74 Old Shoreham Road, Lancing Biodiversity Net Gain Report

Prepared for AY Developers

February 2026

Revision 01

SURVEY AND REPORT VALIDITY

It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases, there will be specific guidance on this (such as for the age of data which may be used to support a protected species licence application) but in circumstances where such advice does not already exist, the Chartered Institute of Ecology and Environmental Management (CIEEM) has provided the general advice set out below.

Age of Data / Survey / Report	***Validity***
Less than 12 months	Likely to be valid in most cases.
12-18 months	Likely to be valid in most cases with the following exceptions: • Where a site may offer existing or new features which could be utilised by a mobile species within a short timeframe; • Where a mobile species is present on site or in the wider area, and can create new features of relevance to the assessment; • Where country-specific or species-specific guidance dictates otherwise.
18 months to 3 years	A professional ecologist will need to undertake a site visit and then review the validity of the report. Some or all of the other ecological surveys updated.
Protected Species Licensing	Licence applications usually only possible using data less than 2 years old

The likelihood of surveys needing to be updated increases with time and is greater for mobile species or in circumstances where the habitat or its management has changed significantly since the surveys were undertaken. Factors to be considered include (but are not limited to):

- Whether the site supports, or may support, a mobile species which could have moved on to site, or changed its distribution within a site;
- Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management;
- Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence.

TURNSTONE ECOLOGY LIMITED

Project Number:	TT4440
Project Title:	Old Shoreham Road, Lancing
Document Reference:	R01-BNG Report-Rev01

Document Issued To:	AY Developers
Document Issued By:	Turnstone Ecology Limited

Revision Number	Author(s)	Reviewer(s)	Issuer	Issue Date
REV00	JB Senior Ecologist	SW Director	JB Senior Ecologist	13/02/2026
REV01	JB Senior Ecologist	SW Director	JB Senior Ecologist	20/02/2026

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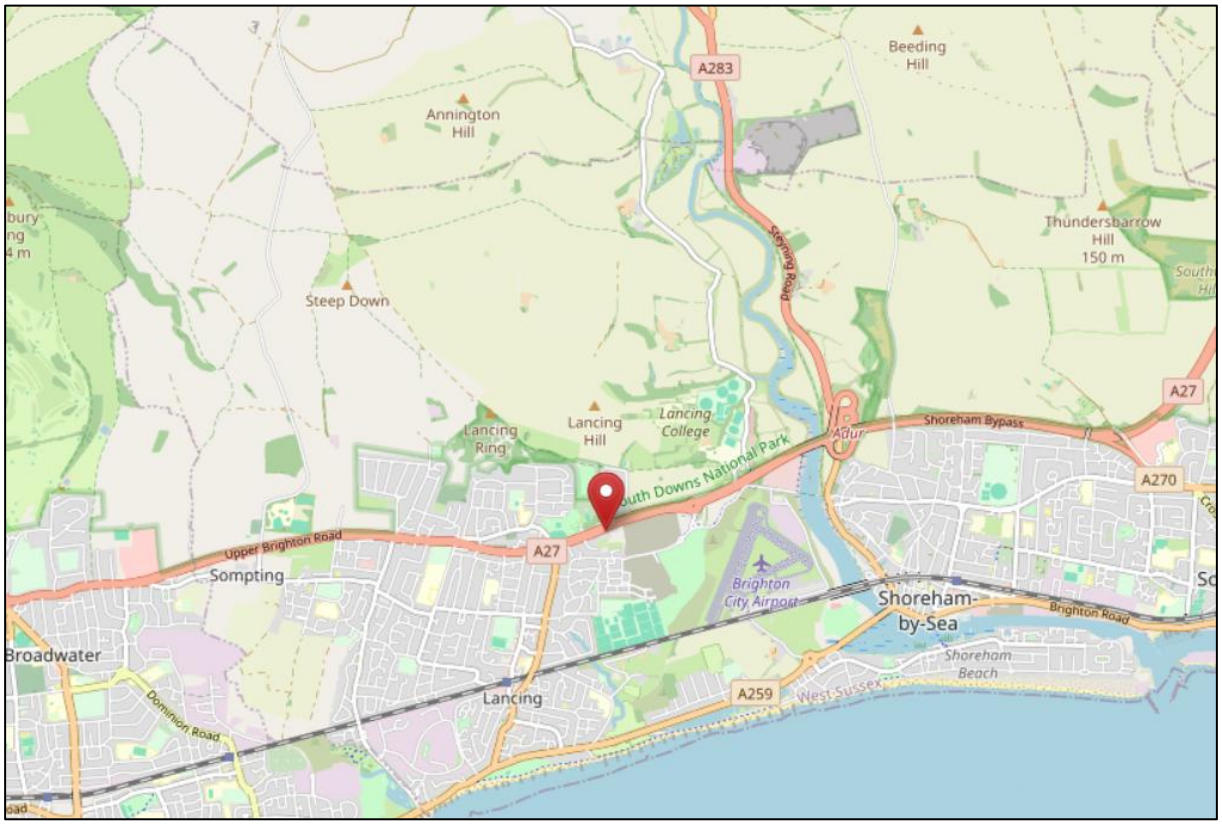
1 INTRODUCTION

1.1 Purpose of Report

This report has been completed in connection with a residential development at 74 Old Shoreham Road, Lancing West Sussex, OS Grid Location TQ 19049 05603. A planning application has been submitted, ref: AWDM/0706/25. The location of the proposed development site is shown in *Figure 1* below and the proposed development plans are fully detailed in *Section 4.*

Figure 1. Location of proposed development (www.openstreetmap.org accessed 02/02/2026)



Previous ecology reports which have been produced for this site are as follows:

- Preliminary Ecological Appraisal and Roost Assessment; Arbtech, dated June 2025
- Great Crested Newt eDNA Sampling; Arbtech, dated June 2025
- Bat Emergence and Re-Entry Surveys (BERS); Arbtech, dated August 2025

This report provides a quantitative assessment of potential impacts from the proposed development on retention, loss, enhancement and creation of habitats, hedgerows and watercourses on-site and gives appropriate mitigation to offset any impacts associated with the proposals to satisfy national and local planning policies in relation to Biodiversity Net Gain (BNG).

This report is a desk-based Biodiversity Net Gain (BNG) study. The UK Habitat Classification Approach has been used to classify habitat types, with the assessment using the Statutory Metric (full

version). Where condition scores for habitats are not known the precautionary principle has been applied which takes the highest biodiversity value of the habitat as the baseline.

Survey data obtained by Surrey Wildlife Trust Ecology Services for the Adur Local Plan Biodiversity Study (Technical Report), commissioned by Adur Council; dated May 2025 has been used to inform the site baseline, following a response from Adur and Worthing Council:

As part of the site assessment process for the Adur Local Plan update, Adur District Council appointed Surrey Wildlife Trust Ecological Services to carry out a UK Habitat Classification and Biodiversity Net Gain Baseline survey. This included an assessment of Site G: Land East of Manor Close. This is a larger site, which includes the proposed development site as well as land to the south and west which is under separate ownership. This Biodiversity Study is available on the Council's website.

The site was surveyed in February 2025. There are significant discrepancies between this newer survey and the older survey carried out in 2023. The plan below shows the UK Habs classification for this wider site:

The council's survey identifies the majority of the site as Bramble scrub, whereas the older Arbtech survey identifies the majority of the site as Ruderal/Ephemeral. This results in a very significant difference in the number of habitat units present.

