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Preliminary Ecological Appraisal

Survey site:

Marsh Lane, Shepley, Huddersfield, West Yorkshire, HD8 8AS

Client:

Jake Hinchliffe

Survey date:

16th May 2024

Project:

This report is prepared to inform a planning application with the Kirklees Council. The proposal is described as:

The installation of 7 (no.) dwellings with an associated access road and landscaping.

[Unsubmitted]

Survey methodology and legislation can be found in the Arbtech Supplement: **PEA Methodology and Legislation - 2024.**

The site survey was undertaken by Jessica Sibley BSc (Hons) MSc, Consultant Ecologist (Accredited Agent on Natural England Bat Licence Number: 2022 10404-CL18-BAT).					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
16/05/2024	14	99	100	6	Light drizzle

Ecological Survey Factor **Conclusion, Impact or Recommendations**	**Detailed using desk study and site survey (carried out under reasonable weather conditions). 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.**
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, proposal plan in appendix 3, and photos in appendix 4). **Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).**	
Summary of Survey Findings **(***UKHab codes used)* **Primary Codes:** • Other neutral grassland [g3c] • Cereal crops [c1c] • Arable field margins [c1a] **Secondary Codes:**	The survey site is centred on National Grid Reference: SE 18715 09403 and has an area of approximately ~0.34ha. The site comprises grassland, cropland, arable field margins, a tree line, and scattered trees, in Shepley, Huddersfield. The underlying geology of the site is sandstone (rough rock), overlain by freely draining slightly acid loamy soils with low fertility. Typical habitats of this soil type include neutral and acid pastures and deciduous woodlands; with acid communities such as bracken and gorse in the uplands. Adjacent to the north of the site is Marsh Lane, adjacent to the east and west are dwellings with associated gardens, and adjacent to the south is a treeline with arable fields and woodland beyond. Within a 4km radius of the site is scattered 'Priority Good Quality Semi-improved Grassland' (closest ~0.54km south), scattered 'Priority Lowland Meadows' (closest ~0.50km south), 'Priority Purple Moor Grass and Rush Pasture' (~2.20km south-east), 'Priority

• Line of trees [33] • Scattered trees [32] • Young trees – self set [202] • Ruderal/ephemeral vegetation [81] • Introduced shrub [847] • Invasive non-native species [524] • Bare ground [510] • Dry stone wall [114] • Fence [612]	Lowland Dry Acid Grassland' (3.52km south-east), 'Priority Upland Heathland' (~2.66km south-west), two patches of 'Priority Lowland Heathland' (closest ~0.44km south), scattered 'Priority Deciduous Woodland' (closest ~0.29km east), scattered 'Priority Traditional Orchards (closest ~0.59km south-east), two patches of 'Woodpasture and Parkland BAP Priority Habitat' (closest ~2.41km south-west), and scattered ancient woodland (closest ~0.58km north-west). Other habitats include 'Grass Moorland' (non-priority), and 'Open Mosaic Habitat', designated under MAGIC. The closest watercourse to the site is Push Dam ~0.29km east of the site boundary. The wider landscape comprises rural areas with small, scattered settlements, with the larger settlement of Huddersfield to the northwest of the site. **Survey Limitations:** • No Biological Records Data (BRD) was available at the time of writing this report and this should be obtained, and the report updated to enable a robust ecological impact assessment to be completed. These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation. **<u>Other neutral grassland [g3c] with ruderal/ephemeral vegetation [81]</u>** The majority of the site is grassland which best represents 'other neutral grassland'. The sward height is varied from ~5-40cm. Species richness among the sward is ~8 species per m^2. There is >20% cover of broadleaved herbs and sedges. Species include: **D:** Fescue *Festuca sp.*

