfall) | Client/ Maintenance Team |
| Remove litter, leaves, and sediment build-up from surface and inlet areas. | Monthly (or after heavy rainfall) | Client/ Maintenance Team |
| Check vegetation health and coverage; replace failed plants with species of similar water tolerance. | Once every two months | Client/ Maintenance Team |
| Weed control: remove invasive or self-seeded weeds by hand to maintain design intent and hydraulic performance | Once every two months | Client/ Maintenance Team |
| Prune and cut back vegetation as required to maintain visibility, encourage dense growth, and prevent obstruction of flow paths | Once every two months | Client/ Maintenance Team |
| Check soil and mulch levels; top up mulch to maintain 50–75 mm depth to suppress weeds and retain moisture | Annually | Client/ Maintenance Team |
| Test infiltration/performance; ensure that the planter drains within 24–48 hours after rainfall | Annually | Client/ Maintenance Team |
| Avoid use of fertilisers or pesticides that could contaminate runoff or harm water quality | Ongoing | Client/ Maintenance Team |
| Record and report any structural issues (e.g. damaged kerbs, geotextile exposure, or broken edges) for prompt repair | Once every two months (or as needed) | Client/ Maintenance Team |


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# 6 Conclusion

The post-development enhancements, comprising habitat creation and habitat features for wildlife, significantly improve the site's NBB and resilience by addressing the DECCA attributes. The integration of diverse habitats, such as rain gardens, wildflower meadow, and green walls, enhances the site's biodiversity by providing more diverse habitats and of higher ecological value, as well as food and shelter for various species. The increased extent of semi-natural habitats and green infrastructure offers more space for species to thrive and serves as recreational areas for people. Effective long-term management and maintenance are essential to sustain these benefits. Regular inspections, adaptive maintenance practices, and timely interventions presented in this report will ensure that habitats remain in good condition and continue to deliver ecological and amenity value.

Improvements in the condition of the site and enhancing connectivity, ensure that biodiversity enhancements are proportional to the extent and impact of the development, contributing to a larger, more joined-up approach to creating a resilient and biodiverse ecological network in Wales.


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# Appendix A Policy and Legislation

## A.1 International legislation

### A.1.1 United Nations Convention on Biological Diversity 1992 (CBD)

The CBD focuses on the conservation of all species and ecosystems. It requires the development of national strategies, plans or programmes for the conservation and sustainable use of biodiversity. The 'UK Post-2010 Biodiversity Framework' (JNCC *et al*) published in July 2012, is the result of a change in strategic thinking following the publication of the CBD's 'Strategic Plan for Biodiversity 2011–2020' (CBD, 2010).

'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' (DEFRA, 2011) underpins the UK Post-2010 Biodiversity Framework. Relevant key targets include:

- No net loss of priority habitats and an increase in the overall extent of priority habitats; and
- Overall improvement in the status of our wildlife and prevention of further human-induced extinctions of known threatened species.

## A.2 National legislation

### A.2.1 Environment (Wales) Act 2016

The Environment (Wales) Act 2016 was introduced to establish the necessary legislation for planning and managing Wales' natural resources in a sustainable and integrated manner.

The Environment Act introduced a new duty to replace the existing biodiversity duty outlined in the Natural Environment and Rural Communities Act 2006. Previously, public authorities were required to have regard to conserving biodiversity. The new Section 6 duty goes further, requiring all public authorities, when carrying out their functions in Wales, to seek to "maintain and enhance biodiversity" where it is within the proper exercise of their functions. Additionally, public authorities must also seek to "promote the resilience of ecosystems".

### A.2.2 Conservation of Habitats and Species Regulations 2019 (as amended)

The Habitat Regulations implement the EU Habitats Directive and EU Birds Directive in the UK and provide for the designation and protection of European sites and the protection of European protected species (EPS). For those animal species listed on Schedule 2, it is an offence to deliberately capture, kill, disturb or take or destroy the eggs of an EPS or to damage or destroy a breeding site or resting place of an EPS.

It is also an offence under the Habitat Regulations to deliberately pick, collect, cut, uproot or destroy a wild plant listed in Schedule 5. However, these actions can be made lawful through the granting of licences by the appropriate authorities (Natural England (NE) in England) where deemed appropriate.

### A.2.3 Wildlife & Countryside Act 1981 (as amended) (WCA)

The Wildlife & Countryside Act (WCA) is the principle mechanism for the legislative protection of wildlife in Great Britain and provides for the designation, protection and management of Sites of Special Scientific Interest (SSSIs) and for the establishment of National Nature Reserves (NNRs) in England and Wales for their flora, fauna or geological interests.

Under the Act, it is an offence to intentionally kill, injure or take any wild animal listed on Schedule 5; intentionally or recklessly damage, destroy or obstruct access to any structure or place used by a Schedule 5 species for shelter or protection; or to disturb them while using such a place.

The WCA also provides for the legal protection of wild birds. All nesting birds including their nests, eggs and young are protected from killing, injury, taking or selling with additional protection offered to species listed on Schedule 1. For these species, adult birds and their young are protected from intentional or reckless disturbance while at or near the nest.

It is an offence to intentionally pick, uproot or destroy any wild plant included in Schedule 8. The Act is also the principal mechanism for preventing the spread of non-native plant and animal species listed on Schedule 9 such as Japanese knotweed which may be detrimental to native wildlife.

## A.3 Countryside and Rights of Way Act 2000 (the CRoW Act)

The CRoW Act (HM Government, 2000) amends and strengthens the protection given to certain species under the WCA, especially reckless actions regarding disturbance.

### A.3.1 Natural Environment & Rural Communities Act 2006 (the NERC Act)

Section 40 of the NERC Act (HM Government, 2006) requires public authorities, to have regard to the purpose of conserving biodiversity.

Section 41 (S41) of the NERC Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the purpose of conserving biodiversity in England and to take, or promote steps to further their conservation.

## A.4 Planning Policy

### A.4.1 Planning Policy Wales 2024

### A.4.2 Natural Resources Policy (Welsh Government, 2017)

The Natural Resources Policy is designed to drive the delivery of the goals of recent legislation known as the Well-being of Future Generations Act (WFG Act) and the Environment (Wales) Act (Welsh Government, 2015; 2016). This policy document and the Nature Recovery Action Plan (Welsh Government, 2020) state the need to proactively develop Resilient Ecological Networks to maintain and enhance the wider resilience of Wales' ecosystems. In doing so, Wales would also address the Convention on Biological Diversity's Strategic Plan for Biodiversity and the associated Aichi biodiversity targets.

### A.4.3 Future Wales – The National Plan 2040 (Welsh Government)

Future Wales is the national development framework, setting the direction for development in Wales to 2040. It is a development plan with a strategy for addressing key national priorities through the planning system, including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of Welsh communities.

Future Wales is a spatial plan, setting a direction for where Wales should be investing in infrastructure and development for the greater good of Wales and its people. Future Wales sets the challenge of delivering these improvements to the public, private and third sectors. It makes clear the importance of planning new infrastructure and development in such a way that they are complementary rather than competing priorities, ensuring opportunities are maximised and multiple benefits are achieved.