The applicant has since submitted a more recent survey carried out by Arbtech on 30 June 2025. This identifies the majority of the site as vegetated garden as shown in the plan below:

Whilst the report notes that this includes scattered scrub, tall ruderals and tall forbs, these habitats are not indicated on the plan UK Habitat Classification (UKHab) technical guidance defines vegetated garden as:

"Land occurring within a garden boundary that supports predominantly vegetation, either planted or naturally occurring, including lawns, flower beds, shrubs, trees and small patches of semi-natural vegetation."

Photographs in the 2025 Arbtech survey are captioned as vegetated garden. However this does not appear to be what the images themselves show:

The 2025 Arbtech survey does not explain the discrepancies between it and the two previous surveys.

The submitted BNG Metric was completed on 19 May 2025. This is prior to the 2025 Arbtech ecological survey. The metric has been completed based on the 2023 survey. As a result, it is not possible to conclude that the proposal has met the statutory BNG target. A new BNG metric should be submitted. This should either be based on the Surrey Wildlife Trust 2025 survey, or an updated UK Habs survey carried out.

The BNG metric submitted with the metric, identifies the creation of 0.1435ha Other neutral grassland in good condition as on-site habitat creation. It is considered unlikely that this habitat type can actually be delivered and managed on such a small area. The management plan must clearly demonstrate that this habitat is achievable and can be maintained in the long term, rather than being a lower value grassland habitat.

If this can be demonstrated to the satisfaction of the council, this would need to be secured through a section 106 agreement. This would also be registered as a land charge, and the burden of compliance would be passed on to the new residents of the scheme. The council would also require a monitoring fee to cover its obligations to ensure delivery and management over the next 30 years.

There appears to be a discrepancy in the description of this area. The Design and Access Statement refer to the biodiversity area as a communal meadow and states on page 8: 'This not only provides a significant boost to biodiversity but provides communal amenity space for the residents to enjoy'. However, the Planning Statement says at paragraph 4.3 'there will be no access to the meadow or biodiversity enhancement areas in order to protect species and habitat from disturbance'. These statements appear contradictory. If there is access to this area as residential amenity space, it should be reclassified as Modified grassland. This would significantly reduce the number of BNG units present post development.

The Biodiversity Study also modelled ecological connectivity corridors through the Adur Local Plan Area. This identifies a corridor following the watercourse which forms the southern boundary of the site. As a result, habitats along this corridor should be considered to have high strategic significance.

In summary, the ecological information provided is out of date and is inconsistent with more recent evidence commissioned by the council as part of the evidence base for the Adur Local Plan. There are significant concerns over whether the proposed habitat creation is realistically deliverable on site. Therefore, the proposal does not demonstrate that it meets the statutory Biodiversity Net Gain requirement.

1.2 Ecological Context

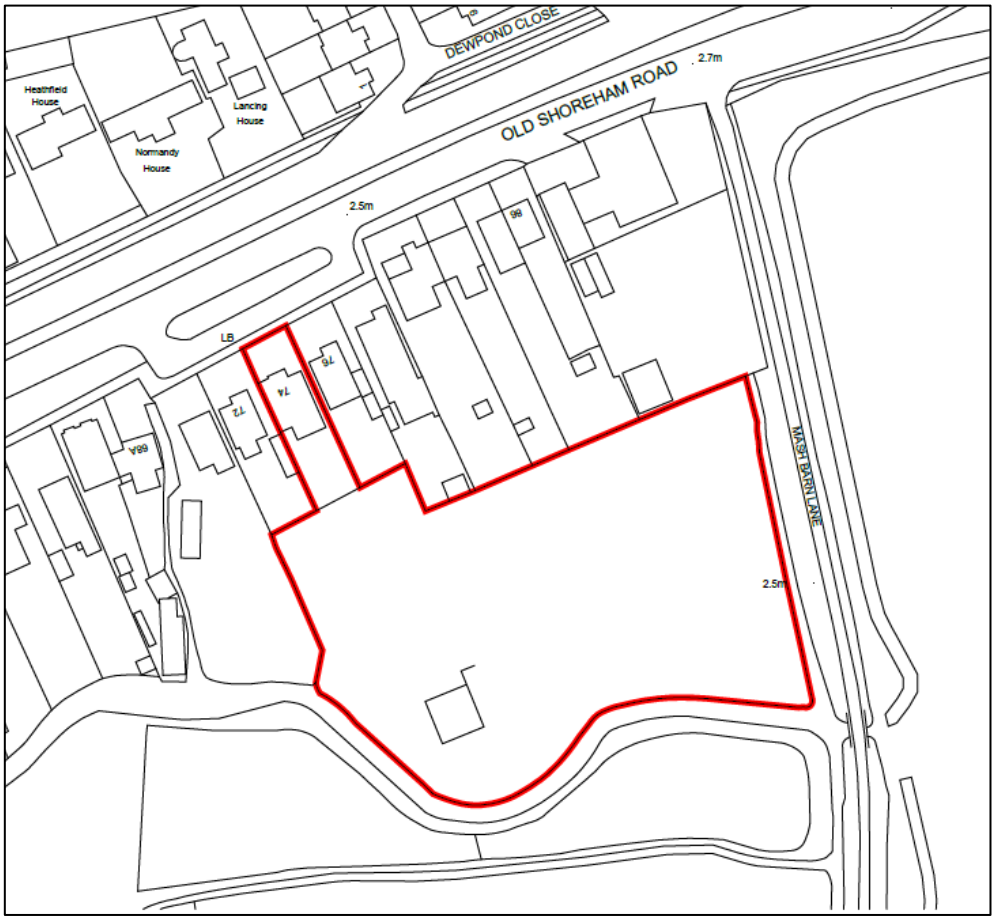
The proposed development site comprises a single-storey bungalow with paved and landscaped garden areas adjacent to the dwelling. The wider red line boundary also includes a section of land to the south of the bungalow which has been left largely unmanaged and has developed into a mix of scrub and ruderal habitats.

The southern boundary of the site is delineated by a watercourse, with the western and eastern boundaries defined by lines of trees that create a green buffer between the site and adjacent properties. A line of trees also follows the watercourse to the south, creating a riparian buffer zone area.

The proposals are for the demolition of the bungalow, clearance of the site and construction of nine residential dwellings with associated facilities within the site boundaries. Improvements to the site access will be made and a new drainage system of ditches and Reedbeds will be created on site. The watercourse is prone to flooding, so a vegetative buffer and bund will be created which will result in a well-connected ecological corridor between the site and adjacent habitats.

The site is located within Lancing village, 1.5 km to the east of the site is the River Adur, the site is 1.7 km north of the Sussex coastline. To the east of the site the wider habitats are a mix of scrub, grassland fields, recreational areas and New Monks nature reserve. To the north and west of the site the habitats are urban, consisting of residential and commercial properties which extend into the neighbouring town of Worthing (4.9 km south-west).

Figure 2. Proposed development site (red line boundary)



2 METHODS

2.1 Desk-based Study

Information relating to designated sites and priority habitats within or adjacent to the site boundaries were obtained from Magic (www.magic.gov.uk), Local Nature Recovery Strategy documents (www.gov.uk) and other freely available information on the internet, such as planning portals and local council guidance documents.

2.2 Baseline Habitat Assessment

The habitats were classified based on the UK Habitat Classification approach (https://ukhab.org, updated January 2021), which is a standardised method to survey main habitat types in the UK and comprises of a five level Primary Habitat Hierarchy system with Secondary Codes. Plant nomenclature in this report follows Rose (Revised Edition 2006) for native, naturalised and garden varieties of vascular plant and Stace; New Flora of the British Isles (Fourth Edition 2019) for cryptic or hybrid flora. Introduced species and garden varieties of flora are identified to genus level due to the number of cultivars, some flora may be listed to species level where that cultivar is easily identifiable.

