



Vistry Group

Land Surrounding Burloes Cottages, Newmarket Road, Royston

ECOLOGICAL APPRAISAL

May 2024

FPCR Environment and Design Ltd

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EXECUTIVE SUMMARY

- FPCR Environment and Design Ltd. (FPCR) were commissioned by Vistry Group to complete an ecological assessment of a site at Land Surrounding Burloes Cottages, Newmarket Road, Royston.
- The site was dominated by intensively managed arable land. Other habitats present included plantation broadleaved woodland, neutral semi-improved grassland, tall ruderal vegetation, amenity grassland and hardstanding.
- Therfield Heath SSSI was located c.1.47km west of the site. This SSSI is discussed further within *RECREATIONAL MITIGATION STRATEGY – THERFIELD HEATH SSSI* (FPCR, 2024) however with the implementation of discussed mitigation, it's concluded that there will be no significant adverse effects on the condition of the Therfield Heath SSSI as a result of the proposed development. It is anticipated that development is unlikely to impact on the nature conservation status of Holland Hall (Melbourn) Railway Cutting SSSI and the two LWSs.
- The only habitat identified as meeting the criteria for classification as Habitat of Principal Importance under the Natural Environment & Rural Communities (NERC) Act was the eastern plantation broadleaved woodland. This woodland is to be retained.
- A total of 49 trees were assessed as presenting features suitable to support roosting bats. Of these, ten trees assessed as 'moderate potential' to support roosting bats and 39 trees assessed as 'low potential' to support roosting bats. As such, further survey work in the form of nocturnal surveys and/or aerial roped access survey(s) are required in order to identify the presence/absence of roosting bats on trees identified to support roosting potential which are to be removed.
- It was concluded that with the implementation of mitigation, the effect on breeding and wintering birds is predicted to be negligible during the construction phase and beneficial at the site level during the occupation phase. Arable land which provides potential suitable ground nesting habitat will be lost. The arable habitat furthermore provides a potential suitable overwintering foraging resource for birds. This will be mitigated by the establishment of berry bearing scrub and species rich meadow grassland providing seeds. To avoid disturbance to nesting birds it is recommended that any woody vegetation removal works are undertaken outside of the breeding bird season (i.e. avoiding March to September inclusive). If this is not possible a nesting bird check must be undertaken by a suitably qualified ecologist prior to removal, with vegetation/ suitable nest sites removed within 48 hours if this check confirms no active nests are present.
- GCN have been identified as highly unlikely to be present within the site. As a result, GCN have not been identified as a statutory constraint to development and further survey work and/or mitigation for GCN would not be proportionate.
- The site did not provide a suitable matrix of habitat to support a viable reptile population, however precautionary working practices during the clearance of suitable habitat is recommended.

1.0 INTRODUCTION

- 1.1 The following report has been prepared by FPCR Environment and Design Ltd. (FPCR) on behalf of Vistry Group and details the results of an Ecological Appraisal of an area of land located at Land Surrounding Burloes Cottages, Newmarket Road, Royston (hereafter referred to as the 'Site' (central OS grid reference: TL369406).
- 1.2 The aims of the appraisal are to update the result of previous ecological surveys completed between 2015 and 2020 to identify any habitat change, the potential presence of protected species and any other features of ecological value within the Site, to identify and describe potential ecological constraints and impacts of the proposed development, and to set out appropriate avoidance, mitigation, compensation and enhancement measures that could be implemented.
- 1.3 The appraisal of the Site has been informed by an ecological desk study, extended Phase I habitat and hedgerow survey and further protected species surveys.

Site Location, Context and Development Proposals

- 1.4 The site is located within the LPA boundary of North Hertfordshire District.
- 1.5 The site was dominated by intensively managed arable land. Other habitats present included plantation broadleaved woodland, amenity grassland, neutral semi-improved grassland, hardstanding and tall ruderal vegetation.
- 1.6 Neighbouring land to the north comprises Newmarket Road, sport pitch and housing development currently under construction, to the east and south existing semi-mature to mature plantation broadleaved woodland and to the west existing semi-mature to mature plantation woodland and existing residential development.
- 1.7 The site is an allocated site for residential development of 300 homes under Policy RY10 of the adopted 2011-2031 North Hertfordshire Local Plan¹.
- 1.8 Proposals include the hybrid application for residential development of up to 325 dwellings comprising: (a) full planning application for Phase 1 comprising 102 dwellings and associated infrastructure including access from Newmarket Road, emergency and pedestrian/cycle access from Burloes Hall Drive, internal highways, public open space, landscaping and drainage and (b) outline application for up to 223 dwellings and associated infrastructure with all matters reserved apart from primary means of access and emergency and pedestrian/cycle access from Burloes Hall Drive.
- 1.9 Previous ecology reporting and surveys by SES (Southern Ecological Solutions) were completed at the site in order to inform the previous outline planning application and reserved matters between 2015 and 2020. The results of these surveys are provided within:
 - *Extended Phase 1 Habitat Survey: Park Field, Newmarket Road, Royston, Hertfordshire*. SES (December 2016);
 - *Phase 2 Ecological Surveys & Assessment: Park Field, Newmarket Road, Royston, Hertfordshire*. SES (December 2016);

¹ North Hertfordshire Local Plan 2011 – 2031. North Herts Council (November 2022).

- *Report to inform the Screening of Effects on nearby Statutory Designated Sites: Park field, Newmarket Road, Royston, Hertfordshire. SES (December 2016); and*
- *Addendum Ecology Report: Park Field, Newmarket Road, Royston, Hertfordshire, SG8 7NJ. SES (July 2020).*

1.10 This updated ecology report is intended to inform a new outline planning application for around 300 dwellings.

2.0 METHODOLOGY

Desk Study

- 2.1 An ecological desk study was undertaken to collate existing baseline information held by statutory and non-statutory consultees. The following baseline data was collated:
- Records of statutory designated sites of European nature conservation importance (such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites), national/regional nature conservation importance (such as Sites of Special Scientific Importance (SSSIs) and National Nature Reserves (NNRs)), and sites of local nature conservation importance (Local Nature Reserves (LNR)) within 10km, 2km and 1km of the site, respectively;
 - Non-statutory designated sites for nature conservation for within 1km of the site, Local Wildlife Sites (LWS) which are designated on the basis of the habitat(s) they support or the known presence of rare, local and/or declining species, and
 - Records of legally protected or otherwise notable species, including Species of Principal Importance under the Natural Environment & Rural Communities (NERC) Act 2006 from within 1km of the site, with data from the last 20 years used.
- 2.2 Existing ecological information was requested from Herts Environmental Records Centre (HERC) and Cambridgeshire and Peterborough Environmental Records Centre (CPERC).
- 2.3 Online resources, including data available through the Multi-Agency Geographic Information for the Countryside² and Bing maps³ were used to supplement information obtained from consultees, and reviewed in order to obtain an overview of statutory designations and identify any features of potential importance for nature conservation in the wider landscape.

Field Survey

Extended Phase 1 Survey Habitats

- 2.4 An update extended phase 1 habitat survey was undertaken on 10th October 2023 by a suitably experienced ecologist holding a level 3 FISC. Survey methods followed the Phase I Survey technique⁴. This involved a systematic walkover of the site to classify the broad habitat types and to particularly identify any Habitats of Principal Importance for the conservation of biodiversity under the NERC Act 2006. In addition, species lists were compiled for each habitat type present, and their relative abundances recorded using the DAFOR scale.

Biodiversity Net Gain (BNG) Assessment

- 2.5 A BNG assessment completed on the scheme has been calculated in accordance with DEFRA Statutory biodiversity metric calculation tool, with the results of the phase 1 habitat survey, condition assessment survey in accordance with Statutory biodiversity metric condition assessments excel spreadsheet, and the illustrative framework (ROY01-MCB-ZZ-ZZ-DR-A-0140-D5-P2_Illustrative Framework) and landscape masterplan (2750 LVIA Appendix C Landscape Masterplan 2024 03 19).

² Magic [online] <https://magic.defra.gov.uk/MagicMap.aspx>

³ Bing Maps <https://www.bing.com/maps>.

⁴ JNCC 2010. *Handbook for Phase I habitat survey – a technique for environmental audit*. JNCC, Peterborough.

- 2.6 The development site was mapped and divided into existing habitat criteria. Habitats were defined using the UK Habitat Classification with further information providing habitat area, distinctiveness and condition, which are used to calculate the value of each habitat.
- 2.7 Full details of the calculation methodology are provided in the Statutory biodiversity metric: user guide.

Fauna

Bats

Ground Level Tree Assessment

- 2.8 Tree assessments were undertaken from ground level, with the aid of a torch and binoculars (where appropriate). This survey was undertaken on 10th October 2023 by a suitably experience ecologist. During the survey Potential Roosting Features (PRFs) for bats were sought⁵.
- 2.9 Certain factors such as orientation of the feature, its height from the ground, the direct surroundings and its location in respect to other features may enhance or reduce the potential value.
- 2.10 Trees were classified into general bat roost potential groups based upon the presence of these features. Table 1 (below) broadly classifies the potential categories as accurately as possible as well as discussing the relevance of the features. This table is based upon Table 4.1 and Chapter 6 in Bat Surveys for Professional Ecologists: Good Practice Guidelines (J., Collins (Bat Conservation Trust), 2016).
- 2.11 Although the British Standard 8596:2015 document groups trees with moderate and high potential, these have been separated below (as per Table 4.1 in The Bat Conservation Trust Guidelines) to allow more specific survey criteria to be applied.

Table 1: Classification and Survey Requirements for Bats in Trees

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey Work/Actions
High Potential	A tree with one or more Potential Roosting Features that are obviously suitable for larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat. Examples include (but are not limited to); woodpecker holes, larger cavities, hollow trunks, hazard beams, etc.	Aerial assessment by roped access bat workers (if appropriate) and/or nocturnal survey during appropriate period (May to August). Following additional assessments a tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the tree or roost is to be affected by proposals a licence from Natural England will be required. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working

⁵ British Standard 8596:2015 Surveying for bats in trees and woodland, October 2015.

