



Land off Biddestone Lane, Yatton Keynell,
Chippenham, SN14 7BA

Preliminary Ecological Appraisal



March 2025

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Every endeavour has been made to identify the presence of protected species on site, where this falls within the agreed scope of works.

The flora and fauna detailed within this report are those noted during the field survey and from anecdotal evidence. It should not be viewed as a complete list of flora and fauna species that may frequent or exist on site at other times of the year.

Up to date standard methodologies have been used, which are accepted by Natural England and other statutory conservation bodies. No responsibility will be accepted where these methodologies fail to identify all species on-site.

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Reference to sections or particular paragraphs of this document taken out of context may lead to misrepresentation.

Summary

In March 2024, All Ecology Ltd was commissioned to undertake a Preliminary Ecological Appraisal of a site known as Land off Biddestone Lane, Yatton Keynell, Chippenham, SN14 7BA. The site consists of an arable field containing a pond with surrounding vegetation and the field is bound by hedgerows and trees. The site is immediately surrounded by the local village hall amenity ground to the northeast, arable field to the southwest, road with arable field beyond to the northwest and a field of scrub and grassland mosaic to the southeast. The site is located to the southwest of the small village of Yatton Keynell and the local area consists if a mosaic of arable and grass fields with connecting field boundary vegetation. There are also areas of woodland further to the west.

The proposals for the site are for a new housing development comprising 55 new dwellings with associated infrastructure and greenspace as well as attenuation basin and swale. A new access will be created off Biddestone Road. Landscape buffers to the boundary hedges will be retained around the development.

The habitats on site are common, of low to moderate ecological value. Any impacts as a result of loss/changes to these habitats in terms of their vegetation are considered to be negligible.

The site provides potential habitat for a range of fauna. The following require further consideration/action:

- Bats – The boundary hedgerows and trees and pond on site provide good potential bat foraging and commuting habitats on site; further bat activity surveys are required. Three trees on site had potential roosting features and further inspection is required if these are to be removed or subject to tree surgery works.
- Badgers and other mammals – A potential disused Badger sett was present alongside the pond. A pre-works inspection is required to determine if this is in use by Badgers prior to works commencing. Precautionary methods of working are advised with regards to potential passing of Badgers or presence of other common mammals.
- Birds – The arable field may be used by Skylarks and a breeding bird survey for Skylarks is required. A pre-works inspection for nesting birds is required if suitable nesting vegetation is to be removed within the bird nesting season of March – August inclusive.
- Reptiles – The majority of the site is unsuitable for reptiles; however the southeast boundary vegetation connects to an off-site area of scrub and grassland. Therefore, precautionary methods of working should be followed in relation to reptiles.
- Amphibians – There are a number of ponds within 500 m of the site, four of which score suitably for Great Crested Newts and some were not accessible for inspection. Further presence/absence surveys for Great Crested Newts or a district licence would be required to permit the works and following an observation of this species in two of the ponds it is confirmed that an application to use the district licence will be made.

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1.0 Introduction

Background

- 1.1 In March 2024, All Ecology Ltd was commissioned to undertake a Preliminary Ecological Appraisal of a site known as Land off Biddestone Lane, Yatton Keynell, Chippenham, SN14 7BA. The site consists of an arable field containing a pond with surrounding vegetation and the field is bound by hedgerows and trees. The site is immediately surrounded by the local village hall amenity ground to the northeast, arable field to the southwest, road with arable field beyond to the northwest and a field of scrub and grassland mosaic to the southeast. The site is located to the southwest of the small village of Yatton Keynell and the local area is a mosaic of arable and grass fields with connecting field boundary vegetation. There are also areas of woodland further to the west.
- 1.2 In February 2025, the site was revisited to include an additional area of land to the south.
- 1.3 The proposals for the site are for a new housing development comprising 55 new dwellings with associated infrastructure and greenspace as well as attenuation basin and swale. A new access will be created off Biddestone Road. Landscape buffers to the boundary hedges will be retained around the development.

Objectives and Aim

- 1.4 The main objectives and aim of the survey were to identify features of ecological interest, undertake a basic search of habitats present for evidence of use, or potential use, by protected species, and to identify any other possible ecological constraints to any further development of the site.

Site Location & Aerial Photograph



Figure 1: Site location plan.



Figure 2: Aerial view of the site.

2.0 Methodology

Personnel

- 2.1 The survey was carried out by Laura Dent BSc Hons MCIEEM, an ecologist with over nine years' experience working as a consultant who holds a Class 2 Bat Licence (all species, all counties, Class Licence Registration No. 2017-32855-CLS-CLS). The work was overseen by James Godbeer BSc Hons MCIEEM, an ecologist with over 16 years' experience working as a consultant. James has extensive experience of managing environmental contracts, and particular experience in surveying, assessment and mitigation for rare and protected species. He has considerable knowledge of the development and planning process including Ecological Impact Assessments, sustainable ecological design and he has completed ecology chapters of Environmental Statements. James holds a number of protected species licences including bats (all species, all counties, Class Licence Registration No. 2015-12313-CLS-CLS), and Great Crested Newts (Class Licence Registration No. 2019-44282-CLS-CLS). He has successfully obtained European Protected Species mitigation licences for a number of bat species including Lesser Horseshoe, Greater Horseshoe, Serotine, Brown Long-eared, Common Pipistrelle and Natterer's bats, for a number of roost types including maternity and hibernation sites.

