



HYBRID ECOLOGY LTD
joined up thinking

Low Impact EclA:

Land at Keeres Green, Aythorpe Roding

On behalf of:

Real8 Group

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Summary

Land at Keeres Green (the site) was initially visited on 15th February 2019 in response to a development proposal for three residential “life time home” units. A repeat walkover was carried out in November 2020. This report was updated in February 2021 with a revised layout.

The site contains short-grazed grassland and outbuildings and is bordered by species-poor hedgerows. A wet ditch exists on northern, southern and western boundaries.

Grassland is closely grazed by rabbits throughout leaving a short sward and negligible structure/diversity/habitat features. Consequently, potential for great crested newt and reptiles is reduced. Further surveys are considered unnecessary for these species’ groups.

All buildings on site have negligible bat roost potential and require no further survey.

The hedgerows, small areas of scrub and brush piles are likely to attract nesting birds between March and August inclusive. Any work that could affect an active nest will be undertaken outside this window where possible. If this is not possible, an ecologist can carry out a nest check and either a) agree work can proceed or b) advise on safeguarding steps until the young have fledged.

Hedgerows along the southern and western boundaries qualify as Priority Habitat. Under the Natural Environment and Rural Communities Act (2006), Local Planning Authorities have a duty to conserve and enhance such habitat. Two accesses will be created in the southern boundary hedgerow. As a compensatory measure, the northern boundary hedgerow will be infill planted to create a continuous feature.

There are several opportunities for ecological enhancement on site. It is recommended boundary hedgerows are managed to conserve their biodiversity value. Bat and bird boxes will be installed on external boundary walls of new properties. Where possible, property fences will be made penetrable to nocturnal mammals, particularly hedgehog. Ecological enhancements would contribute to Government aims under paragraph 170(d) of the National Planning Policy Framework (NPPF); which requires all development to contribute to biodiversity enhancement where possible.

This survey has identified all ecological constraints to development and considers there is no overriding reason to refuse a planning application on biodiversity grounds.

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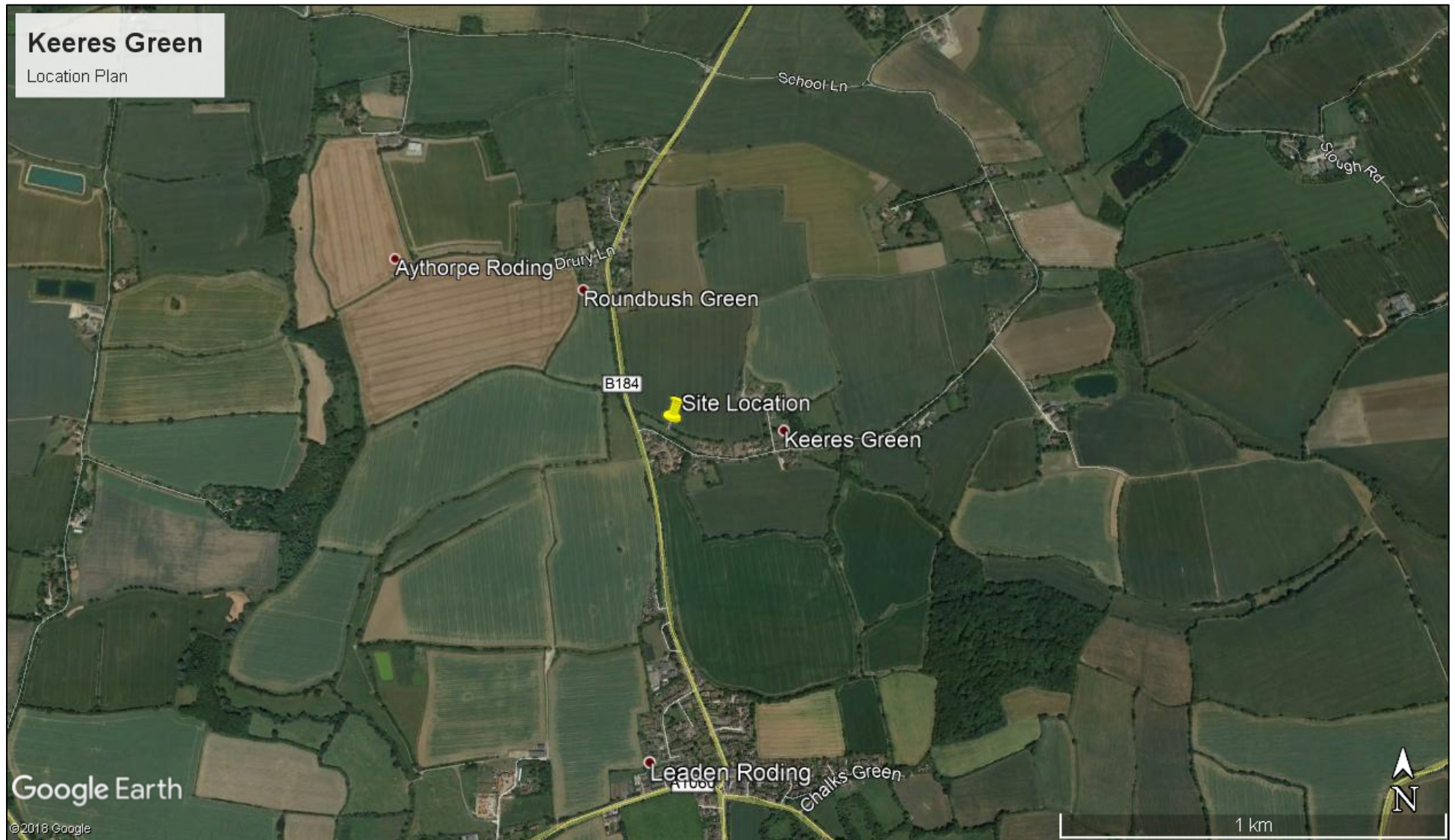
1.0 Introduction

