

Alveston Hill Cycle Route

Hedgerow Survey Report

South Gloucestershire Council

November 2023



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This document has 21 pages including the cover.

Report Validity

In the event of scope or programme changes or if works do not commence within 12 months of the date of this report, then updates to the surveys may be required to ensure the validity of the data, as per CIEEM guidance¹.

Document history

Document title: Hedgerow Survey Report

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Client signoff

Client	South Gloucestershire Council
Project	Alveston Hill Cycle Route
Job number	5220316.006
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¹ <https://cieem.net/resource/advice-note-on-the-lifespan-of-ecological-reports-and-surveys/> [Accessed September 2023]

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1. Introduction

1.1. Terms of Reference

- 1.1.1. AtkinsRéalis was commissioned by South Gloucestershire Council to carry out a hedgerow survey to inform an Ecological Impact Assessment (EiA), in relation to the Alveston Hill Cycle Route Scheme (hereafter referred to as the Scheme), located near the village of Alveston.
- 1.1.2. The scope of this assessment was to record the composition, structure and condition of hedgerows within the survey area, in order to inform an assessment of their ecological value, identify potential avoidance, mitigation and enhancement measures, where appropriate, and inform recommendations to support compliance with relevant legislation and policy.
- 1.1.3. This report is to be submitted as a technical appendix to the EiA and presents the findings of the hedgerow survey, as well as the methods used and any further recommendations.

1.2. The Site

- 1.2.1. The Site, Alveston Hill, is situated between the village of Alveston and the town of Thornbury in the County of South Gloucestershire. The Site is presented in **Appendix A**
- 1.2.2. The Site is centred at Ordnance Survey National Grid reference (OSNGR) ST 63442 88851 and comprises two agricultural fields with public footpath adjacent to/east of Alveston Hill Road (B4061). The road is lined with trees and shrubs. Thornbury Leisure Centre is located north of the Site.
- 1.2.3. Habitats adjacent to the Site include agricultural fields, broadleaved trees and hedgerows, a small stream and scrub. Habitats within the wider landscape beyond the Site predominantly comprise fields which are likely in agricultural use, patches of deciduous woodland and amenity grassland associated with Thornbury Golf Centre and residential and commercial buildings associated with Alveston and Thornbury. A large quarry is also located approximately 2.4 km to the east of the Site. This information and further details are included in the Preliminary Ecological Appraisal² (PEA) for this Scheme.

1.3. The Scheme

- 1.3.1. The Alveston Hill Scheme proposes the following:
 - A 2-way cycle track and footway to run along western side of B4061 between Alveston Hill and the A38;
 - Pedestrian and cycling crossings of Down Road and Alveston Hill; and
 - Off-road segregated walking and cycling path from Alveston Hill to Thornbury Leisure Centre.
- 1.3.2. The proposed works within and alongside the public highway are permitted development under Part 9 Class A(a&b) of the Town and Country Planning General Permitted Development Order (2015) (amended) (GPDO), meaning that formal planning permission is not required. The proposed off-road segregated footpath and cycleway does not fall under permitted development and therefore requires planning permission. Only the off-road segregated footpath and cycleway is included in this assessment.
- 1.3.3. This off-road section proposes a 5 m wide path comprising a 3 m wide 2-way cycleway and 2 m wide footpath. These would be side by side but segregated to facilitate easy movement and prevent obstructions to cyclists and pedestrians. The path will have concrete edging and a stock proof fence is proposed to run alongside the east of the path, serving as a perimeter boundary treatment to the private land beyond. The route includes soft landscaping and opportunities for seating/recreation spaces for visual amenity and functionality purposes.
- 1.3.4. In addition to running through a field, the route passes through existing tree groups and hedgerows. Part of these green infrastructure features will need to be removed to facilitate the development include: a section of hedgerow along the south-west boundary of the Site, a section of the hedgerow

² Atkins (2023). Alveston Hill Cycle Route: *Preliminary Ecological Appraisal*. Version 2.

which runs roughly east to west across the centre of the Site dividing the two field parcels, and complete removal of a hedgerow and two groups of trees in the northern section.

- 1.3.5. At either end of this section of route, it will tie into the existing highway.
- 1.3.6. At the time of writing, the preliminary construction design, construction timetable and construction working methods are not finalised.