	O: Meadow foxtail *Alopecurus pratensis*, crested dog's-tail *Cynosurus cristatus*, Yorkshire fog *Holcus lanatus*, *Poa sp*., meadow buttercup *Ranunculus acris*, creeping buttercup *Ranunculus repens*, common dandelion *Taraxacum officinale agg.*, broadleaved dock *Rumex obtusifolius*, cow parsley *Anthriscus sylvestris*, white clover *Trifolium repens*, fireweed *Chamaenerion angustifolium*, ribwort plantain *Plantago lanceolata*, greater plantain *Plantago major*, common sorrel *Rumex acetosa*, vetch *Vicia sativa*, common nettle *Urtica dioica*, bramble *Rubus fruticosus agg.*, honeysuckle *Lonicera periclymenum*, and variegated yellow archangel *Lamiastrum galeobdolon argentatum*. **R:** Thistle *Cirsium sp.*, *Geranium sp.*, cleavers *Galium aparine*, common ragwort *Jacobaea vulgaris*, crane's-bill *Geranium sp.*, hybrid bluebell *Hyacinthoides × massartiana*, fern *Polypodiopsida sp.*, cotoneaster *Cotoneaster sp.*, forget-me-not *Myosotis sylvatica*, and hogweed *Heracleum sphondylium*. Grassland – condition indication: The sward height across the grassland parcel is varied, with microclimates for vertebrates and invertebrates. Cover of bare ground is >5%. No bracken *Pteridium aquilinum* was recorded, and the cover of scrub is <5%. Creeping buttercup, broad-leaved dock, white clover, and common nettle combined likely account for >5% coverage of the grassland parcel. Variegated yellow archangel a non-native invasive species (as listed under Schedule 9 of the Wildlife and Countryside Act, 1981), was recorded associated with the parcel, near the southern boundary treeline. There are at most ~8 species present per m^2. **Cereal crops [c1c]** A large area of the site is cereal crops. Non-crop vegetation across this area is scarce, with some herbaceous vegetation present. Bare ground is also abundant. Species across this habitat include: **A:** Cereal crop *Poaceae sp.*

	O: *Poa sp.*, pineappleweed *Matricaria discoidea*, *Caryophyllaceae sp.*, and knotgrass *Polygonum aviculare*. **R:** Chickweed *Stellaria media*, thistle *Cirsium sp.*, and broadleaved dock *Rumex obtusifolius*. **Arable field margins [c1a]** Along of the boundaries of the area of cereal crops are arable field margins. Species within the sward include: **A:** Cock's-foot *Dactylis glomerata*. **F:** Common nettle. **O:** Meadow foxtail, Yorkshire fog, *Poa sp*., Broadleaved dock, thistle, cow parsley, and common dandelion. **R:** Cleavers, buttercup *Ranunculaceae sp.*, common sorrel, meadow buttercup, bramble, common ragwort, white clover, vetch *Vicia sp.*, moss *Bryopsida sp*., crane's-bill., *Geranium sp.*, and creeping buttercup. **Line of trees [33]** A line of trees is located along the southern boundary of the site. The line of tree is ~35m in length. Tree species include 3 mature sycamore trees *Acer pseudoplatanus*. Line of trees – condition indication: The tree canopy is continuous with gaps in canopy cover making up <10% and no gaps being >5m wide. Some of the trees contain natural ecological niches (i.e., cavities and knotholes). There is an undisturbed naturally vegetated strip of at least 6m along both sides of the treeline. The majority of the trees look to be in healthy condition. **Scattered trees [32]**