UK Habitat Classification is the industry standard survey method used when determining baseline conditions for Biodiversity Net Gain Assessments using the Statutory Biodiversity Metric Tool (https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides). Habitat condition assessments are undertaken during the baseline site survey and is a measure of the state of a habitat based on current and past management practices. Habitat condition is used to measure variation between parcels of the same habitat type and the scores determined are required to complete the Biodiversity Net Gain Assessment using the Statutory Biodiversity Metric Tool ((https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides).

2.3 Criteria for Assessment

Biodiversity net gain is required in England under a statutory framework introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). This statutory framework is referred to as biodiversity net gain in Planning Practice Guidance. Under the statutory framework for biodiversity net gain, subject to some exceptions, every grant of planning permission is deemed to have been granted subject to the condition that the biodiversity gain objective is met. This objective is for development to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of the onsite habitat. This increase can be achieved through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits.

The biodiversity gain condition is a pre-commencement condition: once planning permission has been granted, a Biodiversity Gain Plan must be submitted and approved by the planning authority before commencement of the development. There are exemptions and transitional arrangements which

disapply the condition from certain planning permissions, as well as special modifications for planning permissions for phased development and the treatment of irreplaceable habitats. The statutory framework for biodiversity net gain also includes provisions about information requirements for planning applications and the treatment of the condition on decision notices on the grant of planning permission.

The Statutory Biodiversity Metric calculation tool has been used to determine the baseline biodiversity units for this site using data collected during the site survey and the metric tool evaluates how the proposed development will impact biodiversity by calculating the lost, retained, enhanced and created habitats using a quantitative approach which follows four rules:

- Trading rules: the trading rules set minimum habitat creation and enhancement requirements to compensate for specific habitat losses, up to the point of no net loss. They are based on the habitat type and distinctiveness of the lost habitat and the metric must meet the trading rules as well as a 10% net gain.
- Biodiversity unit outputs: The requirement to deliver at least a 10% net gain applies to each type of unit: habitat, hedgerow and watercourse (where present within the redline boundary). These are to be treated independently and must not be summed, traded, or converted between the three types of unit.
- The statutory metric tools (small sites or full) as provided on the gov website, are to be used to ascertain whether biodiversity objectives have been met, other formula to determine biodiversity value are not accepted under the Statutory Metric rules.
- In exceptional ecological circumstances, deviation from this biodiversity metric methodology may be permitted by the relevant planning authority, in these situations a bespoke compensation agreement must be arranged.

The biodiversity metric principles have been applied to the site by a competent Ecologist. Protected species considerations are covered separately within the report, following principle 2. As required under principle 7, habitat interventions are determined to be realistic and deliverable within the project timeframe with summarised management prescriptions given within this report that demonstrate achievability of proposed habitat mitigation and/or compensation long-term.

2.4 Constraints

A revised BNG assessment was requested by Adur and Worthing Council (see *Section 1.1*) due to discrepancies in previous survey efforts. The request for a revised BNG assessment was received in November 2025 which is a sub-optimal period for condition assessments of medium or high distinctiveness habitats. To prevent further project delays a desk-based BNG assessment was decided upon, using the survey data and mapping in the Adur Local Plan Technical Report. The landowner confirmed no significant changes have taken place between May 2025 and the date of this assessment (February 2026). Recent photographs of the site provided by the landowner also show habitats consistent with the Adur Local Plan surveys.

The precautionary principle has been applied when calculating the baseline habitat values. Where the Adur Local Plan does not state, or has more than one condition score listed, then the highest biodiversity value of the habitat, which is reasonably supported by any available evidence relating to it, has been used. This has been clearly defined within the baseline habitat tables in *Section 3.3* of this report.

3 RESULTS

3.1 Desk Study

There are no designated sites on or adjacent to the proposed development site and no priority habitats located within the proposed development area; however, the site does fall within the ecological network, as identified in the Adur Local Plan and is considered to support habitats of ecological importance. No irreplaceable habitats are present on, or adjacent, to the site.

3.2 Habitats

3.2.1 General

UK Habitats Classification has been used to determine habitat types within and immediately adjacent to the proposed development site. No site survey has been undertaken by Turnstone Ecology Ltd, the habitat descriptions have been taken from the Adur Local Plan report and with supplementary information provided by the landowner. These habitats are listed below and shown in *Figures 3-6*:

- Buildings (built linear features)
- Developed land; sealed surfaces
- Bramble scrub
- Introduced shrub
- Ruderal/ephemeral
- Vegetated garden
- Ditch
- Line of trees

