

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

'The Slips', West End Lane, Henfield, West Sussex BN5 9RG

Client:

Ben Kirk

Survey date:

16th January 2025

Project:

This report is prepared to inform a planning application with the Horsham District Council. The proposal is described as the construction of five individual plots, each containing a static caravan and dayroom, with associated landscaping and hardstanding.

PEA survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024](#).

The survey results and recommendations contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion.

The report has been partially redacted due to the inclusion of sensitive information regarding badgers

Site Location and Context					
The survey site is centred on National Grid Reference TQ 20116 15970 and has an area of approximately 0.6 ha. The site consists of a long, narrow field of grassland, historically used for camping and caravan parking. It is bordered by hedgerows, two ditches, several lines of trees, and features multiple mature oak trees. Located on the outskirts of Henfield village, the site sits amidst agricultural fields and large residential gardens. The wider landscape is characterized by agricultural fields, small woodland pockets, and an extensive network of bordering hedgerows, providing valuable habitat connectivity. The surrounding landscape is likely to provide value to a range of species including badgers, amphibians and bats.					
Survey Details					
The site survey was undertaken by Rachel Wick MSci, Graduate Ecologist.					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
16/01/2025	6.5	85	60	9	None
Survey limitations					
It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records. A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report. The PEA was undertaken outside of the optimal survey period for vegetation assessments. No further surveys are required, as it was determined that an adequate assessment of the sites community and condition could be drawn from a single suboptimal season visit.					
Ecological Survey Factor	Detailed using desk study and site survey. Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.				

Conclusion, Impact or Recommendations	
Habitats and plants (see location map in appendix 1, habitat map in appendix 2, proposal plan in appendix 3, pond map in appendix 4, and additional photos in appendix 5s). Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
<i>Summary of Survey Findings</i> (UKHab codes used)	The site contains hedgerow which is listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). The site also contains a ditch, several large trees and a line of trees which are all of good quality and could be of value to local wildlife populations (as detailed in subsequent sections of this table). Other habitats within the site are common and widespread and have low ecological value. Further notable habitats are present within 2km. On-site habitat descriptions <u>g4 – Modified grassland</u> The surveyed area is a field of modified grassland with bordering ditches, hedgerow and trees. The grassland has a short, consistent sward with approximately 5% total cover of bare ground. Perennial ryegrass <i>Lolium perenne</i> and Yorkshire-Fog <i>Holcus lanatus</i> form a 50-50 dominant mixture. Other species present include occasional creeping buttercup <i>Ranunculus repens</i> and daisy <i>Bellis perennis</i>, as well as rare orchard grass <i>Dactylis glomerata</i>. The combined cover of species indicative of suboptimal condition (creeping buttercup and daisy) is approximately 10%.  Additionally, a large dead wood stump is found in the northwestern corner of the site. <i>Condition assessment</i> There are approximately four vascular plant species per m² on average, and no scrub or bracken is present (criteria A, E and F). The sward height is consistent (criterion B). Physical damage is evident in less than 5% of the total grassland area, and the total cover of bare ground is less than 5% (criteria D and E). There are no invasive non-native plant species present (criterion G). Condition achieved: poor



Figure 1. A photo of the modified grassland habitat dominating the site, taken facing north at the south end of the site.



Figure 2. The large dead wood stump found in the northwest corner of the site, adjacent to a ditch.

h2b – Non-native and ornamental hedgerow

There are three cherry laurel *Prunus laurocerasus* hedges found on site, across the entire northern border (H1), along the northern half of the eastern border (H2) and along the southern border (H5). Their locations are illustrated in the habitat map in Appendix 2. All three of these hedgerows consist entirely of cherry laurel, with H5 featuring a singular red cedar *Thuja plicata* shrub. While H1 and H5 are well established, with continuous canopies and height of over 2m, H2 has been recently planted and features large gaps and a short height.



	<i>Figure 3. The northern cherry laurel hedgerow (H1) forming the northern border of the site with an access gate pictured on the left, with the eastern border cherry laurel hedgerow pictured in the background (H2)</i> <i>Figure 4. The southern border formed of cherry laurel hedgerow (H5)</i> <u><i>h2a – Native hedgerow</i></u> There are two separate stretches of native hedgerow present on site: H3 and H4. Hedgerow H3 lines the middle of the western border, while H4 lines the southern half of the eastern border. Their locations are illustrated in the habitat map in Appendix 2. <i>Hedgerow H3</i> H3 is between 1.5m and 3m tall, and approximately 1.5m wide. It is formed of a mixture of species including hazel <i>Corylus avellana</i>, blackthorn <i>Prunus spinosa</i>, bramble <i>Rubus sp.</i>, and three individual red cedar <i>Thuja plicata</i> shrubs. There is one large gap where the tree T6 is located, approximately 7m wide. Other gaps do not exceed 2m wide. There are approximately three multi-stemmed hazel trees within the hedgerow, which reach 5m in height at the tallest point and are all young or semi-mature. All of these hazel trees have a stem diameter of less than 7cm. The ground beneath H3 is mostly bare and covered by leaf litter, with infrequent patches of bramble, ivy, moss, and Yorkshire-Fog tussocks. The gap between this ground layer and the base of the canopy is less than 0.5m on average. There are no signs of recent damage to this hedgerow, and all trees within appear to be in a healthy condition. <i>Condition assessment</i> H3 has a height of more than 1.5m and a width of at least 1.5m (group A). There is no significant gap between the base canopy and the ground, but there is a gap larger than 5m present in the canopy (group B). The ground at the base of the hedgerow, up to 1m from the outer edge, is disturbed by cutting on one side and agricultural use on the other. Plant species indicative of nutrient enrichment of the soils did not reach more than 20% total cover (group C). There are no invasive non-native plant species present, and no signs of damage to the hedgerow or surrounding habitat (group D). There is more than one age-class of tree present, and at least 95% of the trees are in a healthy condition with no signs of damage (group E). Condition achieved: moderate <i>Hedgerow H4</i> H4 is 3m tall on average, with a width of approximately 1.5m. Within H4 is a dry ditch, [REDACTED]. There are no gaps in the canopy above 0.5m wide, and the gap between the base of the canopy and the ground is less than 0.5m. The hedgerow is dominated by hazel <i>Corylus avellana</i>, with occasional bramble <i>Rubus sp.</i>, as well as sycamore <i>Acer pseudoplatanus</i> and common holly <i>Ilex aquifolium</i>. The ground layer beneath the hedgerow was predominantly formed of bare ground, with some encroaching grass from the modified grassland field as well as bramble. No signs of recent damage were observed. <i>Condition assessment</i>
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H4 has a height above 1.5m and a width of at least 1.5m (group A). The gap between the canopy base and the ground is less than 0.5m on average, and no gaps in the canopy exceed 0.5m (group B). The hedgerow is adjacent to disturbed ground on either side, with the cut grassland of the field on one side and a private garden present on the other. Plant species indicative of nutrient enrichment of the soils did not reach more than 20% total cover (group C). There are no invasive non-native plant species present, and no signs of damage to the hedgerow or surrounding habitat (group D). **Condition achieved: good**

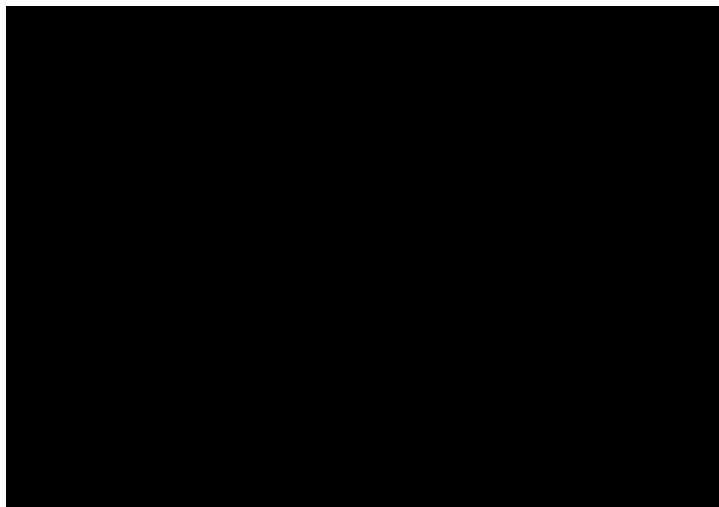


Figure 6. The western native hedgerow, H3.