Desk Study

- 2.2 In order to compile background information on the site and immediate surroundings Wiltshire and Swindon Biological Records Centre (WSBRC) was contacted.
- 2.3 Information requested was as follows:
- Statutory site designations on or within 1 km of the site.
 - Non-statutory site designations on or within 1 km of the site.
 - Records of protected species within the 1 km of the site.
 - Records of rare or notable species within the 1 km of the site.
- 2.4 Online OS maps and aerial photographs were inspected for the presence of ponds in the surrounding area. Additionally, MAGIC (Multi-Agency Geographic Information for the Countryside, 2024) was used to establish the distance and direction of statutory and non-statutory designated sites and species records within the search area.

Habitat Survey

- 2.5 The site was visited on the 3rd April 2024 and 27th of February 2025 and surveyed in accordance with the Joint Nature Conservation Committee (JNCC) Phase I Habitat Survey methodology (JNCC, 2010). This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential that might warrant further study.

Fauna

- 2.6 The habitats present on the site were searched for signs of animal activity. The site and surroundings, for a minimum distance of 30 m where access was available, were searched for signs of Badgers. These include setts, latrines, dung pits, snuffle marks or hairs caught in hedges or on fencing.

- 2.7 Incidental observations of invertebrates and birds were recorded and a search made for any signs of previous nesting.
- 2.8 Any refuges on site such as logs or other debris were lifted and inspected for reptiles and amphibians. Accessible ponds within 500 m, indicated on OS maps, were subject to Great Crested Newt Habitat Suitability Index (HSI) Assessments.

Valuation of Ecological Features

- 2.9 The valuation process used in this report follows the Guidelines for Ecological Impact Assessment in the UK and Ireland from the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).
- 2.10 The value of areas of habitat and plant communities has been measured against published criteria where available. Biodiversity Action Plans (BAPs) have been searched to identify whether action has been taken to protect all areas of a particular habitat and to identify current factors causing loss and decline of particular habitats. The presence of injurious and legally controlled weeds has also been taken into account.
- 2.11 When assigning a level of value to a species, its distribution and status (including a consideration of trends based on available historic records) has been taken into account. Other factors influencing the value of a species are: legal protection, rarity and Species Action Plans (SAPs). Guidance, where it is available, for the identification of populations of sufficient size for them to be considered of national or international importance has also been taken into account.

Nomenclature

- 2.12 The English name only of flora and fauna species is given in the main text of this report; however, scientific names are used for invertebrates where no English name is available. Vascular plants and charophytes follow the nomenclature of The Botanical Society for the British Isles (BSBI) 2007 database (BSBI, 2007) with all other flora and fauna following the Nameserver facility of the National Biodiversity Network Species Dictionary (<http://www.nhm.ac.uk/nbn/>), which is managed by the Natural History Museum.

Limitations

- 2.13 The site was fully accessible with no limitations to undertaking the survey in accordance with the stated methodology.

3.0 Results

Desk Study

- 3.1 There is one statutory designated site within 1 km of the site. This is West Yatton Down Site of Special Scientific Interest (SSSI). This is approximately 940 m west of the site and designated for its agriculturally unimproved limestone grassland for which it is regarded as an outstanding example of this habitat. The site is of great value for butterflies and include Chalk Hill Blue, Duke of Burgundy Fritillary and Green Hairstreak.
- 3.2 There are five non-statutory designated sites within 1 km of the site. These are all Local Wildlife Sites (LWS) and are as follows:
- Giddeahall Meadow LWS (960 m SE)
 - Kent's Bottom & part West Yatton Down LWS (375 m NW)
 - Hammerdown Wood LWS (455 m NW)
 - West Barn Farm Downland LWS (450 m NW)
 - Yatton Keynell Downland LWS (280 m NW)
- 3.3 Giddeahall Meadow LWS is designated for its small, neutral grassland meadow habitat. Kent's Bottom & part West Yatton Down LWS is designated for its unimproved calcareous grassland and scrub on two arcels of land on oolitic limestone. Hammerdown Wood LWS is designated for its ancient semi-natural broadleaved woodland on a steep southeast-facing slope on oolitic limestone. West Barn Farm Downland LWS is designated for its northwest-facing bank and dry valley bottom with unimproved calcareous grassland, mesotrophic grassland and scrub woodland. Yatton Keynell Downland LWS is designated for its small area of unimproved limestone grassland.
- 3.4 All of these sites are well separated and isolated from the proposed development site and will not be impacted by the proposals; no further consideration is required.
- 3.5 The Bath and Bradford on Avon Bat Special Area of Conservation (SAC) consultation zone is approximately 945 m southwest of the proposed development site. However, the site does not fall within this consultation zone.
- 3.6 WSBRC provided the following notable and protected species records within 1 km of the site:
- **Mammals** – Brown Hare, Badger, Otter, Greater Horseshoe Bat, Lesser Horseshoe Bat, Hedgehog.
 - **Birds** – Barn Owl, Brambling, Greenfinch, Hobby, House Martin, Linnet, Little Egret, Marsh Tit, Nightjar, Peregrine, Red Kite, Redwing, Reed Bunting, Short-eared Owl, Skylark, Swift, Yellow Wagtail, Yellowhammer.
 - **Amphibian** – Common Toad.
 - **Reptile** – Grass Snake, Slow-worm, Common Lizard.
 - **Invertebrates** – Moths: August Thorn, Beaded Chestnut, Blood-vein, Brindled Beauty, Brown-spot Pinion, Buff Ermine, Centre-barred Sallow, Cinnabar, Dot Moth, Dusky Brocade, Dusky Thorn, Dusky-lemon Sallow, Feathered Gothic, Figure of Eight, Forester,