- 1.1 This report has been prepared by Gemma Holmes; Consultant Ecologist at Hybrid Ecology Ltd. Gemma is a qualified ecologist with 12 years' experience in professional survey work, holding licences to survey for great crested newt and bats in the UK (Licence numbers 2015-19096-CLS-CLS and 2016-27305-CLS-CLS respectively). Gemma is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM).
- 1.2 Real8 Group instructed Hybrid Ecology to produce a Low Impact EclA for Land at Keeres Green, Aythorpe Roding. The central grid reference is TQ 79613 88307.
- 1.3 The site covers approximately 0.71 hectares. The Survey Boundary is provided in Figure 1 and Site Location in Figure 2. The applicant proposes 3 "life time homes" located within the eastern section of the site and utilising a single access point. See Block plan in Appendix 1.
- 1.4 This Low Impact EclA has been produced to advise the client/developer and relevant members of the project team as to the key ecological constraints and opportunities associated with this project, mitigation requirements and any detailed further surveys required to inform an Ecological Impact Assessment (EclA).
- 1.5 In accordance with CIEEM Guidelines (2017), the aims of the study are to identify:
 - the likely ecological constraints associated with this project;
 - any mitigation measures likely to be required, following the 'Mitigation Hierarchy';
 - any additional surveys that may be required to inform an Ecological Impact Assessment (EclA);
and
 - the opportunities offered by this project to deliver ecological enhancement.

Figure 1. Survey Boundary



Figure 2. Location Plan



2.0 Planning Policy and Legislation

Relevant Local Planning Policy: Uttlesford District Council Local Plan (2005)

Please note that all text in this section is lifted directly from the referenced planning documents.

Policy GEN7: Nature Conservation

- 2.1 Development that would have a harmful effect on wildlife or geological features will not be permitted unless the need for the development outweighs the importance of the feature to nature conservation. Where the site includes protected species or habitats suitable for protected species, a nature conservation survey will be required. Measures to mitigate and/or compensate for the potential impacts of development, secured by planning obligation or condition, will be required. The enhancement of biodiversity through the creation of appropriate new habitats will be sought.

Policy ENV7: The Protection of the Natural Environment

- 2.2 Development proposals likely to affect local areas of nature conservation significance, such as County Wildlife sites, ancient woodlands, wildlife habitats, sites of ecological interest and Regionally Important Geological/Geomorphological Sites, will not be permitted unless the need for the development outweighs the local significance of the site to the biodiversity of the District. Where development is permitted the authority will consider the use of conditions or planning obligations to ensure the protection and enhancement of the site's conservation interest.

Uttlesford District Council Policy ENV8: Other Landscape Elements of Importance for Nature Conservation

- 2.3 Development that may adversely affect hedgerows, linear tree belts, semi-natural grasslands, linear wetland features/networks or other locally important habitats will only be permitted if the following criteria apply:
- 1) The need for the development outweighs the need to retain the elements for their importance to wild fauna and flora;
 - 2) Mitigation measures are provided that would compensate for the harm and reinstate the nature conservation value of the locality.

Relevant National Planning Policy

National Planning Policy Framework (2019)

Paragraph 170:

- 2.4 When determining planning applications, local planning authorities should apply the following principles:
- a) If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.
 - b) Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest.
 - c) Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.
 - d) 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 encouraged, especially where this can secure measurable net gains for biodiversity.

Paragraph 176:

- 2.5 The following should be given the same protection as habitats sites:
- Potential Special Protection Areas and possible Special Areas of Conservation.
 - Listed or proposed Ramsar sites.
 - Sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

Paragraph 177:

- 2.6 The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.

Legislation: Protection of Designated Sites, Habitats and Species

Please note this section is a summary of legislation only and should not be taken as a definitive interpretation of any law.