Relevant policies include:

- Policy 9 – Resilient Ecological Networks and Green Infrastructure. *To ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:*


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- *identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and*
- *identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature-based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being.*

*Planning authorities should include these areas and/or opportunities in their development plan strategies and policies in order to promote and safeguard the functions and opportunities they provide. In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment.*

- Policy 15 – National Forest. *The Welsh Government is committed to developing a national forest through the identification of appropriate sites and mechanisms. Action to safeguard proposed locations for the national forest will be supported*.
- Policy 18 – Renewable and Low Carbon Energy Developments of National Significance. *Proposals for renewable and low carbon energy projects (including repowering) qualifying as Developments of National Significance will be permitted subject to policy 17 (renewable and low carbon energy and associated infrastructure)* and a list of 11 criteria. The criteria also includes: '*the proposal includes biodiversity enhancement measures to provide a net benefit for biodiversity*'.

## A.5 Local Planning Policy

### A.5.1 Wrexham Local Development Plan 2 (LDP2) 2013 to 2028

On 20th December, 2023 we (Wrexham County Borough Council) adopted the Wrexham Local Development Plan (LDP). The adopted LDP forms the development plan for Wrexham County Borough and will be the basis for decisions on land use planning in this area.

The applicable Policy – Local Planning Guidance Note 32 (Biodiversity & Development) is contained with Wrexham Council Local Planning Guidance Notes. The Local Plan aims to safeguard and enhance biodiversity through the identification and protection of sites and/ or species of international, national, and local importance.


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# Appendix B Preliminary Ecological Appraisal


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# Wrexham Association Football Club

## Kop Development

## Preliminary Ecological Appraisal

Intended for
Wrexham Association Football Club

Date
June 2022

Project Number
1620012485

# KOP DEVELOPMENT
# PRELIMINARY ECOLOGICAL APPRAISAL

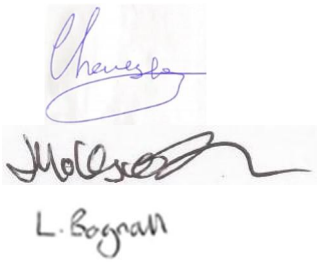
RAMBOLL

# KOP DEVELOPMENT
# PRELIMINARY ECOLOGICAL APPRAISAL

| | |
|---|---|
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# 1. INTRODUCTION

## 1.1 Background

Ramboll UK Limited ("Ramboll") was commissioned by Wrexham Association Football Club (the "client") to provide a Preliminary Ecological Appraisal (PEA) of the disused 'kop' at the eastern aspect of the site and the land to the immediate east of the 'kop', Mold Road, Wrexham, LL11 2AH (the "site") in advance of the proposal to build a 5,500 seater capacity stand (the Proposed Development). The site is centred on OS grid reference SJ 32879 50949, located within the administrative boundary of Wrexham County Borough Council.

## 1.2 Objectives

The aim of this report is to provide a PEA of the site (CIEEM, 2017[1]). PEA is the term used to describe a rapid assessment of the ecological features present, or potentially present, within a site and its Zone of Influence (ZoI). The ZoI is the area over which ecological features may be affected by the biophysical changes caused by the Proposed Development and its associated activities. The structure and content of the report is based on current ecological report writing guidance (CIEEM 2017[2] and BSI Standards Institution 2013[3]).

The content of this report is based on the findings of:

- a desk study;
- a bat scoping survey; and
- an extended Phase 1 habitat survey.

The specific objectives of this report are to:

- identify designated nature conservation sites located either within the site or the ZoI of the Proposed Development;
- assess the potential for the site and the ZoI of the Proposed Development to support populations of protected species or species of nature conservation importance[4];
- record the main habitats and features of ecological interest on the site;
- assess the overall ecological importance of the site;
- provide recommendations for any additional further surveys (if required); and
- provide preliminary recommendations for the protection and enhancement of the site's ecological features.

The report is supported by the following appendices:

- Appendix 1: Phase 1 Habitat Map; and
- Appendix 2: Legislation and Policy Context.

[1] CIEEM (2017). Guidelines for Preliminary Ecological Appraisal, Second Edition. Chartered Institute of Ecology and Environmental Management (CIEEM), Winchester

[2] CIEEM (2017) Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.

[3] BSI Standards Institution (2013). BS 42020:2013. Biodiversity – Code of Practice for Planning and Development. BSI Standards Limited, London.

[4] The following species are considered to be of nature conservation importance: i) listed as a national priority for conservation (such as those listed as priority habitats and species under the Environment (Wales) Act 2016; ii) listed as a local priority for conservation, for example in the relevant local Biodiversity Action Plan (BAP); iii) assessed as a threatened or near-threatened species according to International Union for the Conservation of Nature (IUCN) red list criteria; iv) Red or Amber Listed species in national Species of Conservation Concern assessments; v) listed as a Nationally Rare or Nationally Scarce species (e.g. in one of the Species Status Project reviews) or a Nationally Notable species where a more recent assessment of the taxonomic group has not yet been undertaken; and/or vi) endemic to a country or geographic location (including endemic sub-species, phenotypes, or cultural behaviours of a population that are unique to a particular place).

## 1.3 Proposed Development

The Proposed Development comprises demolition of the disused kop stand and the construction of a new stand for 5,500 spectator seats, inclusive of a 500 capacity hospitality area, with a 600 capacity non-match day exhibition space, new public realm and associated works. The Proposed Development area is shown on the Proposed Site Plan (drawing ref.: 211509-AFL-ZZ-ZZ-DR-A-00101; Appendix 4).

## 1.4 Legislation and Policy Framework

Various legislation and planning policies refer to the protection of wildlife. These are summarised in Appendix 2 but should not be regarded as a definitive legal opinion.

# 2. METHODOLOGY

## 2.1 Desk Study

The purpose of the desk study was to collect existing baseline data about the site and the ZoI such as the location of designated sites or other natural features of potential ecological value such as woodland and ponds. The following ZoI has been considered:

- non-statutory designated sites such as Local Wildlife Sites (LWS), Sites of Importance for Nature Conservation (SINC), Sites of Local Importance for Nature Conservation (SLINC) up to 1 km from the site;
- national statutory designated sites up to 2 km from the site, including National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR); and
- international statutory designated sites including Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites, up to 10 km from the site.

A third-party local records centre data search was requested from North Wales Environmental Information Service (COFNOD). In addition to this, the Multi Agency Geographic Information for the Countryside (MAGIC) website[5] was searched for supplementary information on statutory sites. This included a search for European Protected Species (EPS) licences issued within 2 km of the site. Supplementary information on the site and its surroundings were obtained from aerial images available from Google™ Earth.

## 2.2 Extended Phase 1 Habitat Survey

An extended Phase 1 habitat survey of the site was undertaken by Lee Bagnall CEcol CEnv MCIEEM of Ramboll on the 05 and 16 August 2021. Lee is an associate ecologist with over 15 years' experience and holder of Natural Resources Wales (NRW) licences for great crested newt (GCN) *Triturus cristatus* and bats, a full member of the Chartered Institute of Ecology and a Chartered Environmentalist & Ecologist.

The survey involved a site walkover and preliminary assessment of key habitats, land use and ecological features. The main habitats present were recorded using standard Phase 1 habitat survey methodology as described in the Handbook for Phase 1 Habitat Survey (JNCC, 2016[6]).

