



THE
ENVIRONMENT
PARTNERSHIP



STANSTY CHAIN ROAD WREXHAM, NORTH WALES UPDATED ECOLOGICAL ASSESSMENT

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Executive Summary

1. TEP was first commissioned in 2017 by Russell Homes (UK) Ltd to carry out an Ecological Assessment of land off Stansty Chain Road in Wrexham, North Wales. This report was updated several times with the final version produced in 2021 (TEP Ref: 6078.006 V4).
2. The results of the surveys between 2017 and 2021 are now out of date and this ecological assessment has been produced outlining the 2023 updated survey results for this site. This report should be read in conjunction with the previous ecological assessment outlined above. This report is required to identify any potential ecological constraints to future development of the site to inform the master planning process.
3. The site predominantly comprises improved grassland with mature trees, hedgerows and ditches being the main ecological features of interest within the site.
4. The majority of trees across the site are being retained under the development proposals. The design of the development should take into account the long term setting of these trees and how they will relate to use of the area in the future.
5. Hedgerows are being retained within development proposals where feasible. It is accepted that some hedgerow loss is required for access throughout the site. An adequate habitat buffer should also be provided adjacent to retained hedgerows alongside a sensitive lighting scheme for the development. Hedgerow planting should be undertaken to replace, and preferably increase, the amount of species-rich native hedgerow present across the site.
6. It is known that there is a population of great crested newt (GCN) within 500m of the site, but the site lies only within distant ranging habitat of the breeding ponds (>250m). As the nearest known GCN pond is over 250m from the site boundaries it is not necessary to obtain a GCN mitigation licence from Natural Resources Wales (NRW) to allow development on site to proceed. All land falling between 250m and 500m of the GCN ponds will be cleared under a Precautionary Working Method Statement (PWMS). A Method Statement will be produced detailing the measures to be taken to ensure that, in the unlikely event of amphibians being present, they are not harmed by the works.
7. It is recommended that all vegetation clearance should be undertaken outside the bird nesting season (March to August inclusive). If this period cannot be avoided, a suitably qualified ecologist should carry out a nesting bird check a maximum of 24 hours in advance of vegetation clearance works.
8. If development of the site does not commence within twelve months of the most recent site walkover (June 2023), a pre-construction check to ensure that badgers have not moved into the site or adjacent habitats in the intervening period is recommended.
9. The trees with bat potential are all being retained and protected on site. If any management works of these trees is needed or if any changes to the layout require any of them to be removed, further inspection will be required to confirm roost suitability or if a roost is present.

10. Direct lighting of retained trees and hedgerow habitat should be avoided to ensure no disturbance to potential foraging, commuting and potential roosting bats. It is recommended that a sensitive lighting scheme should be designed and implemented for the site.
11. At the time of writing, an updated reptile survey of the site was underway. Results of the reptile survey, including conclusions and recommendations will be provided separately.

1.0 Introduction

- 1.1 TEP was originally commissioned in 2017 by Russell Homes (UK) Ltd to carry out an Ecological Assessment of land off Stansty Chain Road in Wrexham, North Wales. This report was updated several times with the final version produced in 2021 (TEP Ref: 6078.006 V4).
- 1.2 The results of the surveys between 2017 and 2021 are now out of date and this ecological assessment has been produced outlining the updated survey results for this site. This report is an update of that ecological assessment and incorporates updated survey results from bat activity transects and static monitoring, breeding bird and reptile surveys plus an updated phase 1 habitat assessment, ground-based tree inspection and hedgerow assessment, all undertaken in 2023. This report is required to identify any potential ecological constraints to future development of the site to inform the master planning process.
- 1.3 At the time of writing, an updated reptile survey of the site was underway. Results of the reptile survey, including conclusions and recommendations will be provided separately.
- 1.4 This report has the following objectives;
 - to describe the existing vegetation and give an updated overview of the habitats present on the site;
 - to identify whether there are any features of conservation value such as legally protected species or habitats of biodiversity importance;
 - to advise of further surveys or mitigation requirements that may be needed prior to development of the site; and
 - to outline opportunities to provide biodiversity enhancement within site proposals.
- 1.5 The site is located northwest of Wrexham centre. The central grid reference is SJ 32344 51854. The survey area and site context is shown in Figure 1 and in Drawing G6358.01.002.
- 1.6 The site comprises farmland dissected by a number of hedgerows and mature trees. Farmland surrounds the site to the north and west. Stansty Chain Road splits the northeastern end of the site while the A483 lies along the eastern boundary of the site (beyond which lies commercial and residential developments) and Mold Road (A541) lies along the western boundary of the site.

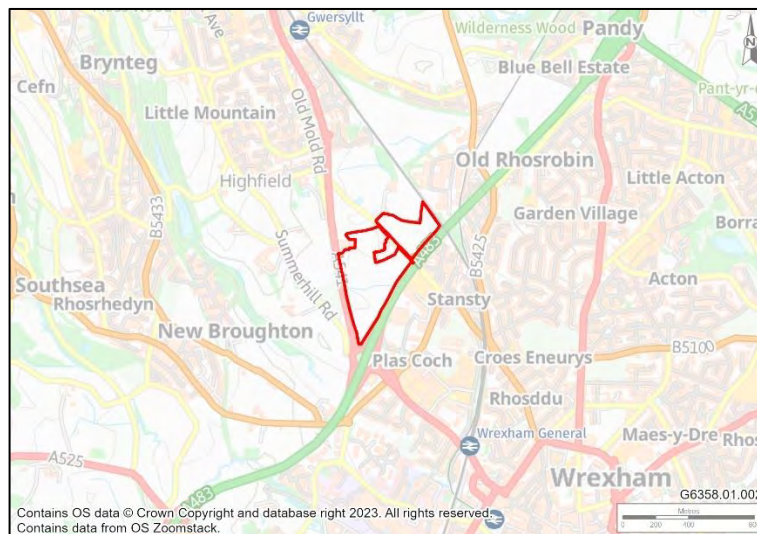


Figure 1: Site location and surrounding landscape

2.0 Methods

Ecology Desktop Study

- 2.1 Information regarding historic species records were obtained from within a 2km radius of the site from Cofnod. Records of internationally protected sites were obtained from within a 10km radius, nationally designated sites within 5km radius and locally protected sites within a 2km radius of the site were requested/gathered from the sources listed in Table 1. This collated data gives a useful indication of the distribution and abundance of ecological receptors at a given locale. It should however be noted that an absence of records does not indicate the absence of protected species from the search area. Our survey work has sought to identify the potential for any protected species.

Table 1: Sources of ecological information

Source of Information	Nature of Information
Where's the Path	Satellite & OS imagery
DEFRA MAGIC Map	Designated sites & NERC priority habitats
Cofnod	Protected species records
Wrexham County Borough Council	Land allocations and relevant policies

Habitats & Flora

Extended Phase 1 Habitat Survey

- 2.2 An updated extended Phase 1 habitat survey was carried out by TEP Ecologist Emma Hickson (FISC Level 4) on 4th June 2023. The survey was carried out in accordance with the Phase 1 habitat assessment methods (JNCC 2010¹) and Guidelines for Preliminary Ecological Appraisal (CIEEM 2017²).

Hedgerows

- 2.3 An assessment of hedgerows present on site was undertaken at the same time as the Phase 1 habitat survey by Emma Hickson. Further details of this ecological hedgerow assessment is provided under a separate cover, TEP report 6358.01.005.

¹ JNCC 2010. Handbook for Phase 1 Habitat Survey: A technique for environmental audit.

² CIEEM 2017. Guidelines for Preliminary Ecological Appraisal.

Limitations

- 2.4 The survey was undertaken within the recommended season to undertake Phase 1 habitat surveys (April and September inclusive). Hedgerow surveys should ideally be undertaken prior to June, however given the information that had previously been gathered on site by TEP since 2017, it is unlikely that any Schedule 8 plant species such as bluebell will have been missed and so this is not seen as a constraint to the hedgerow assessment. Full access was available to the site and so there are therefore no limitations.

Fauna

- 2.5 During the extended Phase 1 habitat survey, the habitats present were assessed for their potential to support species of conservation concern, particularly statutorily protected species or S7³ priority species.

Amphibians

- 2.6 There are no ponds within 250m of the site but five ponds between 250m and 500m of the site, some of which are known to support breeding great crested newt. However, these ponds are separated from the site by major barriers for amphibian movement such as the railway lines and A roads and as such further surveys were not required.

Bats

Ground Level Tree Assessment for Roosting Bats

- 2.7 An updated ground level inspection of all trees within the site, including those along the site boundaries, was undertaken by ecologist Emma Hickson concurrently with the updated Phase 1 habitat survey in June 2023. The surveys included a detailed examination of the exterior trees from ground-level, using high power binoculars, for any evidence of use by bats and any potential roost features (PRFs), which may provide suitable roosting habitat.
- 2.8 In addition, the habitats within and surrounding the survey area were assessed for their potential to support foraging and commuting bats.
- 2.9 The criteria for preliminary roost assessment are based upon the Bat Conservation Trust (BCT) Guidelines (2016⁴) as shown in Table 2. Following the GLTA and habitat assessment, trees and habitats within and immediately adjacent to the site were categorised based on the criteria listed within Table 2 below.

³ Section 7 of the Environment (Wales) Act 2016

⁴ BCT 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines. Bat Conservation Trust 3rd Ed.

Table 2: Roost assessment criteria (from Table 4.1 of BCT Guidelines 2016)

Suitability	Roosting Habitats	Commuting/Foraging habitats
Negligible	No potential roost features are present that are likely to be used by bats.	No features present that are likely to be used by commuting or foraging bats. A general lack of linear features and low habitat, structural or floristic diversity.
Low	A structure or tree with one or more potential roost features that could be used by individual bats opportunistically, but which do not offer sufficient space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.	Habitat that could be used by small numbers of commuting bats (e.g. a gappy hedgerow or an unvegetated stream) or foraging bats (e.g. a lone tree or small patch of scrub) but which is isolated from the surrounding countryside.
Moderate	A structure or tree with one or more potential roost features that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but which is unlikely to support a roost of high conservation status (maternity or hibernation).	Continuous habitat connected to the wider landscape that could be used by bats for commuting (e.g. lines of trees or scrub or linked back gardens), or foraging bats (e.g. trees, scrub, water, grassland).
High	A structure or tree possessing one or more potential roost features that are suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time, due to their size, shelter, protection, conditions and surrounding habitat.	Continuous high quality habitat that is strongly connected with the wider landscape that is likely to be used regularly by commuting bats (e.g. river valley, vegetated stream, woodland edge, hedgerow with trees) or foraging bats (e.g. broad-leaved woodland, grazed parkland, tree-lined watercourses or ponds).

Bat Activity Transect Surveys

- 2.10 Three walked bat activity transect surveys were completed across the site during the period May to September 2023 (one in Spring, Summer and Autumn). Drawing G6358.01.009 illustrates the pre-defined transect route walked on each survey visit. The surveys were undertaken at dusk, commencing at sunset and continuing for a minimum of 1 hour 30 mins. The route was started from random points on the transect to reduce sampling bias.
- 2.11 The transect was walked at a slow, steady pace. Surveyors carried a full spectrum detector (Elekon Bat Logger). Bat passes were recorded, together with the maximum number of bats observed, the species identified, and any other contextual data such as flight direction, social calling or feeding buzzes.
- 2.12 The transect route was designed to sample the range of habitats present across the site, focussing on those most likely to be affected by the development proposals. The transects were completed by trained TEP surveyors. Sonogram analysis was undertaken using Kaleidoscope analysis software at TEP by Emma Hickson.

Static Remote Monitoring Surveys

- 2.13 Static remote monitoring bat detectors (Anabat Express, set to night mode) were deployed at two fixed locations within the site. Static remote monitoring was repeated in these two fixed locations during each seasonal survey between May - September 2023.
- 2.14 The static locations were non-random (as micro-siting was determined by habitat and/or potential impacts) and the spread of locations was designed to confirm the species assemblage using the habitats within the site; determine the relative activity and spatial distribution of bats across the site; and identify potential commuting / dispersal corridors.
- 2.15 Each detector was deployed on a seasonal basis for a minimum of five consecutive nights. Detectors were deployed with standardised sensitivity settings.
- 2.16 Recorded data was analysed following completion of the static recording periods using Kaleidoscope software. Data analysis was completed by TEP Ecologist Emma Hickson.

Survey Constraints

- 2.17 The weather conditions were optimal throughout all transect and static monitoring periods. Further details of static monitoring survey limitations are provided under a separate cover, TEP report 6358.01.008.

Badgers

- 2.18 Signs of use of the site by badger *Meles meles* were also searched for during the Phase 1 habitat survey. The standard methodology as recommended by Harris, Cresswell and Jefferies (1989⁵) was followed to complete a thorough search for evidence, which would indicate the presence of badgers both on the site and locally. Evidence of badger occupation and activity includes:
- Setts: including earth mounds, evidence of bedding and runways between setts;
 - Latrines: often located close to setts, at territory boundaries or adjacent to favoured feeding areas;
 - Prints and paths or trackways;
 - Hairs caught on rough wood or fencing;
 - Other evidence: including snuffle holes, feeding and playing areas and scratching posts.
- 2.19 Badgers are active all year round, so a survey can be carried out at any time of year. However, depending upon the level of vegetation cover, this species is often best surveyed over the winter months when the vegetation has died back.

⁵ Harris, S., Cresswell, P., and Jefferies, DJ., 1989. *Surveying badgers. Mammals Society, London.* .