Line of trees [33]

There are two separate lines of trees found along the western border of the site, one at the northern end and one at the southern end. The northern line of trees is predominantly formed of hazel *Corylus avellana* with common holly *Ilex aquifolium*, bramble *Rubus* sp., and goat willow *Salix caprea* also present. The trees range in height from 4m to 7m, and the canopy is continuous. Several of the hazel trees featured deadwood which would provide an ecological niche for vertebrates and invertebrates. Either side of the line of trees has been disturbed by mowing (within the site) and agricultural use (west of the site). All trees appear to be in a healthy condition, with no evidence of an adverse impact on tree health by damage from animals, humans or pests and diseases.

Condition assessment, northwestern line of trees

At least 70% of the trees are native (criterion A), and the tree canopy is predominantly continuous (criterion B). One or more of the trees feature veteran features (criterion C) and at least 95% of the trees are in a healthy condition with no signs of damage (criterion E). The tree line is bordered by cut vegetation on either side, indicating frequent disturbance (criterion D). **Condition achieved: moderate**

Similarly, the southwestern line of trees appears to contain mostly healthy trees, with mown grassland on one side and agricultural land on the other. However, the trees remained at a consistent 5m height across the whole length and there were no natural ecological features such as deadwood or crevices identified. The southern line of trees also consisted entirely of hazel *Corylus avellana*, with no other species identified. The tree canopy was continuous, and no signs of damage were identified. A singular bird's nest was identified within the southwest line of trees, likely belonging to a common species like pigeon.

Condition assessment, southwestern line of trees

At least 70% of the trees are native (criterion A) and the tree canopy is predominantly continuous (criterion B). None of the trees within the line had veteran features or natural ecological niches (criterion C), and at least 95% were in a healthy condition (criterion E). The tree line is bordered by cut vegetation on either side, indicating frequent disturbance (criterion D). **Condition achieved: moderate**



Figure 7. The northwestern corner of the site, with the northern line of trees pictured in the background.



Figure 8. Part of the southern line of trees, dominated by hazel.

Scattered trees [32]

Within the grassland field there are nine individual trees that do not fall within a hedgerow or line of trees. The location of all eight trees is indicated on the habitat map in Appendix 2.

Tree 1 (T1) is a 10m tall mature oak *Quercus robur* with a diameter at breast height (DBH) estimated to be approximately 90cm. The exact measurement was not obtained as the tree was inaccessible due to the ditch below. T1 had a generous layer of moss and lichen on all limbs, and a high percentage of deadwood present. There were no signs of damage or disease present on T1.

	Tree 2 (T2) is a 3m tall multi-stemmed hawthorn <i>Crataegus monogyna</i>. T2 has five trunks, with the largest one reaching 17cm DBH. It also featured some deadwood and small holes, which provide niches for vertebrates and invertebrates. There were no signs of damage or disease present on T2. Tree 3 (T3) is a 5m tall common holly <i>Ilex aquifolium</i> with at least four individual trunks at breast height. The trunks of T3 were inaccessible due to dense foliage, but the largest trunk was estimated to be no larger than 15cm DBH. There were no signs of damage or disease present on T3. Tree 4 (T4) is a 10m tall mature oak <i>Qeurchus robur</i> with one large trunk reaching a DBH of 67.5cm. The limbs of this tree feature a covering of moss and scattered lichen, and there are frequent dead wood limbs. Further, T4 also features some small crevices and holes on limbs and the main trunk. There were no signs of damage or disease present on T4. Tree 5 (T5) is a 12m tall mature oak <i>Qeurchus robur</i> with a DBH of 133cm. T4 features a high percentage of dead wood, with several cavities caused by broken and split limbs, as well as other holes and cavities present along the trunk. A nest was observed at the top of the main trunk. There were no signs of damage or disease present on T5. Tree 6 (T6) is a 10m tall mature oak <i>Qeurchus robur</i> with a DBH of 110cm. T6 featured multiple deadwood limbs and branches, with some small cavities present in addition. A singular nest was identified within the canopy of T6, likely belonging to a common species. There were no signs of damage or disease present on T6. Tree 7 (T7) is a 15m tall mature oak <i>Qeurchus robur</i> with a DBH of 151cm. T7 featured many instances of deadwood, cavities and holes, as well as a singular nest and evidence of mammal tunnelling within the base root system. There were no signs of damage or disease present on T7. Tree 8 (T8) is a 12m tall mature oak <i>Qeurchus robur</i> with a DBH of 95cm. T8 featured lots of deadwood which in turn created multiple crevices, as well as a singular common bird's nest. There were no signs of damage or disease present on T8. Tree 9 (T9) is a 7m tall mature oak <i>Quercus robur</i> with a DBH of 92cm. T9 featured some deadwood, but no crevices or holes. There were no signs of damage or disease present on T9. <i>Condition assessment</i> All trees present on site were native species and automatically pass the continuous canopy criterion (criteria A and B). Further, none of the trees showed evidence of an adverse impact on tree health caused by human activity (criterion D), and all tree canopies oversail vegetation below (criterion F). All trees except T3 had natural ecological niches for vertebrates and invertebrates such as deadwood, crevices, ivy or loose bark present (criterion E). All trees were mature, except for trees T2 and T3 (criterion C). Condition achieved: good condition for all trees except for T3 in moderate condition
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Figure 9. Tree 1 (left), Tree 3 (right, foreground holly), and Tree 2 (behind both T1 and T3).



Figure 10. The trunk of the large oak T3 is pictured left of the ditch. Adjacent to the ditch on the right is T3, the holly. Tree T2 is rightmost.



Figure 11. Tree T4 (left) and Tree T5 (right) along the western border.



Figure 12. Tree T6, on the eastern border within native hedgerow.



Figure 13. Tree T7 (left) and Tree T8 (right). The canopy of T9 is visible in the top right corner of the image.



Figure 14. The trunk of tree T8 (left) and tree T9 (right).

Ditch [50]

There are two ditches running down the western and eastern borders. The western ditch is approximately 24m long, parallel to the line of trees and hedgerow on the western border. Both ditches featured areas of water and drier portions without standing water, with all water present featuring some level of turbidity. The western ditch did not feature any aquatic marginal vegetation or submerged vegetation. The eastern ditch featured a layer of partially submerged whorl-grass *Catabrosa aquatica*, frequent soft rush *Juncus effusus*, and a small amount of duck weed *Lemna sp.* There were no signs of physical damage along the length of either ditch. Both ditches had a small amount of water present at the northern end of the site, reaching less than 30cm at the tallest point. It is highly likely both ditches remain dry during the summer period, or at a very low level somewhere below 30cm. Both ditches are heavily shaded by trees.

