

Preliminary Ecological Appraisal



**Tyler
Grange**

**InBev Magor,
Monmouthshire
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Summary

- S.1. This report has been prepared by Tyler Grange Group Limited on behalf of Gerald Eve LLP. It sets out the findings of a Preliminary Ecological Appraisal at InBev, Magor, Caldicot, hereinafter referred to as 'the site' to inform site promotion.
- S.2. This report describes: the important ecological features that could be affected by the proposed development, identified through desk study and a site survey of the site in question; known potential ecological constraints which may need to be considered at the time of any planning application for the site: and identifies the opportunities for ecological enhancements, including considerations for net benefits for biodiversity.
- S.3. In terms of protected sites, three Natura 2000 sites (Severn Estuary Ramsar, Special Areas of Conservation (SAC) and Special Protection Area (SPA)), four statutory and fourteen non-statutory designated sites are located within 10 km, 2 km and 2 km respectively. The closest is Gwent Levels - Redwick and Llandeenny Site of Special Scientific Interest (SSSI) located 0.06km south of the site. Impacts to the during construction, namely from pollution (run-off and dust) can be controlled through the implementation of a Construction Environmental Management Plan (CEMP). No anticipated impacts are anticipated to other designated sites within the search area due to the distances involved and the nature of the proposals.
- S.4. The majority of the site contains arable fields and short sward grassland, with a number of buildings with associated hardstanding and vegetated gardens, all of which have negligible ecological importance. Lines of trees, mature trees, scrub and woodlands are scattered throughout the site which are considered to be of local ecological importance. The hedgerow predominately consists of at least one woody UK native species and are therefore a priority habitat under section 41 of the NERC Act 2006 and are considered to be of up to County ecological importance. The evolving design should follow the mitigation hierarchy, namely retention and enhancement of native hedgerows, woodland, trees and lines of trees with appropriate protection during construction in line with British Standards. Where this is not possible, any lost habitats should be replaced with habitats of either greater area or better condition or both, in order to achieve a net benefit for biodiversity. Created habitats should be of the same broad type as those lost. The recommended proposed habitats are native hedgerows, other neutral grassland, mixed scrub, woodland and tree planting.
- S.5. The site could support badger, bats, birds, great crested newt, other amphibians, otter and reptiles. Detailed further survey work would be needed for habitats (botanical surveys), bats if trees or buildings are being impacted as part of the proposals, bat activity and emergence surveys, habitat suitability index and eDNA for great crested newt on any ponds on or within 250 m of the site, badger surveys, breeding and wintering bird surveys, otter surveys and reptile presence/likely absence surveys to inform a future planning application. The full scope of further work is dependent on the proposals.
- S.6. No issues that could affect the principle or significantly affect the quantum of development the site could support have been identified. With the recommendations and further work set out in this report, there can be confidence that the site could be developed in accordance with relevant planning policy and legislation including policy S13 from the Monmouthshire Local Development Plan 2014.



Section 1: Introduction

Introduction

- 1.1. This report has been prepared by Tyler Grange Group Ltd on behalf of Gerald Eve LLP. This report sets out the findings of a Preliminary Ecological Appraisal at InBev, Magor, Caldicot (OS Grid Reference ST 41306 87272), hereafter referred to as 'the site'. See **Figure 1.1** for the indicative red line boundary.



Figure 1.1. Indicative red line boundary (© Google Aerial Imagery)

Purpose

- 1.2. This report:
- Uses available background data and results of the field surveys to describe and evaluate the ecological features present within the likely "Zone of Influence"¹ (Zoi) of potential development of the site; and
 - With reference to relevant planning policy and legislation (**Appendix 1**), describes the actual or potential ecological issues and opportunities that might arise as a result of the site's development, or identifies issues that could affect the principle or quantum of development the site could support.

¹ Defined by the CIEEM (2018) Guidelines for Ecological Impact Assessment as the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries



- 1.3. This assessment and the terminology used are consistent with the Guidelines for Preliminary Ecological Appraisal².

Methodology

- 1.4. Full methods for the data search and phase 1/UK Habitat Classification (UK Habs) survey work can be found in **Appendix 2**.

Quality Control

- 1.5. All ecologists at Tyler Grange Group Limited are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) or are working towards membership and act under the direction of members, and abide by the Institute's Code of Professional Conduct³.

Limitations and Assumptions

- 1.6. Full access to the site was not granted at the time of the survey. Therefore, the survey was undertaken from a public footpath which runs through the site. Consequently, full species lists and condition assessments were not able to be collected for the habitats on site. Further surveys would be needed to fully characterise the habitats on site.

² CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

³ CIEEM (2022) Code of Professional Conduct, CIEEM, Winchester



Section 2: Ecological Features and Potential Impacts, Mitigation, and Enhancement

Designated Sites

- 2.1. The data search returned three Natura 2000 sites within 10 km of the site, four statutory designated sites and fourteen non-statutory designated sites within 2 km of the site. These are detailed in **Table 2.1** over the page, along with potential impacts and mitigation measures which may be required.



