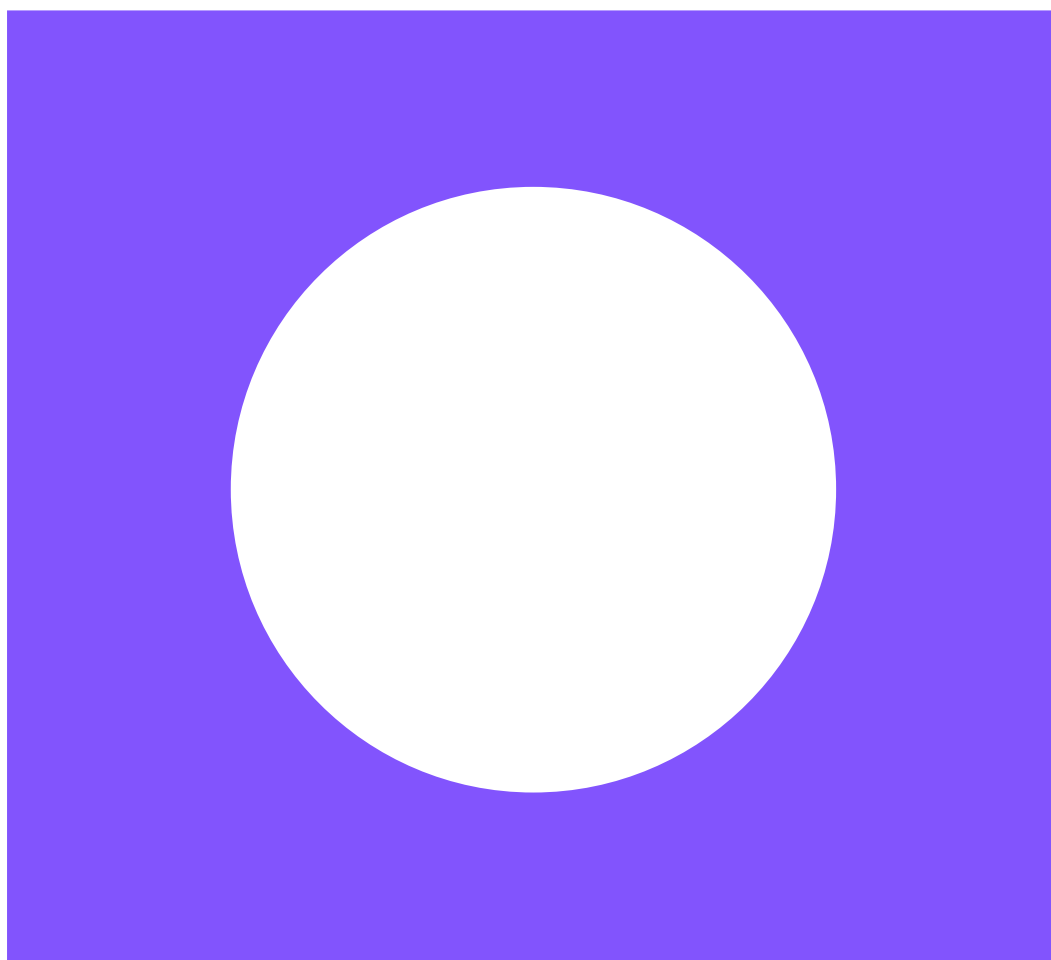




L795 Arborfield FW Strategic Growth Solution

Preliminary Ecological Appraisal Report

April 2026

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Thames Water

L795 Arborfield FW Strategic Growth Solution

Preliminary Ecological Appraisal Report

April 2026

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Executive summary

Mott MacDonald Limited was commissioned by Thames Water in March 2026 to undertake a Preliminary Ecological Appraisal (PEA) of land at Park Lane, Finchampstead, Wokingham, RG40 4PT (henceforth referred to as 'the Site'). The purpose of this appraisal is to describe the current habitats, evaluate their potential to support notable or protected species, and assess the ecological constraints and opportunities associated with the Proposed Works. The purpose of this appraisal is to inform a full planning application for Arborfield FW Strategic Growth Solution (henceforth referred to as the Proposed Works).

Baseline condition assessments of the habitats present are included in the L795 Arborfield FW Strategic Growth Solution Biodiversity Baseline Report¹, to inform subsequent Biodiversity Net Gain (BNG) calculations. A Biodiversity Gain Plan may be required depending on the extent of vegetation removal identified during the detailed design.

The proposed works involve the construction of two offline storage tanks, new foul sewers, eight manholes, a 6m above-ground vent stack, and new pipework to connect the vent stack and twin tanks. The exact alignment for the pipework connecting the twin tanks to the vent stack is currently unknown and is subject to detailed design. Therefore a precautionary approach has been taken for this appraisal. It is recommended that the ecologist is kept informed as the design develops in order to assess any changes to the predicted impacts. Based on current information, a number of potential ecological receptors relevant to the Proposed Works have been identified.

The key recommendations in this report are:

- **Further assessment:** As the Proposed Works fall within the Longmoor Bog SSSI Impact Risk Zones, it is recommended that Natural England are consulted.
- **Avoidance:** Every opportunity should be sought through the scheme design and construction methodology to avoid direct loss/damage or indirect effects through the following:
 - Avoid the spread of Invasive Non-Native Species (INNS) plants through avoiding disturbance, avoiding soil movement and implementing biosecurity.

A Construction Environmental Management Plan (CEMP) would implement prescriptions to control dust, noise, surface water run-off, light and vibration levels, as required to avoid and minimise impacts to protected species and habitats.

This PEA is valid for 18 months after the date of survey. After this date the report should be reviewed by a competent ecologist and an update site walkover (and subsequently a new PEA report) may be required.

¹the L795 Arborfield FW Strategic Growth Solution Biodiversity Baseline Report. L795-DN-00-004-RP-EN-0003

1 Introduction

1.1 Project background and Site description

Mott MacDonald Limited was commissioned by Thames Water Utilities Limited in March 2026 to undertake a Preliminary Ecological Appraisal (PEA) of land at Park Lane, Finchampstead, Wokingham RG40 4PT.

The Proposed Works are located within Finchampstead centred at Ordnance Survey Grid Reference (OSGR) SU 77486 64968. The working area of the Proposed Works is approximately 0.3ha in area and is shown by a red line boundary within Figure 1.1 and Appendix E.