Survey constraints

- 2.20 It was not possible to inspect all areas within 30m of the site, including in the fields to the north. Although it may be possible that any evidence of badger in this area, if present, could have been missed it does not hinder the evaluation of badger activity within the site.

Breeding Bird Survey

- 2.21 Four breeding bird surveys (BBS) were undertaken throughout the breeding bird season by experienced ecologists Mike Walker, Clare Gower, Colin Davies and Damian Young applying methods based on the standard breeding bird survey and common bird census methods developed by the British Trust for Ornithology (BTO)⁶. Further details of breeding bird survey methodology are provided under a separate cover, TEP report 6358.01.009.
- 2.22 Bird species and activity patterns were recorded and mapped using standard BTO symbology. Bird species within the 100 m surrounding the sites were also recorded during the survey, as a proportion of the bird's foraging or nesting habitat is likely to be within the sites.

Survey constraints

- 2.23 The survey period and weather conditions were optimal throughout the survey and so no constraints were encountered.

Reptile Survey

- 2.24 Updated survey for presence / probable absence of reptiles was undertaken in September 2023 by ecologist Anthony Carr. On 17th August 2023, a total of 120 artificial cover objects (ACO's) were laid, in accordance with the recommended density in Froglife guidance (Foster, 1999). Further details of reptile surveys are provided under a separate cover, TEP report 6359.01.007.
- 2.25 ACO's, a mixture of roofing felts and corrugated bitumen roofing material, were laid in areas of most favourable habitat for reptiles. Suitable locations focused on the grassland and scrub/hedgerow borders adjacent to the railway line, as well as the wet ditch in the south of the site which provide good foraging, sheltering and basking habitat. Remnants of an old stone wall towards the centre of the survey area also offer good basking habitat for reptiles.
- 2.26 ACO's were placed on predominantly south-facing locations, which were exposed to a reasonable amount of sunlight. The refugia were searched on seven occasions (along with existing features likely to shelter reptiles) using a walked transect to observe basking/moving reptiles between ACO's.

⁶ British Trust for Ornithology (BTO), Edited by Robert J. Fuller (2012). Birds and Habitat - Relationships in Changing Landscapes. Cambridge University Press. Norfolk.

3.0 Results

Desktop study

- 3.1 A summary of the results of the desktop study is set out below. Further details, including maps, are provided under a separate cover, TEP report 6358.01.003.

Relevant Planning Policies and Guidance

- 3.2 Neither the site nor adjacent land is allocated for biodiversity purposes in the Wrexham County Borough Council Unitary Development Plan (UDP, adopted Feb 2005) nor the Wrexham Local Development Plan (LDP) 2013 to 2028.
- 3.3 The following policies from the UDP are most relevant to this assessment:
- Policy PS11 – Biodiversity
 - Policy GDP1 – Development Objectives
 - Policy EC2 – Agricultural Land
 - Policy EC4 – Hedgerows, Trees and Woodland
 - Policy EC6 – Biodiversity Conservation.
- 3.4 The following policies from the LDP are most relevant to this assessment:
- Policy SP15 - Natural Environment
 - Policy NE1 - International and Nationally Designated Nature Conservation Sites
 - Policy NE2 - Locally Designated Sites of Nature Conservation and Geological Importance
 - Policy NE3 - Trees, Woodlands and Hedgerows
 - Policy NE6 - Waste Water Treatment and River Water Quality.

Designated sites

- 3.5 There are five internationally designated sites for nature conservation within 10km of the development boundary. The nearest internationally designated site is Midland Meres and Mosses Phase 2 Ramsar site, located approximately 4.5km northeast of the development site.
- 3.6 Midland Meres and Mosses Phase 2 Ramsar is mainly designated for its diverse range of habitats from open water to raised bog. It supports a number of rare species of plants associated with wetlands and an assemblage of invertebrates including several rare species.
- 3.7 One nationally designated site for nature conservation lies within 1km of the development boundary. This is Gatewen Marsh Site of Special Scientific Interest (SSSI), located approximately 320m southwest of the development site. The SSSI is primarily designated for its habitats and is one of three significant examples in the former county of Clwyd of the “southern mesotrophic mires” wetland type.

- 3.8 SSSI Impact Risk Zones (IRZ) apply to designated sites in England only, however, sites in Wales can still fall into these zones. The development site falls within the IRZ for the River Dee and Bala Lake SAC and River Dee SSSI, both of which are located approximately 8.6km east. The IRZs also cover the interest features and sensitivities of European sites, which are underpinned by the SSSI designations.
- 3.9 In regard to these designations, consultation with Natural England is required if the planning proposals fall under:
- Air Pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m²
 - Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
- 3.10 Residential development is not listed as a likely risk for the designated sites associated with these IRZ's.
- 3.11 There are no statutory wildlife sites of local significance within 2km of the site.
- 3.12 There are three locally designated sites for nature conservation within 1km of the development boundary, these are Moss Valley Local Wildlife Site (LWS), approximately 580m west of the site, Berse Drelincourt LWS, approximately 950m southwest of the site and Woodlands and Fishpond Wood LWS, approximately 1km north of the site.
- 3.13 Moss Valley LWS is designated for its woodland valley habitats that support a diverse ground flora. The site also covers an area of unimproved calcareous grassland and semi-improved neutral grassland.
- 3.14 Berse Drelincourt LWS is designated for its mosaic of semi-natural habitats which include dense/continuous scrub, running water, semi-improved neutral grassland, semi-natural broad-leaved woodland and standing water.
- 3.15 Woodlands and Fishpond Wood LWS is designated for its mosaic of wetland and associated habitats which include a former dammed lake, swamp, scrub, semi-improved neutral grassland and semi-natural woodland.

Designated habitats

- 3.16 No habitats within the site are designated as a Section 7 Environment (Wales) Act 2016 habitat of principal importance.
- 3.17 Several parcels of habitats of principal importance occur in the wider landscape within 1km of the site. These habitats are identified as deciduous woodland, with the nearest occurring adjacent to the northern boundary of the site, and traditional orchard with the nearest occurring 630m southeast of the site. Development of the site will not impact upon any of these habitats of principal importance.

Protected species records

3.18 A number of species spread over a 2km search radius were identified through the Cofnod desktop search. Species include those listed under any of the following:

- European Protected Species (EPS);
- Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Species of principal importance under Section 7 of the Environment (Wales) Act 2016 (S7);
- Protection of Badgers Act 1992 (PBA);
- Red and Amber listed Birds of Conservation Concern (BoCC) UK species (BRd/BAm) (Eaton et al. 2015); and
- Red and Amber listed Bird of Conservation Concern (BoCC) in Wales (Bam/ BRd – Wales) (RSPB, 2016).

3.19 In summary, notable species that occur in the last ten years include:

Amphibians

- Great crested newt *Triturus cristatus* (EPS, WCA5, S7);
- Palmate newt *Lissotriton helveticus* (WCA5);
- Smooth newt *Lissotriton vulgaris* (WCA5);
- Common toad *Bufo bufo* (WCA5, S7); and
- Common frog *Rana temporaria* (WCA5).

Birds

- Avocet *Recurvirostra avosetta* (WCA1);
- Barn owl *Tyto alba* (WCA1);
- Black-headed Gull *Chroicocephalus ridibundus* (S7, BRd);
- Brambling *Fringilla montifringilla* (WCA1, BAm);
- Bullfinch *Pyrrhula pyrrhula* (S7, BAm);
- Coal tit *Periparus ater* (BAm);
- Common gull *Larus canus* (BAm);
- Common sandpiper *Actitis hypoleucos* (BAm);
- Common Scoter *Melanitta nigra* (WCA1, S7, BAm);
- Coot *Fulica atra* (BAm);
- Cuckoo *Cuculus canorus* (S7, BRd);
- Curlew *Numenius arquata* (S7, BRd);
- Dunlin *Calidris alpina* (BRd);
- Dunnock *Prunella modularis* (S7, BAm);
- Fieldfare *Turdus pilaris* (WCA1, BRd);
- Firecrest *Regulus ignicapilla* (WCA1, BAm);
- Grasshopper warbler *Locustella naevia* (BRd);
- Green Woodpecker *Picus viridis* (BAm)
- Greenfinch *Chloris chloris* (BRd);
- Grey Wagtail *Motacilla cinerea* (BRd);
- Greylag Goose *Anser anser* (BAm);
- Hen Harrier *Circus cyaneus* (WCA1, S7, BRd);

- Herring Gull *Larus argentatus* (S7, BRd);
- House martin *Delichon urbicum* (BAm);
- House sparrow *Passer domesticus* (S7, BRd);
- Iceland Gull *Larus glaucoides* (BAm);
- Kestrel *Falco tinnunculus* (BAm);
- Kingfisher *Alcedo atthis* (WCA1, BAm);
- Lapwing *Vanellus vanellus* (S7, BRd);
- Lesser black-backed gull *Larus fuscus* (BAm);
- Lesser redpoll *Acanthis cabaret* (BRd, BAm);
- Linnet *Linaria cannabina* (BRd);
- Marsh Harrier *Circus aeruginosus* (WCA1, BAm);
- Marsh Tit *Poecile palustris* (S7, BRd);
- Meadow Pipit *Anthus pratensis* (BAm);
- Merlin *Falco columbarius* (WCA1, BRd);
- Mistle Thrush *Turdus viscivorus* (BRd, BAm);
- Oystercatcher *Haematopus ostralegus* (BAm);
- Peregrine *Falco peregrinus* (WCA1);
- Pied Flycatcher *Ficedula hypoleuca* (S7, BAm);
- Pintail *Anas acuta* (WCA1, BAm);
- Pochard *Aythya ferina* (BRd);
- Red Kite *Milvus milvus* (WCA1);
- Redwing *Turdus iliacus* (WCA1, BRd, BAm);
- Reed Bunting *Emberiza schoeniclus* (BAm);
- Rook *Corvus frugilegus* (BRd);
- Shag *Gulosus aristotelis* (BAm);
- Shelduck *Tadorna tadorna* (BRd);
- Shoveler *Spatula clypeata* (BAm);
- Skylark *Alauda arvensis* (BRd, BAm);
- Snipe *Gallinago gallinago* (BAm);
- Song thrush *Turdus philomelos* (BRd, BAm);
- Spotted Flycatcher *Muscicapa striata* (BRd);
- Starling *Sturnus vulgaris* (S7, BRd);
- Swift *Apus apus* (BAm);
- Teal *Anas crecca* (BAm);
- Tree Sparrow *Passer montanus* (BRd);
- Water Rail *Rallus aquaticus* (BAm);
- Wheatear *Oenanthe oenanthe* (BAm);
- Whimbrel *Numenius phaeopus* (WCA1, BAm);
- Whitethroat *Curruca communis* (BRd);
- Wigeon *Mareca penelope* (BAm);
- Willow Warbler *Phylloscopus trochilus* (BRd); and
- Woodcock *Scolopax rusticola* (BRd).

Mammals

- Badger *Meles meles* (PBA);
- Hedgehog *Erinaceus europaeus* (S7);
- Otter *Lutra lutra* (EPS, S7, WCA5, LBAP);
- Polecat *Mustela putorius* (S7);

- Brandt's Bat *Myotis brandtii* (EPS, WCA5);
- Brown Long-eared Bat *Plecotus auritus* (EPS, S7, WCA5);
- Common Pipistrelle *Pipistrellus pipistrellus* (EPS, S7, WCA5);
- Daubenton's Bat *Myotis daubentonii* (EPS, WCA5);
- Lesser Horseshoe Bat *Rhinolophus hipposideros* (EPS, S7, WCA5, LBAP);
- Natterer's Bat *Myotis nattereri* (EPS, WCA5);
- Noctule Bat *Nyctalus noctula* (EPS, S7, WCA5);
- Soprano Pipistrelle *Pipistrellus pygmaeus* (EPS, S7, WCA5); and
- Whiskered Bat *Myotis mystacinus* (EPS, WCA5).

Reptiles

- Common lizard *Zootoca vivipara* (WCA5, S7); and
- Grass snake *Natrix natrix* (WCA5, S7).

Other

- Bluebell *Hyacinthoides non-scripta* (WCA8);
- Dingy skipper *Erynnis tages* (S7);
- Wall moth *Lasiommata megera* (S7);
- Giant Hogweed *Heracleum mantegazzianum* (WCA9);
- Himalayan Balsam *Impatiens glandulifera* (WCA9);
- Japanese Knotweed *Fallopia japonica* (WCA9);
- Montbretia *Crocsmia pottsii* x *aurea* = *C. x crocosmiiflora* (WCA9);
- Three-cornered Garlic *Allium triquetrum* (WCA9);
- Variegated Yellow Archangel *Lamium galeobdolon* subsp. *Argentatum* (WCA9); and
- Wall Cotoneaster *Cotoneaster horizontalis* (WCA9).

Habitat Survey

- 3.20 The results of the Phase 1 habitat survey are illustrated in Drawing G6358.01.007. Species lists and photographs are presented in Appendix A Target Notes. The habitats present within the development site or adjacent to the site are listed below and brief descriptions of these habitats are also given:

- Improved grassland;
- Hedgerows;
- Plantation broad-leaved woodland;
- Tall ruderal;
- Scattered broad-leaved trees;
- Standing water and ditches;
- Semi-natural broad-leaved woodland; and
- Modified neutral grassland.