Table 2.1. Designated Sites

Designated site	Distance and direction from site	Ecological Importance	Reason for Designation	Potential Impacts and Requirement for Mitigation	Relevant Legislation and Policy
Severn Estuary Ramsar	3.2 km south east	International	Designated for: <i>Criteria 1</i> - Due to immense tidal range (second-largest in world), this affects both the physical environment and biological communities. - Annex I features listed below for SAC <i>Criteria 3</i> Due to unusual estuarine communities, reduced diversity and high productivity. <i>Criteria 4</i> This site is important for the run of migratory fish between sea and river via estuary and migratory birds during spring and autumn. <i>Criteria 5</i> Assemblage of international importance of waterfowl <i>Criteria 6</i> Species with peak counts in winter – Tundra swan <i>Cygnus columbianus bewickii</i>, greater white-fronted goose <i>Anser albifrons</i>, common shelduck <i>Tadorna tadorna</i>, gadwall <i>Anas strepera</i>, Dunlin <i>Calidris alpina</i>, common redshank <i>Tringa totanus tetanus</i>. <i>Criteria 8</i> Key migration route to fish spawning grounds and important as feeding and nursery grounds.	The site falls within the Impact Risk Zone for the Severn Estuary, if the proposals fall within the at risk categories, consultation with Natural England or National Resource Wales (NRW) may be required. No anticipated impacts due to the distances involved and the nature of the proposals.	The Conservation of Habitats and Species Regulations 2017 (as amended)
Severn Estuary Special Area of Conservation (SAC)	3.2 km south east	International	Annex I habitat that is a primary reasons - Estuaries - Mudflats and sandflats not covered by seawater at low tide - Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) Annex I habitat present as a qualifying feature - Sandbanks which are slightly covered by sea water all the time - Reefs Annex II species that are a primary reason - Sea lamprey <i>Petromyzon marinus</i> - River lamprey <i>Lampetra fluviatilis</i> - Twaite shad <i>Alosa fallax</i>		The Conservation of Habitats and Species Regulations 2017 (as amended)
Severn Estuary Special Protection Area (SPA)	3.2 km south east	International	Qualifying Features: <i>Cygnus columbianus bewickii</i>; Bewick's swan (Non-breeding) <i>Tadorna tadorna</i>; Common shelduck (Non-breeding) <i>Anas strepera</i>; Gadwall (Non-breeding) <i>Calidris alpina alpina</i>; Dunlin (Non-breeding)		The Conservation of Habitats and Species Regulations 2017 (as amended)

Designated site	Distance and direction from site	Ecological Importance	Reason for Designation	Potential Impacts and Requirement for Mitigation	Relevant Legislation and Policy
			<i>Tringa totanus</i> ; Common redshank (Non-breeding) <i>Anser albifrons albifrons</i> ; Greater white-fronted goose (Non-breeding) Waterbird assemblage		
Gwent Levels - Redwick and Llandeenny Site of Special Scientific Interest (SSSI)	0.06 km south	National	Designated for its extensive area of reclaimed wet pastures with a rich species diversity and communities, including nationally rare or notable aquatic invertebrate fauna, terrestrial invertebrates and rare plant species interest.	Best practice pollution prevention measures, incorporated into a Construction Environment Management Plan (CEMP).	N/A
Magor Marsh SSSI	0.8 km south east	National	Designated as the largest remnant of the formerly extensive fenlands, supporting a variety of aquatic flora and an important breeding ground for water and marsh birds.	No anticipated impacts due to the distances involved and the nature of the proposals.	
Gwent Levels – Magor and Undy SSSI	1.3 km south east	National	Designated for supporting forty three nationally rare and notable invertebrates and aquatic plant species interest.		
Gwent Levels – Whitson SSSI	1.7 km south west	National	Designated for supporting reed and ditch habitats, insects and other invertebrates and shrill carder bee, all as special features of the SSSI.		
Upper Cottage Pond Wildlife Site/Site of Importance for Nature Conservation (SINC)	0.4 km west	Local	The pond does lack diversity, the main interest lies with the abundance of <i>Catabrosa aquatica</i> .	Best practice pollution prevention measures, incorporated into a Construction Environment Management Plan (CEMP).	
Wilcrick Fort West Wildlife Site/SINC	0.5 km north west	Local	Unimproved neutral grassland on slopes.		
Land at Barecroft Common Wildlife Site/SINC	0.6 km south east	Local	Three large, flat fields on the Gwent Levels at Magor: All fields comprise semi-improved damp grassland.	No anticipated impacts due to the distances involved and the nature of the proposals.	
Barecroft Fields Wildlife Site/SINC	0.6 km south east	Local	Lowland species-rich grassland.		
Bowkett Field, Barecroft Wildlife Site/SINC	0.6 km south east	Local	Lowland species-rich grassland.		
Bluehouse Farm Wildlife Site/SINC	0.7 km south east	Local	Two species-rich neutral grassland fields split divided by a ditch.		
Grange Road Wildlife Site/SINC	1.2 km north east	Local	Two species-rich neutral grassland fields including both flat low lying field with a watercourse.		
Upper Grange Farm Field Wildlife Site/SINC	1.4 km north east	Local	Lowland Species-rich grassland.		
Blackwall Lane Field Wildlife Site/SINC	1.4 km south east	Local	Lowland Species-rich grassland.		

Designated site	Distance and direction from site	Ecological Importance	Reason for Designation	Potential Impacts and Requirement for Mitigation	Relevant Legislation and Policy
Ridings Wood Wildlife Site/SINC	1.6 km north west	Local	Ancient semi-natural woodland.		
Bridewell Common Field Wildlife Site/SINC	1.7 km east	Local	Species-rich grassland and floodplain pastures/ seasonally flooded pasture.		
Greenmoor Pool Wildlife Site/SINC	1.7 km west	Local	Formerly standing water which now supports reed swamp (UKBAP Priority Habitat), which itself supports bird populations including Cetti's warbler.		
Grange Wood and The Larches Wildlife Site/SINC	1.8 km north east	Local	No information available.		
Cae Wall Wood Wildlife Site/SINC	1.9 km north west	Local	Part replanted ancient semi-natural woodland.		



Habitats and Protected Species

- 2.2. The habitats and presence of, or potential for, protected species that could be affected by the proposed development are summarised below in **Tables 2.2** and **2.3** respectively. Species which are considered likely absent from the site based on professional judgement following consideration of the habitats within the site, signs of species presence at the time of survey and data search records, are not discussed. The locations of habitats are shown on the Habitats Features Plan **01586/P97**.