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey Work/Actions
		method statement may still be appropriate.
Moderate Potential	A tree with Potential Roosting Features which could support one or more potential roost sites due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat but unlikely to support a roost of high conservation status (i.e. larger roost, irrespective of wider conservation status). Examples include (but are not limited to); woodpecker holes, rot cavities, branch socket cavities, etc.	A combination of aerial assessment by roped access bat workers and/or nocturnal survey during appropriate period (May to August). Following additional assessments a tree may be upgraded or downgraded based on findings. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate. If a roost site/s is confirmed a licence from Natural England will be required.
Low Potential	A tree of sufficient size and age to contain Potential Roosting Features but with none seen from ground or features seen only very limited potential. Examples include (but are not limited to); loose/lifted bark, shallow splits exposed to elements or upward facing holes.	No further survey required but a precautionary working method statement may be appropriate.
Negligible/No potential	Negligible/no habitat features likely to be used by roosting bats	None.

Commuting and Foraging

- 2.12 Habitats present within and bounding the site were considered for their potential to support commuting and foraging bats.

Birds

- 2.13 Habitats present within the site were considered for their potential suitability to support nesting birds, in addition to their value as a resource for overwintering bird populations.

Great Crested Newt (GCN) *Triturus cristatus*

- 2.14 There are no ponds or other waterbodies present within the site, however as part of the habitat survey, any ponds or other suitable breeding habitat for GCN within a 250m radius of the site were identified via aerial imagery and OS mapping, and an assessment made of their suitability to support breeding GCN populations. Consideration was also given to the quality of terrestrial habitats between such features and the site.

Hazel Dormice *Muscardinus avellanarius*

- 2.15 Habitats were assessed for their general suitability for hazel dormice. This species generally uses areas of dense woody vegetation and are more likely to be found where there is a wide diversity of woody species contributing to a three-dimensional habitat structure, a number of food sources, plants suitable for nest-building materials and good habitat connectivity.

Reptiles

- 2.16 Habitats present within the site were considered for their potential suitability to support reptile populations. These include the presence of features that provide opportunities for reptiles to bask, forage and/or hibernate, and areas of varied vegetation structure in sheltered locations with sunny aspects and connectivity to other suitable reptile habitats. This assessment was based on the methodology detailed in the Herpetofauna Workers Manual⁶ and the Froglife Advice Sheet⁷.

⁶ Gent, A.H. & Gibson, S.D., eds., 1998. *Herpetofauna Workers' Manual*. Peterborough, Joint Nature Conservation Committee.

⁷ Froglife, 1999. *Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

3.0 RESULTS

Desk Study (Figure 1)

- 3.1 Locations of statutory and non-statutory sites referred to in the following section are illustrated on Figure 1.

Statutory Designations

- 3.2 The site is not covered by, and does not lie adjacent to, any statutory sites designated for their nature conservation value.
- 3.3 No international sites designated for nature conservation were located within a 10km radius of the site.
- 3.4 Two national and local statutory designated sites for nature conservation were identified within a 2km radius of the site, details of which are provided within Table 2.

Table 2: Statutory Sites of Nature Conservation Interest

Site Name	Designation Status	Closest approx. location to Site (km)	Description
Therfield Heath	SSSI & LNR	c.1.47km west	The site comprises chalk grassland habitat, which supports a diverse array of insects, including the chalk hill blue butterfly <i>Lysandra coridon</i> . The unimproved pasture is dominated by red fescue <i>Festuca rubra</i> and upright brome <i>Bromus erectus</i> , as well as a rich assemblage of herbs, including spotted cat's ear <i>Hypochoeris maculata</i> and pasque flower <i>Pulsatilla vulgaris</i> . Mixed scrub communities can be found on site, in addition to two areas of mature beech woodland.
Holland Hall (Melbourn) Railway Cutting	SSSI	c.1.63km north	A steep railway cutting through chalk where the slopes comprise of chalk grassland, dominated by species such as upright brome, quaking-grass <i>Briza media</i> and sheep's-fescue <i>Festuca ovina</i> . There are areas of highly calcareous soils which support the nationally uncommon wild candytuft <i>Iberis amara</i> , as well as greater pignut <i>Bunium bulbocastanum</i> and wild carrot <i>Daucus carota</i> . Some scrub is also present.

Non-Statutory Designations

- 3.5 The site is not covered by, and does not lie adjacent to, any non-statutory designated site of notable nature conservation value.
- 3.6 Two non-statutory designated sites for nature conservation were located within 1km of the application site, descriptions of which are outlined in Table 3.

Table 3: Non-Statutory Sites of Nature Conservation Interest

Site Name	Designation Status	Closest approx. location to Site (m)	Description
Shaftsbury Green	LWS	c.515m west	An area of semi-improved calcareous grassland that supports a variety of plants, including upright brome, common knapweed <i>Centaurea nigra</i> and bird's-foot-trefoil <i>Lotus corniculatus</i> .
Royston Chalk Pit	LWS	c.570m west	A former lime kiln is dominated by mature scrub such as beech <i>Fagus sylvatica</i> , sycamore <i>Acer pseudoplatanus</i> and ash <i>Fraxinus excelsior</i> . Chalky woodland flora is also present on site, including wood false-brome <i>Brachypodium sylvaticum</i> . The site is important for protected species.

Species Records

- 3.7 Records provided by HERC and CPERC concerning protected or otherwise notable taxa from within a 1km search area are summarised below and shown on Figure 1.

Bats

- 3.8 Records of at least five bat species were identified within 1km of the site, though no existing bat records were returned from within the site. The closest record was a Daubenton's bat *Myotis daubentonii* located 630m west in Royston Chalk Pit. Other species identified included brown long-eared bat *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus*, natterer's bat *Myotis nattereri* and western barbastelle *Barbastella barbastellus*. An unidentified *Pipistrellus* sp. was also recorded.

Birds

- 3.9 A total of 63 protected and/or notable bird records were identified within 1km of the site, including 23 Red list BOCC 5 (Birds of Conservation Concern) species, as summarised in Table 4 below.

Table 4: Bird Species Records within 1km of the site and BOCC5 status.

Species Name	Scientific Name	UK Status
Barn Owl	<i>Tyto alba</i>	WCA1i
Black Redstart	<i>Phoenicurus ochruros</i>	Amber & WCA1i
Black-tailed Godwit	<i>Limosa limosa</i>	Red & WCA1i
Brambling	<i>Fringilla montifringilla</i>	WCA1i
Corn Bunting	<i>Emberiza calandra</i>	Red
Crossbill	<i>Loxia curvirostra</i>	WCA1i
Curlew	<i>Numenius aquata</i>	Red
Fieldfare	<i>Turdus pilaris</i>	Red
Firecrest	<i>Regulus ignicapilla</i>	WCA1i
Greenfinch	<i>Chloris chloris</i>	Red
Grey Partridge	<i>Perdix perdix</i>	Red
Hen Harrier	<i>Circus cyaneus</i>	Red & WCA1i
Hobby	<i>Falco subbuteo</i>	WCA1i
Honey-buzzard	<i>Pernis apivorus</i>	Amber & WCA1i

Species Name	Scientific Name	UK Status
House Martin	<i>Delichon urbicum</i>	Red
House Sparrow	<i>Passer domesticus</i>	Red
Lapwing	<i>Vanellus vanellus</i>	Red
Lesser Spotted Woodpecker	<i>Dryobates minor</i>	Red
Linnet	<i>Linaria cannabina</i>	Red
Marsh Harrier	<i>Circus aeruginosus</i>	Amber & WCA1i
Mistle Thrush	<i>Turdus viscivorus</i>	Red
Nightingale	<i>Luscinia megarhynchos</i>	Red
Pallid Harrier	<i>Circus macrourus</i>	WCA1i
Peregrine	<i>Falco peregrinus</i>	WCA1i
Quail	<i>Coturnix coturnix</i>	Amber & WCA1i
Red Kite	<i>Milvus milvus</i>	WCA1i
Redwing	<i>Turdus iliacus</i>	Amber & WCA1i
Ring Ouzel	<i>Turdus torquatus</i>	Red
Skylark	<i>Alauda arvensis</i>	Red
Spotted Flycatcher	<i>Muscicapa striata</i>	Red
Starling	<i>Sturnus vulgaris</i>	Red
Swift	<i>Apus spus</i>	Red
Tree Sparrow	<i>Passer montanus</i>	Red
Turtle Dove	<i>Streptopelia turtur</i>	Red
Yellow Wagtail	<i>Motacilla flava</i>	Red
Yellowhammer	<i>Emberiza citrinella</i>	Red

Other Mammals

- 3.10 Records for West European hedgehog *Erinaceus europaeus* records were returned from within 1km of the site, the closest located 225m south of the site. Chinese muntjac records were also returned, the closest of which was recorded approximately 640m west of the site boundary.

Amphibians and Reptiles

- 3.11 There are no records of GCN or reptiles from consultation data records received from HERC and CPERC SER within a 1km radius of the site. There are no records of GCN or GCN EPSL are located within a 1km radius of the site from Magic Map.

Other Notable species

- 3.12 A number of invertebrate records were returned from within 1km of the site, including small heath *Coenonympha pamphilus pamphilus* and white-letter hairstreak *Satyrus w-album*.

Field Survey – Habitats

Overview

- 3.13 The habitats described below correspond to those mapped on Figure 2: Phase 1 Habitat Plan. Plant species lists for each habitat are provided in Appendix A.

- 3.14 The site was dominated by intensively managed arable land, currently used for cereal crops. Other habitats within and/or bounding the site included buildings, hardstanding, lawn and planting, rear garden boundaries, introduced shrub hedgerow, native species hedgerow, fence, coniferous trees scrub and broadleaved trees.
- 3.15 Results from this updated report identifies that no material change in habitats or their condition and management has occurred between most previous ecological surveying (SES, July 2020) and this updated assessment.

Arable

- 3.16 The site was dominated by a single intensively managed arable field compartment. At the time of survey, the field was cultivated with a recently sown unidentified crop. Very narrow (c.1m) arable field margins were present around the peripheries of the arable field and were very limited in botanical diversity.