International sites

- 2.7 Legal protection prevents damaging activities on designated sites. Some of the sites, known as Special Protection Areas (SPAs) are specifically designated for birds and Special Areas of Conservation (SACs), are of international importance for certain species (e.g. barbastelle bat). These sites have been created under the EC Birds Directive and Habitats Directive.

Nationally protected sites

- 2.8 Within the UK sites that are nationally important for plants, animals or geological or physiographical features are protected by law as Sites of Special Scientific Interest (SSSIs). This system provides the underpinning statutory protection for all sites, including those which are also of international importance.

Locally designated sites

- 2.9 Local authorities for any given area may designate certain areas as being of local conservation interest. The criteria for inclusion, and the level of protection provided, if any, may vary between areas. Most individual counties have a similar scheme, although they do vary. These sites, which may be given various titles such as 'Local Wildlife Sites' (LWS), 'Local Nature Conservation Sites' (LNCS), 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs), together with statutory designations, are defined in local and structure plans under the Town and Country Planning system and are a material consideration when planning applications are being determined.

Hedgerows

- 2.10 The Hedgerow Regulations (1997) is a piece of legislation designed to protect countryside hedges. The criteria include length, number of woody species and associated features (including wet ditches). The legislation prevents the intentional or reckless removal of an "important" hedgerow. Applications to remove hedgerows can be issued to the Local Planning Authority who may then issue a Hedgerow Removal Notice. From an ecological perspective, all hedgerows hold value for a huge range of wildlife. Hedgerows should be retained and protected throughout the lifetime of a development wherever possible and managed to secure long term viability.

Legally protected species

- 2.11 The Conservation of Habitats and Species Regulations (2016) affords protection to bats (all species), great crested newt, otter and dormouse (this is not an exhaustive list and is relevant to East Anglia only). The Wildlife and Countryside Act 1981 (as amended) is the main source of legal protection for wildlife in England and was strengthened by the Countryside and Rights of Way Act 2000.

2.12 Species protection is provided under Schedules 1, 5, 6 and 8 to species including bat, great crested newt, water vole, otter and nesting birds. Badgers are protected separately under the Protection of Badgers Act (1992).

Species and Habitats of Principal Importance in England (or Priority habitats/species)

2.13 The Natural Environment and Rural Communities Act (2006) places a duty on Local Planning Authorities to conserve and enhance certain habitats and species. The species that have been designated to be of "principal importance for the purpose of conserving biodiversity" are those that are most threatened, in greatest decline, or where the UK holds a significant proportion of the world's total population. They mainly derive from lists originally drawn up for the UK Biodiversity Action Plan (UK BAP). Similarly, the list of habitats of principal importance in England also derive from the UK Biodiversity Action Plan.

3.0 Methodology: Desktop Study

Mapping exercise

- 3.1 Aerial imagery (Google Earth Pro, 2019) was used to examine the landscape context of the site in relation to significant ecological resources such as woodland, established hedgerows, grassland and any naturalised features that would allow wildlife use and dispersal.
- 3.2 Multi-Agency Geographical Information for the Countryside (MAGIC) was used to identify any land designated for nature conservation reasons within 2km of the site. Designated sites include Ramsar, Special Areas of Conservation (SAC), Special Protection Areas (SPA), Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR). MAGIC was also used to identify any areas of land mapped by Natural England as Priority Habitat.
- 3.3 Essex Field Club (EFC) was instructed to carry out a search for nationally and locally designated sites within 2km.

Biological Records Search

- 3.4 EFC was instructed to carry out a search of records for protected and priority species within a 2km radius of the site. Data records are included in the protected species evaluation in Section 8.

4.0 Methodology: Habitats and Species

Phase 1 Habitat Survey

- 4.1 An Extended Phase 1 Habitat Survey was carried out on 18th September 2020 by ecologist Gemma Holmes (BSc Hons ACIEEM) and assistant surveyor Oliver Coyne. A repeat walkover survey was carried out on 20th November 2020.
- 4.2 The surveys included the red line in Figure 1 and up to 30 metres beyond the site boundaries, where accessible. The weather conditions were conducive to surveying, with good visibility, no wind and no rain. The survey was undertaken in accordance with the Handbook for Phase 1 Habitat Survey (JNCC 2010). Habitats on and adjacent to the site were mapped and target notes added for any interesting or notable biodiversity features.

Protected/priority species scoping

- 4.3 The survey also included an assessment of the site's potential to support any legally protected species; or Species and Habitats of Principal Importance, as identified by Section 41 of the Natural Environment and Rural Communities Act (2006). Where best practice guidelines exist, these have been used to assess the likelihood that individual species will be present, for example Bat Surveys: Good Practice Guidelines (BCT 2016) and Habitat Suitability Index for Great Crested Newt (Oldham et al, 2000).
- 4.4 All buildings on site were subject to a Preliminary Roost Assessment (BCT, 2016) which involved external and internal inspections for any voids or crevices that could reasonably support a bat roost, and to establish any field signs that could indicate a roost including droppings, staining, scratch marks and insect remains. The buildings were assigned either "high", "moderate", "low" or "negligible" bat roost potential in accordance with BCT Guidelines.