Table 2.2. Habitats, their Importance, Potential Impacts and Mitigation/Enhancement Opportunities

Habitats	Description and ecological importance	Potential Constraints/Impacts and Mitigation/Enhancement Opportunities	Photograph
Building and Hardstanding (Inaccessible)	The northern portion of the site comprises buildings and hardstanding associated with the current operations at the InBev facility. A number of other buildings are located across the southern portion of the site including a farmhouse, agricultural buildings and stables. These are accessed from a hardstanding road. Negligible ecological importance.	See fauna section below in relation to bats and nesting birds.	Inaccessible
Built up areas and gardens	A vegetated garden with a mown lawn and introduced shrubs is associated with the farmhouse. Negligible ecological importance.	Vegetated gardens are a common and widespread habitat within the wider landscape.	
Arable Cropland	The majority of the site comprises arable cropland fields. Negligible ecological importance.	Arable cropland is a common and widespread habitat within the wider landscape.	
Grassland	The southern portion of the site comprises sheep and horse grazed fields. Negligible ecological importance	Grassland is a common and widespread habitat within the wider landscape. The whole site is included within NRW Priority Area (Lowland Meadow). As such, further surveys of the grassland are required within the botanical period when the majority of plants are visible (May – August) to classify the grassland. Grassland habitats, seeded with a more diverse mix of local provenance and managed more informally should be included within the evolving design to compensate for the losses involved.	

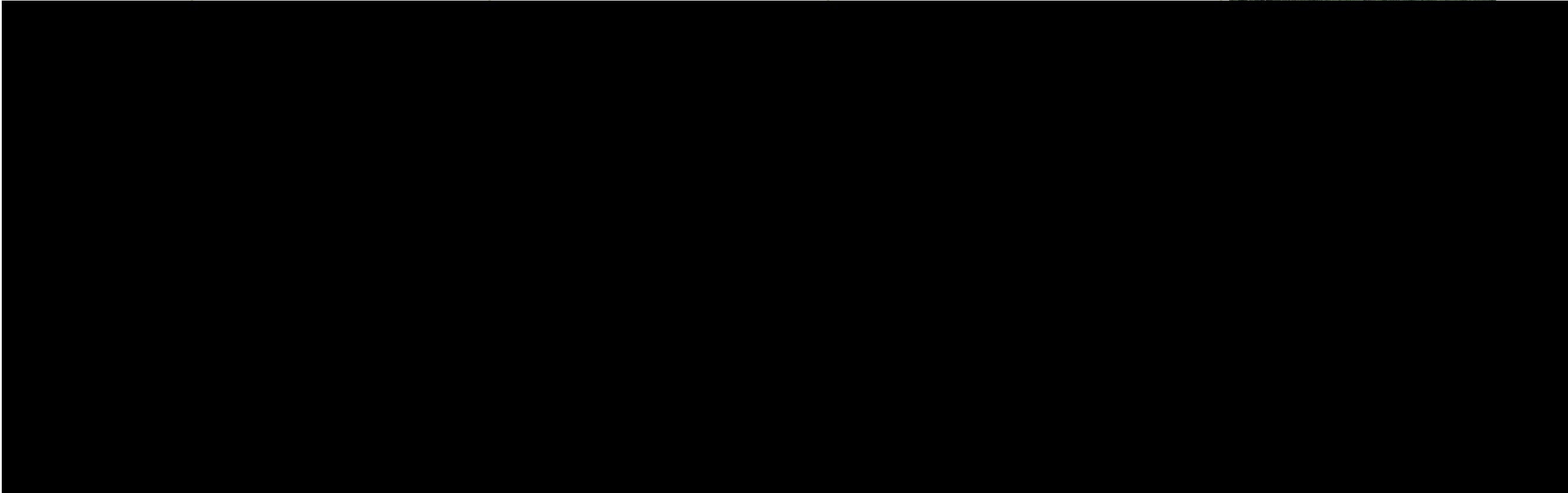
Habitats	Description and ecological importance	Potential Constraints/Impacts and Mitigation/Enhancement Opportunities	Photograph
Line of trees and hedgerows	The majority of the arable and grassland fields are bounded by native lines of trees and hedgerows. The majority of hedgerows are managed and dominated by hawthorn <i>Crataegus monogyna</i>, field maple <i>Acer campestre</i>, ash <i>Fraxinus excelsior</i>, hazel <i>Corylus avellana</i> and elder <i>Sambucus nigra</i> with bramble <i>Rubus fruticosus agg</i>, dog rose <i>Rosa canina</i>, holly and ivy <i>Hedera helix</i>. The hedgerow predominately consists of at least one woody UK native species and are therefore a priority habitat under section 41 of the NERC Act 2006 and are considered to be of up to County ecological importance.	Where possible, lines of trees and hedgerows should be retained, protected and enhanced as part of the evolving design of the scheme to maintain these important features, follow the mitigation hierarchy and contribute to a net benefit for biodiversity. Further surveys to determine whether the hedgerows are classed as important under the Hedgerow Regulations 1997 should be undertaken. During construction, damage to these habitats could occur as a result of machinery use or storage of materials, could occur. In the absence of mitigation, these impacts could trigger local planning policy. Therefore, to mitigate for the impacts, all retained trees should be protected by tree protection fencing, installed in line with the British Standard BS5837: 2012 'Trees in relation to design, demolition and construction'. The line of trees and hedgerows could be enhanced through infill planting and understorey planting with native species to create a continuous, denser and more diverse line of trees. The line of tree could be buffered through an ecotone, scrub and grassland as part of the proposals to create a wildlife corridor along the southern boundary and providing connectivity into the wider landscape. Should the line of trees or hedgerows be lost as part of the proposals, new native lines of trees should be included within the design to compensate for those lost and contribute to a net benefit for biodiversity.	
Trees	Mature trees are located across the site, including around the boundaries and scattered within the arable fields. Local ecological importance	During construction damage could occur as a result of machinery use, storage of materials or pollution (namely run-off and dust). To mitigate for the impacts, trees should be protected by tree protection fencing, installed in line with the AIA and British Standard BS5837: 2012 'Trees in relation to design, demolition and construction'. Standard best practice pollution prevention⁴ measures should be incorporated into a Construction Environmental Management Plan (CEMP) and implemented during construction. Where possible, mature trees should be retained within the evolving design to maintain these important features, follow the mitigation hierarchy and contribute to a net benefit for biodiversity. Individual trees could be enhanced through adjacent native scrub/woodland/hedgerow planting to provide a corridor for wildlife movement.	