1.4. Scope of the Assessment

- 1.4.1. The scope of this assessment was to record the composition, structure and condition of hedgerows within the Site and extending to cover the two field parcels (hereafter referred to as ‘the Survey Area’) as shown in **Appendix A**, under existing legislation (refer to **Appendix B** and good practice guidance³).
- 1.4.2. This report presents the findings as well as the methods used and any further recommendations, including identification of potential avoidance, mitigation and enhancement measures, where appropriate.
- 1.4.3. At the time of writing, the preliminary construction design, construction timetable and construction working methods are not finalised.

1.5. Legislation and Relevant Policy

- 1.5.1. Hedgerows that meet specific criteria are protected under The Hedgerows Regulations 1997.
- 1.5.2. The Hedgerows Regulations (1997) provides protection of certain hedgerows as described within the regulations. Under the Regulations, criteria are established that are to be used by the local planning authority to determine which hedgerows are important. The criteria relate to the value of the hedgerows from an archaeological, historical, landscape or ecological perspective.
- 1.5.3. Any part of these hedgerows may not be removed until permission is granted. An application to remove a hedgerow must be made to the Local Planning Authority (LPA), who will either issue a hedgerow retention or removal notice.
- 1.5.4. Hedgerows are a conservation priority and listed as UK Biodiversity Action Plan (BAP) Priority Habitat, as required by the Natural Environment and Rural Communities Act 2006, and are a local conservation priority and listed in the South Gloucestershire BAP.
- 1.5.5. A summary of the relevant legislation, including the South Gloucestershire BAP priority habitat and species list, is provided in **Appendix B**.
- 1.5.6. Within South Gloucestershire Council’s Local Plan Core Strategy⁴, Core Strategy Policy CS9, Managing the Environment and Heritage, sets out the core strategy objectives of conserving and enhancing the district’s distinctive landscapes, natural environmental resources and biodiversity. This policy states that new development will be expected to conserve and enhance the natural environment, avoiding or minimising impacts on biodiversity and geodiversity and conserve and enhance the character, quality, distinctiveness, and amenity of the landscape.
- 1.5.7. Within South Gloucestershire Council’s Policies, Sites and Places (PSP) plan⁵, Policy PSP19 – wider biodiversity, states that biodiversity gain will be sought from development proposals. Land with low to negligible nature conservation value (such as pasture or arable land) can be used for provision of new semi-natural habitat, which would provide gains for local wildlife.

³ DEFRA (2007). Hedgerow Survey Handbook, 2nd Edition. Department of Food and Rural Affairs. London.

⁴ South Gloucestershire Council (2013). *South Gloucestershire Local Plan: Core Strategy 2006-2027*. Available at: <https://beta.southglos.gov.uk/static/f149e2bb1bf00a972238eb11eb06d132/South-Gloucestershire-Core-Strategy-2006-2027.pdf> [Accessed 22 August 2023].

⁵ South Gloucestershire Council (2017). *South Gloucestershire Local Plan: Policies, Sites and Places Plan* Adopted November 2017. Available at: <https://beta.southglos.gov.uk/static/90efa5d673f208a3109ed111ba963a01/PSP-Plan-Nov2017.pdf> [Accessed 22 August 2023]