Condition assessment

Neither ditch featured good quality water (criterion A), and there were less than 10 species of emergent, floating or submerged plants present (criterion B). There is less than 10% cover of filamentous algae and duckweed over both ditches (criterion C), and there was an absence of a fringe of aquatic marginal vegetation (criterion D). Physical damage was not evident in either ditch (criterion E). The water levels of both ditches were below 50cm at the time of the survey, suggesting both are likely to dry during the summer months (criterion F). More than 10% of the ditches is shaded by surrounding vegetation (criterion G) and there is an absence of invasive non-native plant and animal species (criterion H). **Condition achieved: poor**



Figure 15. The eastern ditch, with cherry laurel hedgerow H2 to the right and the trunk of T4 to the left.



Figure 16. The western ditch, shaded by the line of trees at the western border.

Local notable habitats

A long, wide strip of coastal and floodplain grazing marsh runs from north to south, west of the site. The two closest points to the site are found ~315m south and ~640m northwest. A small strip of lowland fens is found ~1.8km southwest of the site. One small parcel of ancient woodland is found within 2km of the site, located ~1.3km northeast of the site at its closest point. Additionally, there are several small scattered areas of deciduous woodland within the surrounding landscape. The nearest parcel of deciduous woodland is found ~160m southeast. Northwest of the site by approximately 180m are four small sections of traditional orchard.

Foreseen Impacts

On-site habitats

The proposed development will result in the loss of approximately 0.5 ha of modified grassland. This could result in a net loss in biodiversity at the site.

Notable habitats

No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats.

Recommendations

On-site habitats

Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).

	Notable habitats None required. Biodiversity net gain The Environment Act (2021) requires all developments (excluding exemptions) to deliver a 10% net gain in biodiversity. Therefore, the planning application must be accompanied by a biodiversity net gain calculation and a habitat management and monitoring plan to ensure the proposed development delivers a 10% net gain.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	On-site designations The site is not subject to any designation. Statutory designated sites (within 2km) There are no known statutory sites within 2km of the site. However, the Impact Risk Zones for Sites of Special Scientific Interest (SSSI IRZs) indicate that at the location selected, there is potential for some types of development to have a harmful effect on terrestrial Sites of Special Scientific Interest (SSSIs) and those Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites that they underpin. This development site is also within the Sussex North Water Supply Zone. Statutory designated sites (within 10km) No national network sites (SAC, SPA, Ramsar) are located within 10km. Non-statutory designated sites The presence of non-statutory designated sites within 2km of the site cannot be established without data from Sussex Biodiversity Record Centre.
<i>Foreseen Impacts</i>	On-site designations No impacts foreseen. Statutory and non-statutory designated sites Within the Sussex North Water Supply Zone, proposals that would lead to an increase in water demand may have a likely significant effect on the qualifying features of the Arun Valley Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar site through reduced water levels.
<i>Recommendations</i>	On-site designations None required. Statutory and non-statutory designated sites

	Natural England advises that such development proposals require a Habitats Regulations Assessment (HRA) to consider the impacts, alone and in combination with other plans/projects, proceeding to appropriate assessment stage where likely significant effects cannot be ruled out
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	No problematic invasive and non-native species recorded on site.
<i>Foreseen Impacts</i>	No impacts foreseen.
<i>Recommendations</i>	No further surveys are required but remain vigilant. When designing the planting scheme for the new garden areas, the planting of any Schedule 9 invasive species, or any other non-native plants likely to escape into any semi natural habitats on site or adjacent, must be avoided.
Invertebrates	
<i>Summary of Survey Findings</i>	The habitats present on-site, including short modified grassland, ditches, hedgerows, and trees, are likely to support common invertebrate species by providing foraging and shelter opportunities. However, the grassland, which is the only habitat being impacted, offers limited potential for supporting specialized or protected invertebrate species due to its modified nature and lack of structural diversity. The retained ditches, hedgerows, and trees will continue to provide suitable habitat for a variety of invertebrates. The dead wood stump present in the northwest corner also provides some habitat to invertebrates. Given the low likelihood of the site supporting significant or notable invertebrate assemblages, further invertebrate surveys are unlikely to be required. The site also falls within the South Downs Important Invertebrate Area (IIA).
<i>Foreseen Impacts</i>	The grassland is of limited value for specialized or protected invertebrates due to its modified nature. The retained habitats, including ditches, hedgerows, and trees, are expected to continue supporting invertebrate diversity. The dead wood stump may be removed to facilitate the development but given the context of the wider site and the various other examples of deadwood upon trees and within the hedgerow, this removal is likely to be inconsequential.
<i>Recommendations</i>	Given the site's characteristics and the limited impact on higher-value habitats, further invertebrate surveys are not considered necessary at this stage. Suggested biodiversity enhancements The site could be enhanced via the provision of native wildflowers or wildflower turf, which would provide foraging opportunities for invertebrates.

Bats	
Summary of Survey Findings	EPSL data A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. No EPSLs are present within a 2km radius of the site. There are no Special Areas of Conservation designated for bats within 10km of the site. Foraging and commuting habitat The site features short modified grassland, which provides limited foraging opportunities for bats due to its low structural diversity and consequent low value to invertebrate populations. However, the presence of mature trees with potential roosting features enhances the site's suitability for bats. The hedgerows and lines of trees on-site provide valuable linear connectivity, which is essential for bats as they navigate and commute between roosting and foraging areas. Additionally, the presence of a ditch further enhances the site's foraging value by supporting invertebrate populations, a primary food source for bats. The wider landscape, dominated by agricultural fields, small woodland pockets, and an extensive network of hedgerows, offers excellent habitat for bats. The linear features within the surrounding environment, such as hedgerows and woodland edges, create well-connected corridors that facilitate bat movement across the landscape. Roosting habitat Several mature trees are present on-site, offering potential roosting habitat for bats. All individual trees identified on site were observed to feature a least one cavity or hole with the exception of T2. Trees T5, T6 and T7 in particular were host to a varied number of cavities and holes, as well as a higher percentage of deadwood limbs. As no trees are scheduled for removal under the proposed development, a detailed survey of the trees was not conducted.
Foreseen Impacts	Roosting habitat [Trees] All trees will be retained and therefore no impacts to roosting bats are anticipated. Foraging and commuting habitat The proposed development will result in the loss of approximately 0.5 ha of modified grassland but given their low value and the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. Artificial lighting The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.

<i>Recommendations</i>	Roosting habitat [Trees] No further surveys are recommended due to all trees being retained. Should plans change and require the removal of any trees a full assessment of the trees suitability for bats will be required in the form of A Ground Level Tree Assessment (GLTA). Following this further survey works may be required. Foraging and commuting habitat No further surveys are required. Artificial lighting A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: Artificial Lighting Guidance - Buildings, planning and development - Bat Conservation Trust (bats.org.uk) Suggested biodiversity enhancements The installation of four bat boxes at the site, one for each 'plot' created, will provide additional roosting habitat for bats. The bat boxes will be incorporated into the fabric of the new dwellings or on mature trees. They will be suitable for pipistrelles and Brown long-eared bats (which have been identified locally through EPSL data). Suitable bat boxes for pipistrelles include Habitat Bat Box, Ibstock Enclosed Bat Box or similar alternative brands. Suitable bat boxes for brown long-eared bats include NHBS Isabella Bat Box, NHBS Improved Cavity Bat Box or a similar alternative brand Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light.
Birds	
<i>Summary of Survey Findings</i>	Trees and vegetation Evidence of bird nesting was observed on-site, with a single nest observed within the western line of trees and additional nests located in several of the scattered mature trees. Although no birds' nests were observed within any of the hedgerows present on site, they also offer nesting and nest-building resources for birds. Barn owls The site does not appear to provide any suitable nesting sites for barn owls. Overwintering birds Due to the small size of the site and the extent and type of the habitats recorded, the site not considered suitable to support a significant assemblage of protected and/or notable birds.