The Site is within the Hazebrouck Meadows Suitable Alternative Natural Greenspace (SANG). Habitats on site consist of neutral grassland with planted trees and scrub. There is also a dry ditch to the south of the Site. The wider landscape consists of woodland, scrub and pasture to the north and east, with development including new housing to the south and west.

In addition to a standard PEA, habitat condition assessments were carried out to provide inputs for the statutory Biodiversity Metric and to inform Biodiversity Net Gain (BNG) calculations which can be found in the Appendices of the L795 Arborfield FW Strategic Growth Solution B Biodiversity Baseline Report. Document reference: L795-DN-00-004-RP-EN-0003.

It is anticipated that ecological advice will be sought to review the detailed design of the Proposed Works, once finalised, to identify the need for any further ecological survey and assessment, if required.

Figure 1: The proposed project location



Source: Mott MacDonald, 2026

For the purposes of this report, the site is the area within the boundary shown in Figure 1.1, this area is hereafter referred to as 'the Site'.

1.2 Proposed Works

L795 Arborfield FW Strategic Solution, in Finchampstead, Wokingham, is a foul water network reinforcement project. This PEA has been based upon the reference design solution, noting a change in location to the vent stack from the reference design.

The outline reference design solution consists of:

- Construction of below ground twin tank offline storage with approximate total storage volume of 91m³ per tank
- Construction of three new foul sewers and a new high level overflow pipe new to connect the twin tanks to the existing sewer network
- Construction of 8 new manholes, with 4 located on the twin tanks and 4 connecting between the new sewers and existing sewer network. Manholes covers will be flush with ground level.
- Installation of above ground vent stack (6m high) with associated below ground concrete block foundation (2m x 2m x 1m)
- Installation of new pipework to connect the twin tanks to the vent stack.

The alignment for the pipework connecting the twin tanks to the vent stack is currently unknown, it is anticipated that the pipe would be approximately 50-80m in length.

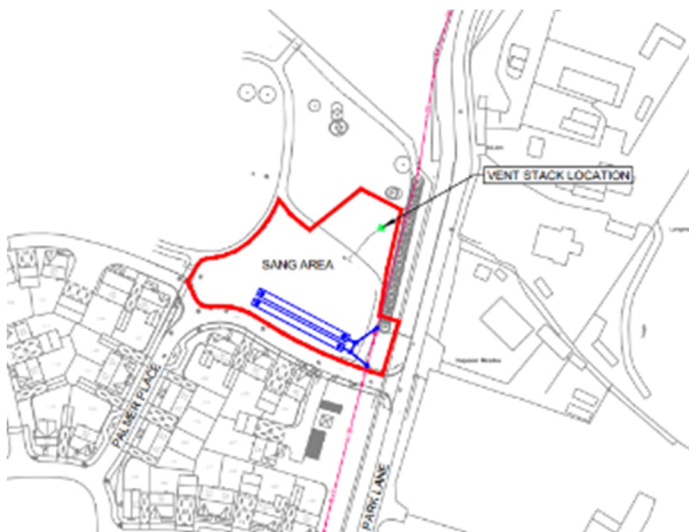
The Proposed Works are required to accommodate additional flows arising from insufficient capacity within the existing system to manage increased discharge from major housing developments in Arborfield. The proposed works involve constructing a new storm tank, together with the necessary ancillaries and a vent stack. These measures will help prevent overflow discharges into the environment.

The red line boundary is within a new dedicated SANG adjacent to Countryside Partnerships Homes Counties West development site, Finchampstead. Temporary removal of newly planted vegetation will take place in the SANG within the red line boundary. The planted vegetation surrounding the planned construction elements (such as the vent stack, manholes, and underground storm tanks, including their 3m buffer zone) is to be reinstated to the same condition within a 10year window post construction works to align with BNG requirements.

Proposed access is through the adjacent Palmer Place and access to the SANG is expected to use the existing access gates. Plant equipment expected to be used during construction are not known, however it is assumed that excavators, generators & large crane will be required. The likely levels of noise generation are unknown at this stage.

Construction is expected to commence in Summer 2026 for a duration of 6 months. The reference design solution has been based on model findings and is subject to change during the detailed design stage. Therefore, for the purposes of this assessment, it is assumed that all areas within the redline boundary will be developed.

Figure 2: Outline design



Source: Mott MacDonald, 2026

1.3 Aims and objectives of this report

This Preliminary Ecological Appraisal (PEA) Report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Preliminary Ecological Appraisal' (2017). The purpose of this report is to identify any potential ecological constraints associated with the Proposed Works and/or to identify the need for additional survey work to further evaluate any impact that may risk contravention of legislation or policy relating to protected species and nature conservation. Where possible, this report

outlines any design considerations that may be required to ensure compliance with legislation and policy and provides recommendations for further survey and assessment where required. Although some of these measures may be used to achieve a net gain in biodiversity in line with national and local planning policies, this does not comprise a Biodiversity Net Gain assessment.

The aims of this assessment are to:

- Undertake a desktop review to identify any existing information regarding protected and/or notable species and sites with a nature conservation designation, within the defined zone of influence (Zoi) for the Site;
- Carry out a UK Habitat Classification (UKHab) survey to provide a description of the existing broad habitat types both within and immediately adjacent to the Site;
- To record the presence or potential presence of any protected and/or notable species of flora or fauna;
- Identify the presence of any invasive plant species on or adjacent to the Site;
- Provide a UKHab map with target notes of ecological features as identified above;
- Outline any ecological constraints to the Proposed Works in terms of designated sites, habitats and/or protected or notable species;
- Provide recommendations for further ecological survey work or assessment, if considered necessary to provide an ecological baseline for the Proposed Works;
- Identify any high-level mitigation or compensation measures that may be required to offset potential development impacts; and
- Identify opportunities for enhancement in line with national and local planning policy.

1.4 Quality assurance and environmental management

This report has been subject to Mott MacDonald Limited's internal quality assurance checks in line with ISO9001:2015.

All surveys and assessments were undertaken by suitably qualified and experienced ecologists as per the CIEEM Competency Framework (CIEEM, 2021) and have been undertaken with reference to the recommendations given in *BS 42020:2013 Biodiversity: Code of practice for planning and development* (British Standards Institute, 2013).

As per the advice note from CIEEM (2019) *On the Lifespan of Ecological Reports & Surveys*; the findings presented in this report are valid for up to 18 months from the date of survey. Following this, the survey data should be reviewed and, if appropriate, updated to ensure any assessment and mitigation approach remains valid.