2. Methodology

2.1. Hedgerow Survey

- 2.1.1. The Preliminary Ecological Appraisal (PEA) identified six hedgerows within the Survey Area (H1, H2, H3, H4, H5 and H6). The location of these is shown in **Appendix A**. The Proposed route passes through H1, H2, and H6. The hedgerows identified within the Survey Area border Alveston Hill Road and agricultural fields.
- 2.1.2. Hedgerow surveys were carried out in June 2023 (for H1-5) and October 2023 (for H6), which is considered to be within the optimal season for hedgerow surveys, and the hedgerows were in leaf at the time of survey. Surveys were carried out in accordance with the relevant methods described in The Hedgerow Regulations 1997⁶.
- 2.1.3. The hedgerow survey was undertaken by suitably experienced AtkinsRéalis ecologists, in accordance with good practice guidance³ and used the broad definition of a hedgerow developed by the Hedgerow Action Plan Working Group, which defines a hedgerow as “*Any boundary line of trees or shrubs over 20 m long and less than 5 m wide, provided that at one time the trees or shrubs were more or less continuous. It includes an earth bank or wall only where such a feature occurs in association with a line of trees or shrubs.*”
- 2.1.4. During the survey the following features were recorded:
- Length of hedgerow;
 - Typical height and width of hedgerow;
 - Number and length of any gaps;
 - Presence of banks, walls and ditches;
 - Presence, number and spacing of standard trees;
 - Adjacent land use and proximity of ecological features such as ponds, woodlands, or parallel hedgerows, and any connections to other hedgerows not evident on existing maps;
 - The presence and abundance of ground flora species listed on Schedule 2 of The Hedgerow Regulations 1997 within representative 30 m sections up to 1 m from the hedgerow base;
 - Evidence of past or recent management; and
 - Evidence of use by animal species, in particular protected species.
- 2.1.5. Following the survey, hedgerows were assessed against the wildlife criteria for determining ‘important’ hedgerows, as set out in Schedule 1, Part 2 of The Hedgerow Regulations 1997⁶. The identified hedgerows were not assessed against the landscape, heritage and archaeology criteria as these criteria are not within the professional remit of ecology.
- 2.1.6. As detailed within The Hedgerow Regulations 1997, in the UK a hedgerow is important for wildlife if it is at least 30 years old and:
- Contains protected species listed in the Wildlife and Countryside Act 1981 (as amended); or
 - Contains species that are endangered, vulnerable and rare and identified in the British Red Data books; or
 - Has at least seven qualifying woody species present; or
 - Has at least six qualifying woody species and has associated with it at least three of the features listed in **Appendix C**; or
 - Has at least six qualifying woody species that include one of the following: black poplar (*Populus nigra* ssp. *Betulifolia*), large-leaved lime (*Tilia platyphyllos*), small-leaved lime (*Tilia cordata*), wild service-tree (*Sorbus torminalis*); or

⁶ [The Hedgerows Regulations 1997 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

- Has at least five qualifying woody species and has associated with it at least four of the features listed in **Appendix C**; or
- Runs parallel with a bridleway, footpath or Byway Open to all Traffic (BOAT) and has four or more qualifying woody species present and at least two of the features listed in **Appendix C**.

2.1.7. Where the age of hedgerows was not known, a precautionary approach was taken to the assessment of 'important' hedgerows based on professional judgement. All well-established mature hedgerows were assumed to be at least 30 years old unless there was evidence or knowledge that would cast doubt on this.

2.1.8. Following the survey, species-rich hedgerows were also identified. A hedgerow is classed as 'species-rich' when it contains a minimum of five woody species within each 30 m section of hedgerow sampled.

2.2. Limitations to surveys

2.2.1. Ecological surveys are limited by factors which affect the presence of species, such as the time of year, migration patterns and behaviour. Therefore, the hedgerow surveys of this Site have not produced a complete list of species and the absence of evidence of any species should not be taken as conclusive proof that the species is not present or that it will not be present in the future.

2.2.2. One hedgerow, H4, was inaccessible, due to overgrown bramble in front of the hedgerow. Therefore, it was not possible to sample 30 m sections along the length of the hedgerow. Instead, surveyors stood behind the bramble and recorded all species that could be seen within the hedgerow from this position. It was not possible to record any other details, such as associated features, about this hedgerow. Due to this, a precautionary approach was taken and the hedge was given a precautionary assessment as species rich and 'important', see Section 3 below.

2.2.3. It was only possible to access one side of each hedgerow that was sampled. Therefore, the species identified within each hedgerow only reflect one side. This is not considered a significant limitation to the survey as all hedgerows (excluding H4) were identified as important and species-rich.

3. Results

3.1. Hedgerow features

3.1.1. All hedgerows were determined to be at least 30 years old, based on professional judgement, and were well managed, with infrequent cutting. There was variation in adjacent land use between the hedgerows; H2, H3 and H4 all had grassland on one side, with other uses including pasture and residential land on the other. H1 was adjacent to pasture and a road, H5 was adjacent to pasture on both sides. H6 was adjacent to amenity grassland and a footpath. Hedgerows varied in length, however, were all a similar average height and width. H1 had gaps that exceeded 10% of the hedgerow.

3.1.2. The hedgerows were in proximity to some ecological features; H1, H3, and H6 were connected to woodland habitat, and H2 was connected to hedgerows H3 and H5. Hedgerow H1 ran parallel to one other hedgerow. No hedgerows were connected to pond habitats.

3.1.3. The full results of the hedgerow surveys are shown in **Appendix D**.

3.1.4. Hedgerow H4 was inaccessible, so full survey results were not obtained. There were several gaps in this hedgerow with planted scattered trees.

3.2. 'Important' Hedgerows

3.2.1. H1, H2, H3 and H5 were classed as 'important' based on the criteria set out in The Hedgerow Regulations 1997⁶. The full results of the assessment are shown in **Appendix D**.