Figure 3. Aerial view of proposed development site

Figure 4. Baseline Habitats Map

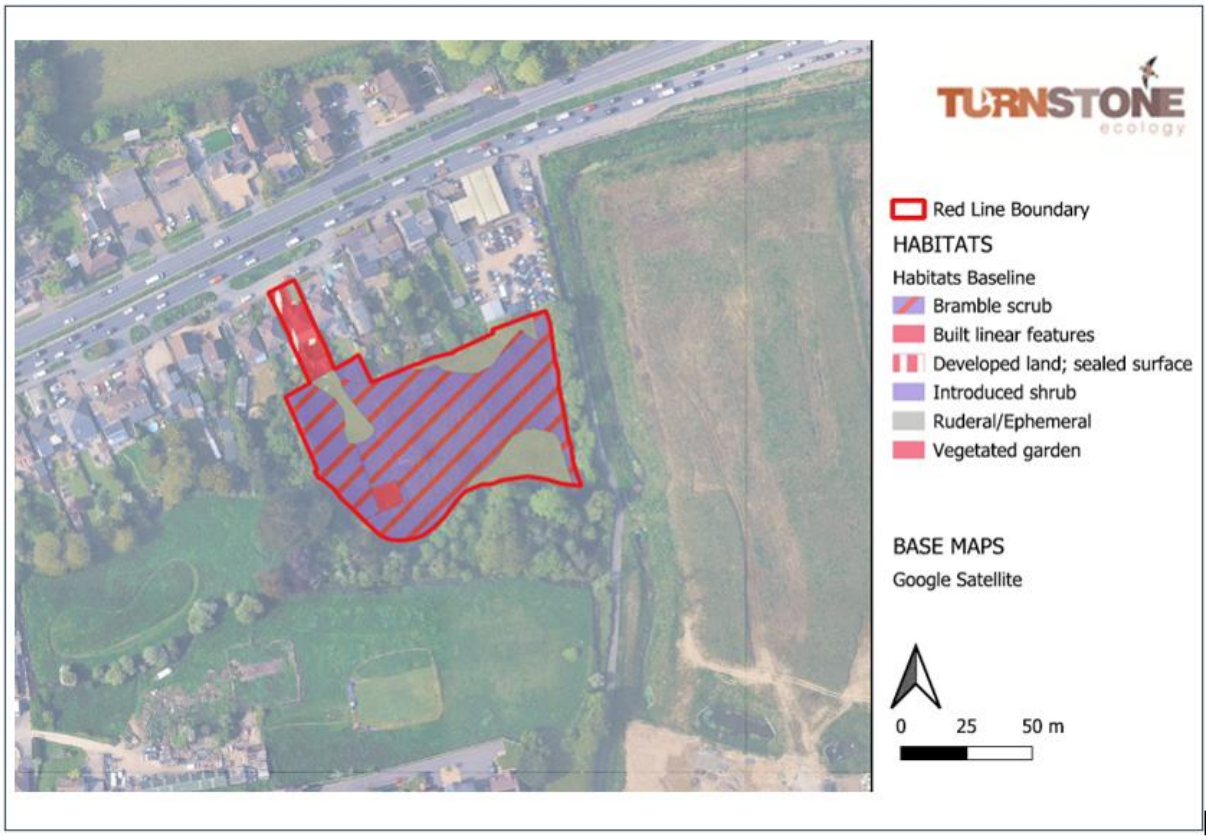


Figure 5. Baseline Hedgerow Map

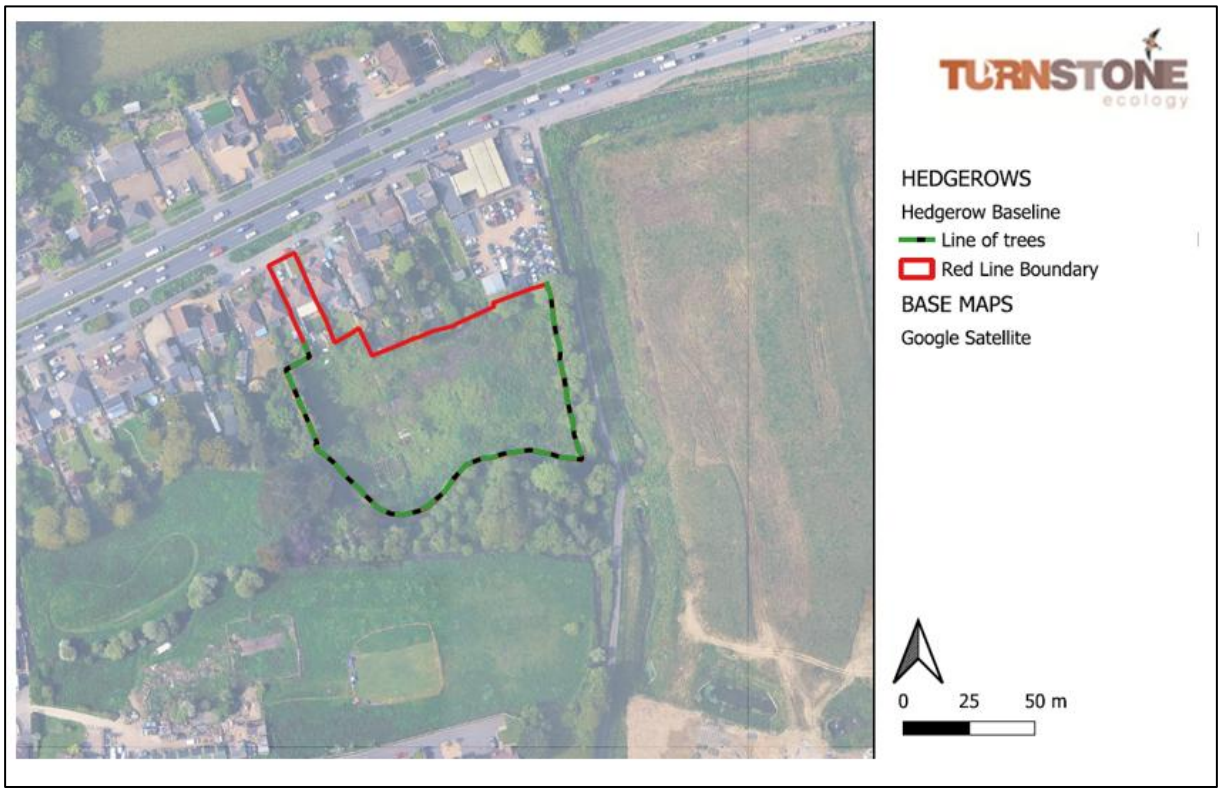
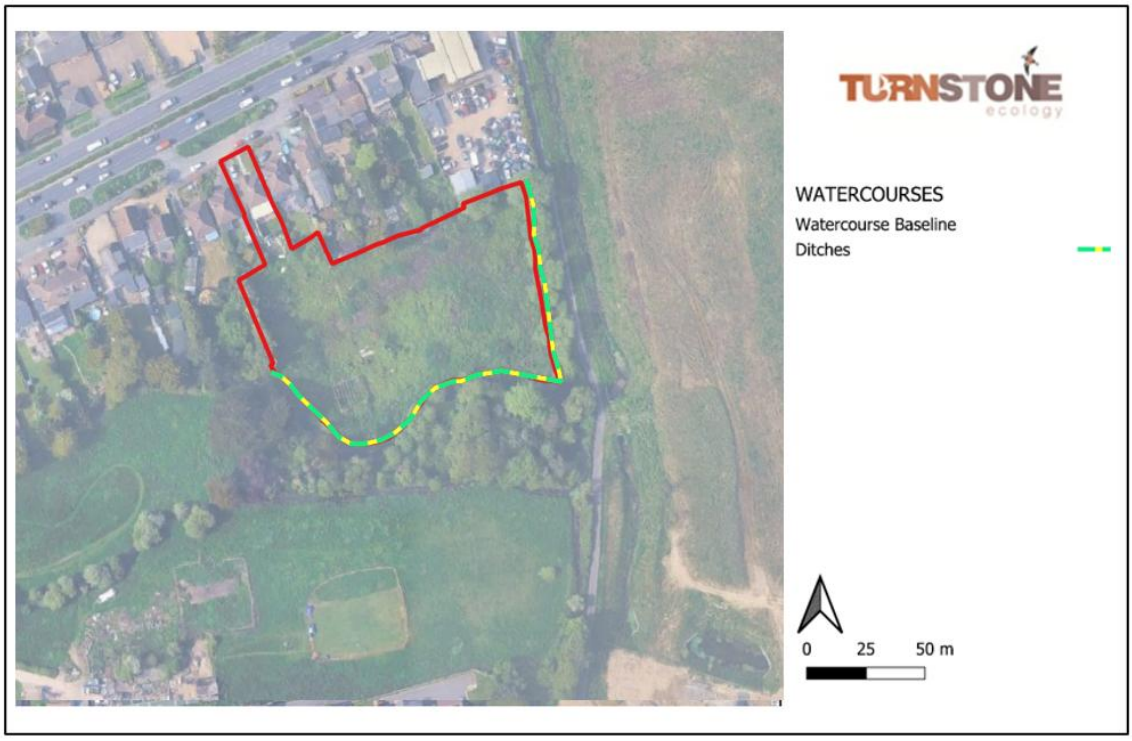


Figure 6. Baseline Watercourse Map



3.2.2 Buildings (built linear features)

A building is located to the north of the site. The buildings is a single-storey residential bungalow dwelling constructed of brick with a pitched, tiled roof. The property is currently unoccupied. A small garden shed is located further into the site; this is in poor condition and will also be demolished as part of the proposals.

3.2.3 Developed land; sealed surfaces

The site is accessed via Old Shoreham Road, from a concreted driveway. A narrow pedestrian-only path allows access into the southern section of the site from the bungalow.

3.2.4 Bramble scrub

The site has been left largely unmanaged; Bramble scrub has colonised much of the land to the south of the bungalow. A comprehensive floral list for this habitat has not been obtained; however, the dominant species present is Bramble *(Rubus fruticosus agg.)* with additional species typical of disturbed ground. Glades and rides are present within this habitat along with some patches of bare ground.

3.2.5 Introduced shrub

A small area of introduced shrub is present along the northeastern section of the site, within an area likely to have been ornamental garden at some point. The shrubs in this area are well-established,

ornamental species which are likely to have been managed as part of a large residential garden and that now form a fringe habitat between the bungalow and the scrub/ruderal areas to the south.

3.2.6 Ruderal/ephemeral

As the site has been left largely unmanaged, early colonising plants have established themselves within the southern section of the site, consisting of ruderal species including Nettles, Thistles, Willowherbs and Umbellifers. The ruderal cover is patchy, with areas dominated by moss, sections of bare ground, and some stands of taller ruderal vegetation.