Grassland

- 3.21 The main body of the site is roughly rectangular in shape and is split into six fields that comprise improved grassland. The grassland was not grazed at the time of the survey and signs of some management was present (Figure 2). These fields appeared to comprise dominant perennial ryegrass *Lolium perenne* as well as annual meadow grass *Poa annua*, false oat-grass *Arrhenatherum elatius* and cocks-foot *Dactylis glomerata* with other species such as creeping thistle *Cirsium arvense*, meadow buttercup *Ranunculus acris* and greater plantain *Plantago major*.

Hedgerows

- 3.22 The parcels of grassland are segregated by a number of generally well managed hedgerows and mature trees. The hedgerows range from species-poor to species-rich and some contain trees. The majority of the hedgerows north of Stansty Chain Road are species rich and contain a mix of hawthorn *Crataegus monogyna*, elder *Sambucus nigra*, holly *Ilex aquifolium*, dog rose *Rosa canina*, blackthorn *Prunus spinosa* and hazel *Corylus avellana*. Tree species found within these hedgerows often include oak *Quercus robur* and ash *Fraxinus excelsior*.
- 3.23 Hedgerow ground flora comprised few woodland indicator species which included dog's mercury *Mercurialis perennis* and lords-and-ladies *Arum maculatum*. The majority of the hedgerows in this part of the site are planted on a stone wall.
- 3.24 The hedgerows within the land south of Stansty Chain Road are species-poor and are dominated by hawthorn *Crataegus monogyna*, with occasional blackthorn *Prunus spinosa*. Dog's mercury and lords-and-ladies were also identified amongst these hedgerows.
- 3.25 Species lists were produced of all hedgerows present on and bounding the site. A hedgerow species list is presented in report 6358.01.005 and drawing G6258.01.007 shows the location of all hedgerows surveyed.
- 3.26 Hedgerows within the northern part of the site (north of Stansty Chain Road) are generally more species-rich than those in the southern part of the site.

Woodland & Trees

- 3.27 Three small pockets of plantation woodland occur on the boundaries of the site. The northern site boundary along Stansty Lodge Lane largely comprises a double hedgerow that has become outgrown as the lane is disused. Species included hawthorn, elder, ash, holly, hazel and English oak. A patch of native bluebell was identified in this area amongst lesser celandine *Ficaria verna*, dog's mercury and lords-and-ladies.
- 3.28 The other areas comprises plantation woodland alongside the A541 and Stansty Chain Road. Species include sycamore *Acer pseudoplatanus*, blackthorn, ash and cherry. An understorey of bramble *Rubus fruticosus* agg scrub was also present.
- 3.29 The site is also bordered by an embankment of semi-mature broad-leaved plantation woodland associated with the A483, as well as an area in the south adjacent to the A541. Species comprise hazel, ash, oak and sycamore.

- 3.30 A number of scattered mature trees are present across the site, particularly associated with the field boundaries. The main tree species include English oak and ash. A number of the oaks across the site are mature and have features characteristic of veteran trees. Features present include deadwood and decay, cavities, broken limbs, fallen limbs, basal hollowing, loose or lifted bark, rot holes and root damage. These trees are valuable to a range of species.



Figure 2: One of the mature oaks present within the site

Standing Water & Ditches

- 3.31 The fields in the southern part of the site are dissected by a wet ditch that is approximately 2m wide. This ditch runs between the woodland embankment in the south east and H8 in the west. It is surrounded by tall ruderal in the west with two mature English oaks present also.



Figure 3: Wet ditch south of Stansty Chain Road

Tall Ruderal

- 3.32 Tall ruderal growth is present across the site, surrounding the ditch and hedgerows in the north of the site. Species include broad-leaved dock *Rumex obtusifolius*, hogweed *Heracleum sphondylium*, ragwort *Jacobaea vulgaris*, nettle *Urtica dioica*, soft rush *Juncus effusus* and red campion *Silene dioica*.



Figure 4: Tall ruderal habitat across the site

Invasive and protected plant species

- 3.33 As noted above, the protected plant species native bluebell (Schedule 8 of the Wildlife and Countryside Act 1981 as amended) was identified within the plantation woodland associated with Stansty Lodge Lane.

- 3.34 The invasive plant species Japanese knotweed *Fallopia japonica* and variegated yellow archangel *Lamiastrum galeobdolon subsp. Argentatum* (Schedule 9 of the Wildlife and Countryside Act 1981 as amended) were identified along the eastern boundary of the site. During the updated Phase 1 survey it was noted that the Japanese knotweed has started to encroach into the field in the eastern part of the site.

Connectivity with the wider landscape

- 3.35 The site has connectivity to habitats within the wider landscape via the network of onsite hedgerows connecting to further hedgerows within the wider landscape to the north. The site has limited connectivity to the east, south and west due to substantial roads.

Fauna

Amphibians

- 3.36 No ponds are located on site and no desktop records of any amphibians were recorded within the site.
- 3.37 There are records for great crested newt, common frog, common toad, palmate newt, and smooth newt in ponds to the north, with the closest record lying 216m west of the site. This record is from 2006 and is likely associated with a historic pond within 250m of the site, identified using Magic Maps. This pond, however, is completely dry and looks to have been dry for some time, confirmed by Emma Hickson as part of the walkover in June 2023. It is therefore likely that GCN are now absent from this area.



Figure 5: Dry Pond area to the northwest of the site

- 3.38 There are five other ponds within 500m of the site, some of which are known to support breeding great crested newt. The second nearest record is 328m north of the site from 2019, associated with these mitigation ponds built as part of the development scheme to the north of the site.

- 3.39 The site contains limited terrestrial habitat (improved grassland) for foraging amphibians. The hedgerows on site provide potential refuge opportunities and commuting habitat for amphibians. There is, however, no suitable breeding habitat on site.

Badger

- 3.40 The desktop study identified a record for badger approximately 48m from the site.
- 3.41 The grassland habitat within the development site provides potential foraging and commuting habitat for badger. During the survey no setts were identified within the site and no other signs of badger were observed. The updated extended Phase 1 habitat survey confirmed there are currently no signs of badger activity within the site boundaries.

Bats

- 3.42 The desktop identified records of brown long eared bat. common pipistrelle, soprano pipistrelle and noctule bat within 1km of the site.

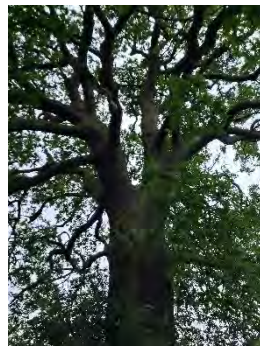
Ground-based assessment of trees

- 3.43 Several of the trees within the site contained potential roost features and therefore are considered to have suitability for roosting bats.
- 3.44 The following trees, shown on Drawing 6358.01.008 and in Table 3, below, were considered to have low - high suitability for roosting bats:

Table 3: Tree Descriptions

Tree #	Grid Reference	Description	Roosting Category	Photograph
1	SJ 32557 52084	Mature oak with single stem with trunk and branch cavities. Has woodpecker holes and split branches.	Moderate	

Tree #	Grid Reference	Description	Roosting Category	Photograph
2	SJ 32419 52207	Mature, ivy-covered oak with woodpecker holes and multiple branch splits including some with high potential.	High	
3	SJ 32508 51972	Mature oak with large lower branch which is split. Tall vertical trunk split/cavity. Multiple other PRFs	High	
4	SJ 32433 51927	Mature oak with branch wounds and splits. Squirrel hole showing staining on one limb on west.	High	
5	SJ 32397 51916	Mature oak with dead branch join	Moderate	

Tree #	Grid Reference	Description	Roosting Category	Photograph
6	SJ 32397 51916	Mature oak next to tree 5. Loose bark on limbs to the west	Low	
7	SJ 32436 52043	Mature oak covered in ivy with several broken branches.	Moderate	
8	SJ 32375 52039	Mature oak with dense epicormics growth. Dead limbs on all aspects and a branch split on the southern side	High	
9	SJ 32325 52004	Mature oak with dead branches on all aspects and a branch cavity close to the central trunk	Moderate	

Tree #	Grid Reference	Description	Roosting Category	Photograph
10	SJ 32350 52089	Mature oak with very suitable branch cavity close to the central stem	High	
11	SJ 32390 52125	Mature oak with dense epicormics growth, a trunk cavity on the south and broken branches.	Moderate	
12	Offsite oak. Couldn't get access	Dead oak with broken branches and patches of ivy cover.	Precautionary High	

Tree #	Grid Reference	Description	Roosting Category	Photograph
13	SJ 32296 52101	Offsite, ivy-covered sycamore with woodpecker holes.	High	
14	SJ 32289 52098	Offsite dead oak with lots of loose bark and dead branches on all aspects.	Moderate	
15	SJ 32255 51747	Mature oak near brook with dense epicormic growth, difficult to see features.	Precautionary Moderate	

Tree #	Grid Reference	Description	Roosting Category	Photograph
16	SJ 32271 51749	Mature oak near brook with large central split	High	
17	SJ 32433 52030	Partially dead sycamore. Holes and dead branches on all aspects could lead to a cavity on the inside.	High	
18	SJ 32662 52262	Dead ash tree. Previously identified as negligible potential but lifting bark raises potential to low.	Low	
19	SJ 32175 51974	Large, mature ivy-covered ash. Ivy potentially obscuring features.	Low	

- 3.45 The surrounding habitats and adjacent trees provide opportunities for commuting and for foraging. The woodland, brook and arable fields in particular are moderate quality foraging habitat.

Transect and Static Monitoring Surveys

- 3.46 The bat assessment report is provided under a separate cover, TEP report 6358.01.008. This provides full details of the bat activity surveys undertaken on site in 2023 and the results of these are summarised below. Drawing G6358.01.009 shows the transect route and static monitoring locations.
- 3.47 During the activity and static monitoring surveys at least five confirmed bat species were recorded including common pipistrelle, soprano pipistrelle, noctule, brown long-eared bat and unidentified Myotis species.
- 3.48 The transect and static monitoring surveys found common pipistrelle was the most commonly recorded species. Bat activity was concentrated around the north and west of the site associated with the hedgerows and mature trees, and the hedgerow and woodland adjacent to Mold Road. Drawings G6358.01.012, G6358.01.013 and G6358.01.014 show the results of the bat transect surveys.

Birds

- 3.49 A number of records for WCA1, S7 and BRd/BAm (including for UK and for Wales specifically) bird species lie within 2km of the site. No records occurred within the proposed development site.
- 3.50 The hedgerows, tree lines and scattered trees provide suitable nesting habitat for a range of bird species. The grassland could also provide suitable nesting habitat for ground nesting species depending upon the level of management.

Breeding Bird Surveys

- 3.51 A breeding bird technical report is provided under a separate cover, TEP report 6358.01.009 and the breeding bird survey results are illustrated on maps G6358.01.001.1-4.
- 3.52 During the breeding bird surveys a total of 27 species were recorded within the site boundary and 100m buffer; 24 species in visit one, 17 species in visit two, 20 species in visit three and 21 species in visit four. Of those recorded, there are no species listed under Schedule 1 of the Wildlife and Countryside Act 1981. Five S7 species were recorded, two of which are also Red Listed Bird of Conservation Concern species (BRd) and two are also Amber Listed (BAm) species. Four additional BRd species and one BAm species were also recorded that are not S7 species.
- 3.53 Six bird species were confirmed to be breeding within the site boundary and 100m buffer. These are blackbird, blue tit, carrion crow, great tit, long-tailed tit, and woodpigeon. None of these are notable species.
- 3.54 Five probable breeding species were also recorded within the site and 100m buffer during the breeding bird survey. With regards to notable bird species, a single pair of dunnock were recorded as probably breeding within the site itself and a single pair of greenfinch were thought to be probably breeding within the 100m buffer of the site.

- 3.55 There were also 14 bird species recorded as possible breeders on site and within the 100m site buffer. Notable possible breeding species within the site itself include greenfinch, magpie, song thrush and whitethroat. House sparrow, starling and swift were additional notable species which are possible breeders within the 100m buffer.

Otter and water vole

- 3.56 12 records of otter were recorded within 600m of the site within the desktop search. No records for water vole were identified in the desktop search. The onsite ditch lacks connectivity to watercourses in the wider area and there appears to be no significant watercourses within 1km of the site that have connectivity to the proposed development site. It is considered highly unlikely water vole or otter would range into the site from the wider area. Water vole and otter are not considered further in this assessment.

Reptiles

Reptile suitability assessment

- 3.57 There are seven records for common lizard approximately 625m north of the site as well as 12 records of grass snake within 1km of the site. The land south of Stansty Chain Road contains potential habitat suitable to support reptiles including the wet ditch across the centre of the site and the hardstanding and rubble present in the north west area. The land north of Stansty Chain Road also contains potential habitat suitable to support reptiles including stone walls amongst hedgerows and a railway embankment adjacent to the northeastern boundary. The record for common lizard has connectivity to this part of the site via the uninterrupted habitat associated with the railway line.



Figure 6: Rubble pile in the northwest of the site, amongst tall ruderal and hardstanding areas

Reptile survey

- 3.58 Results of the reptile surveys undertaken in 2023 are presented under a separate cover, TEP report 6358.01.007. Drawing G6358.01.010 shows the reptile survey area.
- 3.59 Report 6358.01.007 will cover the results, conclusions and recommendations with regards to the development and reptiles and should be read in conjunction with this Ecological Assessment. Reptiles will not be considered further in this report.

Conclusions

- 3.60 The current development proposals for the site are shown in drawing A106224_002 Rev. H Stansty Green, Wrexham Illustrative Masterplan. The application is being made in outline with all matters other than access reserved for consideration at a later date. As such, the submitted masterplan is purely illustrative at this stage.
- 3.61 The proposals include a large residential development scheme with swathes of green space, mainly to the eastern and southern boundaries, and retained hedgerows and trees.