Evaluation criteria

- 4.5 Features (conservation sites, habitats, and species) were evaluated where possible in relation to a geographical context (i.e. International, National, Regional, Metropolitan, County, District, Borough, Local and Site), in accordance with CIEEM Ecological Impact Assessment Guidelines (2016). Criteria include designations, quality of habitat in relation to the site context, ability to support notable assemblages of species, contribution to habitat connectivity, dispersal opportunities or providing intrinsic ecological value.

5.0 Limitations

- 5.1 Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. Wildlife is transient and mobile, and results of a survey can reasonably vary from one day to the next or across the seasons.
- 5.2 The protected species assessment provides a view of the likelihood of protected species occurring on the site based on the known distribution of species in the local area and the suitability of the habitat. However, it should not be taken as providing a full and definitive survey of any protected species/group.
- 5.3 Biological records can be patchy, and some areas/species are under recorded, therefore absence of records for a species or group does not necessarily mean that there is a lack of ecological interest. Equally, the presence of records does not necessarily mean the habitat is still suitable for the species/group in question.
- 5.4 This report is valid for 18 months, after which point habitats are reasonably expected to have changed to warrant a re-survey.

6.0 Results: Desktop Study

Landscape context

- 6.1 The site is situated to the west of Keeres Green, a small village in rural north Essex. Roundbush Green and Leaden Roding exist to the north and south respectively. The surrounding landscape is rural in character and dominated by arable land. Hedgerows generally define arable land parcels although some land boundaries consist just of sparsely populated trees. Small woodlands exist c.700 metres east and west of the site.

