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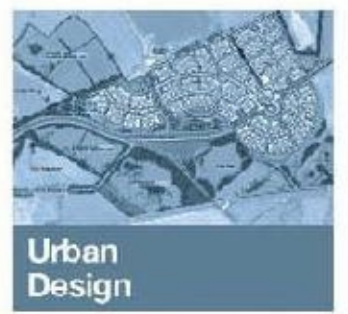
Arboriculture
& Tree Works



Ecology & Habitat
Management



Land Adoption &
Weed Eradication



Urban
Design

JAMES BLAKE

A S S O C I A T E S

Ecological Constraints Plan

for

Phase 2A,

Haverhill,

Suffolk

On behalf of

Persimmon Homes (Suffolk)

July 2020

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		DB	SR	JBA	July 2020
<p>Job Number: JBA 18/351 and 17/364</p>		 <p>JAMES BLAKE ASSOCIATES</p> <p>Title: Ecological Constraints Plan of Phase 2A, Haverhill, Suffolk.</p>			

Disclaimer

James Blake Associates Ltd have made every effort to meet the client's brief. However, no survey ensures complete and absolute assessment of the changeable natural environment. The findings in this report were based on evidence from thorough survey: It is important to remember that evidence can be limited, hard to detect or concealed by site use and disturbance. When it is stated that no evidence was found or was evident at that point in time, it does not mean that species are not present or could not be present at a later date: The survey was required because habitats are suitable for a given protected species, and such species could colonise areas following completion of the survey.

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Background

James Blake Associates Ltd were commissioned by Persimmon Homes (Suffolk) to create an Ecological Constraints Plan for land at Haverhill Phase 2A (Ordnance Survey National Grid reference TL 67404 46963, taken from the centre of site). Phasing plan of the larger development site is shown in Appendix A.

There is a general biodiversity duty in the National Planning Policy Framework (NPPF) 2019, placing responsibility on Local Planning Authorities to aim to conserve, enhance and encourage biodiversity in and around development. Section 40 of the Natural Environment and Rural Communities (NERC) Act (2006) requires every public body in the exercising of its functions to 'have regard, so far as is consistent with the proper exercise of these functions, to the purpose of conserving biodiversity'. Biodiversity, as covered by the section 40 duty, includes all biodiversity, not just the habitats and species of principal importance. However, there is an expectation that public bodies would refer to the Section 41 list when complying with the Section 40 duty.

Should the following recommended ecological enhancements be followed, ecological value of the development site should be retained and improved.

Ecological survey information

Ecological recommendations and constraints are based on data collected from the following survey reports which include the larger development site (Relief Road and Phases 2-6):

- *Preliminary Ecological Appraisal* (JBA January 2019);
- *Great Crested Newt eDNA Survey* (JBA June 2019);
- *Reptile Survey* (JBA June 2019);
- *Botanical Survey (including Sulphur Clover Survey)* (JBA August 2019);
- *Hedgerow Survey* (JBA August 2019);
- *Hazel Dormouse Survey Report* (JBA December 2019);
- *Breeding Bird Survey* (JBA October 2019) and *Wintering Bird Survey* (February 2020);
- [REDACTED]
- *Bat Activity* (JBA December 2019);

SUMMARY OF ECOLOGICAL CONSTRAINTS AND RECOMMENDATIONS

Recommendations have been made in order to safeguard and enhance the biodiversity on site. See Appendix B for the ecological constraints plan.

The findings from the ecological surveys are summarised below:

Preliminary Ecological Appraisal (PEA) of Phases 2-6 and the Relief Road (JBA January 2019) survey summary: The PEA highlighted that further surveys were recommended for the following:

- [REDACTED]
- Breeding Bird survey
- Wintering Bird survey
- Reptile survey
- Great Crested Newt eDNA
- Hedgerow survey
- Botanical survey
- Hedgerow survey
- Bat activity survey
- Dormouse survey

Ecological enhancement recommendations

- A Landscape and Ecological Management Plan (LEMP) should be produced which will detail necessary landscaping and ecological management.
- Landscaping should incorporate native or wildlife attracting trees, shrubs and wildflower areas.
- Hedgerows and vegetation of significant ecological value to be retained and enhanced to create corridors and shelter/foraging for wildlife including birds, bats and [REDACTED] See Appendix B for recommended vegetation retention plans.
- 'Hedgehog links' (i.e. 15cm diameter gaps at the base of fences) are recommended to enable small mammals to move through the development.
- Bird boxes to be installed onto new buildings on site to provide nesting opportunities. Boxes should be located out of direct sunlight and close to, but not restricted by, vegetation. Detailed specifications of bird box types are covered in the breeding bird survey section of the constraints plan.
- Bat boxes to be installed on the proposed buildings or retained trees within the site to provide additional roosting opportunities.

Great Crested Newt eDNA Survey (JBA June 2019f) survey summary:

The aim of the survey was to determine the presence or likely absence of great crested newt (GCN) within 500m of the proposed site boundary. Six ponds were

identified within 500m of the site on OS maps, however, two ponds had been filled in, one pond was dry and access was not granted for two of the ponds.