Designated sites

- 3.62 The nationally designated site, Gatewen Marsh SSSI, is designated for its habitats and is located 320m southeast of the site. There is no connectivity between the site and the SSSI due to the presence of Mold Road which acts as a barrier between the two areas. No direct or indirect impacts are predicted on Gatewen Marsh SSSI from the development proposals.
- 3.63 The site falls within the SSSI Impact Risk Zone (IRZ) for the River Dee and Bala Lake SAC and River Dee SSSI. Current proposals are for residential development of the site. Residential development is not one of the proposals listed as a concern for potential impacts upon these site. No direct or indirect impacts are predicted on River Dee and Bala Lake SAC and River Dee SSSI from the development proposals.
- 3.64 The LWS's will not be directly affected by the development proposals. Additionally, a significant amount of green space is included within the development proposals, reducing the potential impact on existing public open space within the wider area. As such, no direct or indirect impacts are predicted from the development proposals.

Habitats

- 3.65 The grassland habitats within the site are poor quality and common and widespread in the area, so are of low intrinsic value. The loss of this habitat is not considered to be a significant impact. The hedgerows and mature trees are considered to offer the greatest biodiversity value within the site.
- 3.66 The site contains a mix of species-rich and species-poor hedgerows, all the hedgerow habitats form part of a network linking with the wider environment surrounding the site. It is the intention of Russell Homes to retain the majority of hedgerows across the site, however, they will need to sever these in places to create road access points and footpaths. Existing hedgerows on site will be enhanced and native species-rich hedgerows planted where suitable to mitigate for these losses. The development will be designed to retain as much hedgerow habitat as feasible in order to maintain connectivity across the site.
- 3.67 Under the existing proposals there are six points where hedgerows will need to be severed for roads and an additional five for footpaths. There will also be a requirement to remove a section of hedgerow alongside Stansty Chain Road for a visibility splay for road safety. There will be no net loss of hedgerows on site, hedgerow planting will be undertaken across the site to replace the losses, with an increase in species-rich native hedgerows anticipated.

- 3.68 Should there be any hedgerows on site which are considered important from a heritage perspective, it is considered that replacement for the small sections of these to be lost can be adequately provided on site.
- 3.69 There are several mature trees throughout the site that are of significant value to a range of species, providing a valuable habitat resource for wildlife. An Arboricultural Impact Assessment is required to fully assess the trees on site.
- 3.70 It is proposed that the majority of trees across the site will be retained given the ecological as well as aesthetic value that they contribute to a development. An appropriate habitat buffer will also be retained around these trees in order to protect the integrity of the trees. The root protection zone (RPZ) will form the basis of this buffer zone.
- 3.71 Appropriate tree protection measures will also need to be put in place to ensure an adequate habitat buffer from the trees is retained from the proposed development and during construction of the site.

Invasive and protected plant species

- 3.72 The protected plant species bluebell was identified within the site, along the northern boundary. The bluebells should be left in-situ and protected from any development works. If the bluebells will be disturbed by development proposals, it will be necessary to translocate them to suitable habitat that will remain undisturbed at an appropriate time of year.
- 3.73 The invasive species Japanese knotweed and variegated yellow archangel were identified within and adjacent to the site and may be affected by the development, including site clearance works. Japanese knotweed was observed to have spread into the eastern edge of the site during the Phase 1 habitat survey update. To avoid the offence of causing the spread of this species, an eradication and control plan would be required prior to commencement of works onsite.

Fauna

Amphibians

- 3.74 There are five ponds within 500m of the development site. Several of these ponds contain historic records for great crested newt.
- 3.75 Terrestrial habitat associated with the site falls within the distant ranging distance for great crested newt, however, there is no suitable breeding habitat on site and the terrestrial habitat on site is poor quality for great crested newts and other common amphibians. There are limited opportunities for foraging, refuge and hibernation, although there is some connectivity to the site along the railway line bordering the site to the east. As the presence of great crested newts is known to be within influencing distance of the site, there may be implications, albeit limited, for development of the site with regard to great crested newts.

Badger

- 3.76 There is no evidence of badgers utilising the site so there are currently no implications relating to badgers from the proposed development, however, the habitats present have potential to support badger setts in the future.

Bats

Ground-based Assessment of Trees

- 3.77 There are several trees on site which have features that could support roosting bats. These will be retained and protected within current proposals. Consideration will be needed to avoid disturbance of suitable bat roost habitats from external lighting and to maintaining connectivity and dark corridors around the site.

Transect and Static Monitoring Surveys

- 3.78 Wray et al. (2010)⁷ was used to evaluate the site's importance for commuting and foraging bats. The site was assessed as of local importance for pipistrelle species (common and soprano) and local importance for noctule, brown long-eared and Myotis species. Static monitoring recorded moderate levels of activity across the site, particularly the woodland/hedgerows in the north. The activity recorded during the transect surveys was comparatively low across the rest of the site with activity generally focussed on the boundary features. Overall, considering the site location, small species assemblage and the wider landscape, the site is considered to be of local value to bats.
- 3.79 The boundary hedgerows were identified as important commuting and foraging habitats. The majority of the hedgerows will be retained within the development proposals (Drawing ref: 12.07.19 Stansty Sketch Layout). It is accepted there is some hedgerow loss to facilitate access to the site. A sensitive lighting scheme will be required to avoid any indirect impacts from external lighting on foraging and commuting bats.

Birds

- 3.80 The 27 bird species recorded, during the 2023 breeding bird surveys within the site and site buffer, represents a low species diversity with the majority of species recorded being commonplace and widespread. No notable bird species were confirmed to be nesting within the site itself or the 100m buffer, however a pair of dunnock were thought to be likely nesting within the site. A pair of greenfinch were also thought to be likely nesting within the buffer of the site.

⁷ Wray, S., Wells, D., Long, E. and Mitchell-Jones, T. (2011). Valuing bats in ecological impact assessment. In practice. pg. 23-27.

- 3.81 No significant breeding bird concentrations (i.e. 1% or more of the national breeding population) or nationally rare breeding bird species (i.e. between 1 and 1,000 breeding pairs) (Musgrove et al. 2013) were recorded during the survey. Based on criteria applied by Fuller (1980)⁸, the results from the surveys indicate that the site, including the buffer, is of below local significance for breeding birds.
- 3.82 The majority of bird species recorded during the survey are associated with nesting in trees, hedgerow and scrub, with the majority of birds noted during the survey recorded within the hedges along the site boundaries and the scattered broad-leaved trees. This includes all of the notable bird species recorded.
- 3.83 All UK birds are protected under the Wildlife and Countryside Act 1981 (as amended), therefore there will also be implications with regard to nesting birds and vegetation clearance of the site.

⁸ Fuller, R.J., 1980. A method for assessing the ornithological interest of sites for conservation. *Biological Conservation*, 17(3), pp.229-239.

4.0 Recommendations

- 4.1 It is considered that the ecological features, both potential and present, within the site do not preclude development of the site for residential use; and there are opportunities for ecological enhancement. A number of measures to protect, maintain and enhance ecological features within the site are recommended to comply with current legislation and policy.

Habitats

- 4.2 The majority of trees across the site are being retained under the development proposals. The design of the development should take into account the long term setting of these trees and how they will relate to use of the area in the future.
- 4.3 Appropriate tree protection measures will also need to be put in place to ensure an adequate habitat buffer from the trees is retained from the proposed development and during construction of the site. This habitat buffer will largely be informed by Root Protection Areas (RPAs) as set out in an Arboricultural Impact Assessment but ideally a 5m buffer beyond the edge of the tree canopy, or whichever is greater, should be retained.
- 4.4 Physical protection of these trees should also be considered in the long term to further protect the trees from root compaction and other damage. This protection would also serve to protect people and properties that could be harmed in the event of a tree failure. Protection methods could utilise fencing or planting of hedgerows.
- 4.5 If at any time in the future these trees require management or pruning, it is recommended that a bespoke management strategy is undertaken and consultation with an ecologist will be required - see below for further recommendations relating to trees with bat potential.
- 4.6 All hedgerows are being retained within development proposals where feasible. It is accepted that some hedgerow loss is required for access throughout the site and for a visibility splay at the site entrance. An adequate habitat buffer should also be provided adjacent to retained hedgerows alongside a sensitive lighting scheme for the development. Hedgerow planting should be undertaken to replace, and preferably increase, the amount of species-rich native hedgerow present across the site.
- 4.7 Under current proposals it does not appear that bluebell will be affected by the proposals. However, if bluebell will be affected a bluebell protection method statement will be required to ensure the species is appropriately protected and handled. An invasive species eradication and control plan will also be required prior to works commencing on site due to the presence of Japanese knotweed and variegated yellow archangel.
- 4.8 A detailed planting plan should be produced identifying species to be used and should be agreed with the county ecologist. Areas of tree and shrub planting should incorporate a mix of native species of local provenance, to include a variety of berry and nectar bearing species that encourage insects. Increased insect abundance will, in turn, enhance foraging opportunities for bats, birds and other wildlife.

- 4.9 Grassland habitats can be enhanced by the inclusion of wildflower meadow buffers and wildflower bulbs within the proposals, to promote herbaceous diversity and pollinator opportunities. The National Pollinator Strategy recommends the following seasonal planting:

- Spring: primroses and crocuses
- Summer: lavenders, meadow cranesbill and ox-eye daisies
- Autumn: ivy and hebes; and
- Winter: mahonia shrubs and cyclamen.

- 4.10 Any other shrub or herb planting incorporated into the design should include the use of native or wildlife friendly species to enhance the biodiversity of the site. For example, trellising on any fencing or on the new build would offer additional habitat for nesting and foraging birds. Honeysuckle or ivy would be ideal species on trellising.

Amphibians

- 4.11 It is known that there is a population of great crested newt within 500m of the site, but the site lies only within distant ranging habitat of the breeding ponds (>250m). There are opportunities on site to enhance habitat as part of the housing scheme to increase the available range of the great crested newt population.
- 4.12 As the nearest known GCN pond is over 250m from the site boundaries it is not necessary to obtain a GCN mitigation licence from NRW to allow development on site to proceed. All land falling between 250m and 500m of the GCN ponds will be cleared using Reasonable Avoidance Measures (RAMs). A Method Statement will be produced detailing the measures to be taken to ensure that, in the unlikely event of amphibians being present, they are not harmed by the works.
- 4.13 The landscape design for the site will incorporate terrestrial habitat suitable for amphibians. This will allow all amphibians, including the GCN population to the north, to expand their ranging opportunities to the south along the railway line.

Badger

- 4.14 If development of the site does not commence within twelve months of the most recent site walkover (July 2024), a pre-construction check to ensure that badgers have not moved into the site or adjacent habitats in the intervening period is recommended.

Bats

- 4.15 The trees with bat potential (Drawing G6358.01.008) are all being retained and protected on site. If any management works of these trees is needed or if any changes to the layout require any of them to be removed, further inspection will be required to confirm roost suitability or if a roost is present.
- 4.16 Direct lighting of retained trees and hedgerow habitat should be avoided to ensure no disturbance to potential foraging, commuting and potential roosting bats. It is recommended that a sensitive lighting scheme should be designed and implemented for the site. The following should be considered when choosing luminaires:

- Use of unnecessary lighting will be avoided.
- Spatial spread of lighting – Column heights should be carefully considered to minimise light spill. Only luminaires with an upward light ratio of 0% and with good optical control should be used. Luminaires should always be mounted on the horizontal, i.e. no upward tilt. As a last resort, accessories such as baffles, cowls or louvres can be used to reduce light spill and direct it only to where it is needed. The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- Timing and duration of lighting – timers and bespoke dimming regimes may be used to ensure that luminaires are reduced to 1-5 lux at times of predicted low use. Any external security lighting should be set on motion-sensors and short (1min) timers. These can also be set to change with the seasons and therefore reflect the shifting time of dusk and dawn throughout the year. Motion sensors provide further control to ensure that areas are illuminated only when required.
- Intensity and colour of lighting – light intensity will be as low as possible whilst meeting the objectives of the intended function. All luminaires should lack UV elements when manufactured LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability. A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component. Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.

Birds

- 4.17 The removal of sections of hedgerows will reduce the amount of breeding and nesting habitat available for these species and these will be retained or replaced wherever possible. If trees are to be replaced or new hedgerows planted, they should include a range of native species to create a varied vegetation structure and suit a wider range of breeding bird species. Fruiting tree and shrub species and/or species that are attractive to insects will also provide additional foraging resources for numerous bird species.
- 4.18 It is recommended that all vegetation clearance should be undertaken outside the bird nesting season (March to August inclusive). If this period cannot be avoided, a suitably qualified ecologist should carry out a nesting bird check a maximum of 24 hours in advance of vegetation clearance works. If nesting birds are found, an appropriate exclusion zone will need to be set up around any active nests until the young have fledged. The ecologist will carry out regular monitoring checks to advise when it is possible for clearance works to proceed. The size of the exclusion zone will depend on the species nesting.

- 4.19 A nest box scheme should be undertaken as part of the development, including small nest boxes with holes and open fronted nest boxes, which would provide additional nesting sites for a number of species such as blue tit and robin. House sparrow have been recorded to nest within surrounding habitat and therefore house sparrow terraces should be incorporated into the new development to encourage this notable bird species.