Garden Dart, Ghost Moth, Green-brindled Crescent, Hedge Rustic, Knot Grass, Lackey, Large Nutmeg, Mottled Rustic, Mouse Moth, Oak Lutestring, Powdered Quaker, Pretty Chalk Carpet, Rosy Rustic, Rustic, Sallow, Shaded Broad-bar, Shoulder-striped Wainscot, Small Emerald, Small Phoenix, Small Square-spot, White Ermine. Butterflies: Adonis Blue, Chalk Hill Blue, Dingy Skipper, Duke of Burgundy, Grayling, Grizzled Skipper, Marsh Fritillary, Small Blue, Small Heath, Wall, White-letter Hairstreak. Beetle: Yellow Ants'-nest Beetle.

- **Flora** – Autumn Lady's-tresses, Bastard-toadflax, Bastard-toadflax rust, Bluebell, Box, Common Cow-wheat, Corn Marigold, Cornflower, Distant Sedge, Swarf Spurge, Field Gromwell, Flat-sedge, Great Burnet, Greater Chickweed, Green-winged Orchid, Hound's-tongue, Marsh Willowherb, Meadow Brome, Musk Orchid, Narrow-fruited Cornsallad, Night-flowering Catchfly, Rye Brome, Sainfoin, Scots Pine, Smooth Brome, Stinking Hellebore, Summer Snowflake, Tutsan, Yellow-juiced Poppy.

Habitats

- 3.7 The following habitats or vegetation types were identified during the course of the habitat survey:
- Arable
 - Improved grassland
 - Standing water
 - Dense scrub
 - Standard trees
 - Species-rich hedge and trees
 - Species-poor hedge
 - Wet ditch
 - Dry ditch
- 3.8 The main part of the site is an arable field with narrow grass margins, containing a pond with surrounding vegetation and the field is bound by hedgerows and trees.
- 3.9 The narrow grass margins were dominated by False Oat-grass with abundant Hogweed, Cleavers, Broad-leaved Dock, Cock's-foot and Common Nettle. In the west corner of the site there was also abundant Wild Garlic. There was frequent Cow Parsley, Creeping Bent, occasional Bluebell and Fescue sp., and rare occurrences of Lesser Celandine, Black-grass, White Dead-nettle, Dog's Mercury and Lords-and-ladies.
- 3.10 There was a pond situated within the field which was surrounded by a narrow band of Blackthorn scrub with occasional Hawthorn and English Elm and rare occurrences of Dog-rose. There was also an Ash tree adjacent.
- 3.11 The northeast boundary of the field was defined by hedge and trees growing along a chain-link fence. This was dominated by Hawthorn with frequent Blackthorn, occasional English Elm and Goat Willow and rare occurrences of Pedunculate Oak, Ash and Dogwood.

- 3.12 The southeast boundary was defined by species-rich hedge and trees which was dominated by English Elm with abundant Blackthorn, frequent Ash and Hawthorn, occasional Field Maple and rare occurrences of Goat Willow. The south half of this boundary had a ditch which was partially wet and partially dry in areas.
- 3.13 Part of the southwest boundary was defined by species-rich hedge and trees which was mostly cropped. This was dominated by Blackthorn with abundant English Elm, frequent Hawthorn and Ash and rare occurrences of Field Maple. The longest section of hedgerow along the southwest boundary was a length of species-rich hedge and trees which was mostly cropped. This was dominated by English Elm with abundant Hazel and Blackthorn, frequent Elder, Hawthorn and Ash and rare occurrences of Wild Privet. There was a wet flowing ditch along part of the southwest boundary, with this ditch then behind the boundary hedgerows for the most part.
- 3.14 The south half of the northwest boundary was defined by a species-rich hedge and trees but was mostly a cropped hedge dominated by English Elm with frequent Hawthorn and Blackthorn, occasional Elder and Field Maple and rare occurrences of Horse Chestnut and Dog-rose. The north section of the northwest boundary also consisted of a cropped hedge which was dominated by Hawthorn with abundant Blackthorn, occasional English Elm and rare occurrences of Field Maple.
- 3.15 The area to the south of the main part of the site was arable land with narrow grass margins and a species-rich hedge with trees along the west boundary. The narrow grass margins were dominated by Cocks-foot with frequent False Oat-grass and Curled Dock, and rare occurrences of Cleavers, Lords-and-ladies, Bulbous Buttercup, Dock and Common Nettle.
- 3.16 The west boundary species-rich hedge was mostly a cropped hedge dominated by English Elm with occasional Field Maple, Elder and Hazel and rare occurrences of Wild Privet, Bramble ag., and Ivy.

Photographs



1: General view of the arable field.



2: Cropped hedge along the northwest boundary.



3: Existing access within the northwest boundary.



4: Species-rich hedge and trees along the southwest boundary.