⁴ CIRIA (2015) *Construction Work Sector Guidance for Designers*. Fourth edition. (C755D).

Habitats	Description and ecological importance	Potential Constraints/Impacts and Mitigation/Enhancement Opportunities	Photograph
Scrub/ Woodland	Areas of scrub and woodland planting are present adjacent to the buildings in the north west of the site and along the eastern and southern boundaries. Species recorded include hazel, field maple, elder and hawthorn. Local ecological importance.	During construction damage could occur as a result of machinery use, storage of materials or pollution (namely run-off and dust). To mitigate for the impacts, areas of woodland should be protected by tree protection fencing, installed in line with the AIA and British Standard BS5837: 2012 'Trees in relation to design, demolition and construction'. Standard best practice pollution prevention⁵ measures should be incorporated into a Construction Environmental Management Plan (CEMP) and implemented during construction. As part of the evolving design, scrub and woodland habitats could be enhanced to increase its diversity through planting a number of native whips and management to create more structure within the area. Scrub and woodland habitats provide corridors for wildlife movement and provide protection to adjacent hedgerows and lines of trees. This could be enhanced further by providing connectivity to the wider landscape.	

⁵ CIRIA (2015) *Construction Work Sector Guidance for Designers*. Fourth edition. (C755D).

Table 2.3. Fauna (including Protected/Priority Species) their Importance, Potential Impacts and Mitigation/Enhancement Opportunities

Fauna (including Protected/Priority Species)	Ecological Importance/Suitability for Protected/Priority ⁶ species	Constraints and Further Surveys	Potential Impacts and Mitigation/Enhancement Opportunities	Photograph
				
				
Bats	The data search returned records of eight species of bat within 4 km of the site including brown long eared <i>Plecotus auritus</i>, common pipistrelle <i>Pipistrellus pipistrellus</i>, soprano pipistrelle <i>P. pygmaeus</i>, lesser horseshoe bat <i>Rhinolophus hipposideros</i>, Natterer's bat <i>Myotis nattereri</i>, noctule <i>Nyctalus noctule</i>, leisler's bat <i>N. leisleri</i> and unidentified <i>Myotis</i> species. The line of trees, hedgerows and woodland offer habitat of high suitability for commuting/foraging and provide connectivity to suitable habitat within the wider landscape.	In England and Wales, bats and their roosts are protected under the Conservation of Habitats and Species Regulations (2010) and the WCA (1981) (as amended). Some bat species are also priority species. Impacts to these habitats should be avoided where possible. If these habitats are to be lost or impacted, monthly or seasonal bat activity surveys would be required to inform mitigation.	Impacts to suitable habitat should be controlled via a CEMP and a bat sensitive lighting strategy. Native species planting in unlit areas, including linear features, may enhance the site for commuting and foraging bats.	

⁶ Priority species and habitats are those listed at Section 41 of the Natural Environment and Rural Communities (NERC) Act 2005. Section 40 of the NERC Act puts a duty on local authorities to have regard for the conservation of these species, including when considering planning allocations and applications.

	A number of the buildings and mature trees across the site may have potential roosting features.	Trees should be retained as part of the proposals and protected during construction (see Table 2.2 above). Should any trees be removed, a ground level tree assessment should be undertaken to assess the trees potential to support roosting bats. Following the ground level tree assessment, further surveys of the trees maybe required including bat roost surveys in the period May-August/September (inclusive). All buildings onsite should be inspected by a suitably experienced bat licenced surveyor for bat roosting potential. Following the survey, depending on the suitability of the building, further surveys of the building maybe required including bat roost surveys in the period May-August/September (inclusive).	Impacts to any Potential Roost Features being retained should be controlled via a CEMP. Bat sensitive lighting should be used whenever possible. Inclusion of bat boxes in the scheme would enhance the site for roosting bats.	
Birds (Breeding and Wintering)	The data search returned numerous of records of protected and notable birds species within 2 km of the site, including farmland and garden species. Of these, some species of relevance to the site include fieldfare <i>Trudus pilaris</i>, lapwing <i>Vanellus vanellus</i>, lesser redpoll <i>Acanthis cabaret</i>, house sparrow <i>Passer domesticus</i>, starling <i>Sturnus vulgaris</i>, skylark <i>Alaunda arvensis</i>, and linnet <i>Linaria cannabina</i>, The data search also returned twenty three records of barn owl <i>Tyto alba</i> within 2 km of the site, with the closest recorded 0.6 km south of the site from 2021. The line of trees, hedgerows, woodland and scrub have the potential to support common and widespread nesting birds. The grassland and arable fields has the potential to support ground nesting birds such as skylark and lapwing.	All birds, their nests and eggs, are protected by law and as such it is an offence to intentionally kill, injure, or take any wild bird; intentionally take, damage, or destroy the nest of any wild bird while it is in use or being built; and intentionally take or destroy the egg of any wild bird. Further wintering and breeding bird surveys of the site should be undertaken to determine the use of the site by birds, including any birds associated with the Severn Estuary Ramsar and SPA. Removal of trees, scrub, woodland and hedgerows habitats should be avoided during the nesting season (March to September inclusive, though this is not defined in law and birds may nest outside of this time) wherever possible.	Should any of these habitats be cleared during the nesting bird season, pre-removal checks for nesting birds must be carried out by a suitably experienced Ecological Clerk of Works (ECoW), no more than 48 hours prior to the works commencing. Habitat retention, enhancement and creation such as hedgerow, woodland and tree planting should be included within the evolving design to increase nesting opportunities on site. If wintering birds are recorded on the site, suitable compensation depending on the species found and numbers would be required, including potentially retaining arable or grassland habitat. Additionally, bird boxes should be incorporated within scheme, targeting species of conservation concern expected to be present.	
Great crested newt (GCN) <i>Triturus cristatus</i> and other amphibians	The data search returned no records of great crested newt from within 2 km. According to the DataMap Wales, part of the south western portion of the site has been identified as having potential habitat for great crested newt. The data search also returned two records of common toad <i>Bufo bufo</i> within 2 km of the site.	Impacts to these habitats should be avoided where possible. If these habitats are to be lost or impacted, Habitat Suitability Index (HSI) and eDNA survey or traditional presence/likely absent/population surveys of ponds within 250m of the site would determine the presence/likely absence of great crested newt.	Impacts to suitable habitats, if avoidable, should be controlled via a NRW mitigation licence for all stages of the development. The site may be enhanced by native species planting to provide suitable terrestrial habitat, connectivity between retained habitat and inclusions of ponds in the design to provide suitable breeding habitat.	No access to ponds available.