2 Legislation and policy

The following legislative and planning policy context has been used to inform the assessment of the relative ecological value of the Site, potential constraints to the Proposed Works and recommendation for enhancements:

- Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2017 (as amended) (commonly referred to as the Habitats Regulations)
- Natural Environment and Rural Communities Act 2006
- The Environment Act 2021
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996
- The Invasive Alien Species (Permitting and Enforcement) Order 2019 (henceforth referred to as 'the 2019 Order')
- The National Planning Policy Framework (NPPF, 2024)
- The Hedgerows Regulations 1997
- The Well-Being of Future Generations Act 2015
- Wokingham Borough Core Strategy Development Plan (2010)
- The Finchampstead Neighbourhood Development Plan (2022 - 2038) – Referendum Version
- Wokingham Borough Council (2020) Arborfield & Barkham Neighbourhood Plan 2019-2036.

3 Methodology

3.1 Study area and zone of influence

The current guidance on ecological impact assessments (EcIA) (CIEEM, 2018) recommends that all ecological features that occur within a 'zone of influence' (Zol)² for a proposed works are investigated. The Zol includes:

- Areas directly within the land take for the proposed works and access
- Areas which will be temporarily affected during construction
- Areas likely to be impacted by hydrological disruption
- Areas where there is a risk of pollution and noise disturbance during construction and/or operation

The Zol is variable depending on the ecological receptors affected. The size of study area is determined by considering the potential Zol for each receptor on an individual basis. Table 1 below summarises the study area used for ecological receptors considered in this report.

A proportionate approach was taken, to reflect the small scale and temporary nature of the works. The study area used is defined in the table below and discussed further in relevant sections of this report.

Natural England's Site of Special Scientific Interest (SSSI) impact risk zones (IRZ) have been used to inform the study. These were developed to assess potential adverse impacts of development on SSSI designated features, and the National Site Network. The IRZ buffers reflect different types of development proposal and their associated potential adverse impacts.

Table 1: Study area

Ecological feature (receptor)	Study area
Statutory nature conservation sites ³ – designated at national or international level	Within 2km of the Site or where the relevant Site of Special Scientific Interest (SSSI) impact risk zone (IRZ) intersects with the Site.
Statutory sites designated at a county or local level	Site and within a 2km radius.
Non-statutory nature conservation sites ⁴	Site and within a 2 km radius.
Legally protected ⁵ / Species of Principal Importance ⁶ /notable species ⁷	Site and within a 2 km radius.

² Note that the Zol depicts a distance within which effects are identified as most likely. This does not equate to a certainty of effects within this distance, nor does it preclude the possibility of effects outside the Zol.

³ Statutory designations include Special Areas of Conservation (SAC), Special Protection Areas (SPA) (referred to collectively as National Site Network sites in England), Ramsar sites National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR).

⁴ Non-statutory sites are designated by local authorities (e.g. Sites of Importance for Nature Conservation or Local Wildlife Sites).

⁵ Legally protected species include those listed in Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981; Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) or in the Protection of Badgers Act 1992.

⁶ Species of Principal Importance (SPI) are those defined by Section 41 of the Natural Environment and Rural Communities Act, 2006.

⁷ Notable species include SPI; Local Biodiversity Action Plan (LBAP) species; Birds of Conservation Concern (Stanbury et al. 2021); and/or Red Data Book/nationally notable species (JNCC, undated).

Ecological feature (receptor)	Study area
Habitats of Principal Importance ⁸ and ancient woodland	Site and within a 50 m radius.
Waterbodies (with regard to great crested newt (<i>Triturus cristatus</i>) presence)	Site and within a 250 m radius.
UK Habitat Classification survey	Site only.
Protected species evidence	Site and a 50 m radius (where access allows)

Source: Mott MacDonald, 2025

3.2 Species and habitats assessment criteria

Species and habitats are considered notable and included in this report for the following reasons:

- Species and habitats protected by legislation
- Habitats of Principal Importance (HPI)⁸ and Species of Principal Importance (SPI) /priority species⁶
- Species and habitats listed as a local priority for conservation (Local Biodiversity Action Plan (LBAP) species)
- IUCN threatened birds in Great Britain (critically endangered, endangered or vulnerable)
- Birds of Conservation Concern (BoCC) red or amber
- Nationally rare, nationally scarce or near threatened species

Invasive non-native species and species for which the works may pose a welfare issue are also included for consideration where appropriate.

3.3 Desk study

A desk study was undertaken in March 2026. Data were obtained from the following sources:

- Joint Nature Conservation Committee (JNCC) (<https://jncc.gov.uk>)
- Multi Agency Geographical Information for the Countryside (MAGiC) (<https://magic.defra.gov.uk/MagicMap.aspx>)
- Ancient Tree Inventory (<https://ati.woodlandtrust.org.uk/tree-search>)
- Water vole mapping data base ([The National Water Vole Database & Mapping Project | The Wildlife Trusts](#))
- © OpenStreetMap contributors
- Google maps (accessed March 2026)
- Natural England's Priority Habitat Inventory (PHI) (England)⁹
- Thames Valley Environmental Records Centre (TVERC) (datasearch@tverc.org; <https://www.tverc.org/>)
- Wokingham Borough Core Strategy Development Plan (2010)
- The Finchampstead Neighbourhood Development Plan (2022 - 2038) – Referendum Version

⁸ Habitats of Principal Importance are those defined by Section 41 of the Natural Environment and Rural Communities Act, 2006.

⁹ A dataset of confirmed and potential HPI geographic extents and locations. This was used to inform what HPI could be present and support the assessment of potential impacts. Potential HPI were noted and confirmed as such during the field survey, where possible

- Wokingham Borough Council (2020) Arborfield & Barkham Neighbourhood Plan 2019-2036.

3.4 Field survey

The field survey consisted of an UKHab survey, which involved mapping of habitats by a suitably qualified and experienced ecologist from Mott MacDonald and an assessment of the Site's potential to support protected species. This survey was completed on 04/03/2026.

The habitat types were identified and mapped in compliance with the UKHab guidance documents. Primary habitats on-site were classified using Level 3 and Level 4 of the UKHab hierarchy. Secondary codes have been used on the UKHab Map (Appendix A) to further describe the primary habitat present. Dominant plant species were noted, as were any protected, uncommon, invasive species or species indicative of particular habitat types, but there was no attempt to compile exhaustive species lists for this element of the site assessment. Plant species recorded are included in the relevant results subsections in Section 3. Botanical nomenclature in this report follows Stace (2019) for both scientific and English names. Nomenclature for fauna follows the Natural History Museum Species Dictionary¹⁰ with scientific names used at first mention only.