The site was assessed for its potential to support protected and notable species such as bats and breeding birds and was inspected for signs of any invasive plant species subject to legal controls. This was in order to identify potential ecological constraints and to guide recommendations for further survey requirements for these species.

## 2.3 Daytime Building and Tree Inspection for Bats

2.3.1 A daytime inspection of buildings, trees and structures was also completed on 05 and 16 August 2021 by Lee Bagnall. The exterior and interior (where access was available) of the sites buildings and trees were visually inspected for field evidence of roosting bats including droppings, urine staining, feeding remains and potential roosting points. In accordance with the guidance outlined in Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition (Collins, 2016[7]) each building was assessed for its potential to support bats. The following building types and features are considered to be of particular suitability to support roosting bats:

- buildings of pre-20th or early 20th century construction;

[5] www.magic.gov.uk, accessed 20 May 2021

[6] Joint Nature Conservation Committee (JNCC) (2016). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC Peterborough

[7] Collins J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). Bat Conservation Trust (BCT)

- agricultural buildings of brick, stone or timber construction;
- large and complicated roof void(s) with unobstructed flying spaces;
- large (>20 cm) roof timbers with mortise joints, cracks and holes;
- entrances into buildings for bats to fly through;
- poorly maintained buildings such that they provide access points for bats into roofs, walls, bridges, but at the same time not being too cool and draughty;
- roof warmed by the sun e.g. south-facing;
- weatherboarding and/or hanging tiles with gaps;
- undisturbed building roofs and structures;
- buildings and built structures in proximity to each other providing a variety of roosting opportunities throughout the year; and
- buildings and built structures close to good foraging habitat e.g. mature trees, parkland, woodland or wetland.

2.3.2 A ground-level inspection of trees was also undertaken. The following tree features are considered of particular suitability to support roosting bats:

- natural holes;
- woodpecker holes;
- cracks / splits in major limbs;
- loose bark;
- bat, bird or mammal boxes;
- partially detached large-stemmed ivy; and
- other hollows/cavities.

2.3.3 Each building, structure and tree has been classified into a category dependent on the presence of features suitable to support bat roosts. The categories assigned were: Confirmed Roost, High, Moderate, Low and Negligible potential for use by bats. Table 2.1 provides criteria for each of these categories.

Table 2.1: Building, Structure and Tree Bat Roost Potential Categories

| Roost Potential | Description |
|---|---|
| Confirmed | A building, structure or tree that is confirmed to support a bat roost. |
| High | A building, structure or tree with one or more potential roost site that is obviously suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. |
| Moderate | A building, structure or tree with one or more potential roost site that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status. |
| Low | A building or structure with one or more potential roost site that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection and / or suitable surrounding habitat to be used on a regular basis or by a large number of bats (i.e. unlikely to be suitable for hibernation or maternity).<br>Trees of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with very limited roosting potential. |
| Negligible | Negligible habitat features likely to be used by roosting bats and bats very unlikely to be present. |

Notes: Category descriptions drawn from Collins (2016)

## 2.4 Assessment of Importance of Ecological Features

The importance of ecological features (i.e. designated sites, habitats and species) identified within the ZoI has been assessed using a scale that classifies ecological features within a defined

geographic context in accordance with CIEEM guidelines (2019[8]). The classification uses recognised and published criteria (e.g. Ratcliffe, 1977[9], Wray *et al.* 2010[10]) where the habitats and site were assessed in relation to their size, diversity, naturalness, rarity, fragility, typicalness, connectivity with surroundings, intrinsic value, recorded history and potential value. The following geographic frame of reference has been used for the site:

- International Importance;
- National Importance (Wales);
- Regional Importance (North Wales);
- County/ Borough Importance (Wrexham County Borough);
- Local Importance (Wrexham town);
- Site Importance (limited to the site boundary); and
- Negligible Importance.

A wide range of sources can be used to assign importance to ecological features, including legislation and policy. In the case of designated sites, their importance reflects the geographic context of the designation. For example, sites designated as SACs are recognised as being of importance at an International level. Ecological features not included in legislation and policy may also be assigned importance, due to, for example, local rarity or decline, or provision of a functional role for other ecological features. Professional judgement is used to assign such importance.

## 2.5 Limitations

The ecological assessment has been undertaken based on CIEEM's 2017 Guidelines for Preliminary Ecological Appraisal, with elements of 2019 Ecological Impact Assessment Guidelines[11], taking a proportional approach to the level of survey effort and reporting required given the urban nature of the site. It should be noted that under normal circumstances it is not appropriate to submit a PEA in support of a planning application because the scope of a PEA is unlikely to fully meet planning authority requirements in respect of biodiversity policy and implications for protected species. However, in this instance, no further surveys are considered necessary to inform the assessment and a full Ecological Impact Assessment (EcIA) is not recommended as this PEA report contains sufficient information on which the application can be determined.

The extended Phase 1 habitat survey provides a snapshot of ecological conditions and does not record plants or animals that may be present at the site at different times of the year. The survey was undertaken during the optimum April to September Phase 1 habitat survey period when plants are generally visible.

It was not possible to fully inspect the exterior of the kop building due to the presence of dense vegetation on the eastern side of the building. However, the majority of the building could be inspected and this is not considered to present a significant limitation. The requirement for further bat surveys was discussed with the Local Planning Authority (LPA) ecologist and it was agreed that no further bat surveys would be required due to the limited potential for bats to be present.

[8] CIEEM (2019) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute for Ecology and Environmental Management, Winchester

[9] Ratcliffe, D. (1977) A Nature Conservation Review. Cambridge University Press

[10] Wray, S., Wells, D., Long, E. and Mitchell-Jones, T. (2010) Valuing Bats in Ecological Impact Assessment. In Practice, pp 23-25

[11] Chartered Institute of Ecology and Environmental Management (CIEEM), 2019. Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal and Marine. Chartered Institute of Ecology and Environmental Management, London.

The conclusions presented in this report represent Ramboll's best professional judgment based upon the information available and conditions existing as of the date of this report. In performing its assignment, Ramboll must rely upon publicly available information, information provided by the Client and information provided by third parties during desk studies. Accordingly, the conclusions in this report are valid only to the extent that the information provided to Ramboll was accurate and complete.

Ramboll is satisfied that this report represents a robust appraisal of the site. If any action or development has not taken place on this land within twelve months of the date of this report, the findings of this survey should be reviewed by a suitably qualified ecologist and may need to be updated in line with CIEEM's 'Advice Note on the Lifespan of Ecological Reports and Surveys' (2019)[12].

[12] Chartered Institute of Ecology and Environmental Management (CIEEM), 2019. Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM, Winchester. Available online: https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf [Accessed 04/09/2019]

# 3. BASELINE CONDITIONS

## 3.1 Desk Study

### 3.1.1 Landscape Context

The site, set in an urban environment, is located in the north west of Wrexham town. The site is bounded by Mold Road to the south, Crispin Lane to the east and Wrexham Glyndwr University and its associated grounds to the west and north.