- 3.2.2. This assessment takes into account the number of hedgerows covering a large area of landscape, the hedgerow species composition, richness and associated features (e.g. the presence of mature trees and protected species within these hedgerows, e.g. bat and barn owl roosts), and an assessment against priority habitat criteria.
- 3.2.3. H4 was inaccessible so it was not possible to determine whether it could be classed as an ‘important’ hedgerow. Due to this, H4 has been given a precautionary assessment as an ‘important’ hedgerow.
- 3.2.4. H6 was not classed as an ‘important’ hedgerow, as only two woody species were present in the hedgerow. Therefore, it did not meet the criteria set out in The Hedgerow Regulations 1997⁶.

3.3. Species-Rich Hedgerows

- 3.3.1. A total of 13 woody species were identified within hedgerows across the Scheme. Woody species most frequently recorded were hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), hazel (*Corylus avellana*), wild plum (*Prunus domestica*), elder (*Sambucus nigra*) and field maple (*Acer campestre*).
- 3.3.2. H1, H2, H3 and H5 were classified as species-rich, as they contained the minimum number (five) of woody species within each 30 m section of hedgerow to be classed as species-rich.
- 3.3.3. H6 was not classified as species-rich, as only two woody species were present in the hedgerow: hawthorn (*Crataegus monogyna*) which was dominant and dogwood (*Cornus sanguinea*).
- 3.3.4. The ground flora present, including species under Schedule 2 of the Hedgerow Regulations 1997, included; dogs mercury (*Mercurialis perennis*) which was present in hedgerows H1, H2, H3 and H5. Other ground flora species were also found within H5, these included; wood false-brome (*Brachypodium sylvaticum*), and bluebell (*Hyacinthoides non-scriptus*) a species listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). No ground flora was present in H6, other than common nettle (*Urtica dioica*).
- 3.3.5. H4 was inaccessible so it was not possible to determine whether it could be classed as a species-rich hedgerow. Due to this, a precautionary approach has been taken and assessed H4 as species rich.

4. Recommendations

4.1. Mitigation

- 4.1.1. Hedgerows H1, H2, H3 and H5 are all identified as species-rich and classified as ‘important’ according to the Hedgerow Regulations 1997. H4 has been given a precautionary assessment as a species rich and ‘important’ hedgerow. Therefore, the Scheme should aim to retain these hedgerows as they provide valuable ecosystem services.
- 4.1.2. Where this is not possible, suitable mitigation should be put in place to compensate for the loss of important hedgerows, through hedgerow creation in order to adhere to local planning policy⁵.
- 4.1.3. There will be impacts to H1 and H2 which will be partially lost due to the Scheme design as the Scheme passes through these hedgerows. Additionally, H6 will require removal, however this is unconnected at the north-eastern end and removal of a section of this hedgerow is not considered to cause fragmentation. However, it is recommended that where sections of hedgerows H1 and H2 need to be removed to facilitate the cycleway, that there is creation of further hedgerow to provide protection, and a buffer to avoid fragmentation were possible, to allow continued connectivity.
- 4.1.4. To avoid further indirect impacts to the existing hedgerows, it is recommended that where part of the hedgerow needs to be removed to facilitate the cycleway, the hedgerow may be widened. However, the top section of the hedgerow should be retained. This would retain connectivity within the hedgerow and ensure the hedgerow can still function as a commuting corridor for species such as bats.
- 4.1.5. New hedgerow should be planted to mitigate for the losses of hedgerow within the Scheme works, and also to enhance the landscape. New hedgerow should be similar to the lost hedgerows H1 and

H2, in terms of species composition and richness. In order to be classed as species-rich, new hedgerows should be planted with at least five woody species within each 30 m section of new hedge.

- 4.1.6. The new hedgerows may include species such as hawthorn, blackthorn, hazel, wild plum, elder, and field maple. This will include planting more species within existing hedgerows, to increase the diversity of tree and scrub species present. The location of the proposed habitat creation is provided within a landscape general arrangement plan in **Appendix E**.
- 4.1.7. Following establishment, hedgerow trees will require initial management, such as thinning out branches as required, e.g., trimming on rotation, with a section cut every winter, to promote bushy regrowth. In relation to hedgerow management for the existing network of hedgerows, its important existing mature trees, or trees with features suitable for roosting bats, or with deadwood suitable for invertebrates, shall be retained and not removed, pollard or coppiced.
- 4.1.8. Hedgerow planting will reconnect the landscape adjacent to the works and provide important wildlife corridors. Native flower and fruit bearing tree and shrub species of local provenance should be used within the planting to provide food sources for birds and invertebrates. Planting a variety of species will help to provide diverse habitat and a species-rich community.
- 4.1.9. Ground preparation for hedgerow planting including watering regimes, maintenance and monitoring will be provided within the Landscape Ecology Management Plan (LEMP), which will be commissioned once the planning application has been determined.