Plantation Broadleaved Woodland

- 3.17 Four separate areas of established semi-mature to mature broadleaved plantation woodland were present within the site boundary.
- 3.18 Along the northern edge of the site, the canopy was c.12m in height, with canopy species including frequent ash *Fraxinus excelsior*, beech *Fagus sylvatica* and sycamore *Acer pseudoplatanus*. The woodland comprised a sparsely vegetated understorey layer which included occasional blackthorn *Prunus spinosa*, bramble, *Rubus fruticosus*, elder *Sambucus nigra* and hawthorn *Crataegus monogyna*. The herb layer was abundant in garlic mustard *Alliaria petiolate* and common ivy *Hedera helix*.
- 3.19 Along part of the east of the site, the canopy was c.18m in height, with canopy species including abundant beech, occasional sycamore and rare Scots pine *Pinus sylvestris*. The woodland comprised an established understorey layer which included abundant privet *Ligustrum* species and occasional hawthorn, holly *Ilex aquifolium* and mountain grape *Mahonia aquifolium*. The herb layer included frequent common ivy, sanicle *Sanicula europaea* and violet *Viola* species.
- 3.20 A small copse was present within the centre of the arable field compartment. The canopy was c.15m in height, with canopy species including abundant sycamore and occasional beech. The understorey layer was sparsely vegetated and comprised occasional dog-rose *Rosa canina* and elder. The herb layer was dominated by ruderal species including abundant common nettle *Urtica dioica* and frequent barren brome *Bromus sterilis*, black-horehound *Ballota nigra*, cleavers *Galium aparine* and cow parsley *Anthriscus sylvestris*.

Neutral Semi-Improved Grassland

- 3.21 A small area of neutral semi-improved grassland was present within a single corner along the northern site boundary. This grassland is set aside from the arable production of the wider field compartment likely due to the restrictive location for large arable machinery. At the time of survey, the grassland sward was c.10-20cm and comprised a lush and tussocky sward structure. Species composition included abundant barren brome *Bromus sterilis*, frequent cleavers and garlic mustard and occasional common couch *Elymus repens*, creeping thistle *Cirsium arvense*, hoary willowherb *Epilobium parviflorum* and smooth meadow-grass *Poa pratensis*.

Tall Ruderal Vegetation

- 3.22 A small area of tall ruderal vegetation was present associated with perimeter vegetation of the small woodland copse within the centre of the arable field compartment. Species comprised abundant common nettle and occasional garlic mustard and black-horehound.

Amenity Grassland

- 3.23 Amenity grassland was present bordering hardstanding driveway along the east of the site and adjacent to where the driveway meets the main road at the north-eastern corner of the site. At the time of survey, the grassland located either side of the hardstanding driveway was managed via a frequent mowing regime, exhibiting a short fine sward. The grass was also heavily shaded by the adjacent woodland canopies and leaf litter, so some parts of the grassland were bare in places. At the junction of the main road, the grassland was managed via frequent mowing and comprised a sward of c.0-3cm in height. Species composition included frequently occurring autumn hawkbit *Scorzoneroides autumnalis* and wood meadow grass *Poa nemoralis* (due to its location under woodland canopy) and occasional greater plantain *Plantago major* and ribwort plantain *Plantago lanceolata*. As the substrate of the amenity grassland was calcareous, a small number of calcareous indicator species were identified as rarely occurring in abundance, including agrimony *Agrimonia eupatoria*, field scabious *Knautia arvensis* and burnet saxifrage *Pimpinella major*.

Dry Ditch

- 3.24 A dry ditch was present along the southern edge of Newmarket Road located within the northern plantation broadleaved woodland. The ditch was dry at the time of survey and indicated no evidence of holding water for long periods of time. Vegetation comprised that largely of the northern plantation woodland herb flora, including garlic mustard, common ivy and common nettle.

Hardstanding

- 3.25 Hardstanding was present in the form of Newmarket Road along the north and a driveway along the east.

Fauna

Bats

Roosts

- 3.26 Previous ground-based tree assessments undertaken identified a number of trees which provided suitable features to offer 'low' and 'moderate' potential to support roosting bats.
- 3.27 During this update survey, a total of 49 trees within or adjacent to the site boundary were identified. Of these, ten were assessed as providing a 'moderate' potential to support roosting bats (trees T5, T13, T15, T20, T29, T35, T43, T45, T46 and T48). The remaining 39 trees were assessed as providing a 'low' potential to support roosting bats.

Commuting and Foraging

- 3.28 The boundary habitats on site plantation broadleaved woodland were considered to provide suitable opportunities for commuting and foraging bats. In addition, these habitats were well-connected to further areas of suitable commuting, foraging and roosting habitat offsite, including a surrounding woodland network. This updated assessment confirmed that no material change in habitats or management of the site has occurred since previous surveys.

- 3.29 Previous activity transect and automated static detector surveys undertaken at the site identified ten species of bat utilising onsite habitats. These included common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus*, Leisler's bat *Nyctalus leisleri*, noctule *Nyctalus noctula*, unidentified *Nyctalus* species, serotine *Eptesicus serotinus*, unidentified *Myotis* species, unidentified pipistrelle species, big bat species and brown long-eared bat. No Annex II species of bats were identified utilising the site. Previous data suggests higher levels of bat activity associated with habitat along or adjacent to the western site boundary, with surveys concluding relatively low levels of bat activity and dominated by common pipistrelle.

Birds

- 3.30 Woody vegetation in the form of plantation broadleaved woodland provided suitable habitat for breeding birds. In addition to the woody vegetation, the arable cereal crop land provides potential suitable opportunities for ground nesting birds and suitable foraging opportunities.
- 3.31 The large open arable nature of the site provides potential suitable overwintering habitat for overwintering birds in the form of a foraging resource.
- 3.32 Previous breeding bird and wintering bird surveys carried out at the site identified that the majority of bird interest of the site was associated with the adjacent woodlands.
- 3.33 This updated assessment confirmed that no material change in habitats or management of the site has occurred since previous surveys.
- 3.34 A total of 22 breeding (one confirmed (Robin *Erithacus rubecula*) and remainder possible or probable) and 35 wintering species were recorded within or adjacent to the study area. These included seven red-listed Birds of Conservation Concern (BoCC). The species recorded on site were all widespread and generally abundant, with a single wintering woodcock *Scolopax rusticola* the most notable record.
- 3.35 Only two notable arable specialist species were recorded on site, skylark *Alauda arvensis* and yellowhammer *Emberiza citrinella*, though both were only recorded as non-breeding species during the wintering bird surveys.
- 3.36 All of the bird species recorded on site were relatively widespread. The species list reflected the common habitats within the site and the small size of the breeding bird community is considered to result from the lack of diversity of habitats on site.
- 3.37 The breeding bird community was hence considered as being of local value.

Great Crested Newt

Terrestrial Habitat

- 3.38 The vast majority of the site (intensively managed arable land) was considered to provide a sub-optimal commuting, foraging and sheltering habitat for GCN. Arable field margins, woodland, neutral semi-improved grassland and tall ruderal vegetation provide the only suitable terrestrial GCN habitat.

Breeding Habitat

- 3.39 No suitable breeding habitat was present within a 500m radius of the site.

Hazel Dormouse

- 3.40 Surveys for hazel dormouse have previously been undertaken at the site. Results did not identify the presence of this species utilising the site.
- 3.41 This updated assessment confirmed that no material change in habitats or management of the site has occurred since previous surveys.

Reptiles

- 3.42 The site did not support a matrix of habitats suitable to support a viable reptile population. Previous ecology reports undertaken at the site have not identified the requirement to undertake reptile surveys however acknowledge the possibility of a small number of individuals possibly utilising the site.

4.0 DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

Sites of Nature Conservation Value

- 4.1 Therfield Heath SSSI was located c.1.47km west. This SSSI is discussed further within *RECREATIONAL MITIGATION STRATEGY – THERFIELD HEATH SSSI* (FPCR, 2024) however with the implementation of discussed mitigation, it is concluded that there will be no significant adverse effects on the condition of the Therfield Heath SSSI as a result of the proposed development. Holland Hall (Melbourn) Railway Cutting was located c.1.63km north. No impacts to the nature conservation status of the designation are anticipated during both the construction and operational phases of development. The site is suitably located far enough away with existing buffers including residential development that no direct nor indirect impacts during construction activities will occur. There are no public rights of way (PRoW) that are located within the SSSI and there is no public access, therefore increased recreation is not considered likely.
- 4.2 No impacts on both Shaftsbury Green and Royston Chalk Pit LWSs are anticipated as a result of development. Both LWSs are suitably buffered and located far enough away that construction activities are unlikely to impact on their respective nature conservation interests. Whilst there is no formal PRoW located within Shaftsbury Green LWS, there is a PRoW adjacent to it and potential informal tracks within. The schemes provision of an extensive GI and footpath route around the perimeter of the scheme as well as formal PRoW within the immediate surrounding area will provide suitable alternative recreational spaces and as such any significant increase in recreation to the LWS is unlikely.

Habitats

- 4.3 The degree to which habitats receive consideration within the planning system relies on a number of mechanisms, including:
- Inclusion within a specific policy, for example veteran trees, ancient woodland and linear habitats within the National Planning Policy Framework (NPPF)⁸;
 - A non-statutory site designation (e.g. LWS);
 - Habitats considered as Habitats of Principal Importance for the conservation of biodiversity as listed within Section 41 of the NERC Act 2006; and
 - Habitats identified as being a Priority Habitat within the national and local Biodiversity Action Plan (Hertfordshire BAP).
- 4.4 The only habitat which was identified during the survey which falls within one of the above listed categories is plantation broadleaved woodland. Only the eastern woodland has been identified as meeting the requirements as a Habitat of Principal Importance for the conservation of biodiversity as listed within Section 41 of the NERC Act 2006 as 'Lowland Mixed Deciduous Woodland'. This area is shown on Magic Map as 'Priority Habitat Inventory – Deciduous Woodland'. No other areas of woodland on site, which includes along the northern site boundary and the small copse within the centre of the site have been shown on Magic Map and have been assessed as a S41 NERC habitat.
- 4.5 Previous phase 1 habitat surveys undertaken at the site between 2015 and 2020 identified that the vast majority of the site as being dominated by intensively managed arable land. Plantation

⁸ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

broadleaved woodland was present along the north and east, a small copse within the centre, a small area of neutral semi-improved grassland within the north, small area of tall ruderal vegetation and amenity grassland by the driveway. This updated report confirms that no material changes in habitats or their condition and management has occurred between previous ecological surveying and this updated assessment.