5: End of flowing wet ditch along the south west boundary.



6: Flowing wet ditch along part of the southwest boundary.



7: Length of dry ditch along part of the southwest boundary.



8: Length of wet ditch along the southeast boundary.



9: Hedge and trees along the southeast boundary.



10: Hedge and trees along the northeast boundary.



11: View of pond and surrounding scrub and tree.



12: Pond on site.



13: View of the south section of the site looking east.



14: View of the south section of the site looking west.

Fauna

Bats

- 3.17 WSBRC provided four records of Greater Horseshoe and four records of Lesser Horseshoe within 1 km of the site. The locations of these records are withheld and recorded in 1982.

- 3.18 There are no buildings on site. The trees on site were inspected for potential roosting features such as rot holes, dense Ivy stems, flaking bark etc which found three Ash trees along the southeast boundary which contained potential roosting features. One Ash tree (Target Note 1) had two rot holes, another (Target Note 2) had a rot hole within the main trunk of the tree and the third (Target Note 3) had a number of rot holes, woodpecker holes and flaking bark on decaying wood on broken limbs. These potential roosting features may be utilised by roosting bats.
- 3.19 The arable fields provide poor bat foraging habitat but the boundary hedgerows and trees provide good bat foraging and commuting habitat and the pond and surrounding vegetation may also be used by foraging bats.



15: Rot hole within Target note 1 tree.



16: Rot hole within main trunk of Target note 2.



17: Rot and woodpecker holes on decaying limbs of Target note 3.

Birds

- 3.20 WSBRC provided a number of bird records within 1 km of the site, which include Barn Owl, Skylark and Swift. Skylarks were noted as being present within the arable field on site and there are four Skylark records within 1 km of the site. One record is from 2011 and only had a four-digit grid reference so an approximate distance to site could not be estimated. Skylarks were recorded in 2011 and 2004 approximately 725 m northwest, 620 m northwest and 890 m northwest of the site.
- 3.21 The site provides limited bird foraging habitat within the hedgerows, trees and pond on site. The hedgerows and trees also provide nesting opportunities for nesting birds and Skylarks were

heard in the surrounding area and could utilise the arable field for breeding. The site was surveyed early within the nesting season of March – August and no current nesting activity or bird nests were found; however, some may have been missed within the denser vegetation and birds may nest on site in the future.

Badgers

- 3.22 WSBRC provided 14 Badger records within 1 km of the site. Three of these records were of Badger setts but the locations are withheld and an approximate distance to site could not be estimated.
- 3.23 The arable field provides poor foraging opportunities for Badgers but the boundary hedgerows and vegetation surrounding the pond may provide opportunities for the construction of setts. The site and immediate surroundings, where accessible, were searched for evidence of Badgers such as digging, latrines, setts etc which found one potential, disused Badger sett burrow in the bank surrounding the pond (Target Note 4) and two smaller burrows adjacent to the bank (Target Note 5). No evidence was found to indicate these burrows were in current use by Badgers and no other evidence of Badgers was found on or surrounding the site. However, Badgers may utilise this area or pass through on occasion in future.



18: Potential disused Badger hole (Target Note 4).



19: Two disused burrows (Target Note 5).

Otters and Water Voles

- 3.24 There are no Water Vole records within 1 km of the site. WSBRC provided four Otter records within 1 km of the site. Two of these records, of Otter spraints recorded in 2000, had four-digit grid references supplied so an approximate distance to site could not be estimated. An Otter was sighted in 2011 approximately 820 m south of the site. Otter feeding remains were recorded in 2017 approximately 840 m north of the site.
- 3.25 There are no water courses on or adjacent to the site. Wet ditches were present along the southwest and part of the southeast boundaries, the southwest ditch was flowing due to recent heavy rainfall. However, these did not connect to a watercourse and are not deemed suitable for Otters or Water Voles. Therefore, these species are likely to be absent here.

Other mammals

- 3.26 WSBRC provided 34 Hedgehog records within 1 km of the site and five Brown Hare records within 1 km of the site. The Brown Hare records were all recorded before 1986.

- 3.27 The arable field provides poor opportunities for mammals but the hedgerows and vegetation surrounding the pond provide areas of cover for common mammal species. Brown Hare and Hedgehogs may pass through on occasion and deer tracks were present along some edges of the field. The habitats on site are common habitats and other notable or protected mammal species are likely to be absent here but common mammal species will be present at times.

Reptiles

- 3.28 WSBRC provided two Grass Snake records, one Slow-worm record and one Common Lizard record within 1 km of the site. One Grass Snake was recorded in 2004 approximately 945 m southwest of the site. The other Grass Snake record, Slow-worm record and Common Lizard record were recorded in 2007 but only a four-digit grid reference was supplied.
- 3.29 The majority of the site consists of the arable field which is unsuitable for reptiles. The grass margins were narrow and provided sub-optimal opportunities for reptiles and the hedgerows provide limited opportunities for cover. There is an area of scrub and grassland mosaic to the southeast of the site which may provide suitable reptile habitat. Therefore, common reptiles may occasionally utilise the southeast boundary hedgerow for cover but reptiles are unlikely to cross through the arable field on site.