5. Conclusion

- 5.1.1. Hedgerows are a habitat of principal importance for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006 and species-rich hedgerows are special characteristic of the South Gloucestershire landscape. Additionally, they have intrinsic value due to their potential to provide a variety of opportunities to a range of flora and fauna species.
- 5.1.2. Hedgerows H1, H2, H3 and H5 are all identified as species-rich and classified as ‘important’ according to the Hedgerow Regulations 1997. H4 has been given a precautionary assessment as a species rich and ‘important’ hedgerow. Therefore, the Scheme should aim to retain these hedgerows as they provide valuable ecosystem services.
- 5.1.3. Where this is not possible, suitable mitigation should be put in place to compensate for the loss of important hedgerows, through hedgerow creation, and suitable buffers on existing hedgerows in order to adhere to local planning policy⁵, recommendations of which are outlined above.
- 5.1.4. The removal of ‘important’ hedgerows could require a hedgerow removal notice. Anyone proposing to remove a hedgerow, or part of a hedgerow, covered by the regulations, must first notify the local planning authority by submitting a Hedgerow Removal Notice, therefore given the client is the given authority in this instance, this will be under their decision-making process.
- 5.1.5. In the event of scope or programme changes or if works do not commence within 12 months of the date of this report, further surveys may be required to ensure the validity of the data, as per CIEEM guidance.

Appendices



Appendix A. Habitat Survey Plan

The Site is indicated by the Survey Area shown on the habitat plan below.

Hedgerows H1 (ST 63419 88684), H2 (ST 63557 88979), H3 (ST 63528 89030), H4 (ST 63686 89143), H5 (ST 63549 88840), and H6 (ST 63544 89270) are shown by a green dashed line, labelled with a black circle, on the habitat survey plan below.



ATKINS
Member of the SNC-Lavalin Group

Legend

- Scheme boundary
- Scheme route
- Survey area

UK Habitat (lines)

- h2a - hedgerow (priority habitat)
- r1e - ditch
- u1e - Built linear features
- r2 Rivers and streams
- w1g6 - line of trees

UK Habitat (polygon)

- g4 - modified grassland
- w1f - lowland mixed deciduous woodland
- h3d - bramble scrub
- u1 - built-up areas and gardens
- u1e - built linear features
- No access

UK Habitat (Secondary Codes)

- g - tall herb

Target Notes

0 35 70 m

Original scale: 1:1,400	Version: 1.0
Base Mapping: © OpenStreetMap and its contributors	
Atkins Limited © Woodcote Grove, Ashley Road, Epsom, Surrey, KT18 5BW	
Client: South Gloucestershire Council	
Project: Alveston Hill Cycle Scheme	
Job No: 5208124.011	
Title: UK Habitat Survey Plan (1 of 2)	
Drawn by: MA Date: 16/10/2023	Checked by: xx Date: xx/xx/xx
Reviewed by: XX Date: xx/xx/xx	





Member of the SNC-Lavalin Group



Legend

- Scheme boundary
- Scheme route
- Survey area

UK Habitat (lines)

- h2a - hedgerow (priority habitat)
- r2 Rivers and streams

UK Habitat (polygon)

- g4 - modified grassland
- w1f - lowland mixed deciduous woodland
- h3d - bramble scrub
- u1 - built-up areas and gardens
- u1b5 - buildings
- u1e - built linear features
- s - sparsely vegetated land
- r1 - standing open water and canals
- No access

UK Habitat (Secondary Codes)

- g - tall herb

○ Target Notes

0 35 70 m



Original scale: 1:1,400	Version: 1.0	
Base Mapping: © OpenStreetMap and its contributors		
Atkins Limited © Woodcote Grove, Ashley Road, Epsom, Surrey, KT18 5BW		
Client: South Gloucestershire Council		
Project: Alveston Hill Cycle Scheme		
Job No: 5208124.011		
Title: UK Habitat Survey Plan (2 of 2)		
Drawn by: MA Date: 16/10/2023	Checked by: xx Date: xx/xx/xx	Reviewed by: XX Date: xx/xx/xx