3.2.7 Vegetated garden

A small section of lawned garden is present to the north of the bungalow, between the road and the building. This area of lawn is cut short/managed. Some ornamental plant species are also present, likely planted by the previous residents of the property.

3.2.8 Ditch

Two ditches are present adjacent to the site boundaries, these ditches are within the encroachment zones distances, but outside of the development area. Due to these ditches being within the influencing zones under BNG guidance, they are considered to be 'on-site' for the purpose of this report and assessment.

The southern boundary of the site is a watercourse with a riparian corridor, the watercourse is a ditch, forming part of the wider Adur River catchment. A shallow field ditch connects to the main ditch, running from the top, north-eastern section of the site to the ditch along the southern boundary.

3.2.9 Line of trees

Line of trees form the eastern and western boundary and track along the ditch edge. Some gaps are present in this treeline, management has been minimal, allowing for the trees to grow tall and provide a natural screen between the site and adjacent properties. The trees present are a mix of native broadleaved and conifer species, interspersed with some ornamental planting near the northern end of the site.

3.3 Biodiversity Net Gain Metric: Baseline Data

The red line development area boundary totals an area of 0.6106 ha with 0.236 km of tree lines and 0.18km of ditches.

A summary of the habitats present on site, current condition habitat scores and their total area size (per habitat) in hectares can be seen in *Table 1* with the same for hedgerows shown in *Table 2* and for watercourses in *Table 3*. Habitat/Hedgerow/Watercourse unit values, as calculated using the Statutory Biodiversity Metric Tool have also been included.

Table 1. Area sizes and condition scores for all baseline habitats present on site

UK Habitat Classification Code	Habitat Type	Condition	Area (Ha)	Size	Habitat Units
u1b5	Buildings	N/A	0.1052		0
u1b	Sealed surfaces (yards/paths etc)	N/A	0.0115		0
828	Garden	N/A	0.0148		0.03
h3d	Bramble scrub	N/A	0.3619		1.66
81	Ruderal/ephemeral	Good*	0.1086		0.75
u847	Introduced shrubs	N/A	0.0086		0.02
Total			**0.6106**		**2.47**

*Habitats where condition scores were unavailable, therefore the precautionary principle has been applied

Table 2. Length and condition scores for all baseline hedgerows present on site

UK Habitat Classification Code	Hedgerow Type	Condition	Length (km)	Hedgerow Units
33	Line of trees (combined)	Good*	0.236	1.09
Total			**0.236**	**1.09**

*Hedgerows where condition scores were unavailable, therefore the precautionary principle has been applied

Table 3. Length and condition scores for all baseline watercourses present on site

UK Habitat Classification Code	Watercourse Type	Condition	Length (km)	Watercourse Units
50	Ditches (combined)	Good*	0.18	2.48
Total			**0.18**	**2.48**

*Watercourses where condition scores were unavailable, therefore the precautionary principle has been applied

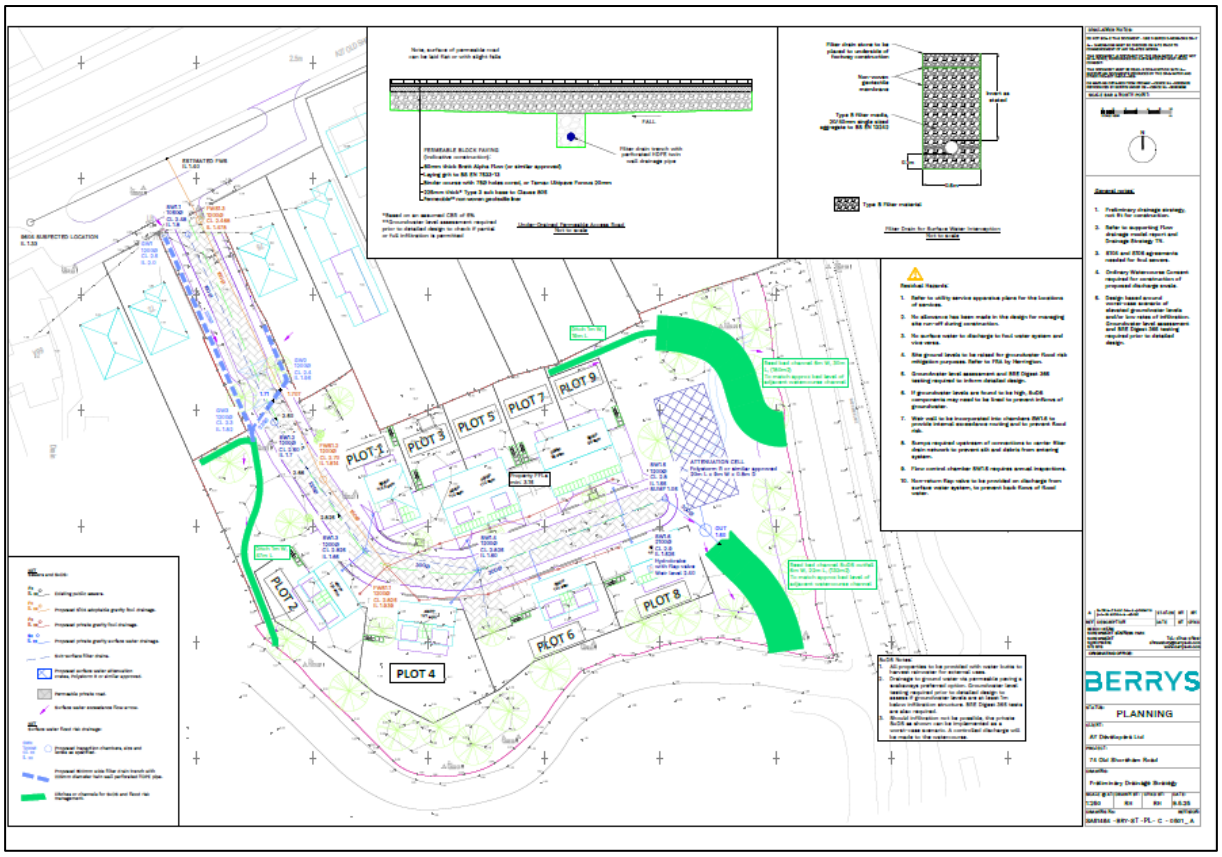
4 EVALUATION

4.1 Summary of Proposals

The proposals include the demolition of an existing bungalow dwelling and garden shed, the clearance of the site, and construction of nine residential dwellings with associated gardens and facilities. The access will be improved. A buffer zone will be retained along the watercourse, with enhancements proposed for the habitats present in this area. Meadow areas will be created which will be used for BNG habitat creation/enhancements. These areas will be fully fenced off with no public access. New drainage will be incorporated into the project design due to a high-water table and existing surface water drainage issues. The proposed plan is shown in *Figure 7* below and the drainage design for the site is shown in *Figure 8.*

Figure 7. Proposed development and landscaping plan

Figure 8. Proposed drainage layout and design



4.2 Habitats

4.2.1 Impacts

The proposed development works will directly affect existing buildings, sealed surface, Bramble scrub, garden and shrubs and ruderal/ephemeral habitats. The boundary tree lines and on-site watercourses will be retained; some enhancements are proposed.