	There are two scattered trees within the site. Species include one mature sycamore and one semi-mature hawthorn *Crataegus monogyna*. There is also a small group of one semi-mature sycamore and two semi-mature ash *Fraxinus excelsior* trees. Individual trees – condition indication: The tree canopy is discontinuous with gaps making up >10% of total area, and with gaps >5m wide. <50% of the trees within the block are mature, with most semi-mature. There is no evidence of an adverse impact on tree health by human activities, however, there is likely a current pruning regime associated with some of the trees. The majority of the trees retain >75% of their expected canopy for their age range and height. A few natural ecological niches are present. The trees over sail grassland or arable field margin vegetation beneath (i.e., >20%). **Young trees – self set [202]** There are ~11 young trees, self-set within the grassland habitat parcel. Species include approximately ten birch *Betulaceae sp.* and one sycamore. **Introduced shrub [847]** There is one small patch of common boxwood *Buxus sempervirens* within the grassland, and a small stand of cotoneaster. **Invasive non-native species [524]** Variegated yellow archangel, an invasive non-native species as listed on Schedule 9 of the Wildlife and Countryside Act (1981), and a species of cotoneaster which may be one of those listed, were recorded within the site.

	Bare ground [510] There are sections of bare ground across the grassland, arable field margins, and cropland habitats. **Dry stone wall [114]** Sections of dry stone wall are present along the northern, eastern, and western boundaries of the site. **Fence [612]** Sections of fencing is present along the northern, eastern, and western boundaries of the site.
Foreseen Impacts	The habitats on-site are generally widespread and not notable. ~0.19ha of neutral grassland will be lost as part of the proposed works, as well as the loss of ~0.15ha of cropland and arable field margins. A semi-mature hawthorn tree, semi-mature sycamore tree, and two semi-mature ash trees will be lost as part of the proposed works. The on-site treeline will be retained. Slight impacts are foreseen on adjacent habitats from the construction or operation of the development if left unmitigated (dust, litter, surface run off etc).
Recommendations	**A Biodiversity Net Gain (BNG) assessment is being undertaken for the site.** **BRD should be obtained, and this report updated.** 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).

	Best practice measures to minimise the possibility of pollution affecting adjacent habitats must be implemented during construction. **A Construction Environment Management Plan (CEMP) may be required for this.**
Locality and Designated Sites	
Summary of Survey Findings	There is one statutory designated site within 4km of the site: • **The Moorland Line** – ~2.28km south-west – (predominantly semi-natural vegetation, used for rough grazing). The site lies within the impact risk zone for the Dark Peak Site of Special Scientific Interest (SSSI), and the proposed development is not listed as a possible high risk for this designation. The site is not subject to any designation.
Foreseen Impacts	No impacts foreseen, given the distance of the proposed development from statutory designated sites.
Recommendations	None required.
Invasive / Non-native species	
Summary of Survey Findings	A species of cotoneaster and variegated yellow archangel were recorded within the site. Grid references: SE1868409378 (cotoneaster), SE1868709380 (variegated yellow archangel). Several species of cotoneaster are listed as invasive non-native on Schedule 9 of the Wildlife & Countryside Act (1981), and variegated yellow archangel is also listed.
Foreseen Impacts	Construction could result in the spread of cotoneaster and variegated yellow archangel.
Recommendations	**The cotoneaster and variegated yellow archangel present on-site will be sensitively removed prior to the commencement of works to prevent the spread of a non-native, invasive species listed on Schedule 9 of the Wildlife and Countryside Act, 1981.** Both will be removed using hand tools only. The most effective method of removal is

	through hand pulling, which results in minimal soil disturbance. Hand-pulling young shrubs will typically result in the full removal of the shrub and associated root network, which will prevent the re-establishment. Mature shrubs are likely to have a deeper and more established root network unlikely to be removed in full by hand pulling alone. Where there are mature shrubs, removal should be aided using hand tools to expose the root network in full so the entire shrub and associated roots can be removed. The cotoneaster and variegated yellow archangel should then be disposed of in line with appropriate controlled waste measures. **Development works will not commence until both cotoneaster and variegated yellow archangel have been successfully removed from the site.**
Invertebrates	
Summary of Survey Findings	No habitat for protected or notable invertebrates is found on-site.
Foreseen Impacts	None foreseen.
Recommendations	No further surveys. **<u>Suggested biodiversity enhancements:</u>** The site could be further enhanced via the provision of native wildflowers or wildflower turf, which would provide foraging opportunities for invertebrates.
Bats	
Summary of Survey Findings	A review of the MAGIC database returned five European Protected Species Licences (EPSLs) for bats within a 4km radius of the site. • EPSM2011-3782 – Common pipistrelle – ~0.69km north-east – Destruction of a resting place. • 2014-5044-EPS-MIT – Common pipistrelle – ~2.63km south-east – Destruction of a resting place. • EPSM2012-5385 – Brown long-eared, Common pipistrelle – ~2.68km north – Destruction of a breeding site and a resting place.