### 3.1.2 Designated Sites

*Statutory Sites*

The Gatewen Marsh SSSI is situated approximately 1 km north west of the site. The Gatewen Marsh supports a wide variety of botanical species such as greater reedmace *Typha latifolia* and brooklime *Veronica beccabunga*. This designation consists primarily of wetland and marsh habitats. This SSSI is separated from the Proposed Development by urban developments and a major highway (A483) and there is no hydrological pathway (e.g. a watercourse or culverted watercourse) from the development to the site.

There are no other national statutory designated sites within 2 km of the Proposed Development and no direct connectivity to designated sites further afield, such as the river Dee SSSI. The River Dee SSSI is located approximately 10 km east via the nearest hydrological pathway, the River Gwenfro, but the River Gwenfro is located approximately 900 m from the Proposed Development and therefore no impact pathway is identified. There are no other designated sites within 10km of the site and there are also no indirect pathways which could from the site.

On this basis, statutory designated sites are not considered further in this assessment.

*Non-Statutory Sites*

There are no non-statutory designated nature conservation sites within 1 km of the site. As no impacts are predicted beyond 1 km, the assigned ZoI, non-statutory designated sites are not considered further in this assessment.

## 3.2 Habitats

### 3.2.1 General Site Description

The Proposed Development, including proposed compound and laydown areas, occupies an area of approximately 0.85 ha. The Proposed Development site comprises; the existing kop building, with hardstanding to the west, semi-improved neutral grassland to the north interspersed with scattered scrub and ruderal vegetation, and an area of scrub with trees on a steep embankment to the south and east of the existing kop. Further south and east, there is an area of open mosaic habitat.

### 3.2.2 Broadleaved Semi-natural Woodland

This habitat is found on the steep embankment to the immediate east of the existing kop (Target Note (TN) 7). This habitat comprises early mature/mature trees including sycamore *Acer pseudoplatanus*, Swedish whitebeam *Sorbus intermedia*, goat willow *Salix caprea*, crab apple *Malus sylvestris*, cherry *Prunus* spp., yew *Taxus baccata,* and elder *Sambucus nigra*. Bramble *Rubus fruticosus* and dog rose *Rosa canina* are present within the understorey whilst there is limited ground flora due to the high degree of shading and large amount of fly-tipped material on the embankment.

### 3.2.3 Buildings

The main building on site is the disused 'kop' structure (TN1) that is scheduled to be demolished. This building is constructed of a single metal skin and is open fronted on its western and southern aspects. Ramboll staff were unable to observe the entirety of the eastern aspect of the building due to the gradient of the embankment, density of the vegetation and amount of fly-tipped material covering the vegetation. Within the building there are small patches of light ivy *Hedera helix* and old man's beard *Clematis vitalba* growing up the eastern and northern wall.

There are two small, brick-built buildings near the southern boundary of the site. The buildings comprise small, one storey brick-built buildings with flat rooves and include a substation, and it is understood these may be demolished to accommodate the new kop. A disused cabin (TN4) is present to the north of the site and it is understood this cabin will be removed as part of the kop redevelopment.

### 3.2.4 Hardstanding Ground

An area of hardstanding (TN2) is present between the kop building and football pitch which provides a walkway in and out of the grounds leading out onto Mold Road.

### 3.2.5 Short ephemeral vegetation

This habitat (TN5 & TN9) forms an open mosaic consisting mainly of short ephemeral vegetation but also interlaced with areas of ruderal, flower-rich vegetation and bare, previously disturbed ground. The southern and eastern most extent of this habitat has the greatest coverage of bare ground, comprising stones/rubble remaining from clearance and compaction of material from the demolition of a former development. Within this area there is a limited number of species including mugwort *Artemesia vulgaris*, weld *Reseda luteola* and smooth sow-thistle *Sonchus oleraceus.* Moving west, towards the base of the scrubby embankment and north towards the area of semi-improved grassland areas of open bare ground (TN8) are smaller, with higher vegetation coverage and a higher diversity of species present. Main species present include weld, mugwort, common fleabane *Pulicaria dysenterica*, common poppy *Papaver rhoeas*, wild carrot *Daucus carota*, common speedwell *Veronica persica*, fat hen *Chenopodium album*, nipplewort *Lapsana communis*, scarlet pimpernel *Angallis arvensis*, mallow *Malva sylvestris*, common fumitory *Fumaria officinalis* and prickly lettuce *Lactuca serriola*.

This habitat meets the criteria to qualify as *Open mosaic habitat on previously developed land* which is a Welsh Priority Habitat as listed under Section 7 of the Environment (Wales) Act 2016. This habitat forms an open mosaic with scattered scrub, semi-improved neutral grassland and bare ground.

### 3.2.6 Scattered Scrub

Scattered scrub (TN6) is present in patches along the peripheries of the semi-improved grassland to the north and north and east of the wooded embankment and open mosaic habitat. Scattered scrub forms localised dense patches and includes species that are typical of urban waste grounds such as butterfly bush *Buddleja davidii*, alongside patches of bramble, dog rose, goat willow *Salix caprea* and ash *Fraxinus excelsior* and rowan *Sorbus aucuparia* saplings. This habitat forms an open mosaic with short ephemeral vegetation, semi-improved neutral grassland and bare ground.

### 3.2.7 Semi-improved neutral grassland

The semi-improved grassland comprises a small area to the north of the existing kop (TN3). This grassland has frequent areas of discarded materials/ rubbish within the grassland including old tree cuttings, boards, rubble, and bricks. The species here are typical of this habitat type and include; false oat grass *Arrhenatherum elatius*, Yorkshire fog *Holcus lanatus*, bird's-foot trefoil *Lotus corniculatus,* black medic *Medicago lupulina*, red clover *Trifolium pratense*, colt's-foot

*Tussilago farfara*, creeping cinquefoil *Potentila reptans*, vetch *Viccia ssp.*, ragwort *Senecio jacobaea*, creeping thistle *Cirsium arvense* and field horsetail *Equisetum arvense*. The grassland is broken up by patches of butterfly bush *buddleja davidii*, old man's beard, goat willow, rosebay willowherb *Chamerion angustifolium*, dog rose *Rosa canina*, bramble *Rubus fruticosus* and ash *Fraxinus excelsior* and rowan *Sorbus aucuparia* saplings. This habitat forms an open mosaic with short ephemeral vegetation, scattered scrub and bare ground.

#### 3.2.8 Introduced Shrub

There are several specimens of butterfly bush located within the scrub towards the eastern edge of the site.

## 3.3 Species

### 3.3.1 Invertebrates

From the ecological data search obtained via COFNOD, three species of invertebrates were recorded within 1km within the last 10 years. These are of the non-native harlequin ladybird *Harmonia axyridis*, large yellow-faced bee *Hylaeus (Prosopis) signatus* and white-letter hairstreak *Satyrium w-album*. Of these, white-letter hairstreak is the only species located on the UK BAP list and therefore, has additional protections given to it. This species was recorded approximately 578 m to the north west of the site. However, due to the absence of suitable habitat on site this species is not expected to be utilising the site for any of its life stages, but may use the site for commuting purposes. The areas of semi-improved grassland and open mosaic habitat are likely to support a range of common invertebrates and the presence of plants such as weld provide habitat for less common species such as the yellow-faced bee which has been recorded locally. Furthermore, the areas of rubble and debris scattered throughout the site are likely to be used by a range of invertebrates.