Amphibians

- 3.30 WSBRC provided one Common Toad record within 1 km of the site. This was recorded in 2002 approximately 600 m north of the site.
- 3.31 The majority of the site provides poor terrestrial habitat in the form of the arable field and sub-optimal terrestrial habitat along some of the grass margins. However, the hedgerows provide areas of cover and there is one pond on site. With regards to Great Crested Newts there are 11 other ponds shown on maps within 500 m of the site that are not isolated by the B4039 and village of Yatton Keynell. On inspection, one of these ponds was dry (Pond 5) and one waterbody formed part of a flowing ditch. The pond on site and seven other ponds were accessible for a Habitat Suitability Index (HSI) Assessment to determine their suitability for Great Crested Newts. In summary, four ponds score above 0.5 at which further surveys or a district licence is required.
- 3.32 Pond 1 – On site, whilst surrounded by a narrow stretch of scrub, this is situated within the arable field. The pond was approximately 105 m² in size and may sometimes dry. The pond had moderate water quality and approximately 10% macrophyte cover. The pond was partially shaded and there are over 13 ponds within 1 km of the pond. Waterfowl and fish are absent from the pond. Score: 0.43. Rated: Poor.
- 3.33 Pond 2 – Adjacent to the southeast corner of the site and approximately 170m² in size. The pond is situated within a small pocket of woodland and heavily shaded. The pond had poor water quality and no macrophyte cover. Fish and waterfowl were absent and the pond may sometimes dry. There are over 13 ponds within 1 km. Score: 0.55. Rated: Below average.
- 3.34 Pond 3 – Approximately 18 m northeast of the site and approximately 135 m² in size. The pond is situated within a fenced off area surrounded by trees and vegetation within the adjacent recreation ground field. The pond is likely to stay permanent year round and had moderate water quality. Fish may be present here but waterfowl were absent. The pond was partially shaded by

surrounding trees and had approximately 30% macrophyte cover. There are over 13 ponds within 1 km. Score: 0.72. Rated: Good.

- 3.35 Pond 4 – Approximately 105 m northwest of the site and approximately 150 m² in size. The pond was situated within an arable field with an edging of overhanging trees. The pond was partially shaded and had no macrophyte cover. The pond may sometimes dry and fish and waterfowl were absent. The pond had poor water quality and there are over 13 ponds within 1 km of the site. Score: 0.41. Rated: Poor.
- 3.36 Pond 5 – Dry on inspection. The pond was assessed after long periods of heavy rainfall and so this attenuation pond is likely to be dry most of the year.
- 3.37 Pond 6 – Approximately 450 m northwest of the site and approximately 240 m² in size. The pond was situated within an area of scrub and hedgerow junctions and was partially shaded. The pond had poor water quality and no macrophyte cover. The pond may sometimes dry and fish and waterfowl were absent. There are over 13 ponds within 1 km. Score: 0.66. Rated: Average.
- 3.38 Pond 7 – Approximately 440 m northwest of the site and approximately 230m² in size. The pond was situated within an area of trees and scrub surrounded by grassland fields. The pond may sometimes dry and fish and waterfowl were absent. The pond was partially shaded by surrounding trees, had moderate water quality and approximately 40% macrophyte cover. There are over 13 ponds within 1 km. Score: 0.81. Rated: Excellent.
- 3.39 Table 1: HSI calculations

HSI Calculator		Pond 1	Pond 2	Pond 3	Pond 4	Pond 6	Pond 7
SI1 - Location	1	1	1	1	1	1	1
SI2 - Pond area	2	0.2	0.25	0.22	0.24	0.5	0.5
SI3 - Pond drying	3	0.5	0.5	0.9	0.5	0.5	0.5
SI4 - Water quality	4	0.67	0.33	0.67	0.33	0.33	0.67
SI5 - Shade	5	0.8	0.2	1	1	0.6	1
SI6 - Fowl	6	1	1	1	1	1	1
SI7 - Fish	7	1	1	0.67	1	1	1
SI8 - Ponds	8	1	1	1	1	1	1
SI9 - Terr'l habitat	9	0.01	1	0.67	0.01	1	1
SI10 - Macrophytes	10	0.4	0.3	0.6	0.3	0.3	0.7
HSI Score	Score	0.43	0.55	0.72	0.41	0.66	0.81



20: Pond 1.



21: Pond 2.



22: Pond 3.



23: Pond 4.



24: Pond 5.



25: Pond 6.



26: Pond 7.