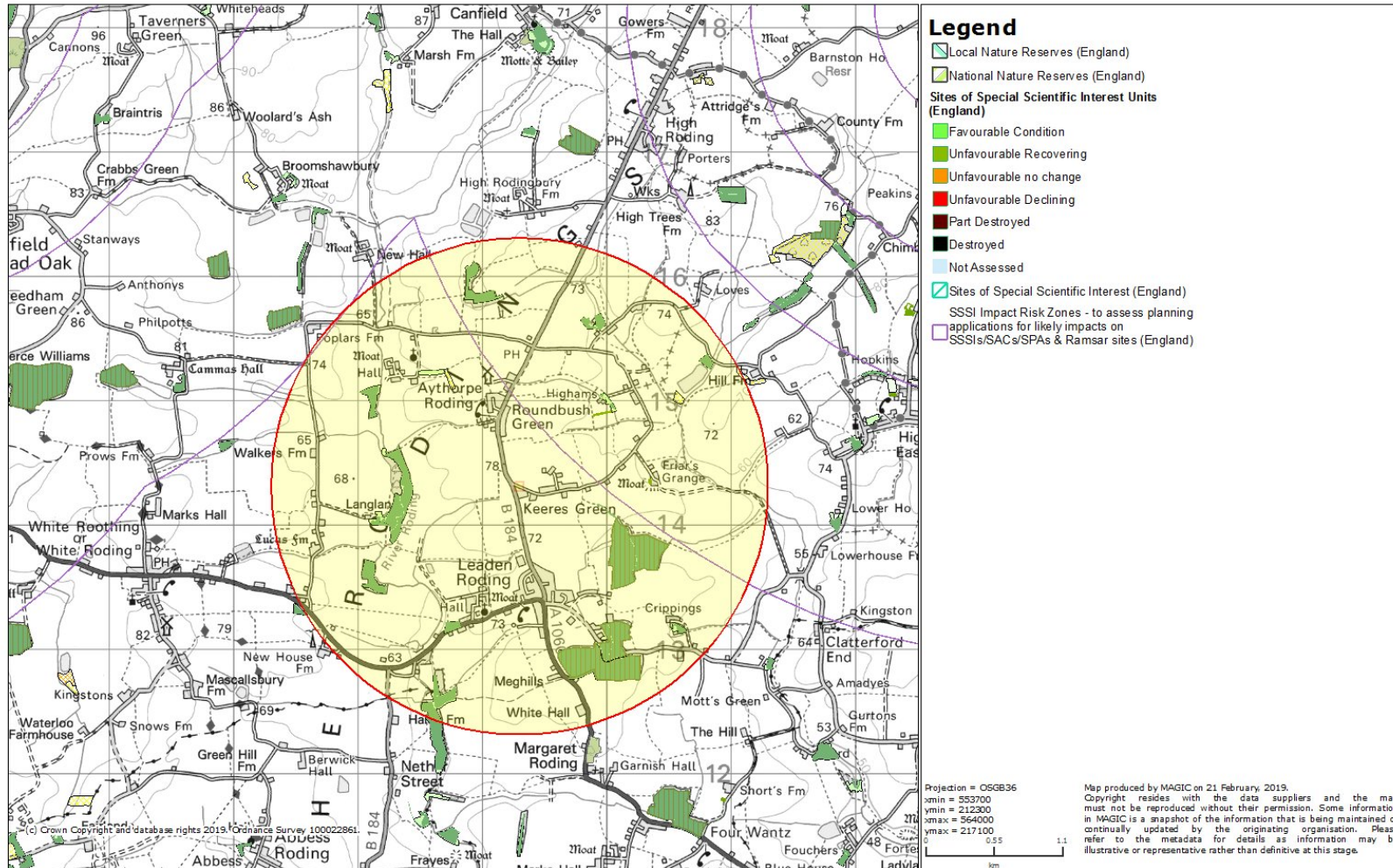
Designated sites and protected habitats

- 6.2 Sites described in this section are provided on Figure 3 (courtesy of MAGIC) overleaf. The site is not the subject of a conservation designation nor does it immediately adjoin a designated site.
- 6.3 There are two Sites of Special Scientific Interest; Garnett's Wood & Barnston Lays and Hatfield Forest within a 5km radius of the site. The site is within the Impact Risk Zone for both SSSIs. The Natural England User Guidance from Natural England has been consulted, and the distance the site is at, and the land-use proposed means the site is unlikely to pose a risk of damage to the respective SSSIs. Further consideration of impacts is not required.
- 6.4 There are several areas of the Priority Habitat "lowland deciduous woodland" surrounding the site. None of the woodlands about the site nor is there any ecological or hydrological connectivity between the site and the wooded areas. Further consideration of impacts is not required.