4.2.2 Retention

No habitats on site are to be retained; all habitats will be enhanced or lost. The boundary line of trees will be retained (0.236 km), along with the watercourses (0.18 km). No encroachment is expected on the retained watercourses as a buffer zone will be implemented during works. This buffer zone will be extended post works via the habitat creation detailed in *Section 4.2.3.*

4.2.3 Creation

The proposed development plans will create 9 new residential dwellings, new access tracks and paved areas, vegetated residential gardens associated with the new dwellings, a total of 0.135 ha of grassland planting across new verges, 31 individual urban trees (0.1262 ha canopy cover using metric tree helper tool), mixed scrub planting within the eastern and western meadow areas, two linear Reedbeds within

the eastern meadow section of the site, 0.18 km of native hedgerow planting (combined length for all new hedgerows) and 0.118 km of new drainage ditch creation (combined).

Table 4. Proposed on-site habitat creation (red line development area only)

UK Habs Code	Proposed development	Habitat Type	Condition Score	Area (Ha)	Habitat Units
u1b5	9 new residential dwellings	Built linear features	N/A	0.09145	0.00
u1b	New access/driveways/ footpaths	Developed land; sealed surface	N/A	0.12555	0.00
828	Gardens associated with the new residential dwellings	Vegetated garden	N/A	0.136	0.29
G4	Verge planting	Modified grassland	Moderate	0.0216	0.08
201	31 individual trees planted across site (not within hedgerows)	Individual urban tree	Poor	0.1262	0.41
H3h	Scrub in meadow areas	Mixed scrub	Good	0.1040	1.01
F2e	2 linear reedbeds that connect to new drainage and the existing watercourse on site	Reedbed	Poor	0.0312	0.13
H3h	Scrub planting along bund (replacing ruderal habitat)	Mixed scrub	Good	0.025	0.24
Total (excluding area for urban trees)				**0.5348**	**2.15**

Table 5. Proposed on-site hedgerow creation (red line development area only)

UK Habs Code	Proposed Creation	Hedgerow Type	Condition Score	Length (km)	Hedgerow Units
H2a	Native hedgerows across site, as show on dev plan (combined length)	Native hedgerow	Poor	0.18	0.35
Total				**0.18**	**0.35**

Table 6. Proposed on-site hedgerow creation (red line development area only)

UK Habs Code	Proposed Creation	Watercourse Type	Condition Score	Length (km)	Watercourse Units
50	Ditches	Ditch	Poor	0.118	0.35
Total				**0.118**	**0.35**

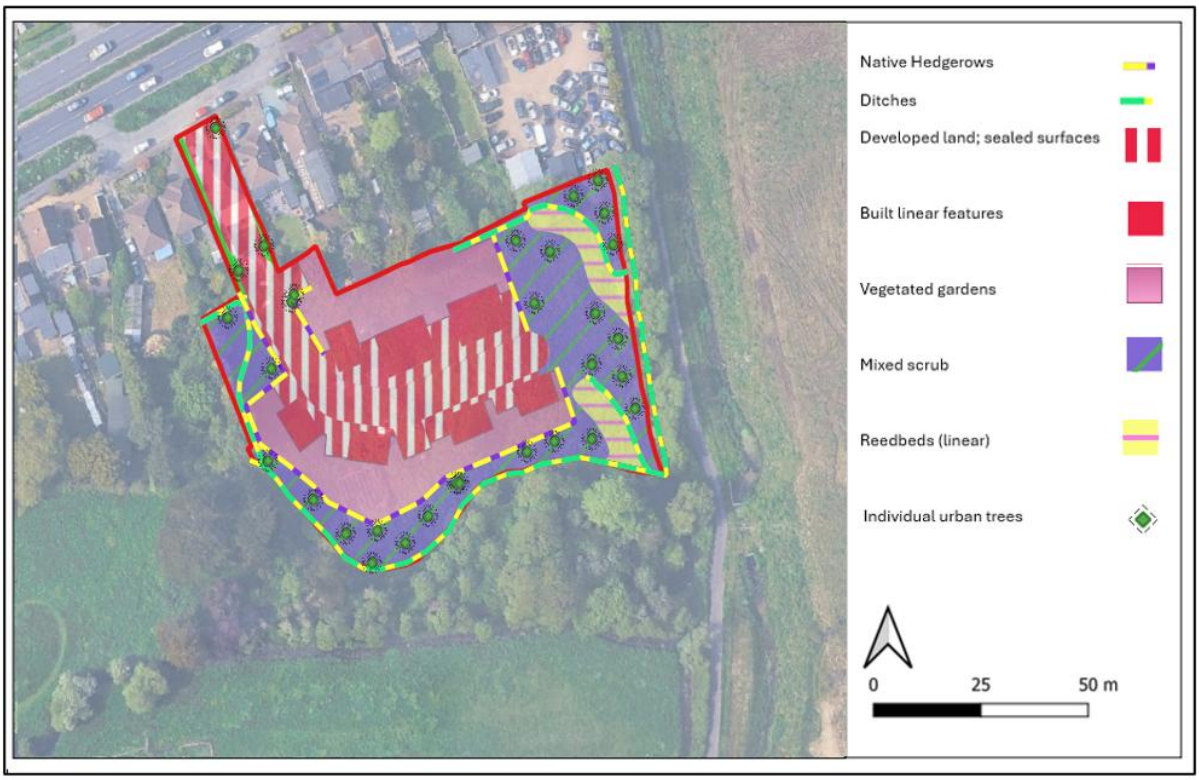
4.2.4 Enhancement

The Bramble scrub along the bund area will be enhanced with planting and management to Mixed scrub (0.0775 ha).

Table 7. Proposed on-site habitat enhancement (red line development area only)

Habitat Type, area (ha) and code	Baseline Condition	Baseline Habitat Units	Proposed Habitat Type and code	Proposed Condition	Proposed Habitat Units	Proposed Net Increase in Habitat Units
Bramble scrub; h3d (along bund); 0.0775 ha	N/A	0.36	Mixed scrub; h3h	Good	0.86	0.5
Total						**0.5**

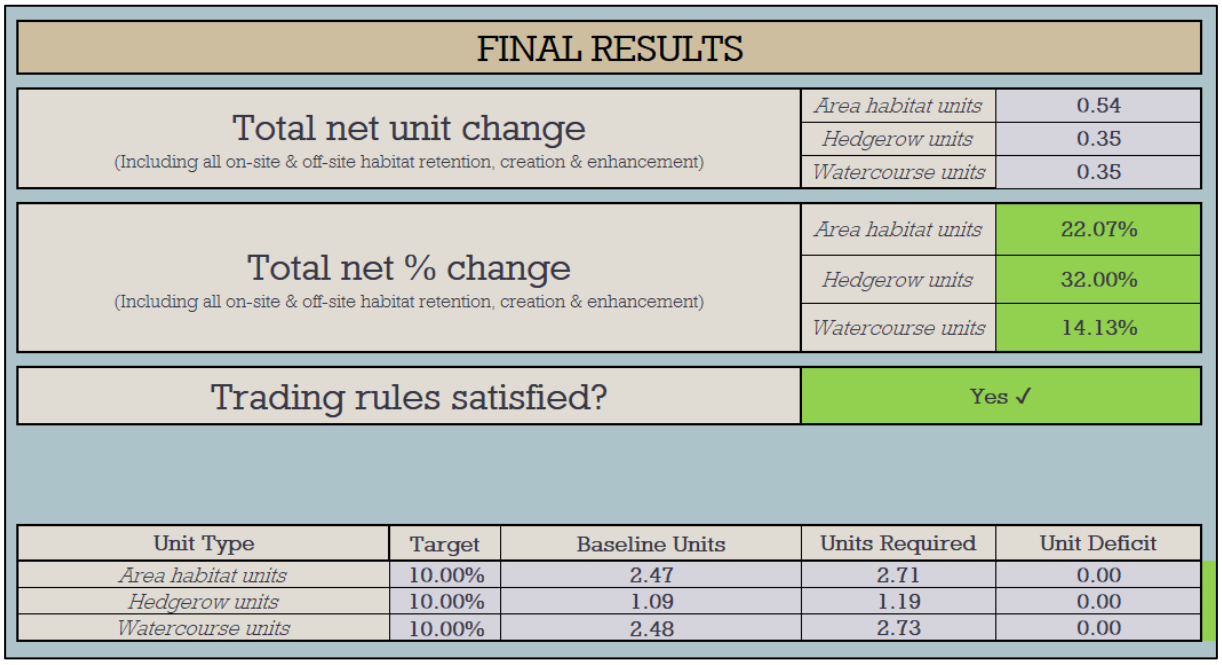
Figure 9. Proposed Habitats Plan (retention, enhancement and creation)