Appendix B. Summary of Relevant Ecological Legislation

Species	Legislation	Offences	Licensing procedures and guidance
Plants <i>European protected species</i>	Conservation of Habitats and Species Regulations 2017 (as amended) Reg 47.	Deliberately pick, collect, cut, uproot or destroy a wild plant of a European protected species (Schedule 5).	Licences can be issued for science, education and conservation and also in respect of a development if it is of over-riding public interest. Guidance documents: <i>NE Standing Advice for protected species 2022</i> <i>European Protected Species: Mitigation Licensing - How to get a licence (WML-G12) (NE 2013)</i> <i>Guidance on sampling rare aquatic plants, NE 2009</i>
Plants <i>Nationally protected species</i>	Wildlife and Countryside Act 1981 (as amended) Schedule 8, Section 13.	Intentionally pick, uproot or destroy any wild plant on Schedule 8.	A mitigation licence to cover all Wildlife and Countryside Act 1981 (as amended) offences can be obtained for projects with reasons of overriding public interest (A05a), or projects which preserve public health and safety, prevent serious damage to livestock, animal feed, crops, growing timber, fisheries or any other property and/or prevent spread of disease (A05). No licence is required for survey in England. Guidance on survey techniques is available from Natural England. Guidance documents: <i>NE Standing Advice for protected species 2022</i>
Plants <i>Invasive species, e.g. Japanese knotweed, hybrid knotweed, giant knotweed, giant hogweed, rhododendron, Himalayan balsam</i>	Wildlife and Countryside Act 1981 (as amended) Schedule 9, Section 14.	It is illegal to plant or otherwise cause these species to grow in the wild.	Any contaminated soil or plant material is classified as controlled waste and should be disposed of in a suitably licensed landfill site, accompanied by appropriate Waste Transfer documentation, and must comply with Section 34 of the Environmental Protection Act 1990. Guidance documents: <i>How to stop invasive non-native plants from spreading (Defra and Environment Agency 2022)</i> <i>Guidance on section 14 of the Wildlife and Countryside Act (Defra 2011)</i>

Habitats & Species	Legislation	Guidance
Species and Habitats of Principal Importance for the Conservation of Biodiversity 'priority habitats and species'	Natural Environment & Rural Communities Act 2006 Section 40 (as amended)	Section 40 of the NERC Act 2006 (as amended) sets out the duty for public authorities to conserve biodiversity in England. Habitats and species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in Section 41 of the NERC Act (as amended) for England. The list of habitats and species can be found on the NE website under 'Habitats and species of principal importance in England'. The list is used as a guide for decision makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006 (as amended) to have regard to the conservation of biodiversity in England when carrying out their normal functions. Ecological impact assessments should include an assessment of the likely impacts to these habitats and species. N.B. The UK Biodiversity Action Plan (BAP) was used to draw up the list of Species and Habitats of Principal Importance and was succeeded by the UK Post-2010 Biodiversity Framework in 2012. However, the UK BAP list of priority habitats and species continue to be regarded as conservation priorities in the UK Post-2010 Biodiversity Framework (JNCC & Defra, July 2012).
Biodiversity Action Plan (BAP) Habitats and Species	No specific legislation, unless it is also a species or habitat of principal importance as described above.	<u>Guidance:</u> The Biodiversity Action Plan (BAP) is the UK's initiative to maintain and enhance biodiversity in response to the Convention on Biological Diversity signed in 1992. The UK BAP was used to draw up the 'England Biodiversity List' and has been succeeded by the UK Post-2010 Biodiversity Framework in 2012, due to a change in government strategy by all UK countries, focussing on managing the environment as a whole rather than dealing with different aspects of biodiversity and environment separately. However, the UK BAP list of priority habitats and species continue to be regarded as conservation priorities in the UK Post-2010 Biodiversity Framework (JNCC & Defra 2012). In addition, habitats and species are included on local Biodiversity Action Plans (BAP), such as the South Gloucestershire BAP as BAP species. These often comprise species included on Section 41 of the NERC Act but may include additional species identified as species of importance within the county.
Hedgerows	The Hedgerows Regulations 1997	Under the regulations, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. In general, permission will be required before removing hedges that are at least 20 metres in length, over 30 years old and contain certain species of plant. The local planning authority will assess the importance of the hedgerow using criteria set out in the regulations.