	• 2017-30682-EPS-MIT – Common pipistrelle – ~3.01km north-east – Destruction of a resting place. • 2019-42580-EPS-MIT – Brandt's, Common pipistrelle, Whiskered – ~3.94km north – Damage of breeding site and destruction of a resting place. **<u>Roosting bats:</u>** **Trees:** ▪ T01 = Sycamore, Height = ~8m, Diameter at Breast Height (DBH) = ~32cm, [SE 18753 09410] – one small **PRF-I** cavity in a branch at ~3m along the northwestern aspect of the tree. ▪ T02 = Hawthorn, Height = ~4m, DBH = ~16cm, [SE 18716 09413] – **negligible**, no suitable bat roost features. ▪ T03 = Sycamore, Height = ~15m, DBH = ~64cm, [SE 18708 09371] – **FAR**, three possible **PRF-I** knotholes at ~6m and ~10m along the northeastern aspect of the tree, further features may be present. ▪ T04 = Sycamore, Height = ~15m, DBH = ~64cm, [SE 18718 09379] – **FAR**, one possible **PRF-I** cavity at ~8m along the southern aspect of the tree, further features may be present. ▪ T05 = Sycamore, Height = ~15m, DBH = ~64cm, [SE 18727 09389] – **FAR**, split branch (possible **PRF-I**) at ~6m along the northern aspect of the tree, and ivy covering the tree concealing possible further suitable features. ▪ G01 = Sycamore x1, Ash x2, Height = ~9m, DBH = ~19cm, [SE 18725 09401] – **negligible**, no suitable bat roost features. **<u>Foraging and commuting bats:</u>** On-site habitats include grassland and trees which are accumulative of low to moderate value for local foraging and commuting bats. These habitats could also be used by bats dispersing from nearby roosts.
Foreseen Impacts	**<u>Roosting bats:</u>**

	T02 and G01 will be felled to facilitate the development. No features were identified on any of these trees and as such there are unlikely to be any impact to bats as a result of their felling. T01, and T03:T05 will likely be retained. **<u>Foraging and commuting bats:</u>** The proposed development will likely result in the loss of ~0.19ha of grassland and ~0.06ha of arable field margins and a few scattered semi-mature trees but given the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. 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.
Recommendations	**<u>Roosting bats:</u>** **T02 and G01:** In the unlikely event that a bat or evidence of bats is discovered during the removal of these trees all work must stop and a bat-licensed ecologist contacted for further advice. **T01 (in the event of felling):** As per Tables 6.3 and 7.1 of the Bat Survey Guidelines (2023) trees with PRF-I's only do not require further survey effort, however compensation for lost features should be installed prior to tree felling works, and works should be carried out under a precautionary working method statement (PWMS). The PWMS includes: • Prior to any PRF removal, suitable compensation should be provided onsite (i.e. bat boxes in appropriate locations). • Felling to be done under supervision by an ecologist.