Water samples were taken from a non-ecologically separated pond and tested for environmental DNA (eDNA) to determine the presence or likely absence of GCN. Laboratory testing found no evidence of GCN DNA in the water sample. It was therefore considered unlikely that GCN are currently using the surveyed pond within 500m of the site boundary.

For a comprehensive detailing of the GCN eDNA survey please refer to the full survey report issued (JBA 2019f).

Ecological constraints

No ecological constraints were identified with regards to GCN.

Ecological enhancement recommendations

Improving the terrestrial and aquatic habitats on site to enhance post-development conditions for amphibians such as:

- Pond creation;
- Ditch improvement for commuting newts;
- Habitat corridors with wildflower and grassland mixes; and
- Creation of hibernacula (See Appendix C).

Reptile Survey (JBA June 2019i) survey summary:

No reptile species were recorded using the site during the survey period, therefore no mitigation or constraints to the development apply to the site with respect to reptiles.

For a comprehensive detailing of the reptile survey (JBA 2019i) please refer to the full survey report issued.

Ecological constraints

No ecological constraints were identified with regards to reptiles.

Ecological enhancement recommendations:

- Log and rock piles located around the edge of the site could provide potential refuge habitat for reptiles and other wildlife;

- Grass clippings and other vegetation could be collected and composted in a corner of the site or near on-site water bodies. This may (in time) become suitable breeding for grass snake and other wildlife; and
- Creation of hibernacula (See Appendix C).

Botanical Survey (including Sulphur Clover Survey) (JBA August 2019c) survey summary:

A botanical survey was undertaken incorporating a search for sulphur clover (*Trifolium ochroleucon*), a Nationally Scarce species which had been previously recorded on the site (RPS 2009), and a survey for other rare and/or protected plant species and habitats of interest.

The survey found the presence of sulphur clover was found on site associated with H2. Dwarf spurge (*Euphorbia exigua*), a Near Threatened species, was also found on the larger development site but not on Phase 2A. Bee orchids (*Ophrys apifera*) and pyramidal orchids (*Anacamptis pyramidalis*) were also observed on the larger development site.

For a comprehensive detailing of the botanical survey (JBA 2019c) please refer to the full survey report issued.

Ecological constraints

- Nationally Scarce sulphur clover was recorded on site in association with hedgerow H2 (Appendix B). The hedge and its margins (at least 4m from hedgerow base either side) must be managed sensitively to ensure the continued survival and ideally, expansion, of the sulphur clover. Information with regards to landscape management should be provided within a LEMP.

Ecological enhancement recommendations:

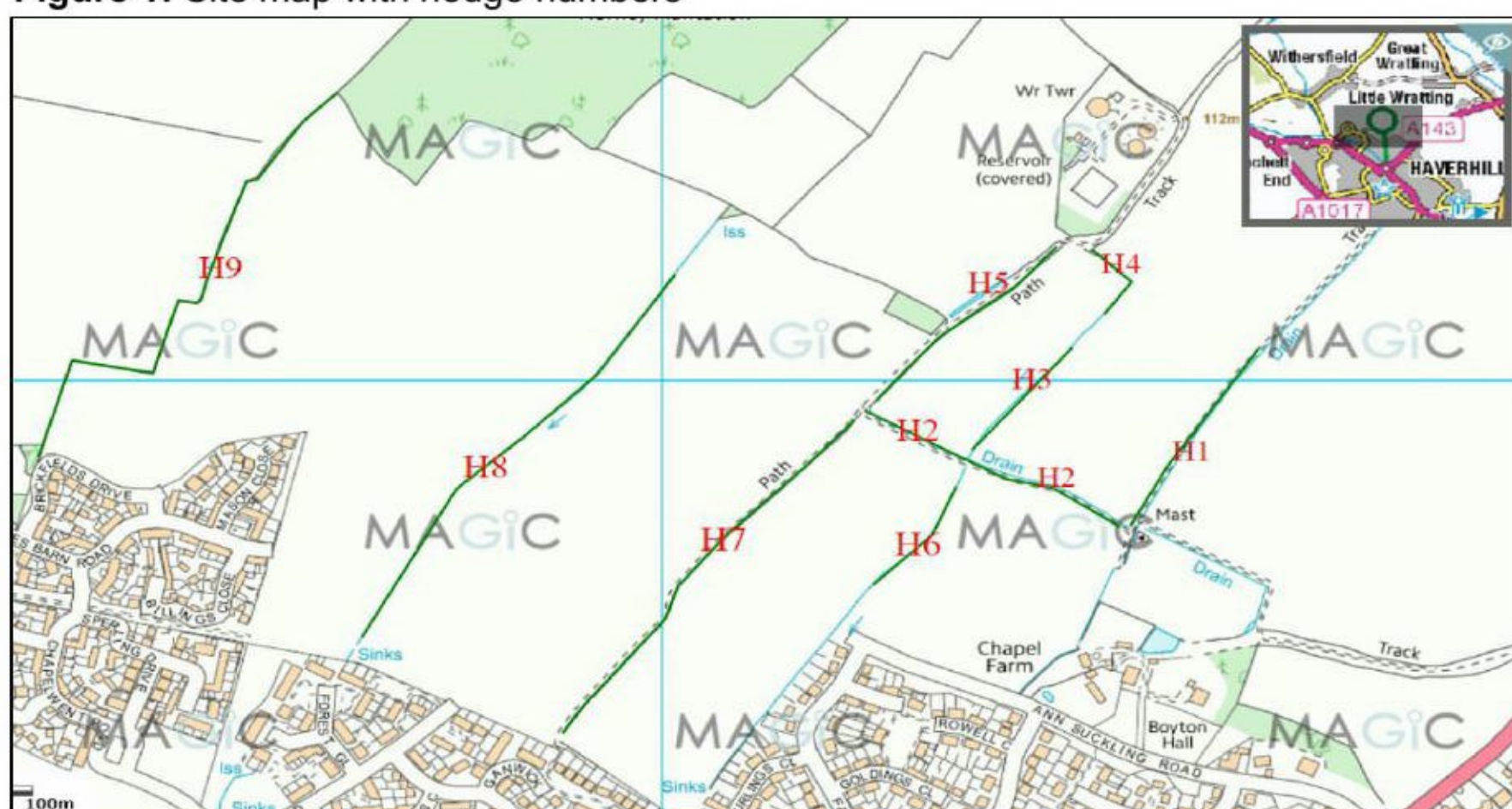
- It is recommended that the hedgerow (H2 – Figure 1) which supports a plant community of interest is retained by the development and managed appropriately to conserve and enhance its ecological value.
- It is recommended that wildflower grassland should be established in suitable areas of public open space where the current interest is low. Native sources of plant species should be used.