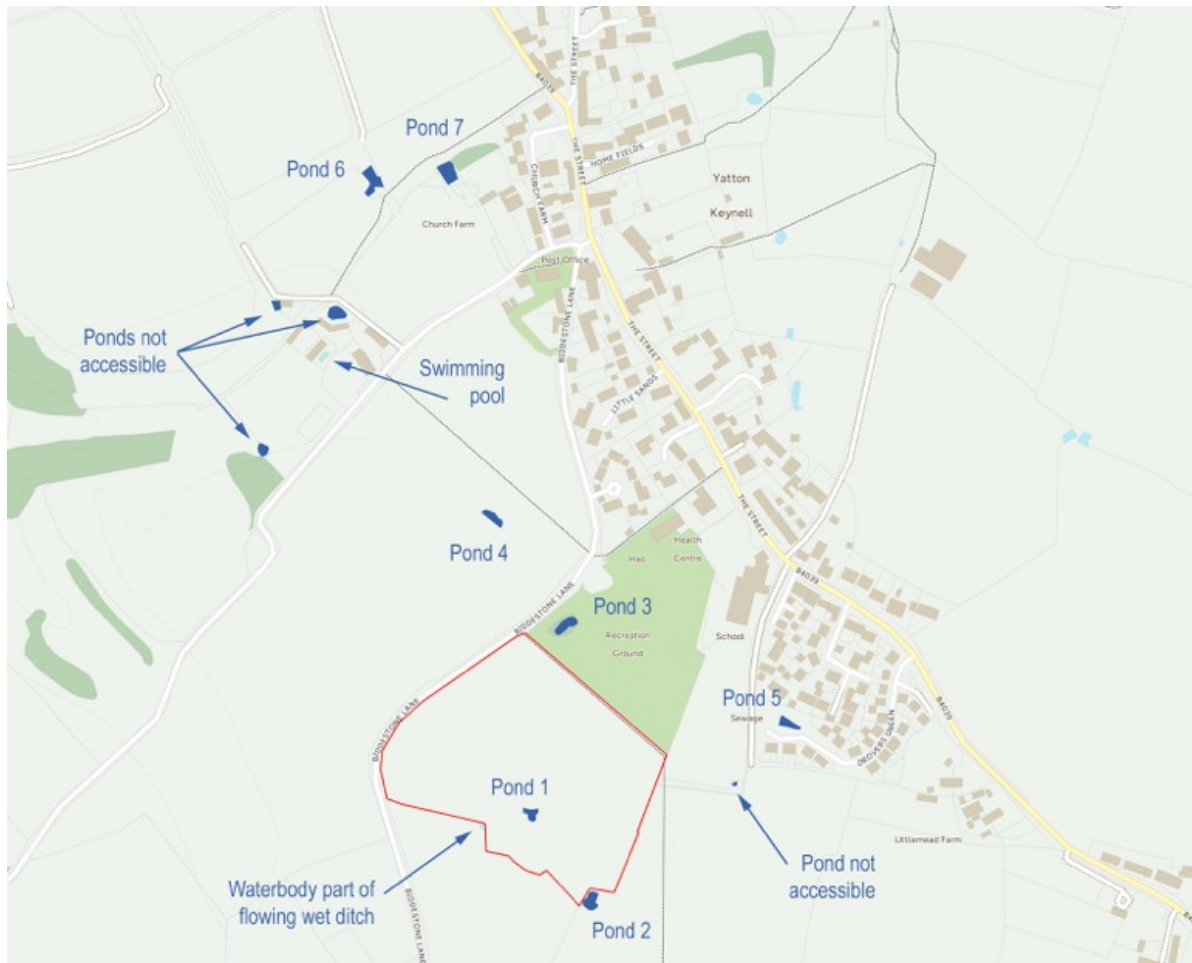


Figure 3: Ponds within 500 m of the site.

Invertebrates

- 3.40 WSBRC provided a number of moth and butterfly records and one beetle record within 1 km of the site. Common invertebrate species are likely to be present on site within the hedges, trees and pond; however, the majority of the site consists of the arable field and potential for the site to support more notable species is low and unlikely to be present in the proposed area of works.

4.0 Development Constraints and Recommendations

Development Proposals

- 4.1 The proposals for the site are for a new housing development comprising 55 new dwellings with associated infrastructure and greenspace as well as attenuation basin and swale. A new access will be created off Biddestone Road. Landscape buffers to the boundary hedges will be retained around the development.

Habitats

- 4.2 The NERC Priority Habitats include all hedgerows with at least 80% cover of at least one woody UK native species (JNCC, 2019). The boundary hedgerows had at least 80% cover of native species and as such qualify as NERC Priority Habitat. A new entrance is to be created through the boundary hedgerow but this will be in substitution for an existing access and therefore a Hedgerow Assessment to determine if any hedges are classified as 'important' under the Hedgerow Regulations 1997, is not required.
- 4.3 The narrow grass margins on site were identified as improved grassland. In order to qualify as NERC Priority Habitat, grassland typically has to be unimproved (good semi-improved grassland can also qualify) and would have to be examples of grassland such as lowland calcareous grassland or lowland dry acid grassland, habitats not found on site. Therefore, no further surveys are deemed necessary.
- 4.4 It is unknown whether the pond on site qualifies as NERC Priority Habitat. The presence of protected, UK BAP, or Red Data Book species would mean the pond qualifies, as would exceptional assemblages of key species, such as amphibians and dragonflies, or the pond is found to be a rich site for plants and invertebrates. The pond is to be retained within the landscape proposals for the site. This provides a significant opportunity to enhance the pond for wildlife.
- 4.5 The remaining habitats on site are common, of low to moderate ecological value and easy to replace. Any impacts as a result of loss/changes to these habitats in terms of their vegetation are considered to be negligible with the majority of the trees on site and boundary vegetation to be retained.
- 4.6 A flowing wet ditch was present along the southwest boundary and a length of wet ditch was present along the southeast boundary. These ditches are likely to be retained but any pollution or changes to the ditches could have adverse effects on the flora and fauna within, as well as have a detrimental effect on areas further downstream. The following suggestions are made for the protection of these habitats during the construction phase of the project but it should be noted that it is likely that assurances and provision will need to be made to address the long-term potential impacts to these ditches by providing sufficient measures to ensure that the hydrology of the site is not changed to the detriment of the ditches, and that potential pollutants (chemicals, detergents, nutrient enrichment etc.) that could enter the ditches through run-off or ground water can be avoided.
- 4.7 During the construction phase of the project on no account should any chemicals, including vehicle fuels or lubricants be left on site at night where they might be accessed by accident or

deliberately (e.g. vandals) resulting in spillage to the ditches either directly or through run-off. Any contractors engaged in works on the site should have in place secure storage facilities and an agreed pollution prevention plan. Appropriate pollution control equipment should be available at the site to control spillages if they do occur.