The walkover of the Site also included an assessment of the likelihood of protected and notable animal species being present using species specific industry standard best practice guidance. Please see Table 2 below. The specific survey methods used for [REDACTED] bats can be found in Appendix B.

Table 2: Assessment criteria of Site's potential for protected/notable species

Level of potential	Assessment
Present	Presence confirmed by the current survey or by recent and/or desk study records.
High	Habitat present provides all of the known key requirements for a given species/species group. Local records are provided by desk study. The Site is within or close to a national or regional stronghold for a particular species. Good quality surrounding habitat and good connectivity.
Moderate	Habitat present provides some of the known key requirements for a given species/species group. Several desk study records and/or the Site are within known national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, barriers to movement and disturbance.
Low	Habitat present is of relatively poor quality for a given species/species group. Few or no desk study records. Presence cannot be discounted on the basis of national distribution, nature of surrounding habitats or habitat fragmentation.
Negligible	Habitat is either absent or of very poor quality for a particular species or species group. No desk study records. Surrounding habitat unlikely to support wider populations of a species/species group. Outside or peripheral to the known range of a species.

The findings of this assessment help establish the need for protected species surveys. Surveys may be required where a site is judged to be of suitability for a particular species/ species group even if that suitability is deemed to be Low - this is particularly the case where there the risk of contravening the relevant conservation legislation is unknown or cannot be quantified on the basis of the information available. However, in some cases there may be opportunities to ensure compliance with the legislation without further survey through precautionary measures prior to and during construction.

¹⁰ <https://www.nhm.ac.uk/our-science/data/uk-species/search>

To inform any future Biodiversity Net Gain calculations, the condition of each habitat was assessed during the on-site survey using the published condition assessment criteria in The Statutory Biodiversity Metric Technical Annex 1 (Natural England, 2024).

Table 3 details the weather conditions at the time of the survey.

Table 3: Survey weather conditions

Date	Temperature (°C)	Cloud Cover (%)	Wind (Beaufort scale)	Precipitation
04/03/2026	7°	10%	2	0%

3.5 Limitations

The following limitations are relevant to this assessment.

- **Biological records:** Biological records obtained from records centres do not necessarily represent a full and complete list for a given area and the absence of a species or habitat record does not prove it is not present. Records are not often collected as a result of systematic surveys and therefore geographic, temporal (annual and seasonal) and species coverage is not often representative. However, this data is considered sufficient alongside the other sources reviewed and ecological survey of the site to inform this assessment of constraints.
- **Records older than 10 years** were considered on a case-by-case basis, with those less than 10 years old used as standard. This is to ensure that changes in local conditions and habitats do not skew results, for example inferring species may be present from an older record prior to development of an area, when no suitable habitats exist anymore. This has been taken into account in the assessment and recommendations.
- **Ordnance survey maps** do not provide a complete record of waterbodies present within a landscape but were reviewed alongside aerial imagery to provide as robust an assessment as possible. Recommendations for further ground-based assessment are made in this report.
- **PEA methodology:** Ecological surveys are limited to factors which affect the presence of plants and animals, such as time of year, migration patterns and behaviour. With a single site visit it is possible that certain species may have been overlooked or under-recorded during the assessment as optimal survey periods vary from species to species. This PEA report therefore cannot be considered to provide a wholly comprehensive account of the ecological interest of the Site, and it should be noted that this report does not constitute an Ecological Impact Assessment. The survey does, however, provide a “snapshot” of the ecological interest present on the day of the survey visit.
- **Sub-optimal timings:** The optimal time for botanical surveys is between April to September, since the site visit was conducted in early March it is considered a sub-optimal time for assessing plant communities. Therefore, it is possible that some species of flora were missed during this visit. However, the surveyors obtained sufficient information to interpret the habitat type to a sufficient accuracy for the purposes of this report.
- **Invasive species:** During the survey the more commonly encountered species were looked for, such as Japanese knotweed (*Reynoutria japonica*), Indian balsam (*Impatiens glandulifera*), rhododendron (*Rhododendron ponticum*), Virginia creeper (*Parthenocissus quinquefolia*), wall cotoneaster (*Cotoneaster horizontalis*) and montbretia (*Crocsmia x crocosmiiflora*). There is a low risk that some less common invasive non-native species may have been omitted from the field survey.

Despite these limitations, it is considered that this report accurately reflects the habitats present, and the potential of the Site to support protected and otherwise notable species.

4 Results and interpretation

This section presents the results of the desk study and field survey along with an interpretation. To inform an assessment of impacts on ecological receptors, potential impact pathways from any proposed works have been identified and considered.

4.1 Desk study

For ease of reference, desk study records for protected and notable species are included together with field sightings/evidence in Section 4.3.

4.1.1 Designated sites

Table 4 below provides a description of designated sites within the ZoI, their ecological importance and a summary of their qualifying features. See Appendix D for a map showing their proximity to the Site. If impact pathways are ruled out in the following table, the designated site is not considered further in this report. Where impact pathways have been identified, recommendations are given in Section 5.

Table 4: Summary of statutory and non-statutory designated sites

Site Name and Designation	Distance and orientation from Site	Ecological importance	Qualifying features
Longmoor Bog SSSI	700m to north-east of the Site	National	Longmoor Bog is one of a few examples in Berkshire of a base-poor valley mire, its main features being a well-developed carr of alder <i>Alnus glutinosa</i> , grey willow <i>Salix cinerea</i> , downy birch <i>Betula pubescens</i> and alder buckthorn <i>Frangula alnus</i> and an area of wet heathland dominated by purple moor-grass <i>Molinia caerulea</i> and cross-leaved heath <i>Erica tetralix</i> . The remainder of the site is predominantly secondary mixed woodland.
Longmoor Bog LNR	700m to north-east of the Site	County	Habitats include lowland valley mire and wet (bog) woodland. Species include bog bush cricket <i>Metrioptera brachyptera</i> , adder <i>Vipera berus</i> , bog bean <i>Menyanthes trifoliata</i> and common wintergreen <i>Gaultheria procumbens</i> .
Hazebrouck Meadows SANG (Extension) (Suitable Alternative Natural Greenspace)	Site is within SANG	Local	Meadows, ponds, woodland, slow worms (<i>Anguis fragilis</i>), bat habitat.
Longmoor Woodland And Bog, California Country Park Local Wildlife Site (LWS)	300m to north-east of the Site.	County	Heathland bog.
Hogwood Shaw LWS	400m to south-west of the Site.	County	Lowland Mixed Deciduous Woodland with a relatively large pond for the size of the site. It is important habitat within increasingly urbanised surroundings.
Shepperlands Copse LWS	500m to south-east of the Site.	County	Lowland Mixed Deciduous Woodland and Lowland Heathland HPI. Reptiles, Bullfinch (<i>Pyrrhula pyrrhula</i>), Red and Amber listed bird species.