Other Opportunities for Biodiversity Enhancement

- 4.20 Enhancement for roosting bats and nesting birds could be delivered within the new site through the provision of bat and bird boxes. These can be situated on retained trees and incorporated within the properties on site.
- 4.21 During the site clearance works, consideration should be given to chipping or composting vegetation for re-use on the new habitats on site, or creation of brash and deadwood piles on the periphery of the site as a further aid to increasing the biodiversity of the site.
- 4.22 Hedgehogs are an S7 species of principal importance. One of the factors contributing to the decline of this species in the UK is habitat fragmentation, caused in part by garden boundaries becoming more secure. Consideration could be given to hedgehog-friendly features in the development through providing links between garden areas and provision of hedgehog boxes in retained habitats or public open space.

APPENDIX A: Target Notes

Target Notes Report

Survey 6358.01-1 Extended Phase 1

Target Note TN1

Improved grassland field bound by woodland, scrub and hedgerows.

<i>Lolium perenne</i>	Perennial Ryegrass	D
<i>Poa annua</i>	Annual Meadow-grass	A
<i>Cirsium arvense</i>	Creeping Thistle	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Elymus repens</i>	Common Couch	F
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Plantago major</i>	Greater Plantain	O



Target Note TN2

Same as TN1 but more managed in areas.



Target Note TN3

Patch of tall ruderal around a nearly dry ditch.

Bistorta officinalis

Silene dioica

Typha angustifolia

Dactylis glomerata

Phalaris arundinacea

Urtica dioica

Juncus effusus

Vicia cracca

Bistort

Red Campion

Small Reedmace

Cock's-foot

Reed Canary-grass

Nettle

Soft Rush

Tufted Vetch

F

F

F

O

O

O

R

R



Target Note TN4

Area of scrub and woodland in the northeast of the site.

Rubus fruticosus agg.

Galium aparine

Quercus sp.

Crataegus monogyna

Dryopteris dilatata

Hedera helix

Rumex obtusifolius

Urtica dioica

Acer campestre

Chamaenerion angustifolium

Fraxinus excelsior

Heracleum sphondylium

Reynoutria japonica

Corylus avellana

Jacobaea vulgaris

Lamium galeobdolon

Prunus avium

Sambucus nigra

Bramble

Cleavers

Oak species

Hawthorn

Broad Buckler-fern

Ivy

Broad-leaved Dock

Nettle

Field Maple

Rosebay Willowherb

Ash

Hogweed

Japanese Knotweed

Hazel

Common Ragwort

Yellow Archangel

Wild Cherry

Elder

D

A

A

F

F

F

F

F

O

O

O

O

O

R

R

R

R

R

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare



HEDGEROWS

H1 – Native species rich intact hedgerow separated two grassland fields.

<i>Prunus spinosa</i>	Blackthorn	D
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Ulmus glabra</i>	Wych Elm	A
<i>Galium aparine</i>	Cleavers	F
<i>Rumex obtusifolius</i>	Broad-leaved Dock	F
<i>Urtica dioica</i>	Nettle	F
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Ilex aquifolium</i>	Holly	O
<i>Rosa canina</i> agg.	Dog Rose	O
<i>Sambucus nigra</i>	Elder	O
<i>Arum maculatum</i>	Lords-and-Ladies	R
<i>Corylus avellana</i>	Hazel	R
<i>Mercurialis perennis</i>	Dog's Mercury	R



H2 – Tall native species rich hedge and trees an extension of H1.

<i>Rubus fruticosus</i> agg.	Bramble	A
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Galium aparine</i>	Cleavers	F
<i>Hedera helix</i>	Ivy	F

Prunus spinosa
Urtica dioica
Acer campestre
Sambucus nigra
Ulmus glabra
Corylus avellana
Rosa canina agg.

Blackthorn
 Nettle
 Field Maple
 Elder
 Wych Elm
 Hazel
 Dog Rose

F
 F
 O
 O
 O
 R
 R



H3 - Native species-poor intact hedgerow bordering the railway line.

Crataegus monogyna
Chamaenerion angustifolium
Rubus fruticosus agg.
Urtica dioica
Cirsium arvense
Galium aparine
Heracleum sphondylium
Sambucus nigra
Calystegia sepium
Quercus sp.

Hawthorn
 Rosebay Willowherb
 Bramble
 Nettle
 Creeping Thistle
 Cleavers
 Hogweed
 Elder
 Hedge Bindweed
 Oak species

A
 F
 F
 F
 O
 O
 O
 O
 R
 R



H4 – Wide native species rich hedge. The western end borders a residential property, some scattered broadleaved trees are present.

Crataegus monogyna
Rubus fruticosus agg.
Hedera helix
Prunus spinosa

Hawthorn
 Bramble
 Ivy
 Blackthorn

A
 A
 F
 F

<i>Urtica dioica</i>	Nettle	F
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Galium aparine</i>	Cleavers	O
<i>Ilex aquifolium</i>	Holly	O
<i>Ulmus glabra</i>	Wych Elm	O
<i>Corylus avellana</i>	Hazel	R
<i>Sambucus nigra</i>	Elder	R
<i>Sorbus aucuparia</i>	Rowan	R
<i>Betula pendula</i>	Silver Birch	R



H5 – Native species-poor intact hedgerow with a large gap likely used for farming machinery access. One broadleaved tree with moderate bat potential.

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Cirsium arvense</i>	Creeping Thistle	A
<i>Prunus spinosa</i>	Blackthorn	A
<i>Galium aparine</i>	Cleavers	F
<i>Sambucus nigra</i>	Elder	F
<i>Ulmus glabra</i>	Wych Elm	O
<i>Urtica dioica</i>	Nettle	O
<i>Acer sp.</i>	Maple species	R
<i>Corylus avellana</i>	Hazel	R
<i>Rosa canina</i> agg.	Dog Rose	R



H6 - Native, intact, species rich hedge bordering Stansty Chain Road.

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Ulmus glabra</i>	Wych Elm	A
<i>Dryopteris dilatata</i>	Broad Buckler-fern	F
<i>Fraxinus excelsior</i>	Ash	F
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Rosa canina</i> agg.	Dog Rose	F
<i>Urtica dioica</i>	Nettle	F
<i>Acer campestre</i>	Field Maple	O
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Arctium minus</i>	Lesser Burdock	O
<i>Galium aparine</i>	Cleavers	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Sambucus nigra</i>	Elder	O
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Corylus avellana</i>	Hazel	R
<i>Geum urbanum</i>	Wood Avens	R
<i>Melilotus</i> sp.	Melilot species	R
<i>Papaver somniferum</i>	Opium Poppy	R
<i>Petasites hybridus</i>	Butterbur	R
<i>Potentilla reptans</i>	Creeping Cinquefoil	R
<i>Prunus</i> sp.	Cherry species	R
<i>Quercus</i> sp.	Oak species	R
<i>Tussilago farfara</i>	Colt's-foot	R



H7 - Native intact hedgerow adjacent to Stansty Chain Road with tall ruderal around the hedgerow

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Prunus spinosa</i>	Blackthorn	F
<i>Rumex obtusifolius</i>	Broad-leaved Dock	F
<i>Urtica dioica</i>	Nettle	F
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Corylus avellana</i>	Hazel	R
<i>Digitalis purpurea</i>	Foxglove	R
<i>Ilex aquifolium</i>	Holly	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Sambucus nigra</i>	Elder	R



H8 – Species poor hedge and trees adjacent to the A541.

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Rubus fruticosus</i> agg.	Bramble	A
<i>Galium aparine</i>	Cleavers	F
<i>Sambucus nigra</i>	Elder	F
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Quercus</i> sp.	Oak species	O
<i>Corylus avellana</i>	Hazel	R
<i>Sorbus aucuparia</i>	Rowan	R
<i>Ulmus glabra</i>	Wych Elm	R



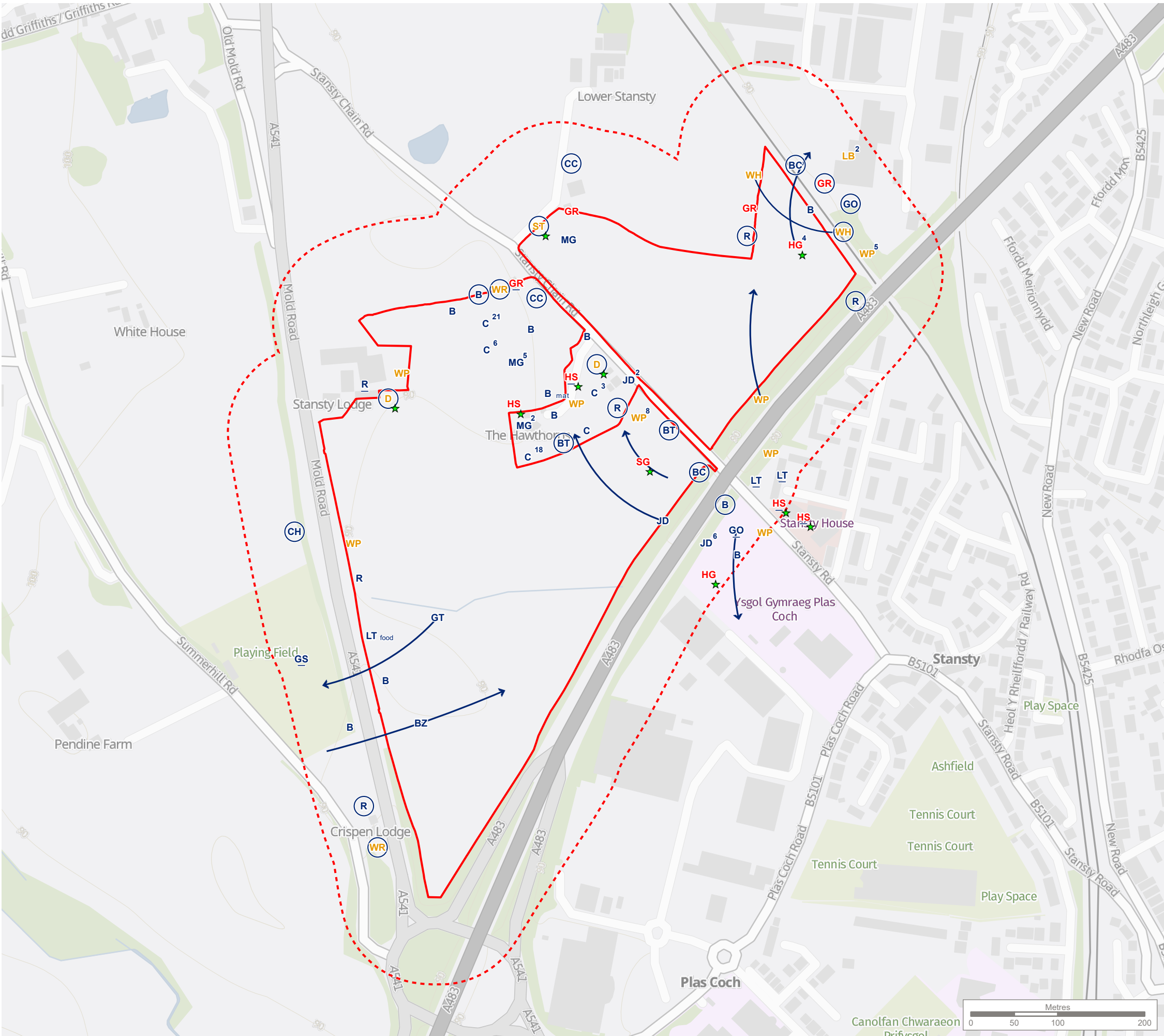
H9 - An extension of H8 with a similar species composition but less trees.



KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

DRAWINGS

G6358.01.001.1-4 Breeding Bird survey Visits 1-4
G6358.01.007 Stansty Chain Road Phase 1 Habitat Plan
G6358.01.008 Bat Tree Location Plan
G6358.01.009 Bat Transect Route and Static Detector Locations
G6358.01.010 Reptile Mat Location Plan
G6358.01.012 Bat Transect Survey Visit 1
G6358.01.013 Bat Transect Survey Visit 2
G6358.01.014 Bat Transect Survey Visit 3
106224_002 Rev. H Stansty Green, Wrexham Illustrative Masterplan



KEY

Site boundary

Site boundary - 100m buffer

Section 7 species

Bird calling

food

Bird carrying food

mat

Bird carrying nesting material

Bird in song

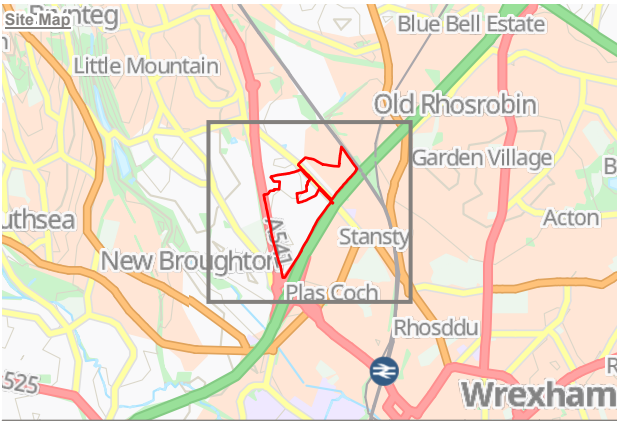
Directional flight line

Same bird

Species Codes

B	Blackbird	GS	Great spotted woodpecker	LT	Long-tailed tit
BC	Blackcap	GT	Great tit	MG	Magpie
BT	Blue tit	HG	Herring gull	R	Robin
BZ	Buzzard	HS	House sparrow	SG	Starling
C	Carrion crow	JD	Jackdaw	ST	Song thrush
CC	Chiffchaff	LB	Lesser black-backed gull	WH	Whitethroat
CH	Chaffinch			WP	Woodpigeon
D	Dunnock			WR	Wren
GO	Goldfinch				
GR	Greenfinch				