South Gloucestershire Biodiversity Action Plan (ref) Priority Habitat and Species List:

Local Priority Habitats	Priority Species	Local Priority Species
Arable farmland	Bullfinch	Adders tongue spearwort
Broadleaf woodland	Dormouse	Barn owl
Hedges, dry stone walls and field margins	Great Crested Newt	Bath asparagus
Old meadows and pastures	Hedgehog	Bithynian vetch
Orchards	Song thrush	Glow worm
Ponds, rhines, rivers and water bodies	Tassel stonewort	Slow worm
Saltmarsh/coastal grazing floodplain	White clawed crayfish	Wild service tree
	Lesser horseshoe bat	

Appendix C. Associated Features





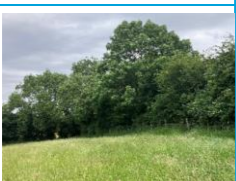
The features associated with hedgerows, as set out in The Hedgerow Regulations 1997⁶ are as follows:


- a. A bank or wall which supports the hedgerow along at least one half of its length;
- b. Gaps which in aggregate do not exceed 10% of the length of the hedgerow;
- c. Where the length of the hedgerow does not exceed 50 meters, at least one standard tree;
- d. Where the length of the hedgerow exceeds 50 meters but does not exceed 100 meters, at least two standard trees;
- e. Where the length of the hedgerow exceeds 100 meters, such number of standard trees (within any part of its length) as would when averaged over its total amount to at least one for each 50 meters;
- f. At least 3 woodland species within one meter, in any direction, of the outermost edges of the hedgerow;
- g. A ditch along at least one half of the length of the hedgerow
- h. Connections scoring 4 points or more (Connection with another hedgerow scores one point and a connection with a pond or a woodland, in which the majority of trees are a broadleaved trees, scores 2 points. A hedgerow is connected with something not only if it meets it but also if it has a point within 10 meters of it and would meet it if the line of the hedgerow continued);
- i. A parallel hedge within 15 meters of the hedgerow.

Appendix D. Hedgerow Survey Results

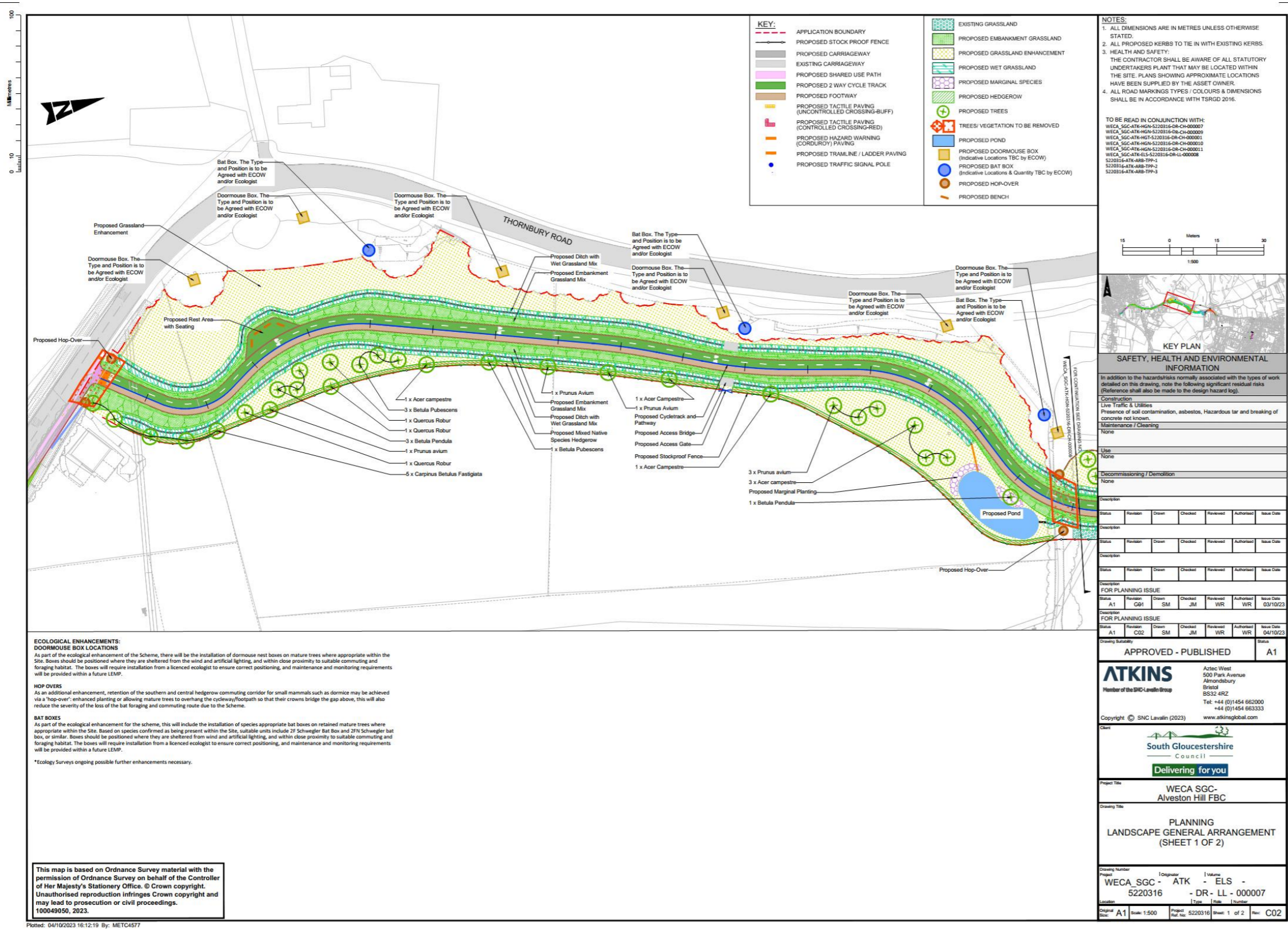
Hedgerow survey results, including confirmation whether they are species-rich or important under paragraphs 6 and 7 of The Hedgerow Regulations 1997