- 4.6 Habitat offering no/negligible ecological value included hardstanding, arable land and tall ruderal vegetation. Loss of these habitats will create a no/negligible impact to biodiversity.
- 4.7 Habitat of low or moderate ecological value at site level included neutral semi-improved grassland, amenity grassland (due to its calcareous substrate and calcareous indicator species) and the northern and copse plantation broadleaved woodland. Any loss of this habitat will be mitigated for within the site GI proposals.
- 4.8 Habitat identified as being of local level importance included the eastern plantation broadleaved woodland. Albeit from the minor width to be removed to facilitate an emergency access connection, this woodland is retained as part of the development.
- 4.9 To avoid indirect impacts to retained woodland and trees during the construction period it is recommended that suitable protection is provided in line with BS 5837 Trees in Relation to Design, Demolition and Construction to Construction - Recommendations.
- 4.10 The scheme seeks to retain as much existing low to moderate habitat of ecological value as feasible. A small length of the northern woodland will be required to be removed in order to facilitate site access.
- 4.11 To mitigate for the loss of habitat, the landscape masterplan has included the establishment of a number of habitat throughout the site. This includes broadleaved trees planted throughout the development footprint within the streetscape and throughout the sites GI. Mixed native species scrub is proposed around several peripheral areas around the site boundary which will buffer the existing and offsite woodlands. Along with flowering amenity grassland, species rich chalk tolerant meadow grassland is proposed around the peripheries of the site and throughout the interior GI of the site. New hedgerow planting is also proposed.

Biodiversity Net Gain (BNG) Assessment (Appendix B)

- 4.12 The BNG assessment undertaken on the onsite land will result in:
 - A net loss to biodiversity of -0.513 habitat units, equating to a net loss to biodiversity of 16.78%;
 - A net gain to biodiversity of 0.72 hedgerow units.
- 4.13 As a result of the onsite land not achieving a 10% net gain to biodiversity for habitat units, the applicant has identified an offsite parcel of land that is available to be used for biodiversity net gain. This offsite land is located as part of the arable field to the east of the onsite application red line, c.480m east. The offsite land is considered to be inside the same LPA boundary or NCA of impact site.
- 4.14 By utilising the offsite land identified, the offsite land will result in the net gain of 8.19 habitat units.
- 4.15 As such, the BNG assessment undertaken within the onsite and offsite land will result in the scheme achieving:
 - A net gain to biodiversity of 3.06 habitat units, equating to a net gain to biodiversity of 10.01%;

- A net gain to biodiversity of 0.72 hedgerow units.

4.16 All trading rules have been satisfied.

Fauna

4.17 Principal pieces of legislation protecting wild species are Part 1 of the Wildlife and Countryside Act 1981 (*as amended*) and the Conservation of Habitats & Species Regulations 2017 (*as amended*). The impact that this legislation has on the Planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

4.18 The presence of protected species is a material consideration in any planning decision, it is essential that the presence or otherwise of protected species, and the extent to which they are impacted by proposals is established prior to planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species, such as through attaching appropriate planning conditions.

4.19 In addition to protected species, there are those that are otherwise of conservation merit, such as Species of Principal Importance for the purpose of conserving biodiversity under the NERC Act 2006. These are recognised in the NPPF, which advises that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying a set of principles including:

- If significant harm to biodiversity resulting from a development cannot be avoided....., adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

4.20 The implications for the proposed development that various species identified from the desk study and field survey, or those that are otherwise thought reasonably likely to occur, are outlined below.

Bats

4.21 All UK species of bats and their roosts are afforded protected by the Conservation of Habitats & Species Regulations 2017 (*as amended*), making it illegal to deliberately disturb any such animal or damage/destroy a breeding site or roosting place of any such animal. Bats are also afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (*as amended*). Under this legislation it is illegal to recklessly or intentionally kill, injure or take a species of bat or recklessly or intentionally obstruct access to any place of shelter or protection or disturb any animal whilst they are occupying such a place of shelter or protection. Some bat species, including soprano pipistrelle, noctule and brown long-eared bat are also Species of Principal Importance under the NERC Act.

Roost Assessment

- 4.22 49 trees were identified to present features to support roosting bats, including ten trees assessed as 'moderate potential' to support roosting bats and 39 trees assessed as 'low potential' to support roosting bats.
- 4.23 In order to facilitate site access, a number of trees located within the northern plantation broadleaved woodland will likely be required to be removed, along with a single tree located along the eastern boundary in order to facilitate an emergency access connection. As such, further survey work in the form of nocturnal surveys and/or aerial roped access survey(s) are required in order to identify the presence/absence of roosting bats on trees identified to support roosting potential which are to be removed. These include trees T2, T3, T12, T14, T17, T18, T19 and T33 (low potential) and trees T13 and T20 (moderate potential). If the presence of roosting bats is identified, the tree(s) can be removed under licence from Natural England once full planning permission has been granted.
- 4.24 It is recommended that a range of bat boxes are installed onto suitably retained trees and/or integrated into new dwellings.

Foraging/Commuting Habitat

- 4.25 Previous activity transect and automated static detector surveys undertaken at the site identified relatively low levels of bat activity utilising onsite habitats and dominated by common pipistrelle, with no Annex II species of bats were identified utilising the site. Given no material change in habitats or management of the site has occurred since previous surveys, it is unlikely that the value of the site to commuting or foraging bats has significantly changed.
- 4.26 The large intensively managed arable land provides a negligible value to for commuting and foraging bats. As such, loss of arable land would create a negligible impact to commuting and foraging bats. The plantation broadleaved woodlands within the site as well as those bordering and within the surrounding environment were assessed as providing suitable commuting and foraging habitat and connectivity, albeit in low levels as identified from previous survey work.
- 4.27 The loss of a small amount of woodland to facilitate site and emergency access is unlikely to result in significant effects to the local bat population. The provision of the new woodland buffer planting in the form of mixed scrub will however provide adequate compensation for the minor losses of the existing woodland. In addition to the provision of the landscape buffer the creation of 'hop over', at the main site access is recommended to avoid potential affects to foraging and commuting bats and will be established by broadleaved tree planting.
- 4.28 The retained plantation woodland and adjacent woodland will be buffered from development by GI, including meadow grassland and broadleaved tree planting. SuDS and swale habitat are further proposed. These habitats will provide a higher commuting and foraging value compared with the current arable baseline.
- 4.29 It is recommended that an appropriate sensitive lighting scheme is implemented to maintain dark corridors along retained and created habitat of the development. Where artificial lighting cannot be avoided the lighting scheme will be designed with reference to the Bat Conservation Trust and Institute of Lighting Professionals guidance⁹. Lighting considerations suitable for implementation

⁹ Bat Conservation Trust & Institute of Lighting Professionals 2023. *Guidance Note 8: Bats and Artificial Lighting at Night*. Bats and the Built Environment Series.

during construction and/or for incorporation into the development to ensure minimal light spill from the site include:

- During the construction period no artificial lighting should be used at night in the vicinity of the onsite and perimeter woodlands;
- The lighting scheme should ensure lighting is directed to where it is needed, avoiding light spillage, particularly the retained trees, woodland, and new habitats including trees, hedgerows, SuDS habitat and grassland.
- The lighting scheme should incorporate LED luminaires as these have a sharp cut-off, lower intensity, good colour rendition and dimming capability. All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used;
- A warm white light source (2700Kelvin or lower) 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;
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards;
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered;
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt;
- Security lighting on properties backing on to sensitive habitats such as hedgerows, trees or waterbodies will be low wattage (<70W)¹⁰ motion censored lights on short (1min) timers;
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites.

Birds

- 4.30 All wild bird species are protected while nesting by the Wildlife and Countryside Act 1981 (as amended). This legislation protects wild birds and their eggs from intentional harm, and makes it illegal to intentionally take, damage, or destroy a wild bird nest while it is in use or being built.
- 4.31 Previous breeding bird surveys undertaken at the site assessed the bird community as being considered to be small with a little over 20 species recorded, as well as all species considered to be breeding. The breeding bird community is regarded as being of Local importance.
- 4.32 Previous wintering bird surveys undertaken at the site identified an assemblage of 35 bird species using the site. All these species were considered common and widespread both locally and nationally, with only a small number of notable species present. Given this, it was assessed that the wintering bird assemblage of the Site is of Local value only.

¹⁰ Stone, E.L. 2013. *Bats and lighting: Overview of current evidence and mitigation*.

- 4.33 Development proposals will result in the site no longer being suitable for skylark and yellowhammer. It was concluded however neither of these species were recorded breeding on site.
- 4.34 Given no material change in habitats or management of the site has occurred since previous surveys, it is unlikely that the value of the site to breeding and wintering birds has significantly changed.
- 4.35 To avoid disturbance to nesting birds, **any wooded vegetation clearance should be undertaken prior to the bird-breeding season (i.e. avoiding March to September inclusive) to minimise the risk of disturbance to nesting birds. If this is not possible, habitats will be checked prior to removal by an experienced ecologist and if no nesting birds are identified, the vegetation removed and building demolished within 48 hours.** If active nests are identified, the nest site(s) will be left untouched and suitably buffered from works until all birds have fledged. Specific advice will be provided by the ecologist prior to undertaking the clearance.
- 4.36 As an enhancement, it is recommended that bird boxes are installed onto the W/N/E facing aspects of suitably retained trees and /or integrated into suitable aspects/walls of new dwellings depending on the species of birds and box specification. These should include a range of designs, including hole and open fronted boxes, suitable for use by a range of urban edge bird species.
- 4.37 The proposals aim to retain existing suitable woody breeding and foraging habitat where possible, including the retention the majority of woodland resource. The schemes proposals will further provide new broadleaved tree planting, mixed scrub, meadow grassland and SuDS habitat.
- 4.38 It was concluded that with the implementation of the above mitigation, the effect on breeding and wintering birds is predicted to be negligible during the construction phase and beneficial at the site level during the occupation phase.