Figure 3. MAGIC map of designated sites

MAGiC

Magic Map

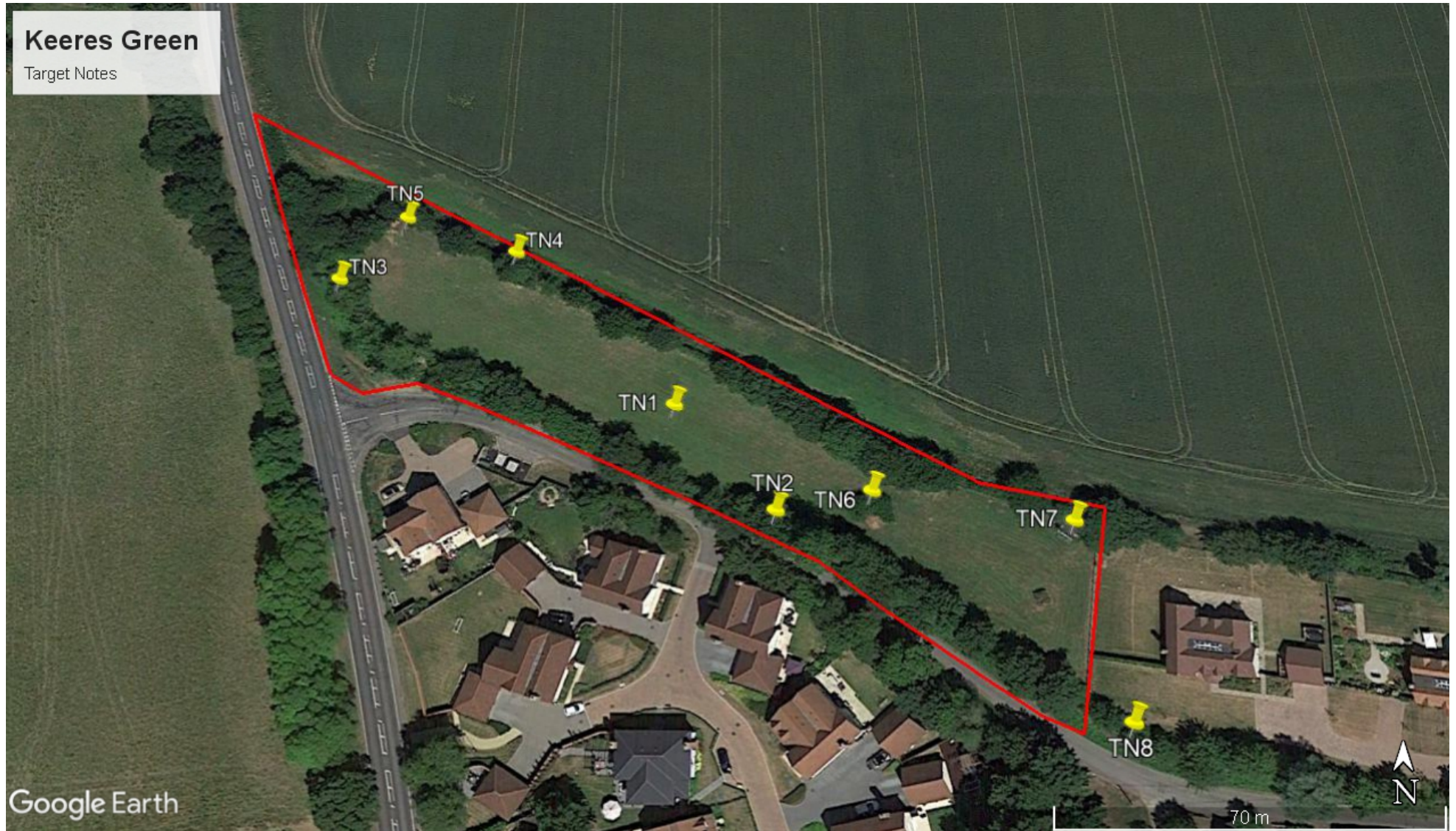


7.0 Results: Phase 1 Habitat Survey

- 7.1 A plan with target notes (TN) providing a visual context to the descriptive text below is provided in Figure 4. Photographs taken during the site visits are provided in Figure 5. The broad habitats on site are amenity grassland, species-poor intact hedgerow and buildings.
- 7.2 The site is an undeveloped area of grassland with hedgerows along boundaries. A wet ditch runs along the southern boundary, between the hedgerow and School Lane, around the western boundary through a small copse and continues east along the northern boundary. Stock fencing runs along the northern, southern and western boundaries. The eastern boundary is fenced with a residential garden beyond.
- 7.3 The grassland (TN1) is closely grazed by rabbit and comprises a short sward with very little in the way of floristic diversity. Species recorded include geranium spp., creeping buttercup, spear thistle, common ragwort, ground ivy and common nettle.
- 7.4 The southern boundary hedgerow (TN2) is out-grown and contains ash, field maple, ivy-clad elm (many dead trees), hazel and blackthorn trees with several elm stumps. The hedgerow continues along the western boundary through a small copse (TN3). The hedgerow meets the Priority Habitat criteria for “hedgerows” and therefore should be retained, protected and enhanced wherever possible. A wide grass verge, recently cleared and seeded, exists beyond the southern boundary hedgerow.
- 7.5 The northern boundary (TN4) is defined by individual field maple trees and dense bramble. A small group of goat willow are situated in the north-eastern corner.
- 7.6 The wet ditch is ephemeral and is shaded by the southern and western boundary hedgerows. Species noted on banks and the adjacent verge include daffodil, pendulous sedge, iris spp., cleavers, herb Robert and ivy. The south facing aspect of this boundary means ground flora is likely to establish in spring and summer.
- 7.7 Several log piles exist along the northern boundary and a large compost heap (TN5) is in the north-western corner.
- 7.8 A small stand of self-seeded hawthorn (TN6) exists in the centre of the site around a manure pile.
- 7.9 Two semi-permanent buildings; a container and open shed (TN7) exist along the northern boundary.
- 7.10 A large pond exists off-site, beyond the south-eastern corner (TN8). It is overhung by a hawthorn and blackthorn hedge and has a shelved bank to the south with grass species suitable for amphibian egg-laying.
- 7.11 None of the habitats on site are important ecologically nor are they irreplaceable or noteworthy in local or national planning terms. All habitats are widespread and common with little intrinsic ecological interest.
- 7.12 In terms of ecological significance, hedgerows and the wet ditch are considered important at parish level.

There was no material change in habitats observed during the November 2020 site visit.

Figure 4. Target Notes



8.0 Results: Protected/Priority Species Scoping

Bats

- 8.1 EFC returned records for several bat species, including common and soprano pipistrelle, brown long-eared and serotine.
- 8.2 Roosting - buildings: The buildings on site are unsuitable roosting habitat, with negligible roost potential. The container is completely sealed with no possibility for bat ingress. The open shed on the north-eastern corner is exposed to light and prevailing weather.
- 8.3 Roosting – trees: None of the trees on/bordering the site were found to contain potential roost features.
- 8.4 Foraging/commuting: The site may attract foraging bats along the southern boundary due to the sheltered microclimate and local pond. The development of this site is unlikely to impact foraging habitat to such an extent bats will be affected. Bats may also commute along the southern boundary, but the habitat terminates east and west and is unlikely to link important roosting sites.

Further surveys for bats are not necessary.