	No ponds are located within the site boundary however four ponds are located approximately 120m south, 140m west, 220m south west and 250m west of the site. A number of watercourse includes ditches are located to the south and west of the site. The hedgerow, tree lines bases, scrub and woodland provide suitable terrestrial habitat for great crested newt and other amphibians. The grassland is a relatively short sward. If the grassland is left unmanaged, there is potential for great crested newt to use the grassland onsite for sheltering and foraging.	If the eDNA surveys return a positive result for great crested newt, a licence from NRW maybe required before the development can proceed.		
Reptiles	The data search returned records of grass snake <i>Natrix helvetica</i>, adder <i>Vipera berus</i> and slow worm <i>Anguis fragilis</i> with the closest located approximately 0.46 km east. The hedgerow, tree lines and woodland bases and scrub and field margins provide suitable habitat for common species of reptiles. If the short sward grassland is left unmanaged, there is potential for reptiles to use the grassland onsite for sheltering and foraging.	Reptiles are afforded protection under the WCA 1981 (as amended), although it is important to note that this legislation protects the species and not their habitat. Impacts to these habitats should be avoided where possible. If these habitats are to be lost or impacted, reptile surveys would determine the presence/likely absence of reptiles and inform future mitigation.	Impacts to suitable habitats, if avoidable, should be controlled via a CEMP. The site may be enhanced by native species planting and inclusion of reptile refugia in the scheme design.	
Otter <i>Lutra lutra</i> and Water Vole <i>Arvicola amphibius</i>	The data search also returned eight two records of otter and 1565 records of water vole within 2 km of the site. A network of waterbodies are located within the wider landscape including the Stutwall Reen and Bareland Stree Reen located approximately 0.04 km south at the closest point. The site is separated from the Reens by a railway corridor. There are no watercourses onsite, however the woodland and scrub could provide sheltering opportunities for otter. Due to the distance between the site and the nearest reen, it is unlikely that a population of water vole would use the site . and water vole are therefore	In England and Wales, otters are protected under the Conservation of Habitats and Species Regulations (2010) and the WCA (1981) (as amended). Further surveys of the southern boundary features and woodland should be undertaken to check for holts or any other structure or places used for shelter by otters. If the site is being used by otter, a licence from NRW maybe required before the development can proceed.	Impacts to suitable habitats, if avoidable, should be controlled via a NRW mitigation licence for all stages of the development. Impacts to the offsite watercourses, such as from run-off, should be controlled via a CEMP.	Watercourses inaccessible.



	considered to be likely absent from the site.			
Other Fauna	The data search returned twenty eight records of west European hedgehog <i>Erinaceus europaeus</i>, four records of brown hare <i>Lepus europaeus</i> and eleven records of harvest mouse <i>Micromys minutus</i> within 2 km of the site. The hedgerow, scrub and woodland bases could provide suitable foraging and sheltering habitat for hedgehog, and the entire site could provide opportunities for brown hare and harvest mouse.	Hedgehog, brown hare and harvest mouse are listed under Section 41 of the NERC Act, 2006, which are a material consideration in planning. Impacts to the hedgerow, scrub and woodland bases should be avoided where possible. Suitable habitat for these species is present within the wider landscape.	Impacts to suitable habitats, if avoidable, should be controlled via a CEMP. Where construction activities in close proximity to suitable habitat which may support hedgehog or brown hare is to be undertaken, there is potential for killing or harm to this species if present during construction activities. As a result, should these species be found on site prior to or during site clearance activities, they will be carefully moved by a gloved hand into suitable areas of retained habitat along the east of the site. Should site clearance be undertaken during the colder months (October/November to March/April), when hedgehog (if present) could be hibernating, a pre-works check of potentially suitable habitat such as scrub habitat would be undertaken to ensure that no hedgehog, if present are harmed during works.	
Invasive Species	The data search identified one record of Himalayan balsam <i>Impatiens glandulifera</i> and ten records of Japanese knotweed <i>Fallopia japonica</i>, with the closest recorded 0.9 km east of the site, adjacent to the railway corridor. No invasive species were noted at the time of the survey however, the entire site could not be surveyed.	Walkover survey of the entire site to check for the presence of non-native invasive species.	If present, controlled removal in line with best practice guidance.	N/A

Section 3: Conclusions and Recommended Further Work

Key Issues

3.1. The key impacts of the development are as follows.

- Impacts to Wildlife Site/SINC during construction, namely from pollution (run-off and dust) which can be controlled through the implementation of a CEMP;
- Damage and destruction during construction to retained trees, woodland and hedgerows. Impacts can be minimised by the installation of tree protection fencing, installed in line with British Standard BS5837: 2012 'Trees in relation to design, demolition and construction';
- Net benefit for biodiversity requirements to deliver an overall improvement in biodiversity through proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context early in the design process; and
- Killing, injury or disturbance to protected and notable species during construction including badger, bats, birds, great crested newt, other amphibians, otter, small mammals and reptiles.

Design Advice

3.2. The habitats of importance on site are woodlands, hedgerows, mature trees, the line of trees and grassland (depending on the results of the botanical survey). In line with the mitigation hierarchy, development proposals should seek to retain and enhance these habitats wherever possible. Where this is not possible, any lost habitats should be replaced with habitats of either greater area or better condition or both, in order to achieve a net benefit for biodiversity. This could be achieved via hedgerow or grassland enhancements. Created habitats should be of the same broad type as those lost. The recommended proposed habitats are native hedgerows, woodland, other neutral grassland, mixed scrub and tree planting.