	• Any identified PRF-I feature(s) will be soft felled in conjunction with an experienced arborist. This will involve sections of the tree with the PRF to be cut away and lowered to the ground and inspected by a licenced ecologist. • Any PRFs felled will be left in-situ on the ground within a 10m exclusion zone for 24 hours. **In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.** **T03, T04 and T05 (in the event of felling):** A close-up inspection of the PRFs identified from ground-level will be required to determine their suitability for bats (i.e. PRF-I or PRF-M). This will either involve a tree climbing team or a MEWP to access the features and should be carried out by a class 2 licenced ecologist. The inspection will involve a detailed inspection of all features using a torch and endoscope. Following this inspection, the features will then be re-classified based on their suitability for roosting bats. Depending on the results of the close-up inspection further surveys may be required to determine bat presence/likely-absence or a recommendation to remove the trees under a precautionary working method statement. **Foraging and commuting bats:** **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: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2 **Suggested biodiversity enhancements:**

	The installation of seven bat boxes onto new dwellings would provide additional roosting habitat for bats. 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. The bat boxes should be a specification suitable for crevice/void-dwelling species of bat such as: • Habibat Bat Access Tile (buildings) • Integrated Eco Bat Box (buildings) • Habibat Bat Box (buildings) • Beaumaris Bat Box (buildings) (Or a similar alternative brand). The site could also be enhanced for foraging and commuting bats, by planting native trees and shrubs, and planting of native hedgerow across the site (i.e., hawthorn or blackthorn *Prunus spinosa*).
Birds	
Summary of Survey Findings	No evidence of nesting birds was found on-site during the surveys; however, birds could use the on-site trees and ruderal vegetation for nesting. No habitat for schedule 1 birds was observed.
Foreseen Impacts	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
Recommendations	**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.

	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. **<u>Suggested biodiversity enhancements:</u>** The site could be enhanced for nesting birds by attaching seven bird boxes across the site, such as: • Vivara Pro WoodStone Swift Nest Box (buildings) • House Sparrow Terrace FSC Nest Box (buildings) • Manthorpe Swift Brick (buildings) • Swallow Nest Bowl (buildings) • Vivara Pro Seville 32mm WoodStone Nest Box (trees) • Vivara Pro Barcelona WoodStone Open Nest Box (trees) (Or a similar alternative brand). General purpose bird boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain, and strong sunlight.
Reptiles	
Summary of Survey Findings	A review of the MAGIC database returned no EPSLs for protected reptiles within a 4km radius of the site. The site contains good terrestrial habitat for reptiles for foraging (e.g. grassland), and refuge/hibernation (e.g. rubble piles, dry stone walls). Furthermore, the site is connected to other suitable habitats adjacent to the south (i.e.,

	grassland and further afield woodland), suitable for commuting and dispersal. Reptile presence across the site cannot be discounted.
Foreseen Impacts	~0.19ha of grassland and ~0.06ha of arable field margins will be removed during construction. The removal of tussocky grassland in favour of grassed garden areas would reduce the "carrying capacity" of the site (i.e., should a population of reptiles be present, gardens alone may not be suitable to support the existing population, primarily due to a significant loss in refuge habitat). The works therefore could result in a reduction in reptile habitat and could result in the fragmentation of the local landscape. Furthermore, site clearance could result in the death or injury of reptiles, if present.
Recommendations	**Reptile surveys will be required to determine presence or likely absence of reptiles on the site.** This will comprise the deployment and monitoring of artificial refugia over seven visits and such surveys must be undertaken between April, May, and September, in accordance with current survey guidelines (Gent & Gibson, 2003). **Suggested biodiversity enhancements:** The site could be enhanced for reptiles post-development by planting native hedgerows across the site (i.e., hawthorn or blackthorn) and with the addition of compost heaps and log piles in garden areas.
Amphibians	
Summary of Survey Findings	A review of the MAGIC database returned no granted EPSL records for Great Crested Newts (GCN) within 500m of the site. There are also no class licence returns, and there is no pond survey data for GCN within a 500m radius of the site. There are no ponds within the site, and a review of aerial imagery highlights there are five ponds (P1:P5) within a 500m radius of the site. P1:P5 are located ~300-500m to the southeast of the site. There does not look to be any significant barriers between the site and these ponds.