### 3.3.2 GCN/ Amphibians

According to MAGIC, no EPS licences have previously been obtained for GCN within 2 km of the site. From the ecological data search obtained via COFNOD, there were no records of amphibians within 1km for the previous 10 years.

The nearest waterbodies are two ponds and the River Gwenfro, one of these ponds is located approximately 210 m to the south east of the site, whilst the other pond is located approximately 455 m to the south west of the site. The presence of GCN in these ponds is unknown. However, the ponds are separated from the site by the A541 dual carriageway and Wrexham General Train Station which is a partial barrier to the movement of GCN. The River Gwenfro is also separated from the site by the A541, but this watercourse is not expected to support GCN populations as it is not a suitable habitat for GCN.

The railway line to the immediate east of the site could be used by GCNs if they are present locally, but this area will not be affected by the proposed works. GCNs and other amphibians are therefore unlikely to be present on site or use the site for any of their life stages. Due to this, GCNs are not considered further in this assessment.

### 3.3.3 Reptiles

The ecological data search provided by COFNOD included one record of reptiles in the past 10 years. This was of common lizard *Zootoca vivipara* which was recorded approximately 300 m to the south of the site near the railway line adjacent to the Premier Inn.

There is a large amount of fly-tipped material, rubble and a mosaic of habitats suitable for reptiles within the construction boundary. Whilst the site is isolated due to its setting in an urban environment, as populations of common reptiles are known to be present locally, it is possible

that a small population of common reptiles are present on site. In addition to this, the railway line that lies to the east of the site could be used by reptiles as a potential corridor for them to move along.

### 3.3.4 Birds

From the ecological data search provided by COFNOD, 43 different species of birds were recorded within the past 10 years. Of these the closest record was of kestrel, located approximately 255 m to the north of the site. The other species records returned by COFNOD include the following species: barn owl *Tyto alba*, black-headed gull *Chroicocephalus ridibundus*, brambling *Fringilla montifringilla*, bullfinch *Pyrrhula pyrrhula*, Canada goose *Branta canadensis*, coal tit *Periparus ater*, cormorant *Phalacrocorax carbo*, cuckoo *Cuclus canorus*, dipper *Cinclus cinclus*, dunlin *Calidris alpina*, dunnock *Prunella modularis*, fieldfare *Turdus pilaris*, garden warbler *Sylvia borin*, goldcrest *Regulus viridis*, green woodpecker *Picus viridis*, herring gull *Larus argentatus*, house martin *Delichon urbicum*, kestrel *Falco tinnunculus*, kingfisher *Alcedo atthis*, lapwing *Vanellus vanellus*, lesser black-backed gull *Larus fuscus*, lesser redpoll *Acanthis cabaret*, long-tailed tit *Aegithalos caudatus*, mallard *Anas platyrhynchos*, marsh tit *Poecile palustris*, mute swan *Cygnus olor*, osprey *Pandion haliaetus*, peregrine *Falco peregrinus*, pied flycatcher *Ficedula hypoleuca*, red kite *Milvus milvus*, redstart *Phoenicurus phoenicurus*, redwing *Turdus iliacus*, reed bunting *Emberiza schoeniclus*, ring-necked parakeet *Psittacula krameria*, snipe *Gallinago gallinago*, song thrush *Turdus philomelos*, starling *Sturnus vulgaris*, swallow *Hirundo rustica*, swift *Apus apus*, whitethroat *Sylvia communis* willow warbler *Phylloscopus trochilus* and woodcock *Scolopax rusticola*. Of these species, barn owl, brambling, fieldfare, kingfisher, osprey, peregrine, red kite and redwing are all Schedule 1 species and bullfinch, cuckoo, herring gull, house sparrow, lapwing, lesser redpoll, marsh tit, reed bunting, song thrush and starling are all UK BAP priority species. Both of these acts of legislation means that they have additional protections added to them and that it is an offence to intentionally disturb them during the breeding season without a valid licence.

The site provides suitability for nesting birds that are typical of the urban environment. These species could nest within the broadleaved woodland to the east of the site and disused nests from previous seasons were also observed with the kop building. Nesting birds may also be present within the scrub to the rear of the building during the nesting bird season (March – August, inclusive). As black redstart has been recorded locally, it is possible that this species could use the area of bare ground and open mosaic habitat during the breeding season. Therefore, clearance works should be undertaken outside of this period where possible. Where not possible, an ecologist should undertake a survey to confirm presence/absence of nesting birds, this is likely to be feasible for the open ground areas and kop structure but may not be possible for the area of scrub to the rear and clearance for this area should be prioritised to avoid the breeding bird season.

### 3.3.5 Bats

According to MAGIC, no EPS licences have previously been obtained for bats within 2 km of the site. From the ecological data search provided by COFNOD, two species of bat have been recorded in the past 10 years. These are of common pipistrelle *Pipistrellus pipistrellus* and noctule *Nyctalus noctule*. The closest of these records was for common pipistrelle, located approximately 667 m to the north west of the site.

There are two small, brick-built, buildings near the southern boundary of the site. The buildings comprise small, one storey brick-built buildings with flat rooves. It is understood that these buildings, which include a substation, will be demolished. The buildings were observed to be in good condition with no obvious features that could be used by bats for roosting. These buildings are assessed as having negligible potential to support bats. A disused cabin is present to the

north of the site. This building was in a poor state of repair, with a broken window, missing door and hole in the structure. As a result it is well lit and draughty, it is also located in scrub with no clear flight lines to the building. This building is assessed to have negligible potential to support bats. It is understood this cabin will be removed as part of the proposed redevelopment.

Trees within the site are limited to the wooded embankment. The majority of the trees are young and shrub like with no potential to support roosting bats. Although there are several semi-mature to mature trees on the embankment, they were observed to be in good condition with no obvious features that could be used by bats. A small number of trees had light to moderate ivy cover, ivy can provide a potential roosting feature although the ivy coverage observed was light and generally not of sufficient extent to provide roosting opportunities. These trees are assessed to have negligible to low potential to support bats.

The extent of potential foraging and commuting habitat for bats on the site is limited, with the railway embankment to the east providing potential commuting features and the open mosaic habitat providing limited foraging opportunities. Connectivity to suitable bat habitats in the wider landscape is poor, with the exception of the nearby railway, given the highly urbanised nature of the site.

### 3.3.6 Badger

No badger setts or other field signs indicative of this species were identified on the site during the extended Phase 1 habitat survey. Given the nature of the habitat on the site (predominantly hardstanding), badgers are considered to be absent from the site although likely present in the wider area, however, they were not returned on an ecological data search from COFNOD. Therefore, badgers are not considered further within this assessment.

## 3.4 Assessment of Important of Ecological Features

Table 4.4 presents the ecological importance of habitats and species present on the site, in accordance with CIEEM guidance. Species assessed as being unlikely to be present on the site are not considered further in this assessment.