<i>Foreseen Impacts</i>	Trees and vegetation The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests. Barn owls None foreseen. Overwintering birds None foreseen.
<i>Recommendations</i>	Trees and vegetation Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. Any vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. Barn owls None required. Overwintering birds None required. Suggested biodiversity enhancements The installation of a minimum of five bird boxes on mature trees around the site boundaries or on new buildings will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box (buildings) Schwegler 1SP Sparrow Terrace (buildings) Schwegler 1B Nest Boxes (trees) Schwegler 2H Robin Boxes (trees) Woodstone Nest Box (buildings or trees) Or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole.

	Swift and sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction.
Reptiles	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site. Habitat suitability The site comprises of short grassland field, which is suboptimal for reptiles due to its low structural diversity, limited cover, and frequent management. However, the hedgerows, ditches, and tree lines on-site provide important habitat features, including sheltering and foraging opportunities. When considered in the context of the site, the grassland gains importance by providing basking opportunities adjacent to these sheltering habitats. These bordering features are well-connected to suitable habitats in the wider landscape, including agricultural fields, hedgerows, and small woodland patches, which enhance the site's ecological connectivity for reptiles. Although the likelihood of a significant reptile population is low, particularly within the grassland areas, the presence of reptiles cannot be entirely discounted due to the peripheral habitats.
<i>Foreseen Impacts</i>	Modified grassland will be removed during construction. The loss of such habitat is likely to be inconsequential to local reptile populations owing to its low value and the presence of more extensive habitat onsite and locally. However, site clearance could result in the death or injury of reptiles, if present.
<i>Recommendations</i>	A precautionary working method will be implemented for widespread reptiles during construction, including the following measures: • Vegetation will be maintained at a short sward (5cm) to discourage reptiles. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby habitats. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any reptiles are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. • In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist. Suggested biodiversity enhancements The site could be enhanced for reptiles post-development with the inclusion of log piles (created from felled materials) and planting of areas of native shrubs, to provide sheltering opportunities.

Amphibians	
Summary of Survey Findings	EPSL and survey data A review of the MAGIC database returned three granted EPSL records for great crested newts within 2km of the site. Further, no positive class survey licence returns or DLL historic survey data (2017 – 2019) were present within 2km of the site. All three licences within 2km are found 320m from the site. These licences (2015-17216-EPS-MIT, 2015-17216-EPS-MIT-1, and 2015-17216-EPS-MIT-2) allow for damage to and destruction of a resting place for great crested newts. Between the location of these licences and the site are a few small roads, livestock/horse grazing fields, cropland and some residential properties with gardens. Hedgerows line the roads, fields and residential properties, connecting the development site to the licenced location. Therefore, the site is suitably connected to the licenced location, with no significant barriers identified. Aquatic habitat suitability (including ponds within 500m) Great crested newts (GCN) exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). There are no ponds on-site, but aerial imagery (MAGIC and OS Maps) indicates seven ponds within 500m. Pond 1 (P1), ~130m west, lies in a grassland field adjacent to hedgerow and trees, which connect directly to the site via Lawyer's Lane and a horse paddock. Lawyer's Lane, with low traffic and no high curbs, and the paddock, featuring short grass, are unlikely to act as significant barriers to amphibian movement. Pond 2 (P2), ~160m west, is similarly connected via hedgerow in a livestock field, which remains suitable unless overgrazed. Overgrazed land is suboptimal for amphibians but may still be used during wet conditions. Pond 3 (P3), ~230m west, lies in low-management grassland near a cul-de-sac, with valuable grassland, hedgerows, two quiet roads, and a horse paddock providing connectivity to the site. Pond 4 (P4), ~300m northeast, is surrounded by tall grassland at a cul-de-sac edge. Connectivity to the site includes quiet roads, allotments, paddocks, cropland, and residential gardens. Cropland suitability varies depending on moisture and vegetation, but hedgerows support dispersal. Pond 5 (P5), ~360m northeast, shares similar connectivity as P4, with additional amenity grassland and residential properties; regularly mown grass poses a minor barrier but may still allow amphibian movement in wet conditions. Pond 6 (P6), ~390m southeast, lies in woodland connected to the site via hedgerows, scattered trees, and agricultural fields. Quiet roads pose minimal dispersal barriers due to low traffic. Pond 7 (P7), ~450m north, is in an agricultural field connected to the site via fields, hedgerows, and quiet roads. A pond map showing approximate pond locations is provided in Appendix 4. Terrestrial habitat suitability

	The site features short grassland, which provides limited suitability for amphibians due to its low structural diversity and frequent management. However, the presence of ditches, hedgerows, and scattered trees significantly enhances the site's suitability, offering opportunities for shelter, foraging, and commuting. These features provide connectivity to the wider landscape, which includes ponds and other suitable habitats, facilitating amphibian dispersal. While the likelihood of large populations on-site is low, the site's linear and semi-natural features may support species during wet conditions.																								
Foreseen Impacts	When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss or significant disturbance of a total of 0.5ha of grassland. If great crested newts are present within the pond 130m to the west of the site, when completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces an Amber risk score, which states: Offence Likely (see below). <table><tr><th>Component</th><th>Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)</th><th>Notional offence probability score</th></tr><tr><td>Great crested newt breeding pond(s)</td><td>No effect</td><td>0</td></tr><tr><td>Land within 100m of any breeding pond(s)</td><td>No effect</td><td>0</td></tr><tr><td>Land 100-250m from any breeding</td><td>0.5 - 1 ha lost or damaged</td><td>0.3</td></tr><tr><td>Land >250m from any breeding pond(s)</td><td>0.5 - 1 ha lost or damaged</td><td>0.03</td></tr><tr><td>Individual great crested newts</td><td>No effect</td><td>0</td></tr><tr><td colspan="2"></td><td>Maximum: 0.3</td></tr><tr><td>Rapid risk assessment result:</td><td colspan="2">AMBER: OFFENCE LIKELY</td></tr></table> If all ponds within 250m of the site boundary are found to be absent of great crested newts, the rapid risk assessment produces a Green risk score, which states: Offence Highly Unlikely.	Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score	Great crested newt breeding pond(s)	No effect	0	Land within 100m of any breeding pond(s)	No effect	0	Land 100-250m from any breeding	0.5 - 1 ha lost or damaged	0.3	Land >250m from any breeding pond(s)	0.5 - 1 ha lost or damaged	0.03	Individual great crested newts	No effect	0			Maximum: 0.3	Rapid risk assessment result:	AMBER: OFFENCE LIKELY	
Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score																							
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Individual great crested newts	No effect	0																							
		Maximum: 0.3																							
Rapid risk assessment result:	AMBER: OFFENCE LIKELY																								
Recommendations	Environmental DNA (eDNA) surveys will be required of any ponds within 250m of the site (where accessible) to determine the presence or absence of great crested newts. This will comprise collecting water samples and sending them off for laboratory analysis and such surveys must be undertaken between mid-April and June, in accordance with current survey guidelines (Biggs et al, 2014). The surveys are likely to be required before planning permission can be granted. Alternatively, as the site falls within the NatureSpace District Level Licensing (DLL) scheme for Horsham District Council, it may be registered under this scheme in the first instance. It is unlikely that eDNA surveys would be required in this case as the site appears to be in an amber zone (though this would need to be confirmed). Suggested biodiversity enhancements																								