Site Name and Designation	Distance and orientation from Site	Ecological importance	Qualifying features
Shepperlands Farm, Berkshire, Buckinghamshire and Oxfordshire (BBO) Wildlife Trust Nature Reserve	500m to south-east of the Site.	Local	Heathland, woodland and meadow habitats. Old oak trees with decaying wood.
Longmoor Lake LWS	900m to north-east of the Site.	County	The site includes a lake and mixed woodland. Wetland species include ragged robin, marsh pennywort and purple moor grass. Heather and bell heather also recorded.
Woodlands Near Banisters Farm LWS	1.4km to south of the Site.	County	Ancient semi-natural woodland site with 26 Ancient Woodland Indicators, Lowland mixed deciduous woodland HPI.
Claypits Copse LWS	1.4km to south-west of the Site.	County	Oak dominated woodland. Old yew trees and one old crab apple.
Long Copse (South) And Robin Hood Copse LWS	1.6km to north-west of the Site.	County	Ancient woodland, Lowland mixed deciduous woodland HPI, bluebell, wood sorrel, moschatel, pignut, primrose and yellow archangel.
Westwood Copse LWS	1.6km to south-west of the Site.	County	Ancient woodland. The woodland is dominated by oak and ash with hazel below. Woodland and wetland species recorded here.
Brook Farm Meadows LWS	1.9km to the north-east of the Site.	County	Wet grassland/ marshy grassland with several near threatened and vulnerable plant species.

Source: MAGIC (2026), Thames Valley Environmental Records Centre (March 2026).

4.1.2 Habitats of Principal Importance and ancient woodland

Table 5 provides a description of Habitats of Principal Importance (HPIs) within 50m of the Site. No ancient woodland was identified. See Appendix D for a map showing the proximity to the Site.

Table 5: Habitats of Principal Importance and ancient woodland

Site name	Distance and orientation from Site	Description	Ecological importance
Deciduous woodland priority habitat	10m to the south-east	Approximately 2 ha area of woodland on the far side of a road (Park Lane).	National

Source: MAGIC 2026, Woodland Trust Ancient Tree Inventory 2006.

4.1.3 Ponds

Ponds found within 250m of the Site are listed in Table 6 below.

Table 6: Ponds within 250m of the Site.

Pond reference	Location	Habitat	Distance	Size
Pond 1	SU 77711 64834	Second Lake at Robinson Crusoe Park, possibly hydrologically connected to pond 2	200m to south-east	0.3024ha

Source: Magic, Google maps, Open street map.

Three UKHab types were identified within the red line boundary with the majority of the Site comprising of other neutral grassland. The locations of the habitats are shown in the UKHab map in Appendix A and correlate with the Target Notes (TN) in Appendix C.

4.2.1 Other neutral grassland (q3c) – Secondary code – 32 Young planted trees

The young recently planted trees and shrubs included hawthorn (*Crataegus monogyna*) and rose (*Rosa spp.*) and were on average two meters tall.

Along the southern edge of the Site a strip of other neutral grassland approximately 4m wide was present with a dry ditch running along it's length. This grassland was dominated by meadow-grass *Poa sp.*

A small section of hardstanding footpath dissects the Site in the north.

Species are included in this assessment if suitable habitat to support them was assessed as being present or potentially present within or adjacent to the Site boundary see Table 9 where potential constraints are identified, recommendations are given in Section 5.

Table 7: Species record

Species	Status	Records	Field Survey Assessment
Bats	Habs. Regs ¹¹ 1981 Act, S5 ¹² SPI ¹³ LBAP	813 records within 2km. Most recent and nearest located 355m from Site with no barriers to dispersal to Site, recorded 2025. The nearest recorded bat roost evidence is also 355m from the Site.	Roosting: Trees within the Site were newly planted and were of low suitability for roosting bats. Foraging and commuting: the small area of tussocky grassland on Site may provide potential foraging and commuting habitat. The Site is bordered by woodland which may provide suitable roosting and foraging habitat.
Birds	Schedule 1 Wildlife and Countryside Act 1981 (as amended). BoCC amber/red NERC-S41 SPI 1981 Act ¹⁴	43 species of notable birds from 493 records including Skylark (<i>Alauda arvensis</i>), bullfinch, linnet (<i>Linaria cannabina</i>), meadow pipit (<i>Anthus pratensis</i>), song thrush (<i>Turdus philomelos</i>), starling (<i>Sturnus vulgaris</i>), whitethroat (<i>Sylvia communis</i>), woodpigeon (<i>Columba palumbus</i>) and wren (<i>Troglodytes troglodytes</i>) (closest 390m, 2025).	Onsite habitat is of low potential. No nesting opportunities were identified as no scrub or trees are present within the redline boundary and dog walkers frequently utilise the area making the Site unsuitable for ground nesting birds. Red kites <i>Milvus milvus</i> were observed during the field survey although no potential nesting sites were identified. Red kites are protected under Schedule 1 of the Wildlife and Countryside Act. 1981 (As amended):
Common toad (<i>Bufo bufo</i>)	NERC-S41 SPI	Three records; most recent is from 2025. Closest record is located 600m from the Site.	Low potential: The grassland within the Site has little refuge opportunities and is used by dog walkers. Nearest pond is 200m away.
Great crested newt (GCN) (<i>Triturus cristatus</i>)	Habs. Regs 1981 Act, S5 SPI LBAP	1 record within 500m. Most recent from 2020. Nearest located 475m with no barriers to dispersal to Site	Low potential: Terrestrial habitat (grassland) present has little refuge or foraging potential. 1 potential breeding pond 200m from the Site with no barriers to dispersal. Habitat Suitability Index assessment was not undertaken as the pond was not accessible.
Hedgehog (<i>Erinaceus europaeus</i>)	UKBAP NERC-S41 SPI, RL-GB-post2001-VU	11 records. Closest 700m, 2023.	Low potential: limited habitat opportunities for foraging and commuting habitat. Site is frequented by dog walkers.
Invasive non-native species	INNS-Other-2015 ¹⁵	Butterfly bush (<i>Buddleja davidii</i>) found adjacent to Site during site survey March 2026.	Moderate potential : Butterfly bush recorded adjacent to the Site. This species spreads rapidly from seed and is very likely to establish if not controlled.
Reptiles	Wildlife and Countryside Act 1981 (as amended).	516 records of Slow worm, adder, common lizard (<i>Zootoca vivipara</i>) and grass snake (<i>Natrix natrix</i>). Closest record 540m, most recent record 2024.	Low potential: Terrestrial habitat (grassland) present has little refuge or foraging potential. The Site is also heavily disturbed by dog walkers.
Hazel dormouse (<i>Muscardinus avellanarius</i>)	Habitats Directive A4, Habs. Regs 1981 Act Sch2, NERC-S41, WACA Sch5.	2 records, closest is 1.8km from the Site, and most recent record is in 2023.	No potential: no suitable habitats present on Site.