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Rev	Description	Drawn	Approved	Date

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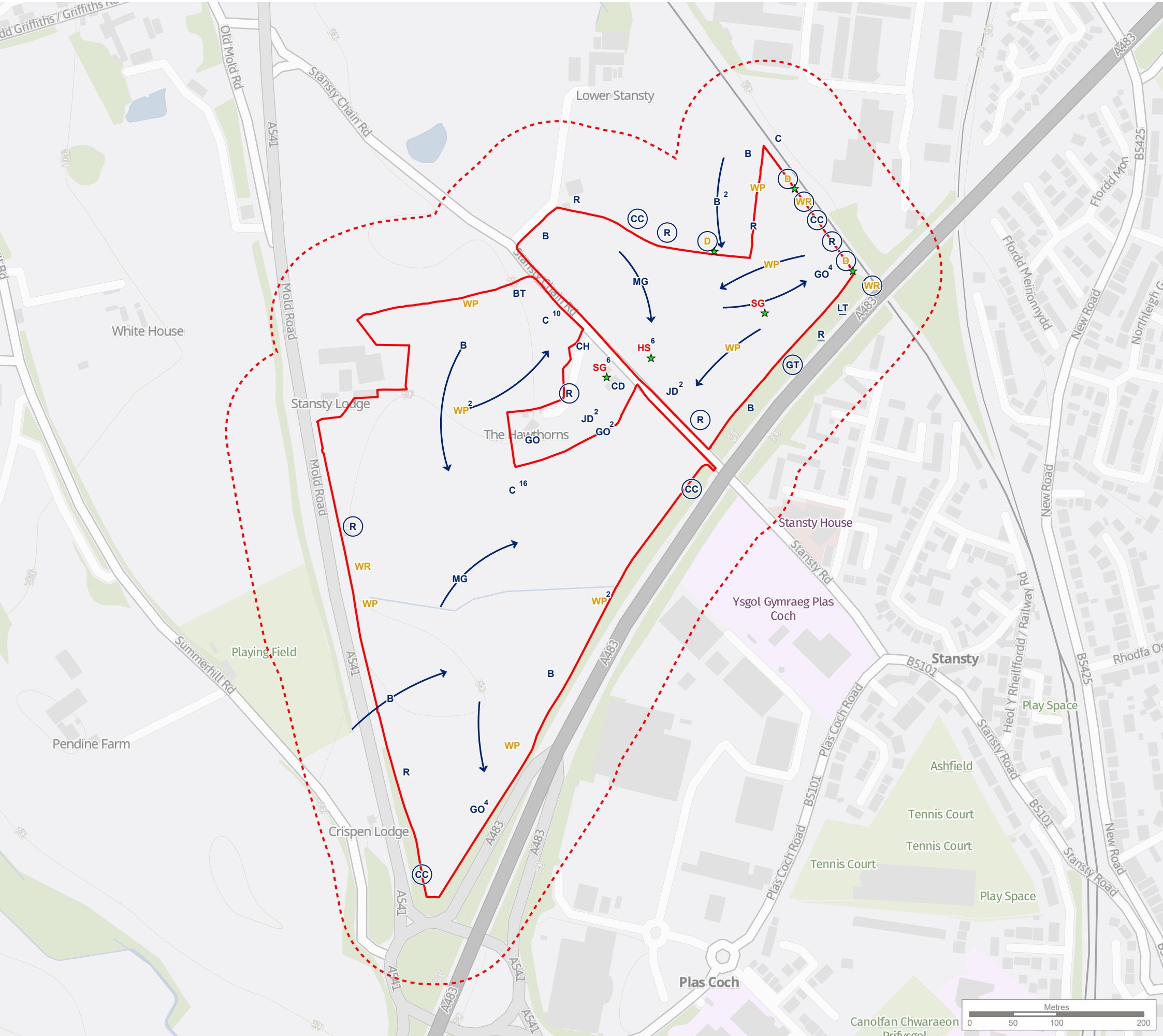
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Stansty Chain Road, Wrexham

Title
Breeding Bird Survey
Visit 1 - 10th May 2023

Drawing Number
G6358.01.001.1

Drawn	Checked	Approved	Scale	Date
ET	AP	MHS	1:4,500 @ A3	15/09/2023



KEY

Site boundary

Site boundary - 100m buffer

Section 7 species

Bird calling

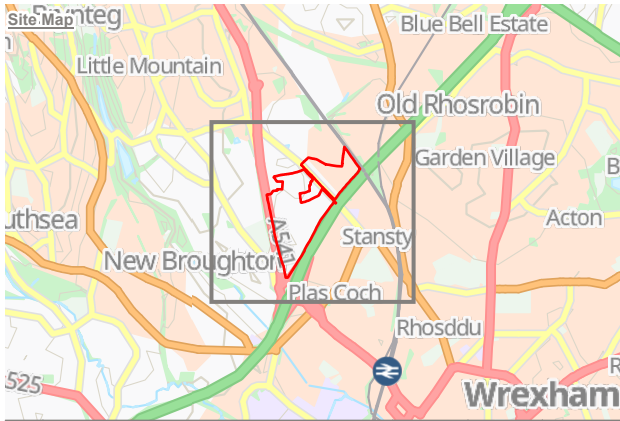
Bird in song

Directional flight line

Species Codes

B	Blackbird	D	Dunnock	LT	Long-tailed tit
BT	Blue tit	GO	Goldfinch	MG	Magpie
C	Carrion crow	GT	Great tit	R	Robin
CC	Chiffchaff	HS	House sparrow	SG	Starling
CD	Collared dove	JD	Jackdaw	WP	Woodpigeon
CH	Chaffinch			WR	Wren

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Rev	Description	Drawn	Approved	Date

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Project

Stansty Chain Road, Wrexham

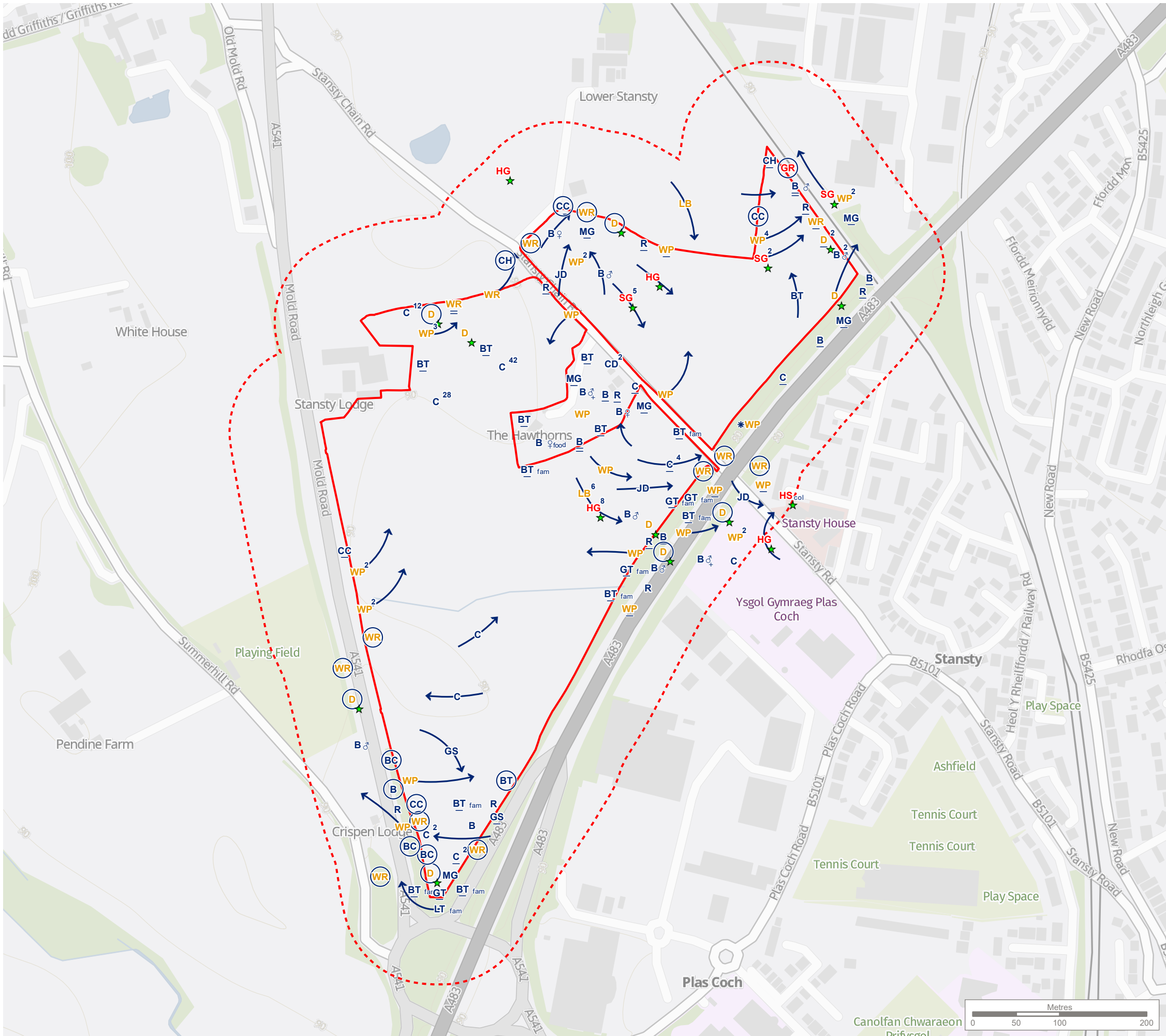
Title

Breeding Bird Survey
Visit 2 - 26th May 2023

Drawing Number

G6358.01.001.2

Drawn	Checked	Approved	Scale	Date
ET	AP	MHS	1:4,500 @ A3	15/09/2023



KEY

Site boundary

Site boundary - 100m buffer

Section 7 species

Female

Male

Pair (male and female)

Colony of birds

Family group of birds

Bird repeatedly giving alarm-calls/other vocalisations

Bird calling

Bird carrying food

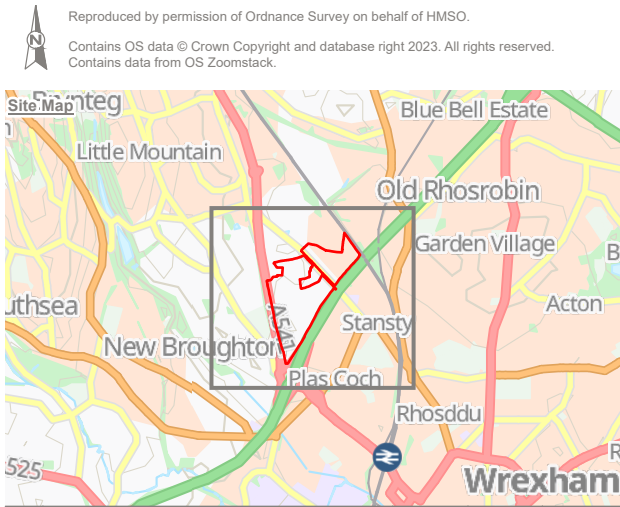
Bird in song

Nest occupied with eggs/brood

Directional flight line

Species Codes

B	Blackbird	GR	Greenfinch	LB	Lesser black-backed gull
BC	Blackcap		Great spotted woodpecker	LT	Long-tailed tit
BT	Blue tit	GS	Great tit	MG	Maggie
C	Carrion crow	GT	Herring gull	R	Robin
CC	Chiffchaff	HG	House sparrow	SG	Starling
CD	Collared dove	HS	Jackdaw	WP	Woodpigeon
CH	Chaffinch	JD		WR	Wren
D	Dunnock				



Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

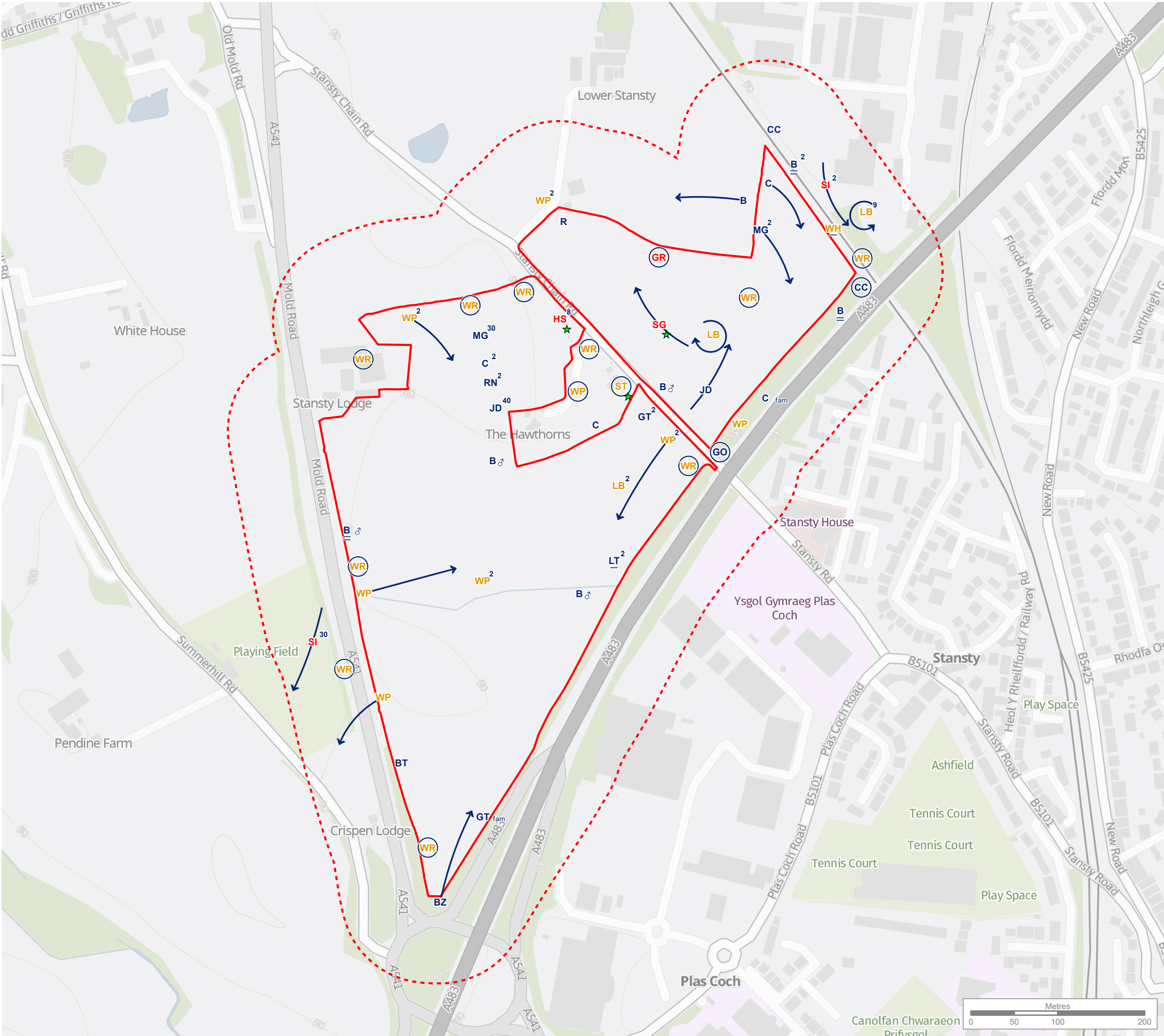
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Stansty Chain Road, Wrexham

Title
Breeding Bird Survey
Visit 3 - 6th June 2023

Drawing Number
G6358.01.001.3

Drawn	Checked	Approved	Scale	Date
ET	AP	MHS	1:4,500 @ A3	15/09/2023



KEY

Site boundary

Site boundary - 100m buffer

Section 7 species

Male

fam

Family group of birds

Bird repeatedly giving alarm-calls/other vocalisations

Bird calling

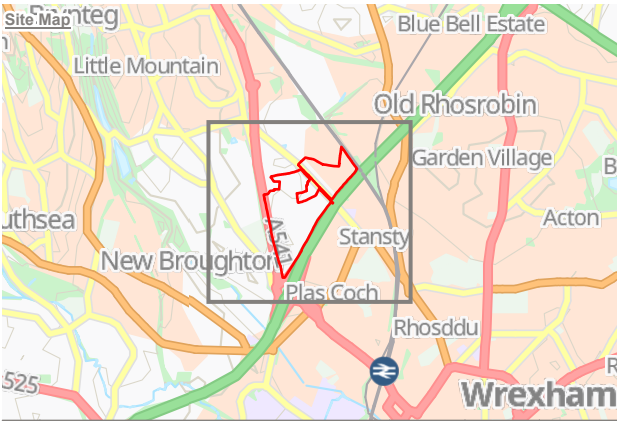
Bird in song

Directional flight line

Species Codes

B	Blackbird	HS	House sparrow	R	Robin
BT	Blue tit	JD	Jackdaw	RN	Raven
BZ	Buzzard	LB	Lesser black-backed gull	SG	Starling
C	Carrion crow	LT	Long-tailed tit	SI	Swift
CC	Chiffchaff	MG	Magpie	ST	Song thrush
GO	Goldfinch			WH	Whitethroat
GR	Greenfinch			WP	Woodpigeon
GT	Great tit			WR	Wren

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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project

Stansty Chain Road, Wrexham

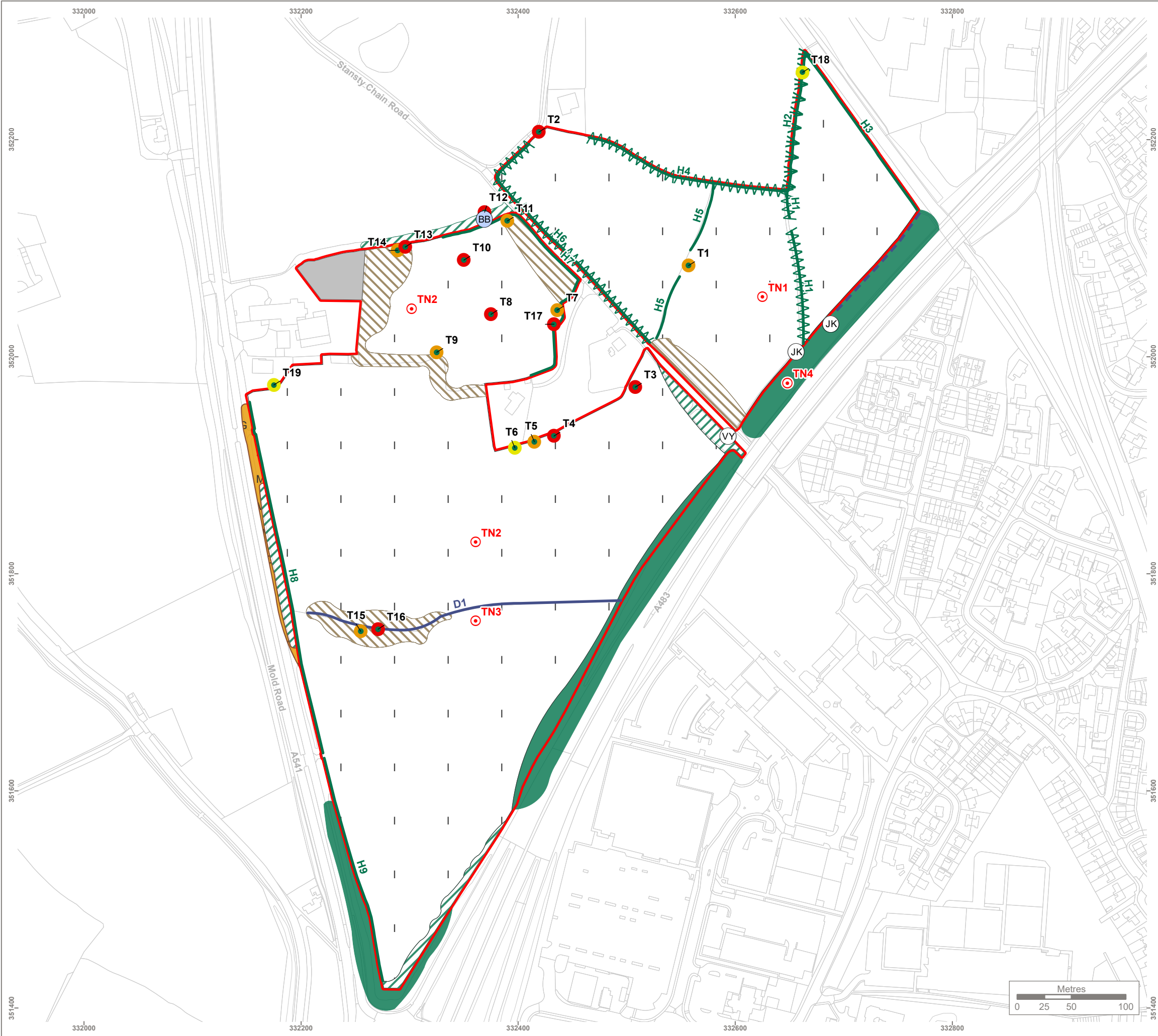
Title

Breeding Bird Survey
Visit 4 - 28th June 2023

Drawing Number

G6358.01.001.4

Drawn	Checked	Approved	Scale	Date
ET	AP	MHS	1:4,500 @ A3	15/09/2023



KEY

- Site boundary
- Target note
- Bluebell
- Japanese knotweed
- Variegated yellow archangel
- Broad-leaved tree with low bat suitability
- Broad-leaved tree with moderate bat suitability
- Broad-leaved tree with high bat suitability
- Standing water
- Native species-rich intact hedge
- Species-poor intact hedge
- Native species-rich hedge and trees
- Dry ditch
- Semi-natural broad-leaved woodland
- Plantation broad-leaved woodland
- Modified neutral grassland
- Improved grassland
- Tall ruderal
- Hardstanding

Note:
The locations of habitats and habitat features are indicative.

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Site Map

Rev	Description	Drawn	Approved	Date

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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Stansty Chain Road, Wrexham

Title
Phase 1 Habitat Survey

Drawing Number
G6358.01.007

Drawn	Checked	Approved	Scale	Date
IJ	CW	EH	1:3,500 @ A3	04/09/2023

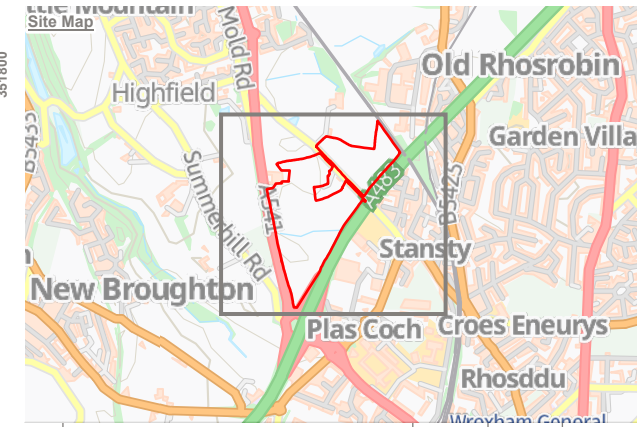


KEY

- Site boundary
- Broad-leaved tree with low bat suitability
- Broad-leaved tree with moderate bat suitability
- Broad-leaved tree with high bat suitability

Note:
The locations of habitats and habitat features are indicative.

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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Stansty Chain Road, Wrexham

Title
Bat Tree Location Plan

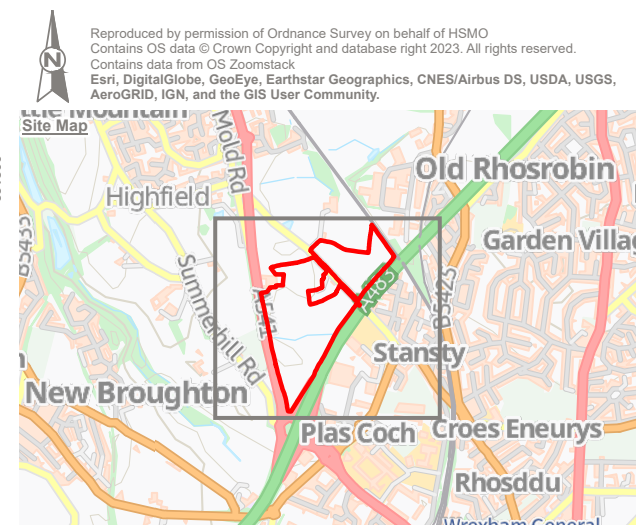
Drawing Number
G6358.01.008

Drawn	Checked	Approved	Scale	Date
IJ	CW	EH	1:3,500 @ A3	24/08/2023



KEY

- Site boundary
- Static detector
- Transect route



Rev	Description	Drawn	Approved	Date

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Project
Stansty Chain Road, Wrexham

Title
Bat Transect Route and Static Detector Locations

Drawing Number
G6358.01.009

Drawn	Checked	Approved	Scale	Date
IJ	CW	EH	1:3,500 @ A3	24/08/2023



KEY

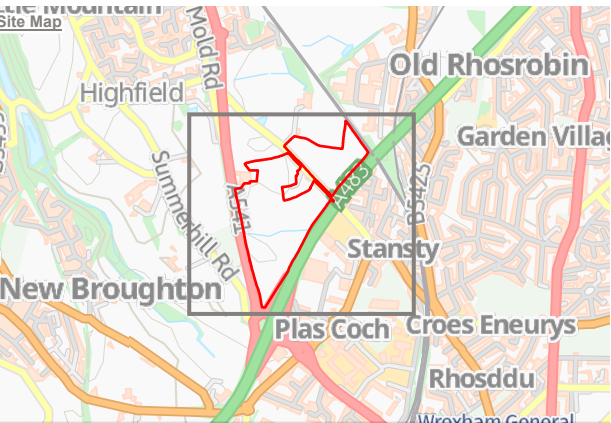
- Site boundary
- Reptile refuge mat location (123 total)
- Phase 1 Habitat Survey**
 - Semi-natural broad-leaved woodland
 - Plantation broad-leaved woodland
 - Modified neutral grassland
 - Improved grassland
 - Tall ruderal
 - Hardstanding

Note:

The locations of habitats and habitat features are indicative.