- 4.8 Where new areas of habitat are to be created, consideration should be given to the seeding of these areas using appropriate seed mixes. Where possible these seeds should be locally sourced to support the genetic integrity of local wild plant populations. Where new trees or shrubs are to be planted, native tree and shrub species should be used as these are most beneficial to invertebrates, and many also produce seeds, nuts and berries that are food for native mammals and birds. Planting of non-native plant species should be limited to those that are not invasive and should prioritise those that provide a good source of nectar for invertebrates.

Protected and Notable Species

Bats

- 4.9 The arable field is poor bat foraging habitat but the boundary hedgerows and trees provide good bat foraging and commuting habitat and the pond and surrounding vegetation may also be used by foraging bats. Bat activity surveys are required to determine the use of these habitats by foraging or commuting bats. In accordance with Bat Surveys for Professional Ecologists – Good Practice Guidelines 4th ed, habitats with high suitability for bats, one survey visit per season (Spring – April/May, Summer – June/July/August, Autumn – September/October) is required which must be supported by static detector surveys. The static detector surveys must be undertaken for a minimum of five consecutive nights per month (April to October) in appropriate weather conditions for bats.
- 4.10 Restrictions on lighting are subject to the results of the further bat activity surveys. However, in general the retained boundary vegetation, trees and pond must not be subject to direct lighting and subject to no more than 0.2 lux of light spill. New lighting should be designed to limit disturbance of foraging, commuting and potentially roosting bats, and other nocturnal wildlife. Measures should include the use of lighting only where absolutely necessary utilising highly directional warm white LED lighting, an example being down spots at 2.5 m high using warm white (2700 K) 8W LED lamps, 550 lumens, 35 degree beam angle. These could be individually activated by PIR sensors on a 1 minute cut off to further reduce their impacts. These will assist in lighting only the areas where lighting is required and minimising light spill either directly or through reflected light.
- 4.11 The new residential development provides opportunities to enhance the site for roosting bats by incorporating new roosting features in to the buildings. Integrated bat tubes, such as the Vivara Pro Build-in WoodStone Bat Tube, can be integrated into the gable ends of the garages and houses which are designed to be built in to the masonry of external walls or beneath render. Alternatively, external bat boxes can be installed after building works are complete, such as the Beaumaris Woodstone Bat Box. Bat boxes can also be installed on retained mature trees. Bat boxes should be installed at least 3 m above ground level and ideally positioned on the east, west or south elevations.
- 4.12 Three trees along the southeast and southwest boundaries had potential roosting features for bats. If these are to be removed or subject to trees surgery works, these will require further

Potential Roosting Feature inspection surveys to determine their use by roosting bats or determine whether further emergence surveys are required.

- 4.13 This remaining trees on site were not noted as having potential roosting features for bats but if these are to be removed or subject to pruning, the following procedures should be employed in the unlikely event a bat or bats are discovered during works:
- If the roost is still on the tree and bats are not injured, seek advice from a licensed ecologist. If help is not available, allow bats to fly out of harm's way.
 - If the timber is felled, the roost is not exposed and the bats are not injured, temporarily seal and isolate the roost and seek advice from a licensed ecologist. If advice is not readily available, position the roost off the ground, re-open it and allow bats to relocate of their own accord.
 - If the roost has been exposed, and especially if bats have been injured, collect bats in a secure box or bag (using a glove) and contact a licensed ecologist.

Badgers and other mammals

- 4.14 A potential disused Badger hole was found adjacent to the pond. This and two other burrows were not found to be in use at the time of survey but it is recommended these are surveyed by a suitably qualified ecologist prior to works commencing to ensure these are not in use by Badgers.
- 4.15 The potential for other species of protected or notable mammal species to use the site is deemed to be low. No constraints are predicted as a result of the potential presence of Hedgehogs, small mammals and passing Badgers. As a precaution it is recommended that during the construction phase of the project any trenches and other excavations are back-filled before nightfall or a ramp left to allow animals to easily exit, and any open pipes larger than 150 mm should be capped off overnight.

Birds

- 4.16 The site provides limited bird foraging habitat within the hedgerows, trees and pond on site. The hedgerows and trees also provide nesting opportunities for nesting birds and Skylarks were heard in the surrounding area and may utilise the arable field for breeding. The site was surveyed early within the nesting season of March – August and no current nesting activity or bird nests were found; however, some may have been missed within the denser vegetation and birds may nest on site in the future.
- 4.17 Nesting birds are protected under The Wildlife and Countryside Act 1981 (and amendments). Clearance of suitable nesting vegetation should be scheduled to take place outside the nesting season of March to August. Where this is not possible, the vegetation would need to be surveyed for nesting birds by a suitably qualified ecologist prior to works commencing. If they are found, then the nest and surrounding habitat must remain intact until the young have fledged.
- 4.18 Skylarks were noted near to the site and further surveys are required to determine if the arable field is used by breeding Skylarks. A breeding bird survey consisting of three visits from May – June must be undertaken to determine whether Skylarks are nesting here and inform a suitable mitigation strategy if present.