	The site could be enhanced for amphibians post-development through creation of amphibian hibernacula using rubble and logs from site clearance. Information on how to construct a hibernaculum can be found here: https://www.wiltshirewildlife.org/hibernaculum
Badger	
<i>Summary of Survey Findings</i>	[REDACTED] The site features short grassland, which can serve as suitable primary foraging habitat for badgers. Additionally, the hedgerow, ditch, and line of trees on-site are likely to enhance the habitat's suitability by providing connectivity and potential commuting routes to adjacent areas, which is crucial for badger movement. The wider landscape is dominated by agricultural and grassland fields which provide additional foraging opportunities for badgers. The centre of Henfield village lies to the east, where human activity and urbanization may limit suitable habitat. However, the site's location on the periphery of the village ensures access to more natural habitats in the surrounding rural landscape, increasing its overall suitability for badgers.
<i>Foreseen Impacts</i>	The proposed development could result in [REDACTED]
<i>Recommendations</i>	Badger surveys will be required [REDACTED] [REDACTED] The surveys are likely to be required before planning permission can be granted. Disturbance, damage or destruction of active badger setts will require a badger development licence. Suggested biodiversity enhancements Planting fruit bearing trees and species-rich grassland to increase foraging opportunities for badgers.
Riparian animals	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no granted EPSL records for otters or water voles within 2km of the site. The ditch may offer some suitability for water voles due to the steep banks at the northern border. However, most of the ditch has shallow banks, limited water, and is seasonally dry for half the year, thus reducing its suitability. The short sward of adjacent neutral grassland

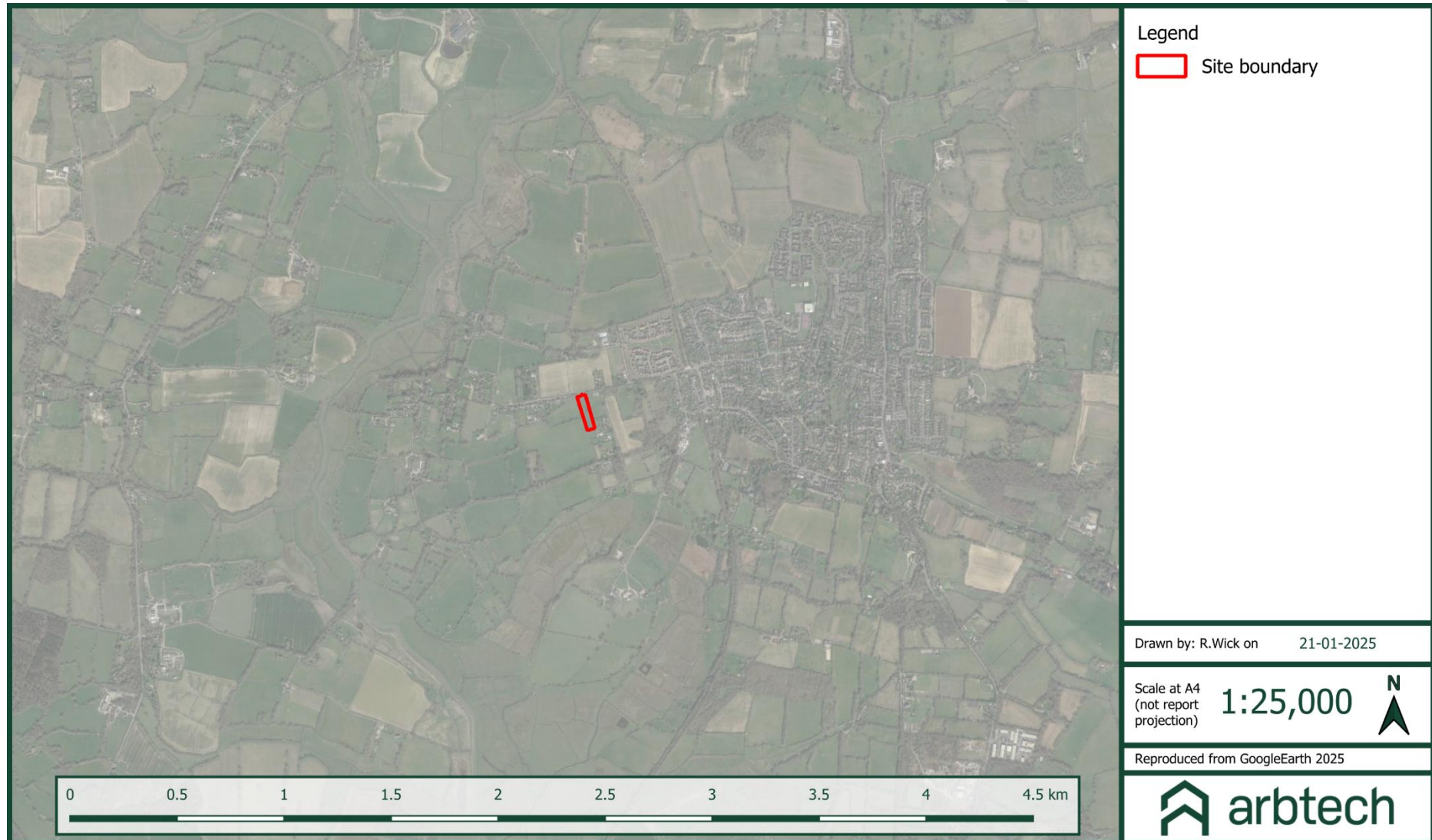
	further limits sheltering opportunities. The line of trees and hedgerow bordering both ditches offer some shelter, connecting to the onsite hedgerow.
<i>Foreseen Impacts</i>	The proposed development will not directly impact the existing ditch on site, however indirect impacts (e.g. pollution, dust, litter, surface run off, etc.) could occur during construction. Grassland will be removed during construction. The loss of such habitat is likely to be inconsequential to local water vole populations owing to its low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of water voles, if present.
<i>Recommendations</i>	Otters None required. Water voles Owing to the nature of the proposed development and the low potential for impacts to water voles, further water vole surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: • Heras fencing will be erected around the working area to prevent encroachment within 5m of the watercourse. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to the watercourse and any retained habitats which water voles could use. • Best practice pollution prevention measures will be implemented to minimise impacts to the watercourse and any retained habitats that water vole could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. In the unlikely event that water voles or evidence of water voles is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Hazel dormouse	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for hazel dormice within 2km of the site. Habitat suitability Dormice typically utilise a three-dimensional habitat structure as to commute between feeding and breeding sites whilst avoiding predation. As such habitats on site are considered unsuitable for hazel dormice and therefore the likelihood of this species being present on site is considered acceptably low. Furthermore, for isolated habitats in the UK, research indicates that dormice require 20ha of woodland habitat to support a viable population (Bright <i>et al.</i> 1994). Although 20ha of woodland is not present on or directly adjacent to the sites, the hedgerows present are connected to an extensive hedgerow network within the wider landscape,