Great Crested Newt

- 4.39 No suitable breeding habitat was present within a 500m radius of the site.
- 4.40 As such, GCN are highly unlikely to be present within the site. GCN are therefore not considered to pose a statutory constraint to development and further survey or mitigation with regards to GCN should not be proportionate.

Reptiles

- 4.41 All British reptiles are protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended) and are listed as Species of Principal Importance for the conservation of biodiversity under Section 41 of the NERC Act. Public bodies, such as the Local Planning Authority therefore have a duty to have regard to the conservation of these species.
- 4.42 The site did not support a suitable matrix of habitats that could support a viable reptile population however, previous ecological reporting did acknowledge the possibility of a small number of individuals possibly utilising the site.
- 4.43 As such, it is recommended that clearance of suitable vegetation (arable field margins and neutral semi-improved grassland) should be cleared during mid-March to October under suitable weather conditions (<9°C, little wind, no rain), via directional strimming to 150mm above ground towards offsite retained habitat.
- 4.44 Habitat proposals will provide suitable commuting, foraging and sheltering habitat in the form of hedgerow, meadow grassland, SuDS and mixed scrub.

APPENDIX A: BOTANICAL SPECIES LIST

Abundance is described on the DAFOR scale.

D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare, LD = Locally Dominant, LA = Locally Abundant, LF = Locally Frequent, LO = Locally Occasional, LR = Locally Rare

Arable

Common Name	Scientific Name	DAFOR
Cock's-foot	<i>Dactylis glomerata</i>	R
Creeping bent	<i>Agrostis stolonifera</i>	R
Mint Sp.	<i>Mentha</i>	R
Red fescue	<i>Festuca rubra</i>	R
Unidentified arable crop	-	D

Neutral Semi-Improved Grassland

Common Name	Scientific Name	DAFOR
Barren brome	<i>Bromus sterilis</i>	A
Black-grass	<i>Alopecurus myosuroides</i>	R
Bramble	<i>Rubus fruticosus</i>	O
Bristly oxtongue	<i>Helminthotheca echioides</i>	R
Cleavers	<i>Galium aparine</i>	F
Cock's-foot	<i>Dactylis glomerata</i>	R
Common couch	<i>Elymus repens</i>	O
Crane's-bill species	<i>Geranium sp.</i>	R
Creeping thistle	<i>Cirsium arvense</i>	O
Crested dogs tail	<i>Cynosurus cristatus</i>	R
Dandelion	<i>Taraxacum officinale</i>	O
Field sow thistle	<i>Sonchus arvensis</i>	R
Garlic mustard	<i>Alliaria petiolata</i>	F
Herb robert	<i>Geranium robertianum</i>	O
Hoary willowherb	<i>Epilobium parviflorum</i>	O
Poppy	<i>Papaveroideae</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	R
Rough charvil	<i>Chaerophyllum temulum</i>	R
Smooth hawksbeard	<i>Crepis capillaris</i>	O
Smooth meadow-grass	<i>Poa pratensis</i>	O
Tall fescue	<i>Festuca arundinacea</i>	R
Wetted thistle	<i>Carduus crispus</i>	R
Willow species	<i>Salix sp.</i>	R
Yorkshire-fog	<i>Holcus lanatus</i>	R

Northern Plantation Broadleaved Woodland

Common Name	Scientific Name	DAFOR
Ash	<i>Fraxinus excelsior</i>	F
Beech	<i>Fagus sylvatica</i>	F
Blackthorn	<i>Prunus spinosa</i>	O
Bramble	<i>Rubus fruticosus</i>	O
Cleavers	<i>Galium aparine</i>	O
Dog rose	<i>Rosa canina</i>	R
Elder	<i>Sambucus nigra</i>	O
Elm	<i>Ulmus procera</i>	R
Garlic mustard	<i>Alliaria petiolata</i>	A

Hawthorn	<i>Crataegus monogyna</i>	O
Herb robert	<i>Geranium robertianum</i>	O
Holly	<i>Ilex sp.</i>	R
Ivy	<i>Hedera sp.</i>	A
Privet species	<i>Ligustrum sp.</i>	R
Sycamore	<i>Acer pseudoplatanus</i>	F
Wild cherry	<i>Prunus avium</i>	R
Wood avens	<i>Geum urbanum</i>	R
Wood false-brome	<i>Brachypodium sylvaticum</i>	F

Planation Broadleaved Woodland Copse

Common Name	Scientific Name	DAFOR
Barren brome	<i>Bromus sterilis</i>	F
Beech	<i>Fagus sylvatica</i>	O
Black-horehound	<i>Ballota nigra</i>	F
Cleavers	<i>Galium aparine</i>	F
Common couch	<i>Elymus repens</i>	O
Common nettle	<i>Urtica dioica</i>	A
Cow parsley	<i>Anthriscus sylvestris</i>	F
Dog rose	<i>Rosa canina</i>	O
Elder	<i>Sambucus nigra</i>	O
Garlic mustard	<i>Alliaria petiolata</i>	A
Sycamore	<i>Acer pseudoplatanus</i>	A
White bryony	<i>Bryonia dioica</i>	R

Eastern Plantation Broadleaved Woodland

Common Name	Scientific Name	DAFOR
Beech	<i>Fagus sylvatica</i>	A
Hawthorn	<i>Crataegus monogyna</i>	O
Holly	<i>Ilex sp.</i>	O
Ivy	<i>Hedera sp.</i>	F
Laurel species	<i>Laurus sp.</i>	R
Mountain grape	<i>Mahonia aquifolium</i>	O
Privet species	<i>Ligustrum sp.</i>	A
Sanicle	<i>Sanicula europaea</i>	F
Scots pine	<i>Pinus sylvestris</i>	R
Sycamore	<i>Acer pseudoplatanus</i>	O
Violet Sp.	<i>Viola sp.</i>	F
Yew	<i>Taxus baccata</i>	R

Amenity Grassland

Common Name	Scientific Name	DAFOR
Agrimony	<i>Agrimonia eupatoria</i>	R
Autumn hawkbit	<i>Scorzonoides autumnalis</i>	F
Burnet saxifrage	<i>Pimpinella major</i>	R
Dandelion	<i>Taraxacum officinale</i>	R
Field scabious	<i>Knautia arvensis</i>	R
Greater plantain	<i>Plantago major</i>	O
Ground-ivy	<i>Glechoma hederacea</i>	R
Hawthorn	<i>Crataegus monogyna</i>	R
Hedge bedstraw	<i>Galium mollugo</i>	R
Ribwort plantain	<i>Plantago lanceolata</i>	O
Rowan	<i>Sorbus aucuparia</i>	R

Self-heal	<i>Prunella vulgaris</i>	R
Wall hawkweed	<i>Hieracium murorum</i>	R
Wood avens	<i>Geum urbanum</i>	R
Wood meadow grass	<i>Poa nemoralis</i>	F
Wood ruff	<i>Galium odoratum</i>	R
Yarrow	<i>Achillea millefolium</i>	R

APPENDIX B: BIODIVERSITY NET GAIN (BNG) ASSESSMENT



April 2022

Appendix B - Biodiversity Net Gain (BNG) Assessment Technical Note

12063 - Land Surrounding Burloes Cottages, Newmarket Road, Royston

1.0 INTRODUCTION

- 1.0 FPCR Environment and Design Ltd. were commissioned by Vistry Group to undertake a biodiversity net gain (BNG) assessment of the illustrative framework (ROY01-MCB-ZZ-ZZ-DR-A-0140-D5-P2_Illustrative Framework) and landscape masterplan (2750 LVIA Appendix C Landscape Masterplan 2024 03 19) for the proposed development of Land Surrounding Burloes Cottages, Newmarket Road, Royston.

Site Proposals

- 1.1 Current proposals for site comprise the hybrid application for residential development of up to 325 dwellings comprising: (a) full planning application for Phase 1 comprising 102 dwellings and associated infrastructure including access from Newmarket Road, emergency and pedestrian/cycle access from Burloes Hall Drive, internal highways, public open space, landscaping and drainage and (b) outline application for up to 223 dwellings and associated infrastructure with all matters reserved apart from primary means of access and emergency and pedestrian/cycle access from Burloes Hall Drive

2.0 METHODOLOGY

- 2.0 The update BNG calculations completed on the scheme have been calculated in accordance with DEFRA Statutory biodiversity metric calculation tool.
- 2.1 The site boundary, results of the habitat survey undertaken in 2023 and the above-mentioned illustrative framework and landscape masterplan were used for this assessment.
- 2.2 The development site was mapped and divided into existing habitat criteria. Habitats were defined using the UK Habitat Classification, with further information providing habitat area, distinctiveness and condition, which are used to calculate the value of each habitat.

- 2.3 The condition assessments were undertaken using the relevant Condition Assessment Criteria within the Statutory biodiversity metric condition assessments excel spreadsheet.

3.0 RESULTS

Existing Baseline Habitats

- 3.0 The biodiversity units for each habitat within the red line on the site have been calculated and are presented in Table 1.

Table 1: Biodiversity Units: Existing On-Site Habitats and Conditions

BIA Baseline Habitat Type	Area (ha)	Condition	Biodiversity Units	Biodiversity Units Retained	Biodiversity Units Enhanced	Biodiversity Units Lost
Cereal crops	14.0798	N/A	28.16	0	0	28.16
Other neutral grassland	0.2369	Poor	0.95	0.1542	0	0.33
Tall forbs	0.0126	Poor	0.03	0	0	0.03
Developed land; sealed surface	0.2758	N/A	0	0.2737	0	0
Other woodland, broadleaved	0.1474	Moderate	1.18	0.116	0	0.25
Other woodland, broadleaved	0.0597	Poor	0.24	0.0516	0	0.03
Totals:	14.81	-	30.55	0.60	0	28.80

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

Proposed Habitats

- 3.1 Table 2 outlines the proposed habitats as well as the key habitats to be created on site and provides the evidence for the condition scores they receive within the metric calculation.