Great crested newt

- 8.5 EFC returned no records for great crested newt. Great crested newt *Triturus cristatus* (GCN) require both terrestrial and aquatic habitats. They return to aquatic habitat to breed March-June, using small to medium ponds with no fish and suitable marginal vegetation including water-cress and flote grass (Froglife 2001). Terrestrial habitat includes refuges and foraging and dispersal opportunities (e.g. rough grassland and broad-leaved woodland) as well as hibernation sites such as rubble piles or mammal burrows. Whilst GCN migrate onto land to forage, shelter and hibernate, it is rare to find them over 250 metres from a breeding pond (Cresswell & Whitworth 2004).
- 8.6 There are no ponds on site therefore no breeding habitat exists. Ditches are ephemeral. The potential for terrestrial great crested newt is reduced by the closely grazed nature of the grassland which would instantly expose individuals to predation. The invertebrate resource is likely to be limited owing to the lack of floristic diversity; therefore, prey availability will also be lacking.
- 8.7 The closest pond is c.10 metres beyond the south-eastern corner. It appears to have good potential for GCN with egg-laying habitat and structure. Given the habitat on site provides negligible value to foraging, sheltering or hibernating great crested newt (being closely rabbit-grazed), the risk of encountering great crested newt during works is considered negligible at best. Any great crested newt in the local environment are likely restricted to adjoining gardens.

Further surveys for great crested newt are not necessary.

Dormouse

- 8.8 EFC returned no records for dormouse and habitat on site is unsuitable. There are no continuous species-rich hedgerows, continuous bramble scrub nor any ancient woodland on site, or directly connected.

Further surveys for dormice are not necessary.

Otter and water vole

- 8.9 EFC returned records for otter c1.7km from the site. No records were returned for water vole. The habitat on site is unsuitable for both species.

Further surveys for otter and water vole are not necessary.

Reptiles

- 8.10 EFC returned no records for reptiles. Reptiles (common lizard *Zootoca vivipara*, slow worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus*) require mosaic habitats with features in which to bask, forage and shelter. These habitats need to have onward connectivity for dispersal. Suitable habitats include grassland with scrub edges or small woodland coppices (Edgar et al. 2010).
- 8.11 The grassland is closely grazed with limited opportunities for reptiles. Small log piles exist on the northern boundary and a compost heap exists on the north-western corner. These features may attract an opportunistic reptile using the site boundaries, but numbers are expected to be low, if at all.
- 8.12 It is recommended log piles and the compost heap are removed prior to October when reptiles may be attracted to them for hibernation purposes.

Further surveys for reptiles are not necessary.

Birds

- 8.13 Birds (all species) are protected under national law by the Wildlife and Countryside Act (1981; as amended). It is an offence to kill, injure, take or possess (alive or dead) any wild bird; take, damage or destroy a nest that is in use or being built; or take, destroy or possess an egg. Barn owl are protected under Schedule 1, where the nest/roost is protected even when not in use.
- 8.14 Boundary hedgerows provide good shelter for nesting birds. It is recommended all vegetation work (tree felling, hedgerow removal etc.) is programmed outside the nesting season (between September and February inclusive). Bird species observed and heard during the survey include chaffinch, blackbird, goldfinch and blue tit. No Schedule 1 birds were heard or seen.
- 8.15 The open shed is also likely to attract nesting birds. If the intention is to remove the shed between March and August inclusive, it is recommended a nest check is undertaken immediately prior.

Badger

8.16 EFC returned local badger records. No evidence of badger (setts, spoil, snuffle holes, latrines, hairs on fences) were identified either on or within 30 metres of the site. Large rabbit warrens exist along the northern boundary, roughly in line with the boundary fence and within the muck heap in the centre.

Further surveys for badger are not necessary.

Legally protected plants/invertebrates

8.17 EFC returned records for bluebell. Bluebell is found in ancient woodland and is unlikely to occur on this site. Records were returned for small heath, a Biodiversity Action Plan butterfly. There is no suitable habitat for this species on site, but enhancement suggestions to improve the site for butterflies are made later in this report.

Further botanical/invertebrate surveys are not necessary.

There was no material change in species presence/potential observed during the November 2020 site visit.

Figure 5. Photographs



a) View west showing hedgerows, scrub and container



b) View north-east showing individual trees, scrub and open shed

Figure 5. Photographs continued.



c) Southern boundary hedgerow and wet ditch with wide grass verge



d) Pond beyond south-eastern corner

Figure 5. Photographs continued



e) Northern boundary with individual trees and log pile



f) Compost heap on north-western corner

9.0 Summary of Ecological Constraints and Opportunities

The Proposal

- 9.1 The proposal involves construction of a residential development containing three lifetime homes – see Appendix 1.

Ecological Constraints

Nesting birds

- 9.2 It is recommended work to vegetation and the open shed is restricted to September-February inclusive when nesting birds are likely absent.

Protecting boundary hedgerows

- 9.3 Hedgerows are Priority Habitat. The southern boundary hedgerow will be severed for access. As a compensatory measure, the northern hedgerow will be complimented with native infill planting to create a continuous feature and will be managed appropriately.