	which in turn, are connected to multiple small woodland pockets. Habitats on site are assessed to provide foraging, commuting, and nest building opportunities for dormice in the form of the scattered trees, hedgerow, and lines of trees.
<i>Foreseen Impacts</i>	Modified grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local dormouse populations owing to their low value, the presence of more suitable habitats on site and locally. However, site clearance could result in the death or injury of dormice, if present.
<i>Recommendations</i>	Owing to the nature of the proposed development and the low potential for impacts to dormice, further dormouse surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: • Site clearance will be undertaken outside of the dormouse hibernation season (November to March) insofar as is possible. • A toolbox talk will be given to contractors regarding the possible presence of dormice at the site. • Heras fencing will be erected around the working area to prevent encroachment into retained habitats where dormice could be present. • A pre-commencement inspection of the site will be undertaken for dormice. In the unlikely event that a dormouse or evidence of dormouse is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Other e.g. hedgehog	
<i>Summary of Survey Findings</i>	The grassland, hedgerow and lines of trees onsite provides limited foraging and commuting opportunities for hedgehogs, with several small parcels of woodland and a network of hedgerow nearby.
<i>Foreseen Impacts</i>	Modified grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.
<i>Recommendations</i>	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. Suggested biodiversity enhancements

	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting fruit bearing trees and species-rich grassland to increase foraging opportunities. • Creation of brash piles or installation of hedgehog houses in shady areas. • Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.
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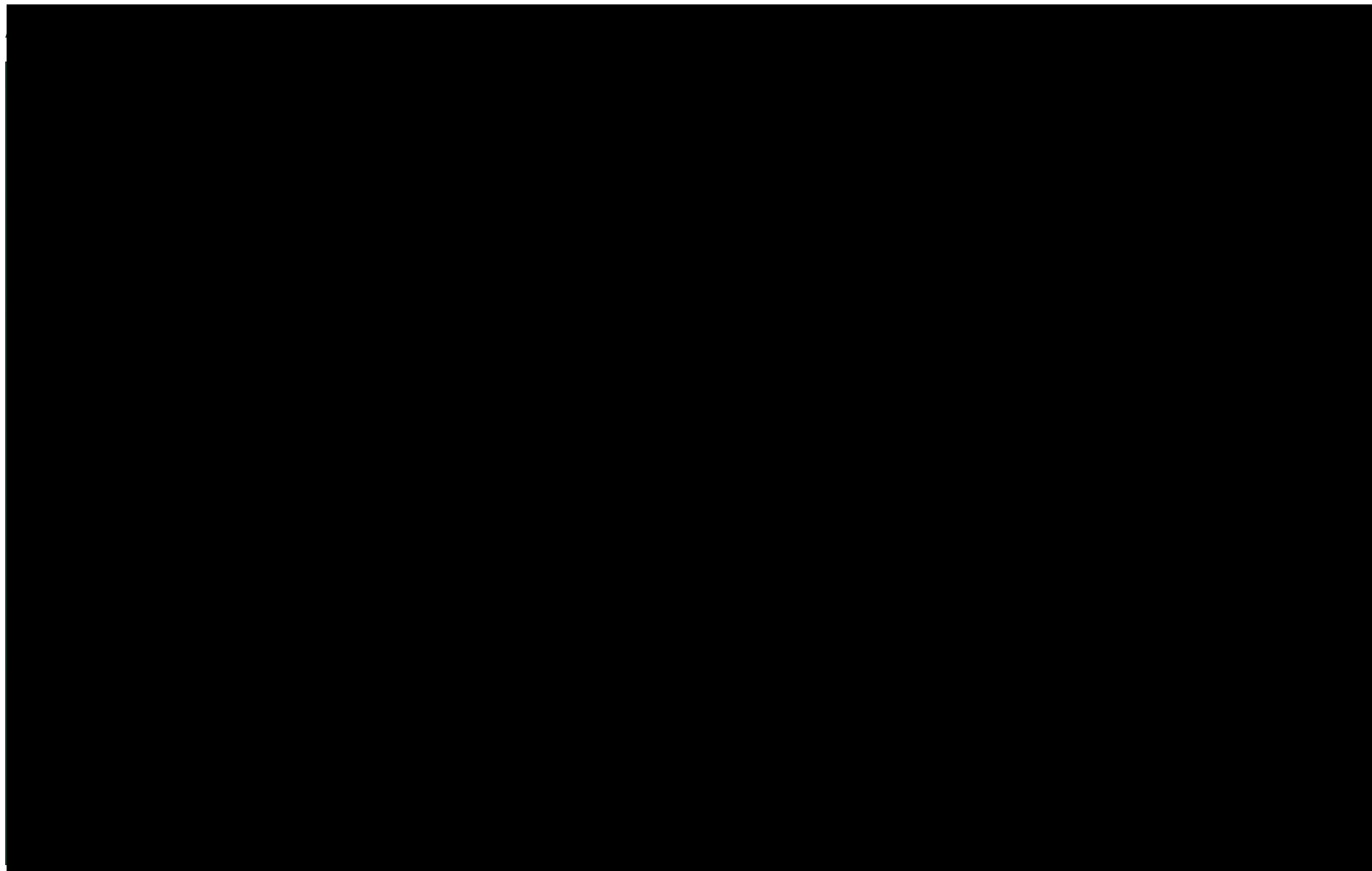
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Appendix 1: Location map



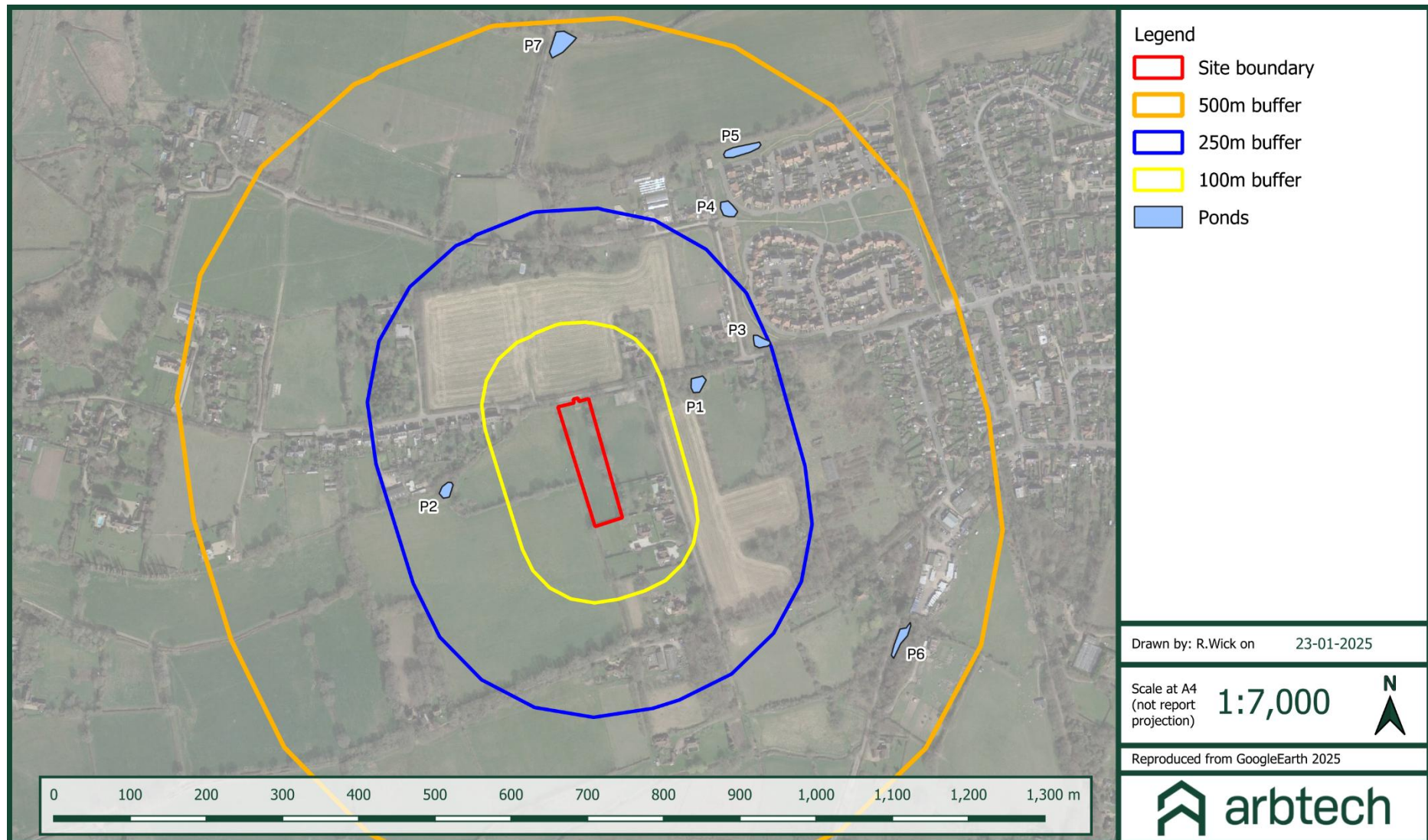
Appendix 2a: Habitat map [REDACTED]