Potential Further Work

3.3. Depending on the proposals, further surveys which may be required to inform a planning application are set out in **Table 3.1** below.

Table 3.1. Further Surveys and Timing of Surveys.

Survey	Visits and timings
Botanical Survey	Grassland, woodland and hedgerows should be surveyed with full access within the botanical season (May – August) to classify the grassland, identify woodland flora and determine if hedgerows are important.



Survey	Visits and timings
Ground Level Tree Assessment (GLTA)	One visit, if required, to inspect trees to be removed for bat roosting potential
Potential Roost Assessment (PRA)	One visit, if required, to inspect buildings onsite for roosting bats and the potential to support roosting bats.
Bat emergence/re-entry surveys	Dependent on results of GLTA and PRA – Up to three visits, a minimum of 3 weeks apart in May-August/September (inclusive), with an appropriate number of surveys to view all potential roosting features.
Bat activity surveys (transect)	Dusk or dawn walked transects, once per month in the period April – October (inclusive). Includes one dusk/dawn in a 24 hour period.
Bat activity surveys (static)	Deployment of static bat detectors for minimum five nights per month between April and October (inclusive).
HSI and eDNA surveys for great crested newt	One visit by two surveyors of all accessible ponds on and within 250m of the site.
Reptile surveys	Total eight visits in spring and/or September.
Breeding bird surveys	Breeding bird surveys undertaken between April and June inclusive.
Wintering bird surveys	Wintering bird surveys undertaken between November and February inclusive.
Otter survey	Inspection of suitable habitat along the southern boundaries of the site. Surveys can be undertaken at any time,

Potential Control Mechanisms

- 3.4. A Landscape and Ecological Management Plan (LEMP) is expected to be conditioned to ensure long-term management (30 years) of habitats post-development.
- 3.5. A CEMP will be produced (to be controlled through a planning condition) to control the construction phase mitigation measures.
- 3.6. Potential mitigation licences from NRW requirements for badger, great crested newt, roosting bats and otter depending on the results of the surveys.

Conclusion

- 3.7. No issues that could affect the principle or significantly affect the quantum of development the site could support have been identified. With the recommendations and further work set out in this report, there can be confidence that the site could be developed in accordance with relevant planning policy and legislation including policy S13 from the Monmouthshire Local Development Plan 2014.



Appendix 1: Legislation and Planning Policy

Legislation

- A1.1. Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
 - The Conservation of Habitats and Species Regulations 2017 (as amended);
 - The Countryside and Rights of Way (CROW) Act 2000;
 - The Natural Environment and Rural Communities Act (NERC) 2006;
 - The Hedgerows Regulations 1997; and
 - The Protection of Badgers Act 1992.
- A1.2. The European Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, 1992, often referred to as the 'Habitats Directive', provides for the protection of key habitats and species considered of European importance. Annexes II and IV of the Directive list all species considered of community interest. The legal framework to protect the species covered by the Habitats Directive has been enacted under UK law through The Conservation of Habitats and Species Regulations 2017 (as amended).
- A1.3. In Britain, the WCA 1981 (as amended) is the primary legislation protecting habitats and species. SSSIs, representing the best examples of our natural heritage, are notified under the WCA 1981 (as amended) by reason of their flora, fauna, geology or other features. All breeding birds, their nests, eggs and young are protected under the Act, which makes it illegal to knowingly destroy or disturb the nest site during nesting season. Schedules 1, 5 and 8 afford protection to individual birds, other animals and plants.
- A1.4. The CROW Act 2000 strengthens the species enforcement provisions of the WCA 1981 (as amended) and makes it an offence to 'recklessly' disturb a protected animal whilst it is using a place of rest or shelter or breeding/nest site.

The Environment (Wales) Act 2016

- A1.1 This piece of legislation is to plan and manage Wales' natural resources. The key area that is relevant to the proposals relates to the sustainable management of the Welsh Natural Resources, the principles of which are outlined below:
- Building resilience—A resilient ecosystem is one that is healthy and functions in a way that is able to address pressures and demands placed on it and is able to deliver benefits over the long term to meet current social, economic and environmental needs.



- Managing multiple benefits -Our ecosystems provide us with a wide range of services and benefits. We need to take all of these into account when we make decisions about how we use them , so that they provide multiple benefits for the long term. This includes taking into account their intrinsic value.
- Adaptive management -Ecosystem processes and functions are complex and variable, and our approach will be adaptive with a focus on active learning derived from monitoring and outcomes and taking into account the time lags and feedback times for ecosystems to respond to interventions. It is about 'learning by doing'.
- Long term -It is also important to take account of the short, medium and long-term consequences of actions, and consider time lags and feedback times for ecosystems to respond to any interventions.
- Evidence -This means gathering information and considering all the social, economic and environmental evidence (including evidence in respect of uncertainties) from a wide range of experts and stakeholders at the local, regional and national level as appropriate, both to identify priorities and opportunities for their management and also in delivering the management actions.
- Collaboration and co-operation -It is about having a two-way communication across local, regional, national and international levels and being interconnected between policy, process and people to break down silo ways of working. This approach supports the development and implementation of the new, innovative solutions that are needed.
- Working at the right scale -An ecosystem is a functioning unit that can operate at any scale depending on the problem or issue being addressed.

National Planning Policy

Planning Policy Wales (PPW) Edition 12 (February 2024)

A1.2 Chapter 6 of the PPW (Distinctive and Natural Places) includes the following commitments and what they relate to where they are applicable to this site:

- 6.2: Green Infrastructure – The planning system should protect and enhance green infrastructure assets and networks because of [their] multi-functional roles. The protection and enhancement of biodiversity must be carefully considered as part of green infrastructure provision...The quality of the built environment should be enhanced by integrating green infrastructure into development.
- 6.4: Biodiversity and Ecological Networks – Promoting biodiversity by enhanced biodiversity and resilience of ecosystems duty (as set out in The Environment (Wales) Act 2016. The Nature Recovery Action Plan supports this legislative requirement to reverse the decline in biodiversity, address the underlying causes of biodiversity loss and increase the resilience of ecosystems.