Opportunities

Hedgerow management

- 9.4 The southern and western boundary hedgerow will be managed. Trees will be left every 10 metres as standards (e.g. as perches for songbirds) and the remainder could be coppiced or laid. A bushy hedge, denser at the base than the top will encourage a range of wildlife from nesting birds to invertebrates and will provide good shelter. Dead elm will be removed.
- 9.5 Hedgerow management will take place between September and February inclusive to avoid the period nesting birds are likely present. The northern boundary will be managed through removal of bramble and “gapping up”, whereby gaps are planted with native species.

Landscaping

- 9.6 There is an opportunity to provide wildflower seeding on the western area of the site which would increase the value of the grassland to pollinators. The seed mix should be chosen based on the soil characteristics. Emorsgate EM1F is an appropriate general purpose wildflower mix and contains species favoured by pollinators including yarrow, common knapweed, field scabious and wild carrot.
- 9.7 The planting proposed for the boundaries of the site is native, to enhance the existing character and ecology. Small drifts of informal ornamental planting are proposed adjacent to the new dwellings to frame, soften and add interest.
- **Native Buffer Mix** (whip and feathers): *Corylus avellana*, *Acer campestre*, *Crataegus monogyna*, *Ulmus procera*, *Salix caprea*.

- **Native Hedge (whips):** *Corylus avellana*, *Crataegus monogyna*, *Salix caprea*.
- **Ornamental Shrubs:** *Cornus* 'Midwinter Fire', *Choisya* × *dewitteana* 'Aztec Pearl', *Hebe rakaensis*, *Hedera helix* 'Green Ripple', *Hydrangea paniculata* 'Limelight', *Lavandula angustifolia* 'Hidcote', *Perovskia* 'Blue Spire', *Pittosporum* 'Golf Ball', *Phlomis frutescens*, *Euphorbia wulfii*, *Sarcococca hookeriana* 'Purple Stem'
- **Herbaceous Perennials:** *Anemone* × *hybrida* 'Honerine Jobert', *Bergenia* 'Bressingham Ruby', *Epimedium* × *versicolor* 'Sulphureum', *Geranium* × *cantabrigiense* 'St Ola', *Helleborus* × *hybrida* 'Harvington Shades of the Night', *Liriope muscari* 'Royal Purple', *Kniphofia* 'Tawny King', *Nepeta* 'Six Hills Giant', *Rudbeckia* 'Goldstrum', *Sisyrinchium striatum*, *Salvia* 'Caradonna'
- **Native Bulbs:** *Galanthus nivalis*, *Hyacinthoides non-scripta*, *Fritillaria meleagris*

Habitat boxes

9.8 Bird nest boxes and features for roosting bats will be included in the development. It is recommended that two house sparrow terraces, two open-fronted nest boxes and two bat boxes/features are included. Bird boxes should be installed facing north or east and above 2 metres. Bat boxes can be installed on a building or tree and should face south, south-east or south-west for maximum solar gain. External boxes should be woodcrete or woodstone for longevity. Habitat integrated bat roost features could be considered as they are visually unintrusive and sit flush with external surfaces. Examples are included in Appendix 2.

10.0 Conclusions

- 10.1 The site is not the subject of a conservation designation, and no mitigation is required in relation to designated sites. Priority habitats on the site will be retained, and where possible enhanced.
- 10.2 Mitigation measures are required in relation to nesting birds in the form of timing restrictions. It is also recommended that the site continues to be managed until such point development commences, to discourage wildlife colonisation.
- 10.3 With the above in place and all other advice in this report followed, there is no reason the Local Planning Authority should refuse an application on ecological grounds.

Biodiversity net-gain

- 10.4 All development is now expected to deliver biodiversity net-gain under the National Planning Policy Framework (NPPF) Paragraph 170(d). The proposal will include new areas of planting and habitat boxes for nesting birds and roosting bats to increase wildlife interest post-development.

Appendix 1. Block plan

NOTES / REVISIONS

- REV A.
- REV B. 07/12/20
- REV C. 15/01/21
- REV D. 27/01/21
- REV E. 05/02/21

Verify all dimensions on site before commencing any work on site or preparing drawings. Do not scale from this drawing. This drawing and design are copyright of L Jones Architects Ltd.

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GROUP

PROJECT

KEERES GREEN,
DUNMOW

DRAWING

BLOCK PLAN

SCALE

1:500 @A3

DATE

17/02/20



Appendix 2. Enhancement Recommendations

Sparrow terrace (external)



- a) Sparrow terrace (<http://www.wildlifeservices.co.uk/nestboxes/sparrowterrace.jpg>)

Integrated bat and bird boxes for buildings

<http://www.habibat.co.uk/>



- a) Habibat integrated sparrow terrace – note the external surface is bespoke.



- b) Habibat integrated bat box