¹¹ Habs. Regs. – The Habitats Regulations, 2017

¹² Schedule 5 of The Wildlife and Countryside Act, 1981

¹⁴ Schedule 1 of the Wildlife and Countryside Act, 1981

¹⁵ It is noted that this INNS-Other Record from TVERC includes a species that is not on a Schedule 9 species on the Wildlife and Countryside Act 1981 (as amended) nor listed as an Invasive Alien Species (Enforcement and Permitting) Order 2019.

Species	Status	Records	Field Survey Assessment
Otter (<i>Lutra lutra</i>)	Habitats Directive A2np and A4, Habs. Regs 1981 Act Sch2, NERC-S41, WACA Sch5.	1 record 1.7km from the site.	No potential: no suitable habitats present on Site.

4.4 Summary of ecological constraints

Based on the findings of the desk study, field survey and interpretation of the potential for protected and notable flora and fauna. The table below summarises those receptors that require further survey, assessment or have further recommendations.

Table 8: Ecological receptors for further consideration

Ecological receptor	Scoped in/out
Designated sites	In
Ancient woodland	Out
Habitats of principal importance	Out
Other habitats	In
Amphibians (GCN, toad)	Out
Bats	Out
Birds	Out
Fish	Out
Hazel dormouse	Out
Invertebrates (terrestrial)	Out
Notable/protected plant species	Out
Otter	Out
Reptiles	Out
Water vole	Out
Invasive non-native species	In
Other mammals (hedgehogs)	Out

5.1 Overview

It is anticipated that mitigation and compensation design will be informed by further survey and the final development proposals. High level recommendations for mitigation, compensation and enhancement, where known, are included below.

- Nocturnal species such as bats: Avoid working at night to avoid the need for artificial lighting, or if this is not possible, following the Institute of Lighting Professionals (ILP) Guidance Note on artificial lighting and bats (ILP, 2023) in the design of operational lighting;
- All species by minimising the loss of habitat and using existing hard standing wherever possible;
- Avoid the spread of INNS plants through avoiding disturbance, avoiding soil movement and implementing biosecurity.

5.3 Further survey and assessment

Table 9: Further survey/assessment recommendations

Receptor	Survey/assessment type	Requirement and rationale
Designations and habitats		
Longmoor Bog SSSI	No survey required.	Consultation with Natural England may be required to determine potential impacts to Longmoor Bog SSSI as the project falls within the Impact Risk Zone criteria.

Source: Mott MacDonald Limited, 2026

5.4 Mitigation

The measures below are likely to be required as part of the mitigation strategy, in order to comply with legislative requirements:

- **Construction Environmental Management Plan (CEMP):** A CEMP or equivalent should be produced prior to the commencement of the works, which will capture all measures to minimise impacts to areas of retained habitat and to safeguard protected and/or notable species throughout the works. The CEMP should include the measures below, which will be tailored to the Proposed Works, once there is more detail on construction activities and phasing.
- **Lighting:** All construction works should be restricted, where possible, to daylight hours to prevent any adverse impacts on nocturnal species such as foraging bats and birds. Although night work is unlikely, as the construction programme extends into November 2026 works will be ongoing in autumn months, temporary lighting may be required at this time for several hours per day. If temporary lighting is essential it should avoid unnecessary disturbance by ensuring that the height of lighting columns are as low as possible; and that lighting hoods, cowls and shields are used to focus light into the working areas and away from the surrounding environment. An ecologist should be consulted prior to installing artificial lighting, with a compliance check carried out during the works (Collins et al), 2023).
- **Excavations:** Should be fenced off and/or covered to avoid animals becoming trapped. Otherwise a mammal ladder should be erected to allow any animals that may become trapped to escape and a check undertaken each morning to check if animals have become trapped overnight. If a trapped animal is found, then a suitably experienced ecologist should be contacted immediately to advise.

- **Invasive Species Management:** Invasive non-native species have been identified within proximity to the Proposed Works. Suitable methods for preventing the spread of these species should be outlined within the CEMP. In addition, any equipment brought onto site should be free of INNS.

-

5.5 Opportunities for enhancement

National and local planning policy promotes ecological enhancement. Starting at the earliest possible stage and throughout the scheme design, an ecologist should be consulted to provide strategic and technical advice on the delivery of net benefits for biodiversity including, if appropriate, off-site opportunities for enhancement.

The following opportunities have been identified so far which could be incorporated into the scope of works where appropriate:

- Incorporation of native species within any landscaping upon completion of the works, such as native tree, scrub and wildflower species;
- Provision of 'insect hotels' or natural brash piles/earth banks; and
- Retaining deadwood where it falls or gather into brash piles in retained habitat to increase invertebrate habitat and provide shelter for hedgehogs, reptiles and amphibians.

6 Conclusion

This report provided an initial assessment of the ecological constraints and opportunities at Arborfield.

As the current scope of works is not yet confirmed, the extent of habitat loss is currently unknown, and therefore a precautionary approach has been taken to this assessment. It is recommended that the ecologist is kept informed as the design develops to assess any changes to the predicted impacts. The following further surveys are recommended to inform avoidance, mitigation and compensation measures:

Mitigation for the spread of INNS like buddleia should also be considered to reduce its proliferation.

A CEMP would implement prescription to control dust, noise, surface water run-off, light and vibration levels to avoid impacts to protected species during construction.

There are a number of enhancement opportunities which can be implemented across the Site as outlined in Section 5 to benefit local biodiversity.