5 STATUTORY METRIC SUMMARY

The proposed development will result in a net gain of **0.54 habitat units** which equates to a **22.07% net gain on habitats**, a net gain of **0.35 hedgerow units** which equates to a **32.00% net gain on hedgerows** and a net gain of **0.35 watercourse units** which equates to a **14.13% net gain on watercourses.** Trading rules have been met and satisfied for habitat, hedgerow and watercourse units.

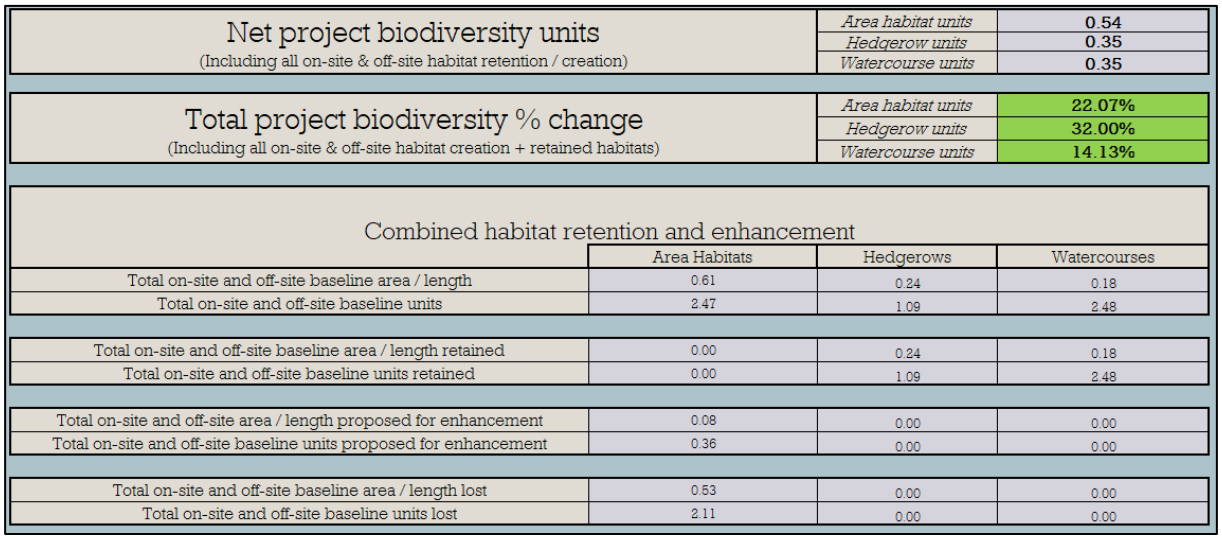
Figure 10. Statutory Metric Summary



FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	0.54
	Hedgerow units	0.35
	Watercourse units	0.35
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	22.07%
	Hedgerow units	32.00%
	Watercourse units	14.13%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Area habitat units	10.00%	2.47	2.71	0.00
Hedgerow units	10.00%	1.09	1.19	0.00
Watercourse units	10.00%	2.48	2.73	0.00

Figure 11. Habitat, hedgerow and watercourse units on site (target, baseline, requirements and changes proposed)



Net project biodiversity units (Including all on-site & off-site habitat retention / creation)		
	Area habitat units	0.54
	Hedgerow units	0.35
	Watercourse units	0.35
Total project biodiversity % change (Including all on-site & off-site habitat creation + retained habitats)	*Area habitat units*	22.07%
	Hedgerow units	32.00%
	Watercourse units	14.13%

Combined habitat retention and enhancement	Area Habitats	Hedgerows	Watercourses
Total on-site and off-site baseline area / length	0.61	0.24	0.18
Total on-site and off-site baseline units	2.47	1.09	2.48
Total on-site and off-site baseline area / length retained	0.00	0.24	0.18
Total on-site and off-site baseline units retained	0.00	1.09	2.48
Total on-site and off-site area / length proposed for enhancement	0.08	0.00	0.00
Total on-site and off-site baseline units proposed for enhancement	0.36	0.00	0.00
Total on-site and off-site baseline area / length lost	0.53	0.00	0.00
Total on-site and off-site baseline units lost	2.11	0.00	0.00

Figure 12. Trading summary for Habitat Units

Trading Summary		
Distinctiveness Group	**Trading Rule**	**Trading Satisfied?**
Very High	Same habitat required – bespoke compensation option ⚠	Yes ✓
High	Same habitat required =	Yes ✓
Medium	Same broad habitat or a higher distinctiveness habitat required (≥)	Yes ✓
Low	Same distinctiveness or better habitat required ≥	Yes ✓

Figure 13. Trading summary for Hedgerow Units

Trading Summary		
Distinctiveness Group	**Trading Rule**	**Trading Satisfied?**
Very High	Same habitat required =	Yes ✓
High	Like for like or better	Yes ✓
Medium	Same distinctiveness or better habitat required	Yes ✓
Low	Same distinctiveness or better habitat required	Yes ✓
Very Low	Same distinctiveness or better habitat required	Yes ✓

Figure 14. Trading summary for Watercourse Units

Trading Summary		
Distinctiveness Group	Trading Rule	Trading Satisfied?
Very High	Same habitat required – bespoke compensation option ⚠	Yes ✓
High	Same habitat required =	Yes ✓
Medium	Same habitat required =	Yes ✓
Low	Better distinctiveness habitat required	Yes ✓

6 HABITAT MANAGEMENT

6.1 General

Management prescriptions will be implemented for all retained and created habitats, hedgerows and watercourses on site to ensure the net gains detailed within this report are met. A Biodiversity Gain Plan will be completed and submitted to the Local Planning Authority to summarise how BNG will be achieved on site.

Full details of required management, per habitat type, will be detailed in full within the accompanying Habitat Management and Monitoring Plan. This plan will cover a period of 30 years and will include the following management prescriptions for each habitat (prescriptions below are summarised, detailed management will be found in the Habitat Management and Monitoring Plan).

6.2 Built structures and Artificial Surfaces

The proposed development includes the construction of residential dwellings and related facilities such as parking, turning and track/access improvements. Some additional re-surfacing will be required (long-term maintenance) which will be of the same material as the existing access track onto the site. No long-term habitat management is required for these areas as they are of negligible botanical value.

6.3 Reedbed

Reedbeds are to be created on site as part of the proposed drainage system. These reedbeds will be linear, connecting to newly created ditches to ensure good water levels are retained year-round. Reedbeds are wetlands dominated by Common Reed *(Phragmites australis)*. Reedbeds are to be planted in March/April, as early as possible after the last frost. Planting any later in the year leaves Reeds vulnerable to competition from other plants.

Cowbane *(Cicuta virosa),* GreaterSpearwort *(Ranunculus lingua)* and Greater Water Parsnip *(Sium lati folium)* should also be planted as these are highly beneficial to species that utilise Reedbed habitats.