Table 3.1: Ecological Importance of Features Present on the Site (in accordance with CIEEM, 2016)

| Feature | Ecological Importance | Rationale |
|---|---|---|
| Broad-leaved woodland | Site Level | Contributes to biodiversity value of the site, and provides potential habitat for common invertebrates and birds, but value is unlikely to extend beyond the Site Level. |
| Hardstanding | Negligible | Does not contribute to biodiversity value of the site. |
| Open mosaic habitat (including short ephemeral vegetation, semi-improved neutral grassland, scattered scrub and bare ground) | County Level | Open mosaic habitat on previously developed land is a Welsh Priority Habitat as listed under Section 7 of the Environment (Wales) Act 2016. Such pioneer habitats are not uncommon in Wales where there are numerous areas of ex industrial land which has been abandoned. However, this habitat is not common in such an urban context as per the Proposed Development and is therefore considered to be important at the County level.<br>This combination of habitats contributes towards the overall biodiversity of the site, and provides potential habitat for common invertebrates, birds and potentially reptiles. |

| Table 3.1: Ecological Importance of Features Present on the Site (in accordance with CIEEM, 2016) | | |
|---|---|---|
| Buildings | Negligible | Does not contribute to biodiversity value of the site. |
| Invertebrates | Local Level | The invertebrate assemblage is likely to be important at the local level, beyond site level, due to the presence of habitats which are not common locally and may support notable invertebrates such as the yellow-faced bee |
| Birds | Local Level | Vegetation is likely to be used by common foraging bird species and may be used by small numbers of common nesting bird species although it is possible that species such as black redstart could use the pioneer habitats on site which are important locally. |
| Bats | Local Level | The extent of foraging and commuting habitat on the site is limited and none of the buildings or trees on site are considered likely to be used by bats. However, as bats are a highly mobile species, any bats which do use the site for foraging or commuting are likely to be part of the wider population important at the local level. |
| Reptiles | Local Level | The site may support a small population of reptiles which are uncommon in the local urban environment. |

# 4. CONCLUSIONS AND RECOMMENDATIONS

This section collates the information gained during the desk study, extended Phase 1 habitat survey and bat scoping survey, presenting the ecological constraints and opportunities and making recommendations for mitigation and compensation. It has been prepared in the context of the Proposed Development of the site.

## 4.1 Habitats

The loss of a habitat important at the County level and a Welsh Priority Habitat (Open Mosaic Habitat on Previously Developed Land) is likely to occur through construction of the proposed development. The loss of this habitat is likely to occur through site clearance required to accommodate access, compounds and material laydown areas. To minimise loss of this habitat, these activities should be restricted to the southern extent of the site which is predominantly bare ground, thereby retaining open mosaic habitat to the north.

If this cannot be achieved through design, the loss of this habitat should be compensated for onsite and this could be achieved through the inclusion of a biodiverse roof on the new kop building. This would provide similar conditions to those on site within which the open mosaic habitat has developed. In addition, areas of bare ground could be left to naturally revegetate as designated as wildlife areas. Should the open mosaic habitat not be affected by the kop development, consideration by the client should be given as to the future development plans for this area such that a biodiverse roof can still be incorporated at part of this development to compensate for any future loss of this habitat.

Potential temporary, indirect impacts on retained habitats can be controlled through a CEMP. This could include dust control measures to prevent construction dust impacting the retained habitats and measures to prevent contaminated run-off leaching into adjacent habitats.

Retained habitats should be managed to prevent the spread of the invasive butterfly bush as without management this plant is likely to progressively dominate the site.

## 4.2 Species

No further species surveys are required but the following recommendations should be implemented prior/during site clearance as appropriate.

### 4.2.1 Invertebrates

Areas of open mosaic habitat should be retained where possible. As above, where this cannot be achieved compensatory habitat should be provided on site. This could be in the form of a biodiverse roof and ensuring that any landscape planting includes a range of species which are valuable to invertebrates, in particular pollinators. Refuges should be provided through provision of log piles, pebbles or insect boxes (‘bug hotels’) in newly created habitats to replace the loss of existing habitat provided by the rubble and debris scattered throughout the existing site.

### 4.2.2 Birds

All wild birds are protected whilst nesting, with destruction of active nests, killing or injuring a wild bird constituting offences under the Wildlife and Countryside Act 1981 (as amended). Loss of vegetation would remove suitable nesting habitat for breeding birds. Were this to take place during the breeding season (March to August inclusive), there would be a risk that nests would be damaged or destroyed during the process. Therefore, vegetation removal should take place between September and February. If this is not possible, a nesting bird check should be undertaken by an experienced ecologist prior to vegetation removal where practical to do so (i.e. this may not be possible for areas of dense scrub). If evidence of nesting birds is identified, work

should stop and a suitable no-work buffer zone around the nest area should be installed, until such time as chicks have fledged.

In addition to this, birds listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), such as black redstart, are afforded additional protection and it is an offence to intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird. Should this species be present, it would be necessary to avoid disturbing it during site clearance/development which may mean setting up an exclusion zone which neutralises part of the site until breeding is complete.

Ten bird boxes should be installed on retained trees or integrated into the new building to compensate for the loss of nesting habitat associated with vegetation removal during site clearance.

#### 4.2.3 Bats

It is recommended that the trees on the wooded embankment which have light-moderate ivy cover are soft-felled under an ecological watching brief on a precautionary basis.

Potential impacts upon bats could arise from light spill onto retained habitats. This could potentially cause disturbance to foraging and commuting bats. The lighting strategy for the site should therefore be devised to ensure that spillage of artificial lights is minimised. In addition to complying with building regulations, the lighting scheme should be designed following guidelines from the BCT Bats and Lighting in the UK[13]. These include:

- using low- or high-pressure sodium lights or LEDs instead of mercury or metal halide lamps, where possible, and avoiding the use of lamps greater than 150W;
- directing lighting to where needed and avoiding spillage, including the use of hoods, cowls, shields etc. to avoid spillage onto areas of vegetation; and
- only lighting areas which need to be lit and using the minimal level of lighting required to comply with building regulations.

#### 4.2.4 Reptiles

Potential impacts upon reptiles could arise during site clearance, during which there is potential to disturb and potentially injure/kill reptiles in additional to loss of suitable habitat for reptiles. To protect reptiles potentially using the site, site clearance should be undertaken under a Precautionary Working Method Statement (PWMS) which will include measures to minimise the risk to reptiles through careful site clearance with ecological supervision. Should reptiles be found to be present it is anticipated that this would be in small numbers and sufficient terrestrial habitat could be retained to the north of the site, in the area of semi-improved grassland, scrub and short-ephemeral vegetation. This area is not located within the footprint of the Proposed Development but is located within the construction boundary and it would be necessary to limit impact on this area in keeping with the recommendations to retain the open mosaic habitat as specified in Section 4.1

### 4.3 Opportunities for Ecological Enhancement

Additional biodiversity enhancement measures could include (but are not limited to) the following:

- provision of green walls by the incorporation of climbing plants on one or more elevations of the new stand;

[13] Bat Conservation Trust, 2018. Bats Artificial Lighting in the UK. Guidance Note 08/18.

- Creation of mini ponds or rain gardens using collected surface water and redirecting to a designated area;
- enhancement for bats provided through the provision of bat boxes installed upon suitable trees or buildings or integrated into the new building on the site; and
- enhancement for hedgehogs through the provision of suitable nest boxes.