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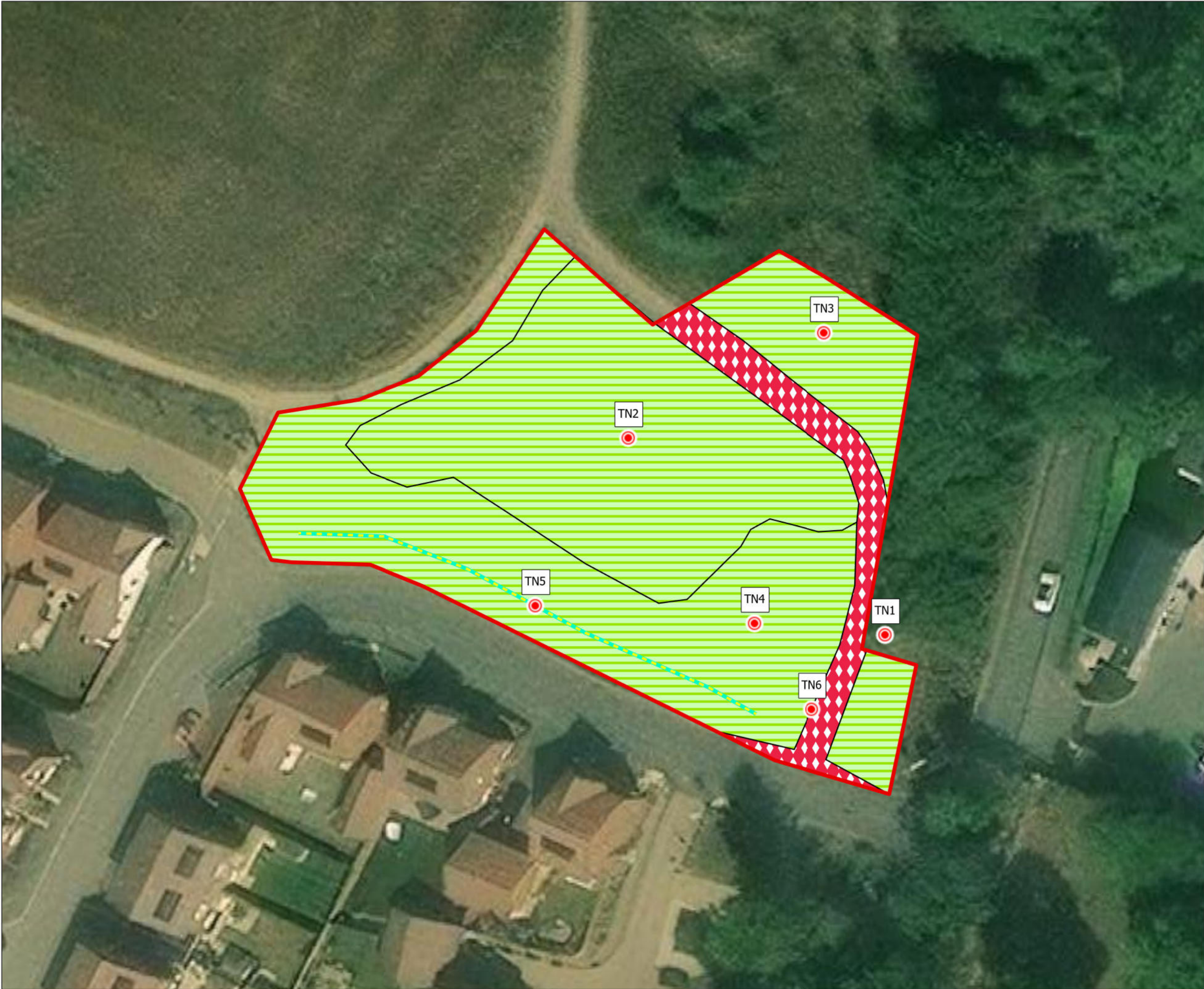
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Appendices

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A. UK Habitat Classification Map



- Red Line Boundary
- Target Notes
- UK Habitat Classification
- Urban - sustainable drainage system (r1, 50 - Ditch)
 - g3c - Other neutral grassland
 - u1b6 - Other developed land

Coordinate system: British National Grid; Datum: OSGB 1936

Data sources: Scheme Data: Thames Water, 2026.
Survey Data: Mott MacDonald, 2026.

Data sources: Microsoft, Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community



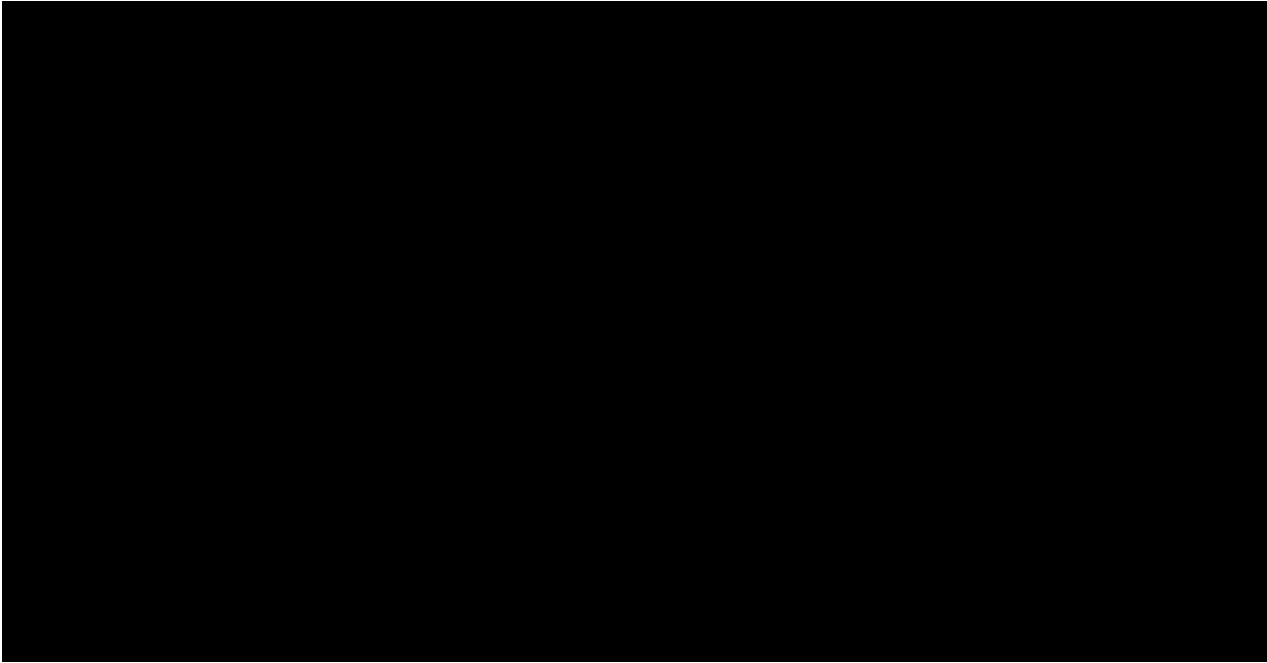
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Thames Water DS Environmental Support
Arborfield L795
UK Habitat Classification Survey