- 4.19 The new buildings are likely to provide a good opportunity to enhance the site for birds and the following options could be explored for inclusion on the sides of the buildings:
- Nest boxes for swifts could be incorporated into the eaves. These not only provide nesting sites for Swifts but can also be used by other species such as House Sparrows and Starlings.
 - House Martin nests could be provided under the eaves or on the north to east sides of the building.
 - Individual boxes, such as the Schwegler Bird Home 1MR, could also be installed at a height of at least 2 m.
 - Groups of multiple small bird boxes could also be installed at a height of least 2 m to provide nesting sites for birds such as House Sparrows
- 4.20 In order to compensate for any loss of foraging habitat and/or enhance the site, it is recommended that any new planting should concentrate on species that are native to the area and ideally produce a range of seeds and berries at varying times of the year. Nectar rich plants could also be used encourage invertebrates on to the site, which in turn provide food for birds as well as other species such as bats.

Reptiles

- 4.21 The majority of the site is arable field which is unsuitable for reptiles. The grass margins were narrow and provided sub-optimal opportunities for reptiles and the hedgerows provide limited opportunities for cover. However, there is an adjacent, off-site area of scrub and grassland mosaic to the southeast of the site which may provide suitable reptile habitat. Therefore, common reptiles may occasionally utilise the southeast boundary hedgerow for cover but reptiles are unlikely to cross through the arable field on site.
- 4.22 Common reptiles receive partial protection under the Wildlife and Countryside Act 1981 (and amendments) whereby it is an offence to intentionally kill or injure any of the four common species.
- 4.23 The proposed works will mostly be limited to the footprint of the arable field but some sections of hedgerow may be removed for new access. Given the limited potential for reptiles within the boundary vegetation of the site, a reptile survey is not required but as a precaution clearance of vegetation on site and subsequent works should be in accordance with the following precautionary method of working for reptiles.
- All clearance works should be undertaken when common reptiles are likely to be fully active i.e. during the April to September period.
 - Clearance of tall vegetation should be undertaken using a strimmer or brush cutter with all cuttings raked and removed the same day.
 - Should any common reptiles be discovered during construction, which are likely to be affected by the development, works should cease immediately. The owner/site manager should then seek the advice of a suitably qualified and experienced ecologist and works should only proceed in accordance with the advice they provide.
 - Any trenches left overnight should be covered or provided with ramps to prevent common reptiles (and other animals) from becoming trapped.

- Any building materials such as bricks, stone etc. should be stored on pallets to discourage reptiles from using them as shelter.
- Any discovered reptiles should be moved to the southwest corner of the site where woodland/scrub extends away from the site.

Amphibians

- 4.24 The majority of the site provides poor terrestrial habitat in the form of the arable field and sub-optimal terrestrial habitat along some of the grass margins. However, the hedgerows provide areas of cover and there is one pond on site. With regards to Great Crested Newts there are 11 other ponds shown on maps within 500 m of the site that are not isolated by the B4039 and village of Yatton Keynell. On inspection, one of these ponds was dry (Pond 5) and one waterbody formed part of a flowing ditch. The pond on site and seven other ponds were accessible for a Habitat Suitability Index (HSI) Assessment to determine their suitability for Great Crested Newts. In summary, four ponds score above 0.5 at which further surveys or a district licence is required.
- 4.25 Great Crested Newts and their places of breeding or rest are protected under the Wildlife and Countryside Act 1981 (and amendments) and The Conservation of Habitats and Species Regulations 2010 making it illegal to kill, injure, capture or disturb a Great Crested Newt and to damage or destroy a breeding or resting site of this species. All activities that would otherwise constitute an offence under The Conservation of Habitats and Species Regulations 2010 must be licensed by Natural England. Great Crested Newts are also a NERC Priority Species.
- 4.26 The entire site measures approximately 4.1 ha. Using Natural England's Great Crested Newt Rapid Risk Assessment, for any land (not just newt habitat) which is within 100 – 250 m of any breeding pond where more than 1 ha is to be lost or damaged, the risk of an offence being committed is rated as 'Red: Offence Highly Likely'. When the risk of newts being trapped in excavations or the killing or injury of newts, such as from poorly stored materials/rubble, the risk of an offence being committed stays at "Red: Offence Highly Likely". Further surveys or a district licence will be required.
- 4.27 The presence or likely absence of Great Crested Newts from suitable ponds can be determined using eDNA sampling however, eDNA can only be collected between mid-April until the end of June and if a positive result is received, traditional survey methods or a district licence would be required. Traditional survey techniques would be in the form of a combination of bottle trapping, torching or netting over the course of six visits and must be timed between mid-March and mid-June with 50% of the surveys timed between mid-April and mid-May. The site and nearby ponds were visited in April 2024 to carry out eDNA sampling but the presence of Great Crested Newts was confirmed following daytime observations of this species in two of the ponds. It was therefore decided that an application to use the district licence will be made.

5.0 References

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6.0 Plans

Plan 1 – Survey Results