# 5. SUMMARY

The table below summarises the proposed ecological mitigation and compensation measures:

Table 5.1: Ecological Importance of Features Present on the Site (in accordance with CIEEM, 2016)

| Feature | Mitigation | Compensation |
|---|---|---|
| Open mosaic habitat | Minimise loss of habitat by restricting compound and laydown areas to the southern extent of the site. | Inclusion of a biodiverse roof or roof section on the new kop building. |
| Invertebrates | Minimise loss of habitat by restricting compound and laydown areas to the southern extent of the site. | Inclusion of a biodiverse roof or roof section on the new kop building<br>Ensure landscape planting includes pollinator friendly species<br>Provide refuges through log piles, or insect boxes. |
| Reptiles | To protect reptiles potentially using the site, site clearance should be undertaken under a Precautionary Working Method Statement (PWMS) which will include measures to minimise the risk to reptiles through careful site clearance with ecological supervision. | |
| Birds | Undertake clearance outside of the nesting bird season between September and February. | Ten bird boxes should be installed on retained trees or integrated into the new building to compensate for the loss of nesting habitat associated with vegetation removal during site clearance. |
| Bats | Soft fell trees on the wooded embankment which have light to moderate ivy cover under a watching brief.<br>Use of a sensitive lighting strategy to reduce unnecessary light spill onto retained and new habitats. | |
| Ecological enhancement opportunities | Provision of green walls by the incorporation of climbing plants on one or more elevations of the new stand.<br>Creation of mini ponds or rain gardens using collected surface water and redirecting to a designated area.<br>Enhancement for bats provided through the provision of bat boxes installed upon suitable trees or buildings or integrated into the new building on the site.<br>Enhancement for hedgehogs through the provision of suitable nest boxes. | |

# APPENDIX 1
# PHASE 1 HABITAT MAP




## Legend

- Construction Boundary
- A2.2 Scrub - scattered
- Target note
- A1.1.1 Broadleaved woodland - semi-natural
- A2.2 Scrub - scattered
- B2.2 Neutral grassland - semi-improved
- J1.3 Cultivated/disturbed land - ephemeral/short perennial
- J3.6 Buildings
- J4 Bare ground
- Hardstanding

Figure Title
Figure 1: Phase 1 Habitat Map

Project Name
Project Name

| Project Number | Figure No. |
|---|---|
| RUK2021N00485 | 1 |
| **Date** | **Prepared By** |
| August 2021 | NJ |
| **Scale** | **Issue** |
| 1:750 @A3 | 1 |

Client
**Wrexham AFC**

RAMBOLL

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri UK, Esri, HERE, Garmin, INCREMENT P, METI/NASA, USGS

# APPENDIX 2
# RELEVANT LEGILSATION AND POLICY

Ecological features are protected under various United Kingdom (UK) and European legislative instruments. These are described below. European legislation is not included as it is incorporated in UK legislation by domestic provisions.

## Legislation

*The Conservation of Habitats and Species Regulations 2017*

The Habitats Directive (Council Directive 92/43/EEC)[14] came into force in 1992 and provides for the creation of a network of protected wildlife areas across the European Union (EU), known as 'Natura 2000'. The Natura 2000 network consists of Special Areas of Conservation (SAC) designated under the Habitats Directive and Special Protection Areas (SPA) designated under the Birds Directive (Council Directive 79/409/EEC)[15]. These sites are part of a range of measures aimed at conserving important or threatened habitats and species.

The Conservation of Habitats and Species Regulations 2017[16] (commonly known as the 'Habitats Regulations') transposes the Habitats Directive into national law and set out the provisions for the protection and management of species and habitats of European importance, including Natura 2000 sites. The 2017 bill consolidated all previous versions of the regulations and subsequent amendments since initial transposition, bringing them all under the single heading, and made some minor amendments. It extends to England and Wales, and to a limited extent Scotland and Northern Ireland. Further amendments were made via The Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2018[17] to ensure they reflect recent European case law (C-323/17 People Over Wind and Sweetman v Coillte Teoranta) in relation to the assessment of plans and projects on sites protected under Council Directive 92/43/EEC on the conservation of natural habitats of wild fauna and flora (the 'Habitats Directive'). In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transposes the Habitats Directive in relation to Northern Ireland.

In addition to providing for the designation and protection of Natura 2000 sites, the Habitats Regulations provide strict protection for plant and animal species as European Protected Species. Derogations from prohibitions are transposed into the Habitats Regulations by way of a licensing regime that allows an otherwise unlawful act to be carried out lawfully for specified reasons and providing certain conditions are met. Under the Habitats Regulations, competent authorities have a general duty, in the exercise of any of their functions, to have regard to the Habitats Directive and Wild Birds Directive including in the granting of consents or authorisations. They may not authorise a plan or project that may adversely affect the integrity of a European site, with certain exceptions (considerations of overriding public interest).

The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, require the Secretary of State and Welsh Ministers to secure compliance with the requirements of the Nature Directives. Any new powers in the 2019 Regulations must be exercised in line with the Directives and retained EU case law up to 1 January 2021.

[14] European Commission, 1992. Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

[15] European Commission, 1979. Council Directive 79/409/EEC on the conservation of wild birds.

[16] Her Majesty's Stationery Officer (HMSO), 2017. The Conservation of Habitats and Species Regulations 2017. HMSO.

[17] Her Majesty's Stationery Officer (HMSO), 2018. The Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2018. HMSO.

*The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*[18]

SACs and Special Protection Areas (SPAs) in the UK no longer form part of the EU's Natura 2000 ecological network. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 have created a national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes:

- existing SACs and SPAs; and
- new SACs and SPAs designated under these Regulations.

Any references to Natura 2000 in The Conservation of Habitats and Species Regulations 2017, as amended and in guidance now refers to the new national site network. Maintaining a coherent network of protected sites with overarching conservation objectives is still required in order to:

- fulfil the commitment made by government to maintain environmental protections
- continue to meet our international legal obligations, such as the Bern Convention, the Oslo and Paris Conventions (OSPAR), Bonn and Ramsar Conventions

Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the national site network. Many Ramsar sites overlap with SACs and SPAs, and may be designated for the same or different species and habitats. All Ramsar sites remain protected in the same way as SACs and SPAs.

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 establish management objectives for the national site network. These are called the network objectives.

The UK Government and devolved administrations (in Wales, Northern Ireland and Scotland) will cooperate to manage, and where necessary, adapt the network to contribute towards meeting the network objectives.

Any references in the 2017 Regulations to meeting the 'requirements of the Directives' includes achieving the network objectives.

The appropriate authorities may publish guidance relating to these requirements. The appropriate authorities are the Secretary of State for Environment, Food and Rural Affairs in England and the Welsh Ministers in Wales.

The network objectives are to:

- maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive to a favourable conservation status (FCS)
- contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive

The appropriate authorities must also have regard to the:

- importance of protected sites
- coherence of the national site network
- threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs

The network objectives contribute to the conservation of UK habitats and species that are also of pan-European importance, and to the achievement of their FCS within the UK.