Table 2: Biodiversity Units: Proposed Created On-site Habitats and Target Conditions

BIA Created Habitat Type	Area (ha)	Condition	Biodiversity Units
Modified grassland	0.2709	Good	1.27
Modified grassland	0.5032	Moderate	1.75
Modified grassland	0.2215	Poor	0.43
Other neutral grassland	1.0368	Poor	3.86
Mixed scrub	0.6606	Moderate	4.42
Developed land; sealed surface	6.8661	N/A	0
Introduced shrub	0.2969	N/A	0.57
Sustainable drainage system	0.209	Moderate	0.50
Vegetated garden	4.1517	N/A	8.01
Urban tree	0.399	Poor	1.12
Urban tree	0.57	Moderate	1.74
Totals (incl. urban trees):	15.19		23.67

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

- 3.2 Table 3 outlines the proposed hedgerows to be created on site and provides the evidence for the condition scores they receive within the metric calculation.

Table 3: Biodiversity Units: Proposed Created On-site Hedgerows and Target Conditions

BIA Created Habitat Type	Length (km)	Condition	Biodiversity Units
Non-native and ornamental hedgerow	0.252	Poor	0.24
Native hedgerow	0.248	Poor	0.48
Totals:	0.50	-	0.72

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

- 3.3 The BNG assessment undertaken on the onsite land and the calculations within the tables outlined above will result in:
- A net loss to biodiversity of -0.513 habitat units, equating to a net loss to biodiversity of 16.78%;
 - A net gain to biodiversity of 0.72 hedgerow units.
- 3.4 As a result of the onsite land not achieving a 10% net gain to biodiversity for habitat units, the applicant has identified an offsite parcel of land that is available to be used for biodiversity net gain. This offsite land is located as part of the arable field to the east of the onsite application red line, c.480m east. The offsite land is considered to be inside the same LPA boundary or NCA of impact site.

Existing Baseline Habitats - Offsite

- 3.5 The biodiversity units for each habitat within the offsite boundary have been calculated and are presented in Table 4.

Table 4: Biodiversity Units: Existing Offsite-Site Habitats and Conditions

BIA Baseline Habitat Type	Area (ha)	Condition	Biodiversity Units	Biodiversity Units Retained	Biodiversity Units Enhanced	Biodiversity Units Lost
Cereal crops	2	N/A	4	0	0	4
Totals:	2	-	4	0	0	4

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

Proposed Habitats

- 3.6 Table 5 outlines the proposed habitats as well as the key habitats to be created within the offsite land and provides the evidence for the condition scores they receive within the metric calculation.

Table 5: Biodiversity Units: Proposed Created Offsite Habitats and Target Conditions

BIA Created Habitat Type	Area (ha)	Condition	Biodiversity Units
Other woodland, broadleaved	0.6	Moderate	2.81
Other neutral grassland	1.4	Moderate	9.37
Totals (incl. urban trees):	15.19		23.67

Please note there may be minor discrepancies (rounding errors) between the columns and the totals, however, the numbers duplicate those presented within the matrix calculator.

- 3.7 The offsite land will result in the net gain of 8.19 habitat units.
- 3.8 As such, the BNG assessment undertaken within the onsite and offsite land will result in the scheme achieving:
- A net gain to biodiversity of 3.06 habitat units, equating to a net gain to biodiversity of 10.01%;
 - A net gain to biodiversity of 0.72 hedgerow units.
- 3.9 All trading rules have been satisfied.



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Key

-  **Red Line Boundary**
- Baseline Habitats**
 -  **Cereal crops**
 -  **Developed land; sealed surface**
 -  **Other neutral grassland**
 -  **Other woodland; broadleaved**
 -  **Tall forbs**





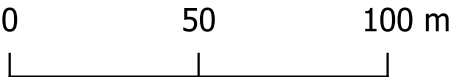
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Key

-  **Site Boundary**
- Proposed Habitats**
 -  **Developed land; sealed surface**
 -  **Introduced shrub**
 -  **Mixed scrub**
 -  **Modified grassland**
 -  **Other neutral grassland**
 -  **Other woodland; broadleaved**
 -  **Sustainable drainage system**
 -  **Vegetated garden**





client
Vistry Group

project
**Land Surrounding Burloes Cottages,
Newmarket Road, Royston**

drawing title
PROPOSED HABITATS

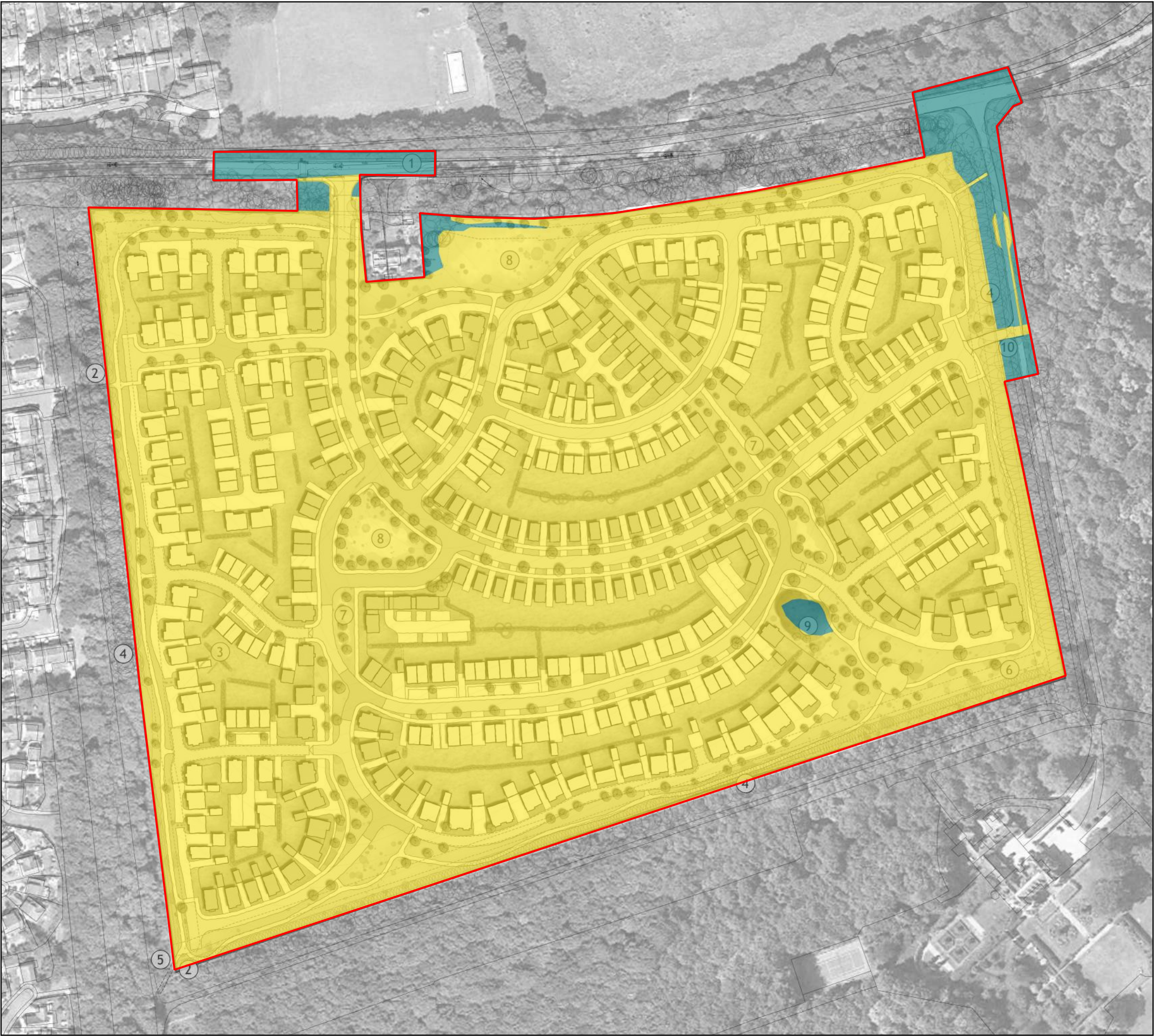
scale @ A3
1:2,000

drawn
EH/MPG

issue date
8/4/2024



Figure 2



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Key

Site Boundary

Habitat Retention

Retained

Lost





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Key

 **Red Line Boundary**

Baseline Habitat Condition

 **Moderate**

 **Poor**

 **N/A - Other**

 **Condition Assessment N/A**

Baseline Habitat Distinctiveness

 **Medium**

 **Low**

 **V.Low**





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Key

 **Site Boundary**

Proposed Habitat Condition

 **Good**

 **Moderate**

 **Poor**

 **Condition Assessment N/A**

Proposed Habitat Distinctiveness

 **Medium**

 **Low**

 **V.Low**



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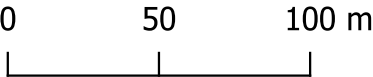
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Key

 Red Line Boundary

Baseline Habitats

 Cereal crops



client
Vistry Group
project
Land Surrounding Burloes Cottages,
Newmarket Road, Royston
drawing title
BASELINE HABITATS - OFFSITE AREA

scale @ A3
1:2,500
drawn
MPG/KDG
issue date
8/4/2024



Figure 6



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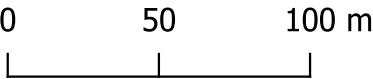
Key

Site Boundary

Proposed Habitats

Other neutral grassland

Other woodland; broadleaved





client
Vistry Group

project
Land Surrounding Burloes Cottages,
Newmarket Road, Royston

drawing title
PROPOSED HABITATS - OFFSITE AREA

scale @ A3
1:2,500

drawn
MPG/KDG

issue date
8/4/2024



Figure 7

The Statutory Biodiversity Metric

Start page

Project details

Planning authority:	North Hertfordshire District		
Project name:	Land Surrounding Burloes Cottages, Newmarket Road, Royston		
Applicant:	Vistry Group		
Application type:	New outline planning application for around 300 dwellings		
Planning application reference:	N/A		
Completed by:	Faith Hersey, Ecologist, FPCR Environment and Design Ltd.		
Date of metric completion:	15.03.24		
Reviewer:	Mark Gardiner, Ecologist, FPCR Environment and Design Ltd.		
Calculation iteration:	Rev G		
Planning authority reviewer:			
Date of planning authority review:			
Target % net gain:	10%		
Irreplaceable habitat present at baseline:	No ✓		
Total site area - including irreplaceable habitat area (hectares):	14.81	Irreplaceable habitat site area (hectares):	0.00
Total off-site area - including irreplaceable habitat area (hectares):	2.00	Irreplaceable habitat area off-site (hectares):	N/A