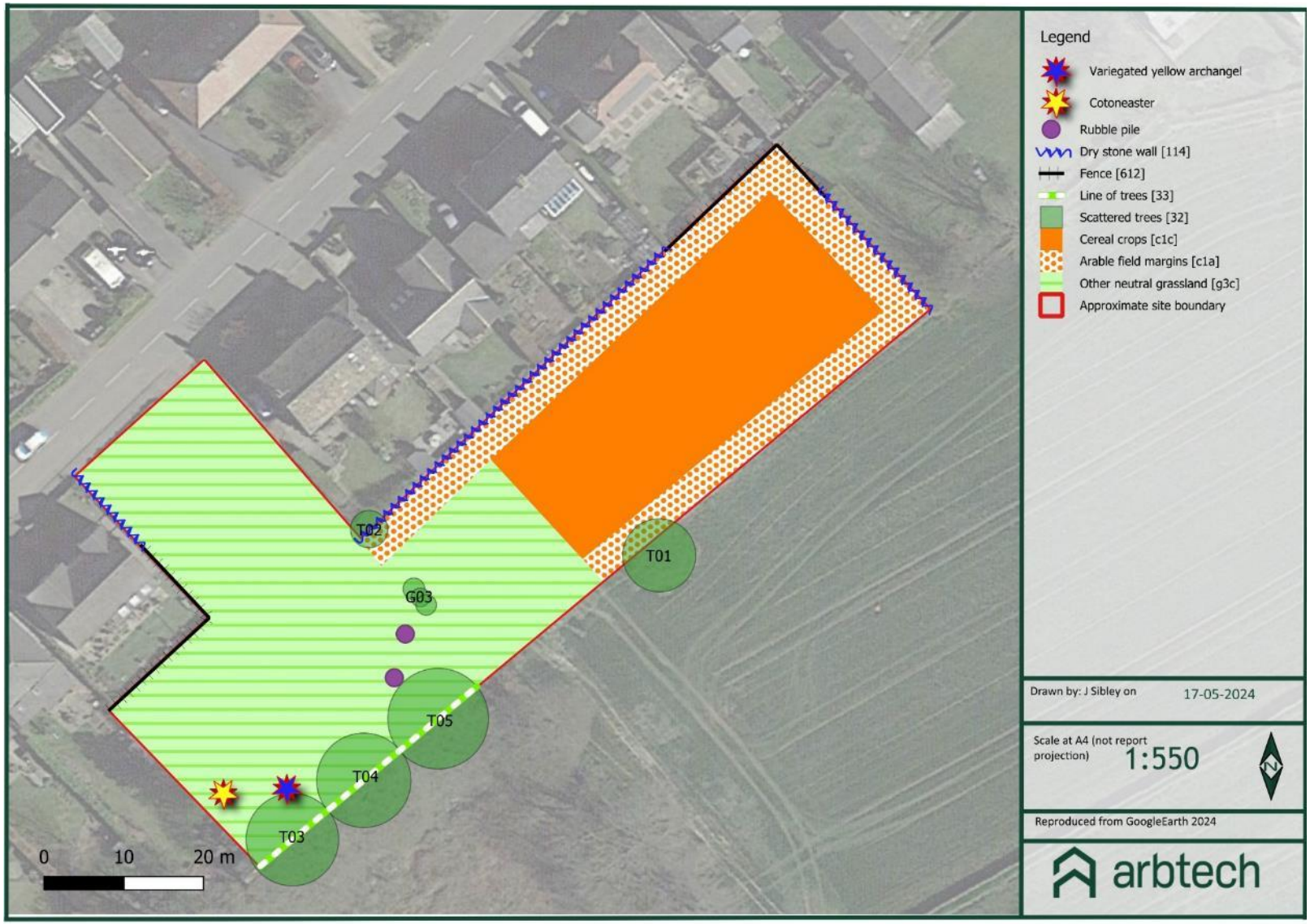
	The site contains grassland, rubble piles, and dry-stone walls which provide good terrestrial opportunities for GCN and other more common amphibians for foraging, refuge, and hibernation. The presence of GCN within the site for transient periods in the grassland and utilising the hedgerow and refugia is possible, given the suitable on-site habitats, and proximity of possible GCN breeding waterbodies (i.e., P1:P5). Common amphibian presence across the site is also possible, given the presence of suitable habitat on the site and proximity of waterbodies.
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 ~0.25ha of grassland and arable field margin. If GCN are present within the pond ~300m to the southeast of the site, when completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a **Green risk score**, which states: **Offence Highly Unlikely**.
Recommendations	**A precautionary working method will be implemented for common amphibians during construction**, including the following measures: • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any amphibians to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter amphibians from the working area. • Any rubble piles will be dismantled by hand, and any brash from tree removal will be stored on pallets. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.