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Project
Stansty Chain Road, Wrexham

Title
Reptile Mat Location Plan

Drawing Number
G6358.01.010

Drawn	Checked	Approved	Scale	Date
IJ	CW	EH	1:3,500 @ A3	24/08/2023



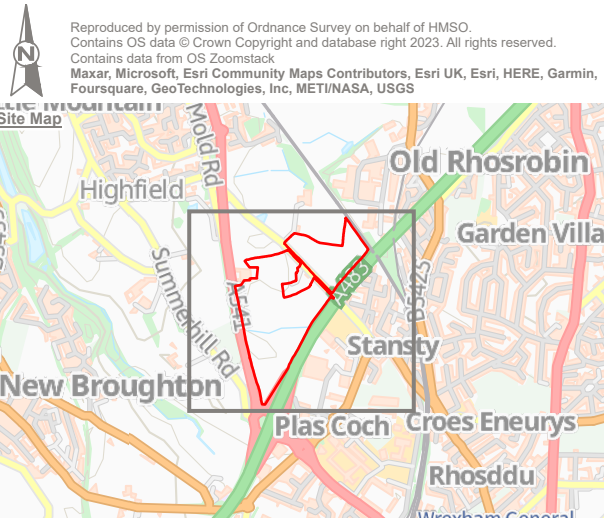
KEY

Site boundary

Bat Transect Survey Results

- Common pipistrelle
- Common pipistrelle social call
- ★ Common pipistrelle feeding buzz
- Soprano pipistrelle
- Soprano pipistrelle social call
- Noctule

Note:
Multiple bat records in the same location may obscure some results from displaying on the map.



Rev	Description	Drawn	Approved	Date



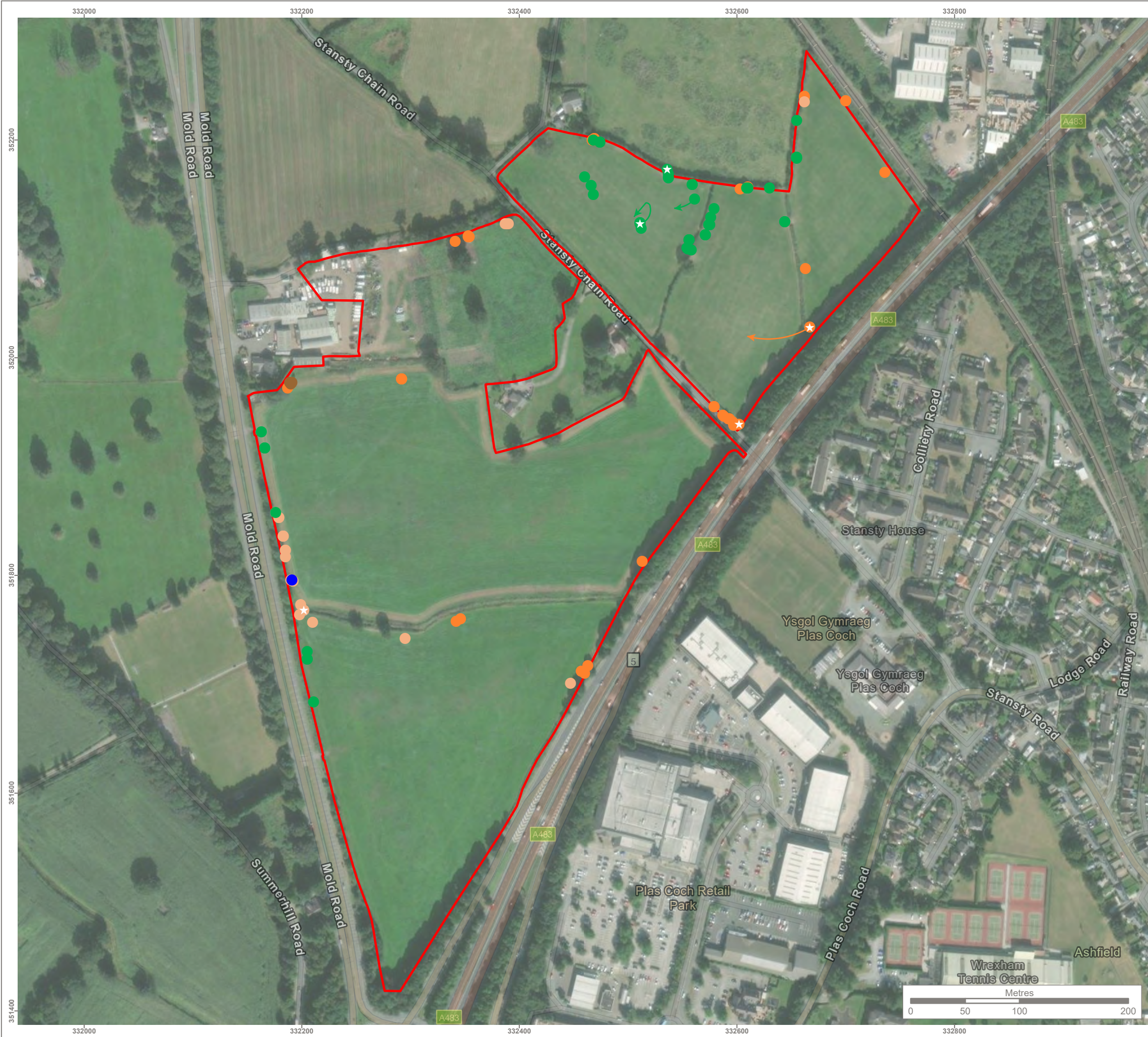
THE ENVIRONMENT PARTNERSHIP
401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Stansty Chain Road, Wrexham

Title
**Bat Transect Survey
Visit 1 - 30th May 2023**

Drawing Number
6358.01.012

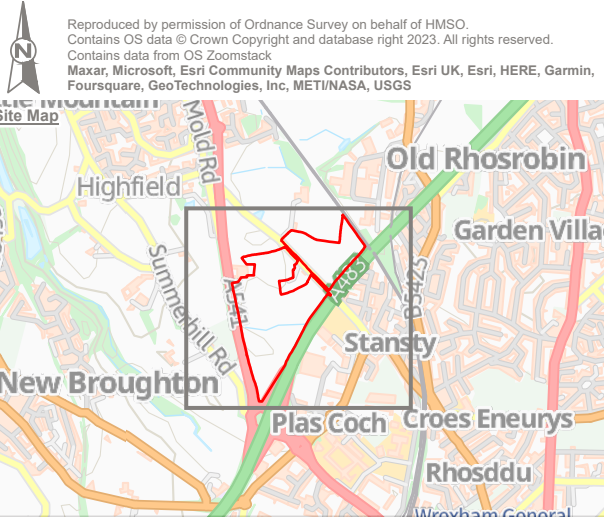
Drawn	Checked	Approved	Scale	Date
BJ	CW	EH	1:3,500 @ A3	15/09/2023



KEY

- Site boundary
- Common pipistrelle
- Common pipistrelle feeding buzz
- Soprano pipistrelle
- Soprano pipistrelle feeding buzz
- Brown long-eared bat
- Myotis species
- Noctule
- Noctule feeding buzz
- Bat flightline (colour denotes bat species)

Note:
Multiple bat records in the same location may obscure some results from displaying on the map.



Rev	Description	Drawn	Approved	Date



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Project
Stansty Chain Road, Wrexham

Title
**Bat Transect Survey
Visit 2 - 11th June 2023**

Drawing Number
6358.01.013

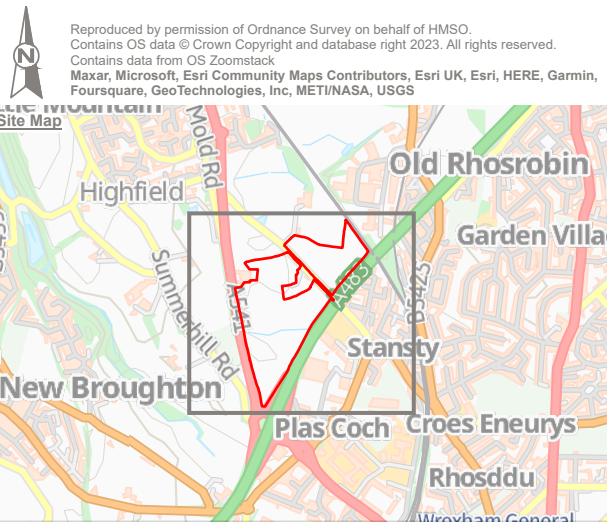
Drawn	Checked	Approved	Scale	Date
BJ	CW	EH	1:3,500 @ A3	15/09/2023



KEY

- Site boundary
- Common pipistrelle
- Common pipistrelle social call
- Common pipistrelle feeding buzz
- Soprano pipistrelle
- Soprano pipistrelle social call
- Soprano pipistrelle feeding buzz
- Myotis species
- Bat flightline (colour denotes bat species)

Note:
Multiple bat records in the same location may obscure some results from displaying on the map.



Rev	Description	Drawn	Approved	Date



THE ENVIRONMENT PARTNERSHIP

401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Stansty Chain Road, Wrexham

Title
Bat Transect Survey
Visit 3 - 5th September 2023

Drawing Number
6358.01.014

Drawn	Checked	Approved	Scale	Date
BJ	CW	EH	1:3,500 @ A3	15/09/2023



- KEY
- Residential parcel
 - Rear garden
 - Primary / secondary road
 - Private drive
 - Pedestrian route
 - Public open space
 - Play space
 - SUDS / swale / ecology pond
 - Retained / proposed vegetation
 - Acoustic bund / fence

AREA CALCULATIONS

- Gross area: 21.53 ha
- Gross nett developable area: 13.83ha
- POS/archaeology area/SUDS/swales/acoustic bunds: 7.56 ha

INDICATIVE ACCOMMODATION SCHEDULE

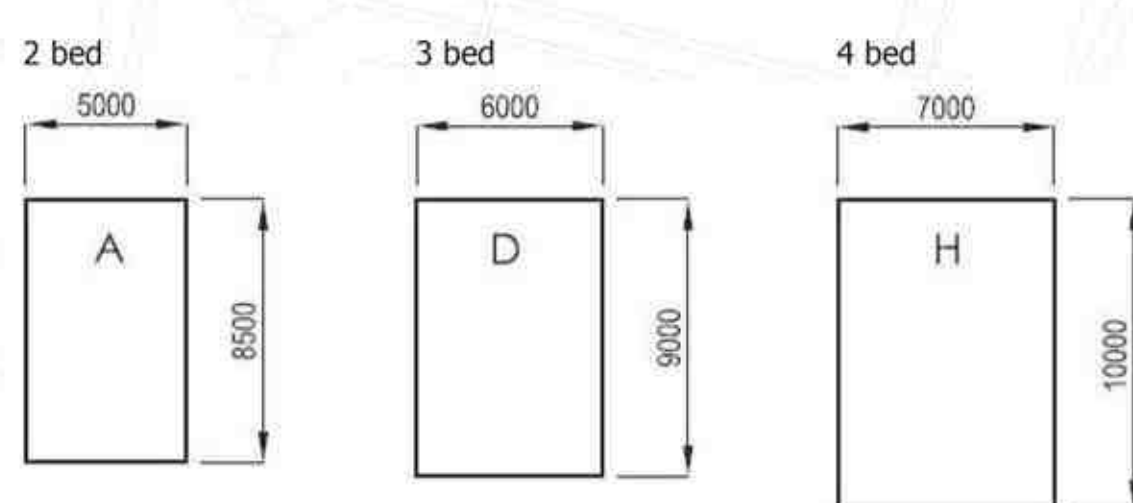
Floorplans of 'typical property sizes' dimensions shown (average of the range of properties) have a deviation of +/- 2m:

category	width	length	height (ridge)
1 bedroom	house	7.4m	8.1m
	apartment	17.7m	16.2m
2 bedroom	house	4.8m	9m
	apartment	4.8m	8.2m
3 bedroom	house	4.8m	8.2m
	house	18m	18m
	house	5.3m	8.6m
	house	4.8m	7.5m
	house	5.4m	8.7m
4 bedroom	house	6m	9.2m
	bungalow	8.7m	11.4m
	house	9.2m	9.4m
	house	5.7m	9.2m
	house	8.4m	9.8m

(These areas are based on an outline application design and are subject to change at Reserved Matters)

INDICATIVE BUILDING PLAN DIMENSIONS

The dimensions below illustrate potential dimensions for the different house types. The may present narrow or broad elevation towards the street.



BUILDING HEIGHT PARAMETERS

Minimum eaves height 2.4 m (bungalow) to 7.2 m (3 storey). Ground to ridge height up to maximum 3 storey (12.2m). Dimensions shown are indicative and have a deviation of +/- 3m.

- Acoustic bund and/or fencing with vegetation
- Retained mature trees
- Central green pocket within development
- Tree lined avenue into development
- Swale features along roads
- Locally equipped area of children's play (LEAP)
- Green ecological corridor with SUDS features
- Frontage onto public open space
- Archaeological preservation in situ (public open space with meadow planting)
- Proposed new bus stop
- Site access

Stansty Green, Wrexham
Russell Homes

Illustrative Masterplan with Dimensions

DATE: 09.03.21
DRAWING: A106224-001-2
REVISION: V

SCALE: 1:1000 @ A0
DRAWN BY: BR / EF
CHECKED BY: AC

TETRA TECH

REVISION NOTES

Rev	Amendments	By	Date
R	Amendments to bunds	BR	25.01.21
T	Amendments to archaeological area and development parcels	EF	26.02.21
U	Updates following council meeting	BR	09.03.21
V	Additional planting to the northern boundary	BR	15.07.23

1. DO NOT SCALE FROM THIS DRAWING
2. THIS DRAWING IS TO BE CHECKED WITH ALL OTHER RELEVANT DRAWINGS
3. ANY DISCREPANCIES CHECK WITH WYLE, IF IN DOUBT ASK
4. DRAWING TO BE USED FOR PURPOSES OF THE ISSUE AND NOTED ON PLAN

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