Cell style conventions

⚠	Attention required
⚠	Input error/rules and principles not met
	Use of this cell is not appropriate
	Enter data
	Automatic lookup
	Result

[Main menu](#)[Results](#)[View all](#)[Reset view](#)

On-site baseline map

[Insert](#)

On-site post intervention map

[Insert](#)

On-site baseline map reference number

Off-site baseline map

[Insert](#)

Off-site baseline map reference number

On-site post-intervention map reference number

Off-site post intervention map

[Insert](#)

Off-site post-intervention reference number

Land Surrounding Burloes Cottages, Newmarket Road
Headline Results
Scroll down for final results Δ

Return to
results menu

On-site baseline	Habitat units	30.55
	Hedgerow units	0.00
	Watercourse units	0.00

On-site post-intervention (including habitat retention, creation & enhancement)	Habitat units	25.42
	Hedgerow units	0.72
	Watercourse units	0.00

On-site net change (units & percentage)	Habitat units	-5.13	-16.78%
	Hedgerow units	0.72	N/A
	Watercourse units	0.00	0.00%

On-site net gain is less than target set [Δ](#)
Zero baseline units - % cannot be calculated

Off-site baseline	Habitat units	4.00
	Hedgerow units	0.00
	Watercourse units	0.00

Off-site post-intervention (including habitat retention, creation & enhancement)	Habitat units	12.19
	Hedgerow units	0.00
	Watercourse units	0.00

Off-site net change (units & percentage)	Habitat units	8.19	204.63%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

Combined net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	3.06
	Hedgerow units	0.72
	Watercourse units	0.00

Spatial risk multiplier (SRM) deductions	Habitat units	0.00
	Hedgerow units	0.00
	Watercourse units	0.00

FINAL RESULTS

Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	3.06
	Hedgerow units	0.72
	Watercourse units	0.00

Total net % change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	10.01%
	Hedgerow units	N/A
	Watercourse units	0.00%

0 baseline units - % cannot be calculated

Trading rules satisfied?	Yes ✓
--------------------------	-------

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	30.55	33.61	0.00
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00

No additional area habitat units required to meet target ✓
No additional hedgerow units required to meet target ✓
No additional watercourse units required to meet target ✓

Return to results menu

Trading summary hedgerows

Trading summary watercourses

Trading Summary			
Distinctiveness Group	Trading Rule	Trading Satisfied?	
Very High	Same habitat required – bespoke compensation option Δ	Yes ✓	
High	Same habitat required =	Yes ✓	
Medium	Same broad habitat or a higher distinctiveness habitat required (≥)	Yes ✓	
Low	Same distinctiveness or better habitat required ≥	Yes ✓	

Very High Distinctiveness					
Habitat group	Group	On-site unit change	Off-site unit change	Project-wide unit change	Unit losses
Grassland - Lowland dry acid grassland	Grassland	0.00	0.00	0.00	
Grassland - Lowland meadows	Grassland	0.00	0.00	0.00	
Grassland - Upland hay meadows	Grassland	0.00	0.00	0.00	
Heathland and shrub - Mountain heaths and willow scrub	Heathland and shrub	0.00	0.00	0.00	
Lakes - Aquifer fed naturally fluctuating water bodies	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Calaminarian grasslands	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Limestone pavement	Sparsely vegetated land	0.00	0.00	0.00	
Wetland - Blanket bog	Wetland	0.00	0.00	0.00	
Wetland - Depressions on peat substrates (H7150)	Wetland	0.00	0.00	0.00	
Wetland - Fens (upland and lowland)	Wetland	0.00	0.00	0.00	
Wetland - Lowland raised bog	Wetland	0.00	0.00	0.00	
Wetland - Oceanic valley mire(1) (D2.1)	Wetland	0.00	0.00	0.00	
Wetland - Purple moor grass and rush pastures	Wetland	0.00	0.00	0.00	
Wetland - Transition mires and quaking bogs (H7140)	Wetland	0.00	0.00	0.00	
Woodland and forest - Wood-pasture and parkland	Woodland and forest	0.00	0.00	0.00	
Rocky shore - High energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Moderate energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Low energy littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Rocky shore - Features of littoral rock - on peat, clay or chalk	Rocky shore	0.00	0.00	0.00	
Intertidal sediment - Littoral seagrass on peat, clay or chalk	Intertidal sediment	0.00	0.00	0.00	
		0.00	0.00	0.00	0.00

High Distinctiveness					
Habitat group	Group	On-site unit change	Off-site unit change	Project-wide unit change	Losses not yet accounted for
Grassland - Traditional orchards	Grassland	0.00	0.00	0.00	
Grassland - Floodplain wetland mosaic and CFGM	Grassland	0.00	0.00	0.00	
Grassland - Lowland calcareous grassland	Grassland	0.00	0.00	0.00	
Grassland - Tall herb communities (H6430)	Grassland	0.00	0.00	0.00	
Grassland - Upland calcareous grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Lowland Heathland	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Dunes with sea buckthorn (H2160)	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Upland heathland	Heathland and shrub	0.00	0.00	0.00	
Lakes - High alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Low alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Marl lakes	Lakes	0.00	0.00	0.00	
Lakes - Moderate alkalinity lakes	Lakes	0.00	0.00	0.00	
Lakes - Peat lakes	Lakes	0.00	0.00	0.00	
Lakes - Ponds (priority habitat)	Lakes	0.00	0.00	0.00	
Lakes - Temporary lakes ponds and pools (H3170)	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Coastal sand dunes	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Coastal vegetated shingle	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Inland rock outcrop and scree habitats	Sparsely vegetated land	0.00	0.00	0.00	
Sparsely vegetated land - Maritime cliff and slopes	Sparsely vegetated land	0.00	0.00	0.00	
Urban - Open mosaic habitats on previously developed land	Urban	0.00	0.00	0.00	
Wetland - Reedbeds	Wetland	0.00	0.00	0.00	
Woodland and forest - Felled/Replacement for felled woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland beech and yew woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Native pine woodlands	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland birchwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland mixed ashwoods	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Upland oakwood	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Wet woodland	Woodland and forest	0.00	0.00	0.00	
Coastal lagoons - Coastal lagoons	Coastal lagoons	0.00	0.00	0.00	
Rocky shore - High energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Moderate energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Low energy littoral rock	Rocky shore	0.00	0.00	0.00	
Rocky shore - Features of littoral rock	Rocky shore	0.00	0.00	0.00	
Intertidal sediment - Littoral mud	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00	
Coastal saltmarsh - Saltmarshes and saline reedbeds	Coastal saltmarsh	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Mussels	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral biogenic reefs - Sabellaria	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Features of littoral sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral muddy sand	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral seagrass	Intertidal sediment	0.00	0.00	0.00	
		0.00	0.00	0.00	0.00

Medium Distinctiveness					
Habitat group	Group	On-site unit change	Off-site unit change	Project wide unit change	Cumulative broad habitat change
Cropland - Arable field margins cultivated annually	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins game bird mix	Cropland	0.00	0.00	0.00	0.00
Cropland - Arable field margins pollen and nectar	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins tussocky	Cropland	0.00	0.00	0.00	
Grassland - Other lowland acid grassland	Grassland	0.00	0.00	0.00	
Grassland - Other neutral grassland	Grassland	3.53	9.37	12.90	12.90 ✓
Grassland - Upland acid grassland	Grassland	0.00	0.00	0.00	
Heathland and shrub - Blackthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Bramble scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Gorse scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hawthorn scrub	Heathland and shrub	0.00	0.00	0.00	4.42 ✓
Heathland and shrub - Willow scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hazel scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Mixed scrub	Heathland and shrub	4.42	0.00	4.42	
Lakes - Ponds (non-priority habitat)	Lakes	0.00	0.00	0.00	0.00
Lakes - Reservoirs	Lakes	0.00	0.00	0.00	
Sparsely vegetated land - Other inland rock and scree	Sparsely vegetated land	0.00	0.00	0.00	0.00
Urban - Cemeteries and churchyards	Urban	0.00	0.00	0.00	0.00
Urban - Biodiverse green roof	Urban	0.00	0.00	0.00	
Individual trees - Urban tree	Individual trees	2.86	0.00	2.86	2.86 ✓
Individual trees - Rural tree	Individual trees	0.00	0.00	0.00	
Woodland and forest - Other Scot's pine woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Other woodland, broadleaved	Woodland and forest	-0.28	2.81	2.53	2.53 ✓
Woodland and forest - Other woodland, mixed	Woodland and forest	0.00	0.00	0.00	
Intertidal sediment - Littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral sand	Intertidal sediment	0.00	0.00	0.00	0.00
Intertidal hard structures - Artificial hard structures with integrated greening of grey infrastructure (IGGI)	Intertidal hard structures	0.00	0.00	0.00	
		10.53	12.19	22.72	