A1.3 Development plan strategies, policies and development proposals must consider the need to:



- Support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- Ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- Ensure statutorily and non-statutorily designated sites are properly protected and managed;
- Safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation; interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- Secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.
- Biodiversity and Resilience of Ecosystems Duty (Section 6 Duty) – Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity. In doing so planning authorities must also take account of and promote the resilience of ecosystems.
- Designated sites - Planning authorities must have regard to the relative significance of international, national and local designations in considering the weight to be attached to nature conservation interests.
- Protection and Management of Designated Sites - Statutorily designated sites must be protected from damage and deterioration, with their important features conserved and enhanced by appropriate management.
- Maintaining and Enhancing Biodiversity - Planning authorities must follow a stepwise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort compensated for; enhancement must be secured wherever possible.
- Protected species - The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained.
- Trees, woodlands and hedgerows - Planning authorities should protect trees, hedgerows, groups of trees/...woodland where they have ecological value, contribute to the character or amenity...or perform a beneficial...green infrastructure function.

Technical Advice Note 5 (TAN 5), Nature Conservation and Planning (2009)

A1.4 The purpose of Technical Advice Note (Wales) 5 (TAN5) is to supplement the information provided in PPW. This provides advice for local planning authorities on:



- The key principles of positive planning for nature conservation;
- Nature conservation and Local Development Plans;
- Nature conservation in development management procedures;
- Development affecting protected internationally and nationally designated sites and habitats; and
- Development affecting protected and priority habitats and species.

Local Planning Policy

Monmouthshire Local Development Plan

A1.5 The Monmouthshire Local Development Plan was adopted in February 2014 to replace the adopted unitary development plan 2006. Relevant policies relating to ecology and nature conservation are detailed below, but are summarised as follows:

- Policy S13 relates to the protection of the landscape, green infrastructure and the natural environment.

Detailed Policy Information

Policy S13 – Landscape, Green Infrastructure and the Natural Environment

'Development proposals must:

1. Maintain the character and quality of the landscape by:
 - i) identifying, protecting and, where appropriate, enhancing the distinctive landscape and historical, cultural, ecological and geological heritage, including natural and man-made elements associated with existing landscape character;
 - ii) protecting areas subject to international and national landscape designations;
 - iii) preserving local distinctiveness, sense of place and setting;
 - iv) respecting and conserving specific landscape features, such as hedges, trees and ponds;
 - v) protecting existing key landscape views and vistas.
2. Maintain, protect and enhance the integrity and connectivity of Monmouthshire's green infrastructure network.
3. Protect, positively manage and enhance biodiversity and geological interests, including designated and non-designated sites, and habitats and species of importance and the ecological connectivity between them.



4. Seek to integrate landscape elements, green infrastructure, biodiversity features and ecological connectivity features, to create multifunctional, interconnected spaces that offer opportunities for recreation and healthy activities such as walking and cycling'



Appendix 2: Methodology and Results

Data Search

- A2.1. A desk-based study was conducted whereby records of designated sites and records of protected and priority species were purchased and interrogated for the site and the surrounding landscape. The aim of the data search is to collate existing ecological records for the site and adjacent areas. Obtaining existing records is an important part of the assessment process as it provides information on issues that may not be apparent during a single survey, which by its nature provides only a 'snapshot' of the ecology of a given site.
- A2.2. The following resources were consulted/contacted:
- Multi-Agency Geographic Information for the countryside (MAGIC) website⁷;
 - LERC Wales' Biodiversity Information and Reporting Database⁸; (Data ordered on 09th April 2024 and received on 09th April 2024);
 - Monmouthshire Council website⁹;
 - Joint Nature Conservation Committee (JNCC) website¹⁰,
 - DataMap Wales designated site website¹¹;
 - Ordnance Survey mapping; and
 - Google Maps, including aerial photography.
- A2.3. The following areas of search around the boundary of the site boundary were applied:
- 2 km for protected and priority species, national statutory designated and non-statutory sites; and
 - 10 km for European statutory sites.

'Extended' Phase I Survey and UK Habs

- A2.4. An 'extended' Phase 1 survey was carried out on the 11th April 2024 by Lucy Billingham BSc, a suitably experienced ecologist. The methods used during the walkover survey broadly followed methods used in an 'extended' Phase I habitat survey¹² and entailed recording the main plant

⁷ <https://magic.defra.gov.uk/> [Accessed 26/09/2024]

⁸

https://aderyn.lercwales.org.uk/commercial_enquiries/results/RiD1ZYXFz2bnvPQh8mLY7BWWJNZnGHanYP6It4eLhoWOTvm6WY [Accessed: 11/10/2024]

⁹ <https://www.monmouthshire.gov.uk> [Accessed 11/10/2024]

¹⁰ <http://jncc.defra.gov.uk/ProtectedSites/> [Accessed 11/10/2024]

¹¹ <https://datamap.gov.wales/search/?limit=20&offset=0> [Accessed 11/10/2024/2024]

¹² Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC, Peterborough.



species and classifying and mapping habitat types with reference to the Habitat Definitions provided by the UK Habitat Classification Working Group¹³.

- A2.5. Additionally, the habitats identified were evaluated for their potential to support legally protected and notable fauna species. Where access allowed, adjacent habitats were also considered in order to assess the site within the wider landscape and to provide information with which to assess possible impacts within the context of the site boundary.