	• If any common amphibians 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 GCN is identified, works must cease, and advice must be sought from a suitably qualified ecologist.** **<u>Suggested biodiversity enhancements</u>** 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	
Summary of Survey Findings	No evidence of badgers was found on-site or is suspected within 30m of the site.
Foreseen Impacts	None foreseen.
Recommendations	**Basic precautionary mitigation during works is recommended**: • 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 habitats which badgers could use. South and west boundaries. • 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 a badger sett is identified within 30m, works must cease and advice must be sought from a suitably qualified ecologist.**

	<u>Suggested biodiversity enhancements:</u> The site could be enhanced for badgers by planting bramble and damson *Prunus domestica subsp. insititia*, as well as planting fruit-bearing trees and species-rich grassland to increase foraging opportunities for badgers.
Riparian animals	
Summary of Survey Findings	There are no watercourses on or connected to the site.
Foreseen Impacts	No impacts are anticipated on riparian animals as a result of the proposed development.
Recommendations	N/A
Hazel dormouse	
Summary of Survey Findings	A review of the MAGIC database returned no granted EPSL records for hazel dormice within 4km of the site. The site lies outside of the known geographic range for hazel dormouse (either natural or reintroduced). Furthermore, the site does not comprise the habitat required to support hazel dormouse (i.e., woodland, connected hedgerow networks). Hazel dormouse presence across the site is unlikely.
Foreseen Impacts	No impacts are anticipated on hazel dormice as a result of the proposed development.
Recommendations	None.
Other e.g. hedgehog	
Summary of Survey Findings	The grassland on-site provides foraging and commuting opportunities for hedgehogs.
Foreseen Impacts	~0.19ha grassland and ~0.06ha arable field margins will be lost as part of the works. The loss of such habitat is likely to be inconsequential to local hedgehog populations owing to the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.
Recommendations	**Similar to the badgers, 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.** **<u>Suggested biodiversity enhancements:</u>** The site could be enhanced for hedgehogs post-development with the inclusion of hedgehog houses close to shaded vegetated areas and fence gaps into any fences installed.

Appendix 1: Habitat map



Appendix 2: Location map



Appendix 3: Existing plan



Appendix 4: Proposed plan



Appendix 5: Photos



Photo 1: On-site grassland – facing northwest.



Photo 2: Arable field margins – northern boundary.



Photo 3: On-site cropland – facing northwest.



Photo 4: Line of trees (T3:T5) – southern boundary.



Photo 5: T1.



Photo 6: T1 – branch cavity.



Photo 7: T2.



Photo 8: T3 – knotholes.



Photo 9: T4 – possible cavity.



Photo 10: T5 – ivy and split branch.



Photo 11: On-site rubble pile.



Photo 12: Dry stone wall – eastern boundary.



Photo 13: On-site cotoneaster.



Photo 14: On-site variegated yellow archangel.

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Version control			
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Draft	0.1	Jessica Sibley BSc (Hons) MSc, Consultant Ecologist	17/05/2024
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