Low Distinctiveness				
Habitat group	Group	On-site unit change	Off-site unit change	Project wide unit change
Cropland - Cereal crops	Cropland	-26.16	0.00	-26.16 Δ
Cropland - Horticulture	Cropland	0.00	0.00	0.00
Cropland - Intensive orchards	Cropland	0.00	0.00	0.00
Cropland - Non-cereal crops	Cropland	0.00	0.00	0.00
Cropland - Temporary grass and clover leys	Cropland	0.00	0.00	0.00
Cropland - Winter stubble	Cropland	0.00	0.00	0.00
Grassland - Modified grassland	Grassland	3.44	0.00	3.44 ✓
Grassland - Bracken	Grassland	0.00	0.00	0.00
Heathland and shrub - Rhododendron scrub	Heathland and shrub	0.00	0.00	0.00
Lakes - Ornamental lake or pond	Lakes	0.00	0.00	0.00
Sparsely vegetated land - Ruderal/ephemeral	Sparsely vegetated land	0.00	0.00	0.00
Sparsely vegetated land - Tall forbs	Sparsely vegetated land	-0.03	0.00	-0.03 Δ
Urban - Bioswale	Urban	0.00	0.00	0.00
Urban - Bare ground	Urban	0.00	0.00	0.00
Urban - Allotments	Urban	0.00	0.00	0.00
Urban - Facade-bound green wall	Urban	0.00	0.00	0.00
Urban - Ground based green wall	Urban	0.00	0.00	0.00
Urban - Ground level planters	Urban	0.00	0.00	0.00
Urban - Other green roof	Urban	0.00	0.00	0.00
Urban - Intensive green roof	Urban	0.00	0.00	0.00
Urban - Introduced shrub	Urban	0.57	0.00	0.57 ✓
Urban - Rain garden	Urban	0.00	0.00	0.00
Urban - Actively worked sand pit/quarry or open cast mine	Urban	0.00	0.00	0.00
Urban - Sustainable drainage system	Urban	0.50	0.00	0.50 ✓
Urban - Vacant or derelict land	Urban	0.00	0.00	0.00
Urban - Vegetated garden	Urban	8.01	0.00	8.01 ✓
Woodland and forest - Other coniferous woodland	Woodland and forest	0.00	0.00	0.00
Coastal saltmarsh - Artificial saltmarshes and saline reedbeds	Coastal saltmarsh	0.00	0.00	0.00
Intertidal sediment - Artificial littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mud	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral muddy sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral seagrass	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral biogenic reefs	Intertidal sediment	0.00	0.00	0.00
Intertidal hard structures - Artificial hard structures	Intertidal hard structures	0.00	0.00	0.00
Intertidal hard structures - Artificial features of hard structures	Intertidal hard structures	0.00	0.00	0.00
Heathland and shrub - Other sea buckthorn scrub	Heathland and shrub	0.00	0.00	0.00
		-15.66	-4.00	-19.66

Very High Distinctiveness Summary	
Very High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Remaining losses; Like for like not satisfied	0.00

High Distinctiveness Summary	
High Distinctiveness Units available to offset lower distinctiveness deficit	0.00
Remaining losses; Like for like not satisfied	0.00

Medium Distinctiveness Summary	
Medium Distinctiveness Units available to offset Lower Distinctiveness Deficit	22.72 ✓
Medium Distinctiveness Broad Habitat losses to be offset by trading up	0.00
Higher Distinctiveness Surplus Units minus Medium Distinctiveness Broad Habitat Deficit	0.00
Cumulative surplus of units	22.72 ✓

Low Distinctiveness Summary	
Low Distinctiveness net change in units	-19.66 Δ
Cumulative surplus of units	3.06 ✓

Condense / Show Columns

Condense / Show Columns

Main Menu

M² to hectares conversion tool:	Select a unit	Hectares	M²

Total area lost (excluding area of individual trees, green walls and intertidal hard structures)	14.22
--	-------

Project Name: Land Surrounding Burloes Cottages, Newmarket Road, Royston

Map Reference

A-2 On-Site Habitat Creation

Condense / Show Columns

Condense / Show Rows

Main Menu

Area habitat summary	
Total Net Unit Change	3.06
Total Net % Change	10.01%
Trading Rules Satisfied	Yes ✓
Area Check	Area Acceptable ✓

Post intervention habitats														
Ref	Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal multiplier	Difficulty		Habitat units delivered	Comments			
				Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation		User comments	Planning authority comments	Habitat reference number	
1	Grassland	Modified grassland	0.2709	Low	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	7	Low	1.27	Modified grassland which will be located surrounding and buffering site peripheries. Likely to pass condition criteria A, C, D, E, F and G. Good condition targeted			
2	Grassland	Modified grassland	0.5032	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	4	Low	1.75	Modified grassland which will be located away from roads and within more formal greenspace. Likely to pass condition criteria A, C, F and G. Moderate condition targeted			
3	Grassland	Modified grassland	0.2215	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.43	Modified grassland which will be located within the streetscape bordering roads to dwellings. Only likely to pass condition criteria C, F and G. Poor condition targeted			
4	Grassland	Other neutral grassland	1.0368	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	2	Low	3.86	Species rich meadow grassland proposed within GI.Unlikely to pass condition criteria A. Poor condition targeted			
5	Heathland and shrub	Mixed scrub	0.6606	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	4.42	Mixed scrub planting located around site peripheries. Likely to pass condition criteria A, B and C			
6	Urban	Developed land; sealed surface	6.8661	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Low	0.00				
7	Urban	Introduced shrub	0.2969	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.57				
8	Urban	Sustainable drainage system	0.209	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	3	Medium	0.50	SuDS and bioswales. Likely to pass condition criteria B, C, and E1			
9	Urban	Vegetated garden	4.1517	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	8.01				
10	Individual trees	Urban tree	0.399	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	10	Low	1.12	98 small sized trees located within streetscape. Likely to pass condition criteria B and F. Poor condition targeted.			
11	Individual trees	Urban tree	0.57	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	27	Low	1.74	140 small sized trees located within streetscape. Likely to pass condition criteria B, D and F. Moderate condition targeted.			
12														
13														
14														
15														
16														
			Total habitat area	15.19							23.67			

Site Area (Excluding area of individual trees, green walls, intertidal hard structure)	14.22
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M² to hectares conversion tool:	Select a unit	Hectares	M²

ame: Land Surrounding Burloes Cottages, Newmarket Road, RoystonMap Re

B-2 On-Site Hedge Creation

Condense / Show ColumnsCondense / Show Rows

Main Menu

Hedgerow summary	
Total Net Unit Change	0.72
Total Net % Change	N/A
Trading Rules Satisfied	Yes ✓

		Proposed habitats		Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty risk multipliers	Hedge units delivered	Comments		
Ref	New hedge number	Habitat type	Length (km)	Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation		User comments	Planning authority comments	Habitat reference number
1		Non-native and ornamental hedgerow	0.037	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.04			
2		Non-native and ornamental hedgerow	0.011	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.01			
3		Non-native and ornamental hedgerow	0.013	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.01			
4		Non-native and ornamental hedgerow	0.027	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.03			
5		Native hedgerow	0.023	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.04			
6		Native hedgerow	0.008	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.02			
7		Native hedgerow	0.011	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.02			
8		Non-native and ornamental hedgerow	0.044	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.04			
9		Non-native and ornamental hedgerow	0.015	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.01			
10		Non-native and ornamental hedgerow	0.019	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.02			
11		Non-native and ornamental hedgerow	0.03	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.03			
12		Non-native and ornamental hedgerow	0.056	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.05			
13		Native hedgerow	0.061	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.12			
14		Native hedgerow	0.037	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.07			
15		Native hedgerow	0.041	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.08			
16		Native hedgerow	0.042	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.08			
17		Native hedgerow	0.025	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.05			
18													
19													
20													
21													
22													
			0.50							0.72			

ect Name: Land Surrounding Burdoss Cottages, Newmarket Road, RoystonMap Reference

D-1 Off-Site Habitat Baseline

Condense / Show ColumnsCondense / Show RowsMain Menu

Area habitat summary

Total Net Unit Change

3.00

Total Net % Change

10.01%

Trading Rules Satisfied

Yes ✓

Existing area habitats					Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Spatial risk multiplier	Ecological baseline	
Ref	Broad habitat	Habitat type	Irreplaceable habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance		Spatial risk category	Total habitat units	
1	Cropland	Cereal crops	No	2	Low	Condition Assessment: N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	Compensation inside LPA boundary or NCA of impact site	4.00	
2											
3											
4											
5											
Total habitat area				2.00							4.00
Site Area (Excluding area of individual trees, green walls, intertidal hard structures)				2.00							
M² to hectares conversion tool:				Select a unit	Hectares	M²					

						Bespoke compensation agreed for losses of VNH or irreplaceable habitat	Comments			
Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area lost	Units lost		User comments	Planning authority comments	Habitat reference	Off-site reference
		0.00	0.00	2.00	4.00					1
0.00	0.00	0.00	0.00	2.00	4.00					
Total area lost (excluding area of individual trees, green walls and intertidal hard structures)					2.00					

Name: Land Surrounding Burloes Cottages, Newmarket Road, RoystonMap Refer

D-2 Off-Site Habitat Creation

Condense / Show ColumnsCondense / Show Rows

Main Menu

Area habitat summary

Total Net Unit Change3.08

Total Net % Change10.01%

Trading Rules SatisfiedYes ✓

Area CheckArea Acceptable ✓

Post intervention habitats

Ref	Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal risk multiplier		Difficulty risk multipliers	Spatial risk multiplier	Habitat units delivered	Comments						
						Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation	Spatial risk category		User comments	Planning authority comments	Habitat reference	Off-site reference	Baseline Ref		
1	Woodland and forest	Other woodland: broadleaved	0.6	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	15	Low	Compensation inside LPA boundary or NCA of impact site	2.81	New woodland establishment. Likely to score 26. Moderate condition targeted.			1			
2	Grassland	Other neutral grassland	1.4	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	Compensation inside LPA boundary or NCA of impact site	9.37	New species rich meadow grassland establishment. Likely to pass condition criteria A, C and D.			1			
3																		
4																		
5																		
Total habitat area			2.00											12.19				
Site Area (Excluding area of individual trees, green walls, intertidal hard structure)			2.00															
M² to hectares conversion tool:			Select a unit	Hectares	M²													

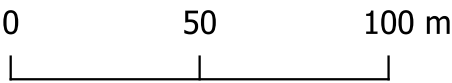


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Key:

- Site Boundary
- Broadleaved woodland - plantation
- Built Environment: Buildings/hardstanding
- Cultivated/disturbed land - amenity grassland
- Cultivated/disturbed land - arable
- Neutral grassland - semi-improved
- Other tall herb and fern - ruderal
- Tree with bat potential
- Target note



client
Vistry Group
project
**Land Surrounding Burloes Cottages,
Newmarket Road, Royston**
drawing title
PHASE 1 HABITAT PLAN

scale @ A3
1:2,000
drawn
MPG/KDG
issue date
16/10/2023

drawing / figure number
Figure 2
rev
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