Associated features are indicated with (*).

Hedge ref.	Photograph	Grid reference	Length (m)	Height (m)	Width (m)	Adjacent land use	No. of woody species	Public right of way running parallel?	*A bank or wall which supports the hedgerow along ½ of its length?	*Gaps which in aggregate <10% of the length of the hedgerow?	*At least one standard tree where the length of the hedgerow <50m?	*At least two standard trees where the length of the hedgerow >50m but <100m?	*A number standard of trees that averages over its total length to at least one for each 50m, in hedgerows > 100m (or at least three woodland species within 1 m)?	*A ditch along ½ of the length of the hedgerow?	*Connections (with another hedgerow, woodland or pond) scoring 4 points or more?	*A parallel hedge within 15 m of the hedgerow?	No. of associated features	Important hedgerow?	Species-rich hedgerow?
H1		ST 63419 88684	103	3-4	1.5-2	Pasture and Road	6	No	Yes	No	No	No	Yes	No	No	Yes	3	Yes	Yes
H2		ST 63557 88979	115	5	3	Pasture and Grassland	5.5	Yes	No	Yes	No	No	Yes	No	No	No	2	Yes	Yes
H3		ST 63528 89030	72	5	2-4	Grassland and Residential	4.5	Yes	No	Yes	No	Yes	No	No	No	No	2	Yes	Yes
H4		ST 63686 89143	140	N/A	N/A	Grassland, other side unknown	6 (across whole hedgerow)	Unable to survey	Unable to survey	Unable to survey	Unable to survey	Unable to survey	Unable to survey	Unable to survey	Unable to survey	Unable to survey	Unable to survey	Unable to survey	Unable to survey
H5		ST 63549 88840	271	5	3	Pasture both sides	5	Yes	No	Yes	No	No	Yes	No	No	No	2	Yes	Yes

Hedge ref.	Photograph	Grid reference	Length (m)	Height (m)	Width (m)	Adjacent land use	No. of woody species	Public right of way running parallel?	*A bank or wall which supports the hedgerow along ½ of its length?	*Gaps which in aggregate <10% of the length of the hedgerow?	*At least one standard tree where the length of the hedgerow <50m?	*At least two standard trees where the length of the hedgerow >50m but <100m?	*A number standard of trees that averages over its total length to at least one for each 50m, in hedgerows > 100m (or at least three woodland species within 1 m)?	*A ditch along ½ of the length of the hedgerow?	*Connections (with another hedgerow, woodland or pond) scoring 4 points or more?	*A parallel hedge within 15 m of the hedgerow?	No. of associated features	Important hedgerow?	Species-rich hedgerow?
H6		ST 63544 89270	64	2 - 3	1.5-2	Amenity grassland and pathway	2	Yes	No	Yes	N/A	Yes	Yes	No	No	No	3	No	No

Appendix E. Proposed Habitat Creation



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