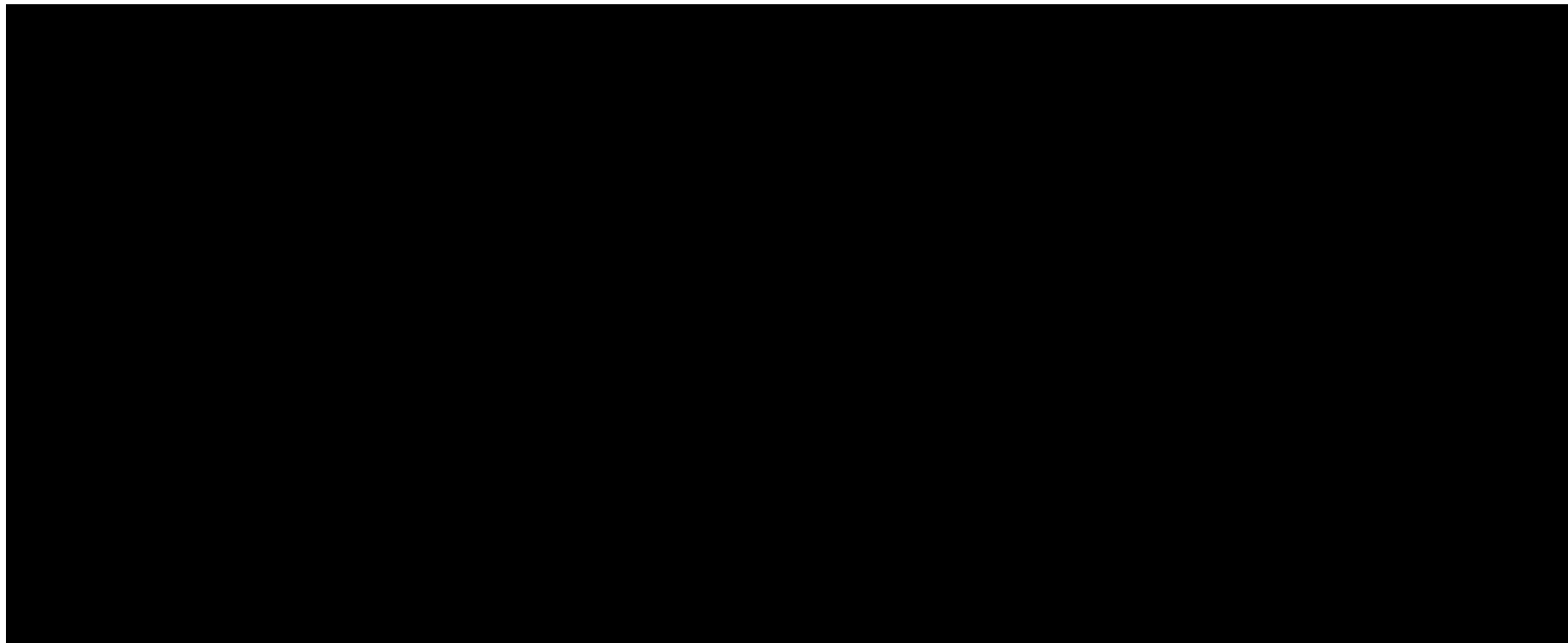
Appendix 3: Proposed plans



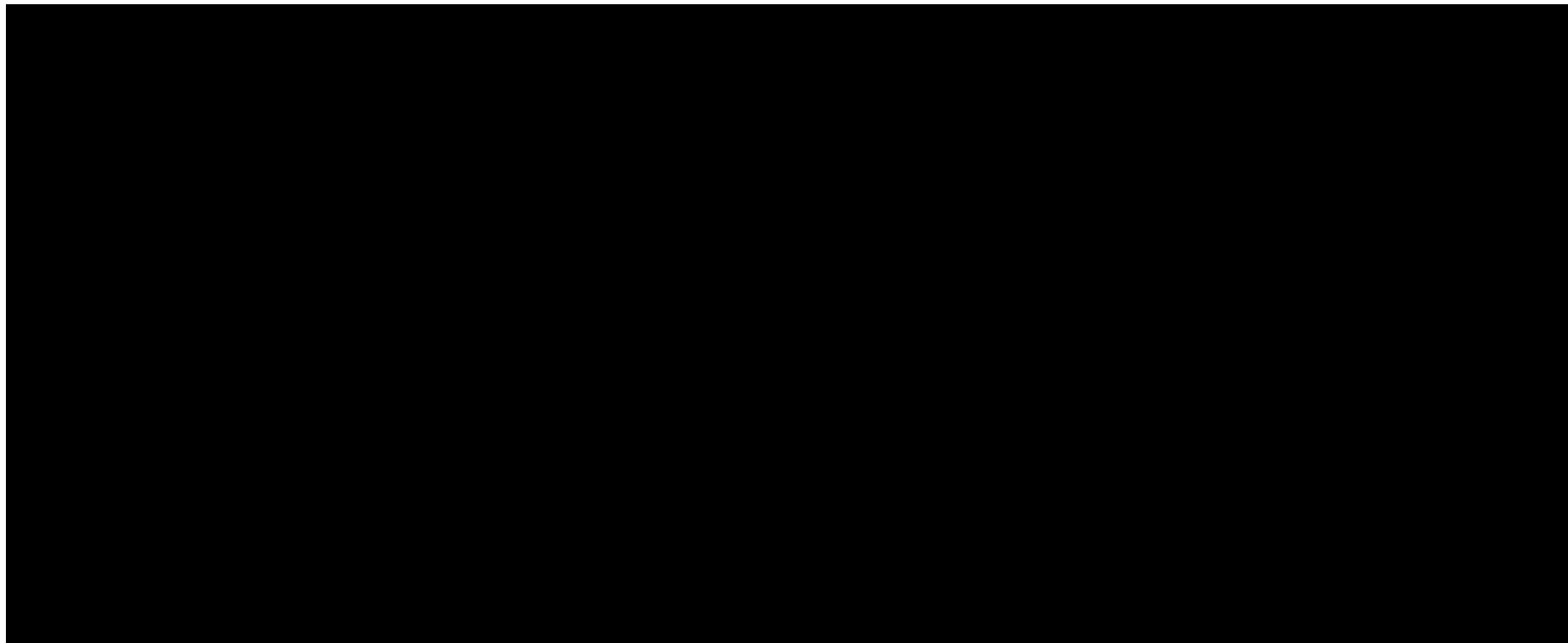
Appendix 4: Pond map

Appendix 5: Additional photos