Day-time Bat Walkover (DBW)

- A2.6. A DBW was undertaken on accessible habitats within the Site boundary. The assessment was undertaken on the 11th April 2024 by Lucy Billingham BSc, a suitably experienced ecologist.. All surveys were daytime inspections and the conditions for all surveys were considered optimal, however access could only be gained from a public footpath and further surveys of the entire site are required. The DBW assessed habitats on-site for the likelihood to be used by foraging and commuting bats as detailed in Table 2.1 below. This combined with desk study records of local bats and bat roosts, and potential for roosting bats on-site is used to determine suitability of the site for bat activity.

Table 2.1: Flight Path and Foraging Habits Assessment Criteria - adapted from Collins, 2023.

Suitability	Description of Roosting Habitats
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.

¹³ UKHab Ltd. (2023). UK Habitat Classification Version 2.0 (at <https://www.ukhab.org>)



Evaluation

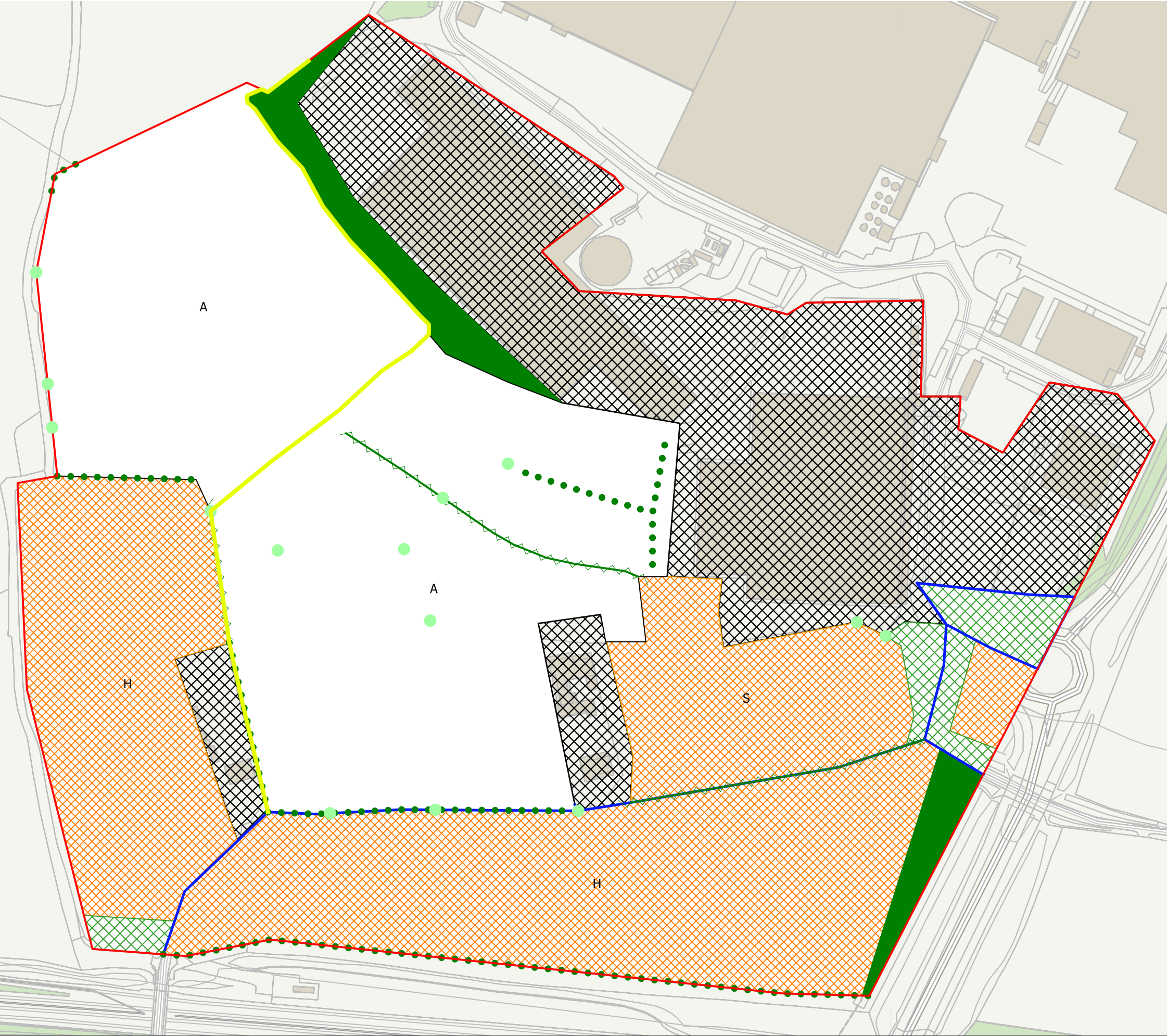
- A2.7. The evaluation of habitats and species is defined in accordance with published guidance¹⁴. The scale of importance of each ecological feature is assigned within a defined geographical context, namely international and European, national, regional, county, and local. Below these are features considered to be of negligible importance.
- A2.8. Consideration will also be given to legally protected or controlled species which are 'important features' in the context of this assessment, for which mitigation measures are required to ensure legal compliance, regardless of their geographic scale of importance. Thus, it is possible for a feature of negligible ecological importance to be legally protected and hence require mitigation.
- A2.9. Evaluation is based on various characteristics that can be used to identify ecological features likely to be important in terms of biodiversity. These include site designations (such as Sites of Species Scientific Interest (SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological feature. In terms of the latter, quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.



Plans:

Plan 1: Habitat Features Plan **01586/P97**





Legend

Boundaries

- Redline Boundary
- PRoW

Baseline Habitats

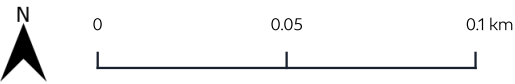
- A Arable
- Scrub
- Woodland
- Inaccessible

Grassland

- H Horse grazed
- Not grazed
- S Sheep grazed

Linear Habitats

- Hedgerow
- Line of Trees
- Hardstanding (Road)
- Trees



Project	InBev, Magor
Drawing Title	Habitat Features Plan
Scale	As Shown (Approximate)
Drawing No.	01586/P97
Date	October 2024
Checked	LB/RC



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