Drawn T Kumar	GIS Checked F Saunders	Checked E Heald	Approved V Hollands
Scale at A3 1:400	Status INF	Revision 01	Security STD

B. Spees specific assessment methods

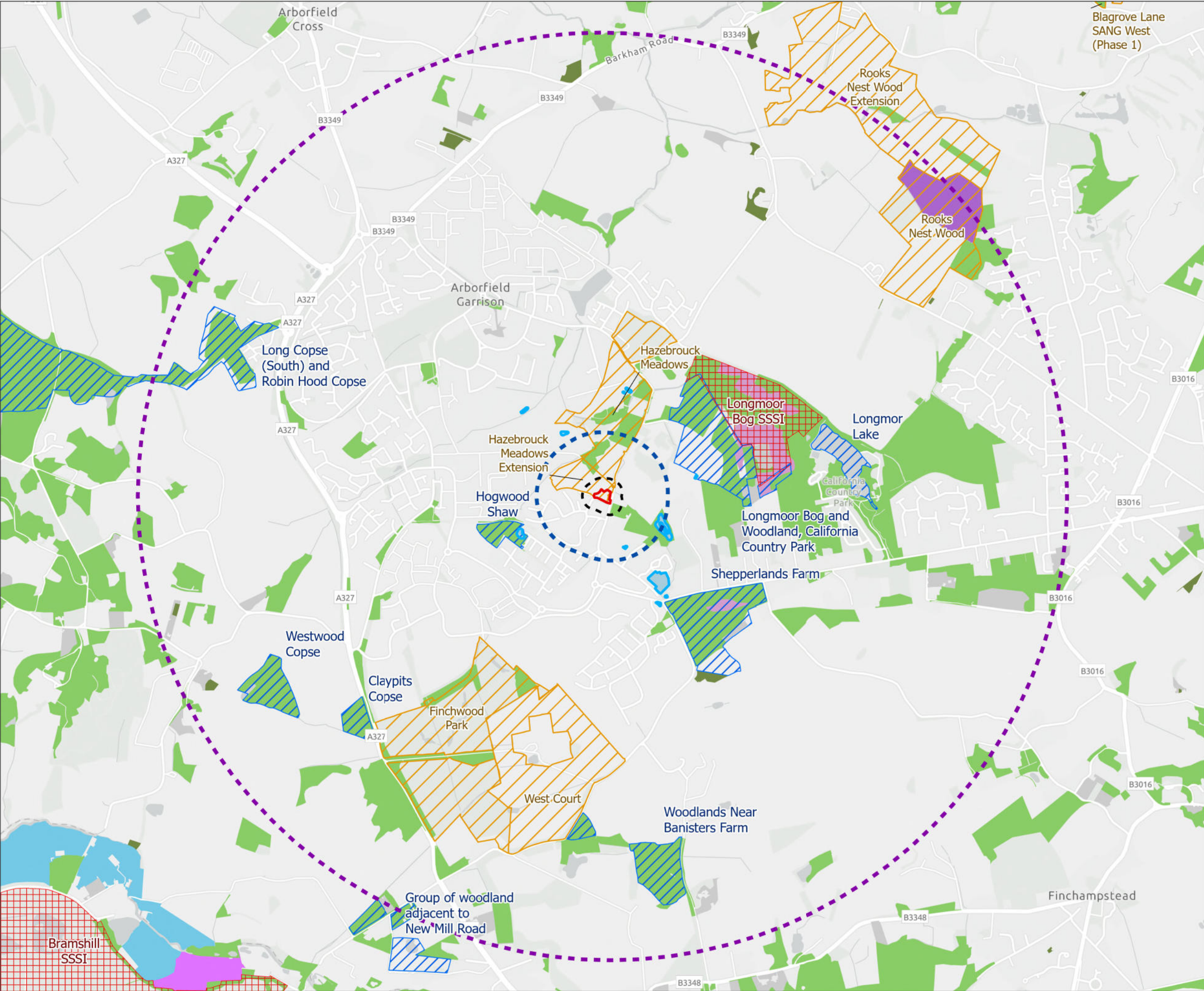


C. Target note and photos

Target note	Description	Photograph
TN1	Butterfly-bush growing just outside the red line boundary.	
TN2 and TN3	Other neutral grassland, with recent planting of trees and shrubs. Grassland species included oxeye daisy, common knapweed and with frequent species including dominant forbs such as common chickweed, ribwort plantain, curled dock and red fescue. The young trees are mixed broadleaved. Shrub includes hawthorn and rose.	
TN4	Short infrequently managed other neutral grassland to the south-west of the Site and adjacent to the ditch area. Grassland species included oxeye daisy, common knapweed and with frequent species including dominant forbs such as common chickweed, ribwort plantain, curled dock and red fescue, the young trees are mixed broadleaved.	  

Target note	Description	Photograph
TN5	Dry drainage ditch to the south-west of the Site. Vegetation dominated by meadow-grass.	
TN6	Fenced area.	

D. Ecological Constraints Map



Red Line Boundary

50m Buffer

250m Buffer

2km Buffer

Suitable Alternative Natural Green Spaces (SANGS)

Site of Special Scientific Interest (SSSI)

Local Wildlife Site

Waterbodies

Priority Habitats Inventory

Coastal and floodplain grazing marsh

Deciduous woodland

Good quality semi improved grassland

Lowland heathland

No main habitat but additional habitats present

Purple moor grass and rush pastures

Traditional orchard

Coordinate system: British National Grid; Datum: OSGB 1936
Data sources: Scheme Data: Thames Water, 2026.
Survey Data: Mott MacDonald, 2026.
Data sources: © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2024.
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E. Site Boundary Map



 Red Line Boundary

Coordinate system: British National Grid; Datum: OSGB 1936
Data sources: Microsoft, Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Data sources: Scheme data: Thames Water, 2026. Survey data: Mott MacDonald, 2026.



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