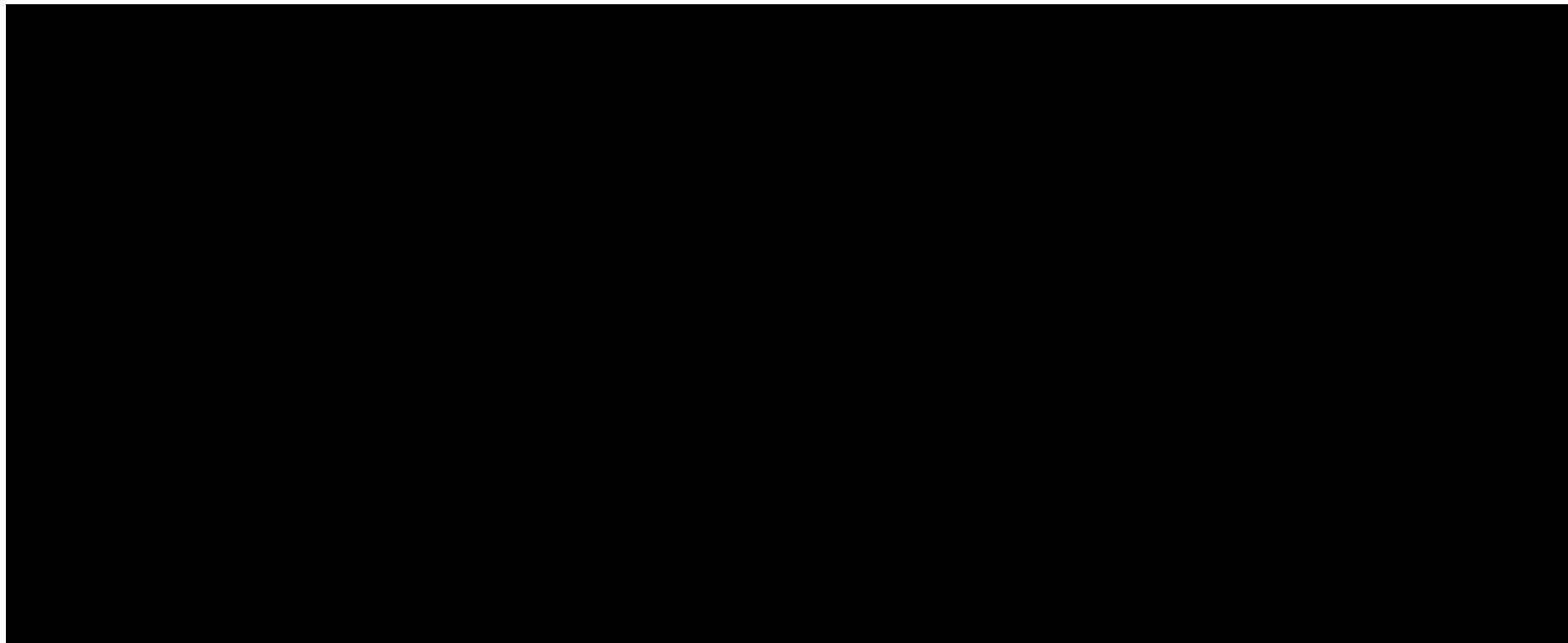
Description	Photos



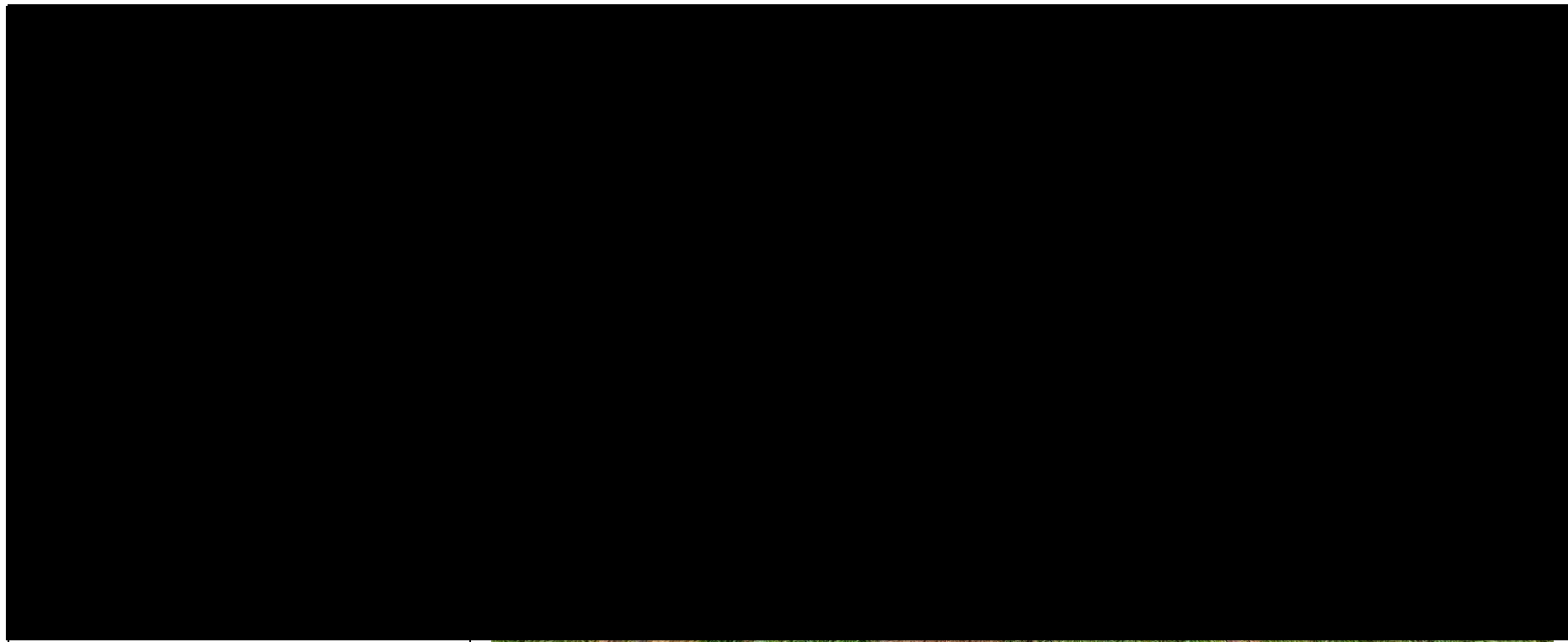
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