Transitional fringes around the reedbed are to be created and maintained and encouraged as these offer excellent areas of habitat for many invertebrate species. Annual monitoring and cutting of overtaking Reeds in these areas will be required. To reduce the dominance of reed within the transitional areas cutting within the winter months is advised, to reduce the risk of damage to species such as Reed Warblers that may be nesting on site. Any cutting should be targeted to areas of reed only, using a brush cutter or similar hand-held tool.

Pesticides, herbicides and fertilisers are to be avoided within this habitat as they could detrimentally impact the waterbodies on site. Where removal of invasive or non-native flora is required or where thinning out of reeds is necessary, then mechanical removal is the preferred method

for this management. Any extensive cutting or management of the reedbed on site should be carried out on a rotational basis with cutting being separated by at least four years. Reedbeds can take 7 years to reach optimal condition, therefore a management plan covering this period will be required.

6.4 Mixed Scrub

Mixed scrub is to be planted on site, within the bund area to transition the existing Bramble scrub to mixed scrub habitat. Areas of Bramble should be cut/cleared and planting of other scrub species undertaken. These species include Hawthorn *(Crataegus monogyna), Blackthorn (Prunus spinosa), Hazel (Corylus avellana),* Dog Rose *(Rosa canina)* and Field Rose *(Rosa arvensis)* and low growing Willow *(Salix spp.)* species. 80% of the species planted must be native species with a minimum of three native, woody species chosen in the planting mix. Once established the scrub habitat is to be cut in patches, this retains vital refugia for species such as reptiles, invertebrates and amphibians.

Cutting of small patches or areas at a time is advised, avoiding cutting patches that are next to each other in subsequent years as this reduces the foliage available for invertebrates. Shrubs with berries should only be cut once the berries have gone as these are food sources for local invertebrates, mammals and birds. Large stones, piles of deadwood and small (less than 5% of the overall scrub area) areas of bare ground are to be encouraged as these areas provide suitable basking habitat for reptiles, aid in creating a tussocky and varied sward height and help to encourage new scrub growth. Scrub can take 5 years to reach optimal condition, therefore a management plan covering this period will be required.

6.5 Ditch

Ditches are to be created on site as part of the proposed new drainage system. Ditches should offer banks of a sloping angle ~ 30-40º. Ditch bank vegetation should ideally be managed on a rotation of 2-5 years, with no more than half of the ditches managed in any one year. Piles of cut vegetation, including Reeds or grass clippings from the ditch management are to be stacked around the ditch edges to offer reptile egg-laying habitat. New planting should comprise of a mix of marginal and wetland plants such as Marsh Marigold *(Caltha palustris),* Ragged Robin *(Silene flos-cuculi),* Water Mint *(Mentha aquatica),* Gypsywort *(Lycopus europaeus)*, Purple Loosestrife *(Lythrum salicaria),* Yellow Iris *(Iris pseudacorus)* and Cuckooflower *(Cardamine pratensis)*. Bank stabilising flora such as Greater Pond-sedge *(Carex riparia)* and Common Reed *(Phragmites australis)* are to be included within the planting specification; where appropriate.

Invasive species colonisation is to be monitored and should these species occur they are to be removed using recommended methods following the INNS secretariat guidance (https://www.nonnativespecies.org/about/inspectorate).

Ditches can take 1 year to reach optimal condition, therefore a management plan covering this period will be required.

6.6 Individual Tree Planting

31 trees are to be planted within the development area boundary. Tree planting must use standard or heavy standard stock; these trees have a higher chance of survival once planted and offer immediate value to wildlife. These trees will be predominantly native and can be a mix of broad-leaved (minimum 70% of the planted stock) and conifer species (maximum of 30% of the planted stock). The trees are to have a mature DBH of >15cm. Species to be planted should include a mix (any of) of the following: Whitebeam *(Sorbus aria),* Beech *(Fagus sylvatica),* Silver Birch *(Betula pendula),* Downy Birch *(Betula pubescens),* Alder *(Alnus glutinosa)*, Wild Cherry *(Prunus avium)*, Douglas Fir *(Pseudotsuga menziesii),* Lawson Cypress *(Chamaecyparis lawsoniana),* Sweet Chestnut *(Castanea Sativa),* Crab apple *(Malus sylvestris)*, or Field Maple *(Acer campestre).* Pine, Cypresses, Spruces and Cedars can also be planted but must be <30% of the total trees planted with native broad-leaved trees accounting for 70+% of the tree stock planted. Where possible a higher proportion of fruiting or nut producing trees should be used as these offer year-round food resources for wildlife locally.

Management of newly planted trees will be required with rabbit guards, weed suppressing mats and regular watering carried out to ensure the trees establish and thrive. Any trees that fail to establish will be replaced with a like-for-like specimen. Trees can take 27 years to achieve target condition score; therefore, a management plan covering this period will be required.

6.7 Native Hedgerow

Native hedgerow planting is proposed on-site. New hedgerow and tree plants should be fully hardened off 40 – 60 cm bare root whips (1 + 1), planted at a density of six plants per metre (double spaced) between November and March and staked and protected with a bio-degradable tree/rabbit guard.

Locally occurring native species from British grown stock of local provenance (Shropshire or surrounding counties) will be used and hedgerow planting will include a mix of Blackthorn (*Prunus spinosa*), Hawthorn *(Crataegus monogyna),* Hornbeam (*Carpinus betulus*), Field Maple (*Acer campestre*), Hazel *(Corylus avellana),* Elder *(Sambucus nigra),* Rowan (*Sorbus aucuparia*), Spindle (*Euonymus europaeus*), Holly (*Ilex aquifolium*), Dog Rose (*Rosa canina agg*.) and Honeysuckle *(Lonicera periclymenum).* The base of the new hedgerows will be seeded during the autumn with a hedgerow wildflower seed mix. Appropriate seed mixes of local provenance can be sourced from *www.naturescape.co.uk* and their N9F seed mix would be suitable which contains a mix of hedgerow flowers, grasses suitable for both sun and semi-shade.

A water supply will be provided at 10 litres per transplant tree or 4 litres per shrub, new bare root hedging plants should have 5-10 litres of water once or twice a week (depending on the weather) for each metre of hedgerow planted. Mulchings or weed suppressing mats are to be used to aid good establishment of hedgerow species, once established a hedgerow base seed mix can be planted. Herbicides (e.g. Glysophate) will not be used either at the planting stage or in long-term site management practices. Hedgerows can take 5 years to reach optimal condition, therefore a management plan covering this period will be required.

If any hedging plants fail to establish, re-planting will replace the original species and be of a similar size to the healthy plants at the time. Once established (probably when first laid for hedgerow plants) the tree guards should be removed. The preferred after-care for all new hedges is for them to be laid when they are between 7 and 10 years old, depending on the rate of establishment.

6.8 Modified Grassland

Verges will be created on site and within these areas an amenity grassland mix will be seeded. This mix will be chosen for durability and long-term suitability for areas with heavy footfall/disturbance. Long-term management of the grassland areas will occur, covering a period of five years with any necessary management being undertaken to cut/re-seed bare patches and generally ensure the grassland is retained as a short to medium height sward habitat suitable for recreational use and meeting the criteria for moderate condition modified grassland habitat. Where possible late season cuts will be undertaken to favour invertebrates and summer pollinators.

7 APPENDIX 1. SITE PHOTOS

Plate 1. Bramble scrub present on site

Plate 2. Areas of Bramble scrub and ephemeral/ruderal

Plate 3. Ditch on site, adjacent Bramble scrub and boundary tree lines

Plate 4. Boundary tree lines, comprising mix of conifer and broadleaved species of varying age