[18] Secretary of State (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Her Majesty's Stationery Office (HMSO)

*The Countryside and Rights of Way Act 2000*

The Countryside and Rights of Way Act 2000[19] primarily extends to England and Wales. It provides a new statutory right of access to the countryside and modernises the rights of way system, bringing into force stronger protection for both wildlife and the countryside.

The Act is divided into five distinct sections, Part III is of relevance to ecology:

- Part III – Nature Conservation and Wildlife Protection: The Act details measures to promote and enhance wildlife conservation. These measures include improving protection for Sites of Special Scientific Interest (SSSI) and increasing penalties for deliberate damage to SSSIs. Furthermore, the Act affords statutory protection to Ramsar Sites which are wetlands designated under the International Convention on Wetlands[20].

*The Wildlife and Countryside Act 1981 (As Amended)*

The Wildlife and Countryside Act 1981 (as amended)[21] forms the basis of much of the statutory wildlife protection in the UK. Part I deals with the protection of plants, birds and other animals and Part II deals with the designation of SSSIs.

This Act covers the following broad areas:

- Wildlife – listing endangered or rare species in need of protection and creating offences for killing, disturbing or injuring such species. Additionally, the disturbance of any nesting bird during breeding season is also noted as an offence, with further protection for species listed on Schedule 1. Measures for preventing the establishment of non-native plant and animal species as listed on Schedule 9 are also provided;
- Nature Conservation – protecting those sites which are National Nature Reserves (NNR) and SSSIs;
- Public Rights of Way – placing a duty on the local authority (to maintain a definitive map of footpaths and rights of way. It also requires that landowners ensure that footpaths and rights of way are continually accessible; and
- Miscellaneous General Provisions.

The Act is enforced by local authorities.

*Natural Environment and Rural Communities Act 2006*

Under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006[22], public authorities must show regard for conserving biodiversity in all their actions. Public authorities should consider how wildlife or land may be affected in all the decisions that they make. The commitment to the biodiversity duty must be measured by public authorities.

Section 41 also requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England.

[19] Her Majesty's Stationery Officer (HMSO), 2000. The Countryside and Rights of Way Act 2000. HMSO.

[20] United Nations Educational, Scientific and Cultural Organization (UNESCO), 1971. Convention on Wetlands of International Importance especially as Waterfowl Habitat, as amended in 1982 and 1987. Ramsar, Iran Published in Paris, 1994.

[21] Her Majesty's Stationery Office (HMSO), 1981. The Wildlife and Countryside Act 1981 [as amended in Quinquennial Review and by the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006]. HMSO.

[22] Her Majesty's Stationery Office (HMSO), Natural Environment and Rural Communities Act 2006. HMSO.

*Protection of Badgers Act 1992*

The Protection of Badgers Act 1992[23] consolidated previous legislation relating specifically to badgers. The Act makes it an offence to kill, injure or take a badger, or to damage or interfere with a sett unless a licence is obtained from a statutory authority (i.e. Natural England).

*Wild Mammals (Protection) Act 1996*

The Wild Mammals (Protection) Act 1996[24] makes it an offense for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering. There are certain exemptions including acts of mercy and acts made lawful by means of hunting, shooting, coursing or pest control activities.

Policy

*Biodiversity in the Planning Process*

Administrative and policy guidance on the application of some of these statutory obligations is provided through relevant government policy guidance and advice. In England, this includes National Planning Policy Framework 2012, National Planning Practice Guidance, Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, Biodiversity 2020 and Natural Environment White Paper The natural choice: securing the value of nature.

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*Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*

This circular[25] provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements the national planning policy in the NPPF and PPG.

*Natural Environment White Paper. The Natural Choice: Securing the Value of Nature*

The Natural Environment White Paper[26] outlines the Government's vision for the natural environment over the next 50 years, shifting the emphasis to an integrated landscape-scale approach. It describes the actions that will be taken to deliver that goal.

*Nature Recovery Action Plan 2020 - 2021*

The Nature Recovery Action Plan (NRAP) for Wales was originally published in December 2015 as the Nature Recovery Plan. It sets out how the United Nations Environment Programme's Convention on Biological Diversity's (CBD) Strategic Plan for Biodiversity and the associated Aichi Biodiversity Targets for 2011-20 in Wales would be addressed, and is the National Biodiversity Strategy and Action Plan for Wales.

[23] Her Majesty's Stationery Office (HMSO), 1992. Protection of Badgers Act 1992. HMSO.

[24] Her Majesty's Stationary Office (HMSO), Wild Mammals (Protection) Act 1996. HMSO.

[25] Office of the Deputy Prime Minister, 2005. Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. Available at: https://www.gov.uk/government/publications/biodiversity-and-geological-conservation-circular-06-2005

[26] Department for Environment, Food and Rural Affairs (Defra), 2011. Natural Environment White Paper. The natural choice: securing the value of nature. Available at: https://www.gov.uk/government/publications/the-natural-choice-securing-the-value-of-nature

*Biodiversity Action Plans (BAP)*

In 1994, the Government produced the UK Biodiversity Action Plan (BAP)[27], a national strategy for the conservation of biodiversity. This led to the creation of the UK Biodiversity Steering Group, which has listed 1,150 Species Action Plans (SAPs) and 65 Habitat Action Plans (HAPs). Regional and District/Borough BAPs apply the UK BAP at a local level.

From July 2012, the 'UK Post-2010 Biodiversity Framework'[28] succeeds the UK BAP. This is a result of a change in strategic thinking following the publication of the 'Convention on Biological Diversity's Strategic Plan for Biodiversity 2011-2020'[29] and its 20 'Aichi targets'[30], at Nagoya, Japan in October 2010, and the launch of the new EU Biodiversity Strategy (EUBS) in May 2011.

The UK Post-2010 Biodiversity Framework constitutes the UK's response to these new 'Aichi' strategic goals and associated targets. The Framework recognises that most work which was previously carried out under the UK BAP is now focussed on the individual countries of the UK (and Northern Ireland) and delivered through each countries' own strategies.

Following the publication of the new Framework, the UK BAP partnership no longer operates. However, many of the tools and resources originally developed under the UK BAP remain of use. The UK list of priority species has been used to help draw up statutory lists of priorities in England, Scotland, Wales and Northern Ireland. For England, this is in line with Section 41 of NERC.

*Local Planning Policy*

*Wrexham Local Development Plan 2 (LDP2) Strategic Policies*

The Wrexham Local Development Plan (LDP) was adopted in October 2017. The applicable Policy – Local Planning Guidance Note 32 (Biodiversity & Development) is contained with Wrexham Council Local Planning Guidance Notes. The Local Plan aims to safeguard and enhance biodiversity through the identification and protection of sites and/ or species of international, national, and local importance.

[27] Her Majesty's Stationery Office (HMSO), 1994. Biodiversity: The UK Action Plan. HMSO.

[28] JNCC and Defra (on behalf of the Four Countries' Biodiversity Group), 2012. UK Post-2010 Biodiversity Framework. July 2012. jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

[29] Available at: https://www.cbd.int/sp/

[30] Available at: https://www.cbd.int/sp/targets/

# APPENDIX 3
# PHOTOGRAPHIC APPENDIX

| Target Note | Photograph |
| --- | --- |
| TN1 – Disused kop |  |
| TN2 - Hardstanding |  |