Hedgerow Survey (JBA August 2019g) survey summary:

Hedgerows on site were assessed for their ecological value using the definitions used by Hedgerow Regulations 1997. All hedgerows except H6 were considered to be species rich. Four hedgerows; H2, H4, H5 and H7 were categorised as 'important' (see Figure 1 for locations of hedgerows regarding the larger site).

For a comprehensive detailing of the hedgerow survey (JBA 2019g) please refer to the full survey report issued.

Figure 1: Site map with hedge numbers



Ecological constraints

- Within Phase 2A; H2 was categorised as 'important' under Hedgerow Regulation (1997) and it is recommended for retention in its entirety by the development. This hedgerow should be afforded a wide buffer zone of at least 4m from hedge base on both sides to ensure that hedgerow and its associated ground flora are not adversely affected by the development. Specific management regimes would be highlighted in a LEMP.
- A sensitive lighting scheme should be drawn up which demonstrates the absence of light spill within any hedgerows which are shown to be important both during and post construction.

Ecological enhancement recommendations:

- It is recommended that a LEMP is designed for the site which takes into consideration results from the hedgerow survey.
- The management of the hedgerows in the long term is essential to ensure the maintenance of their ecological value. It is recommended that an Ecological Management Plan is drawn up for the site.
- The principles of hedgerow management are to cut about one third of hedgerows per year in a rotational manner to ensure that there is always a supply of good quality habitat, berries and nuts throughout the winter.
- Management of the ground flora should also be on a rotational basis with margins cut every 2 to 3 years. Footpaths with public access may need more frequent cutting.
- There may be opportunities to enhance hedgerow habitats on site post development through gapping up with site-native tree and shrub species; the ground flora can also be enhanced by wildflower seed mixes or plug planting.
- Lighting of hedgerows must be avoided if they are to function properly as wildlife corridors. A sensitive lighting scheme should be drawn up which demonstrates the absence of light spill within any hedgerows which are shown to be important for breeding birds, bats, dormice etc.

Breeding Bird Survey (JBA October 2019d) & Wintering Bird Survey (JBA February 2020) survey summary:

The breeding bird survey showed eight Birds of Conservation Concern (BoCC) Red Listed species and ten Amber Listed species were recorded using the larger development site as a whole. Thirteen species of bird were confirmed breeding on the larger development site, twenty one species were considered probably breeding with twelve species possibly breeding. The bird species noted using the site are generally common and widespread. No significant population of any species of interest was recorded. Key habitat for birds on site includes the mature trees, hedgerows, hedgerow margins and scrub.

For a comprehensive detailing of the breeding survey (JBA 2019d) please refer to the full survey report issued.

The birds identified during the wintering bird surveys were predominantly common and widespread species, both at a national and local level. Species of Principle Importance (SPIs) included dunnock (*Prunella modularis*), linnet (*Linaria cannabina*), herring gull (*Larus argentatus*), house sparrow (*Passer domesticus*), reed bunting (*Emberiza schoeniclus*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), starling (*Sturnus vulgaris*) and yellowhammer (*Emberiza citrinella*); all apart from herring gull are either confirmed wintering or considered to be using the site as a flight path. No significant populations of any species were found.

For a comprehensive detailing of the breeding survey (JBA 2019b) please refer to the full survey report issued.

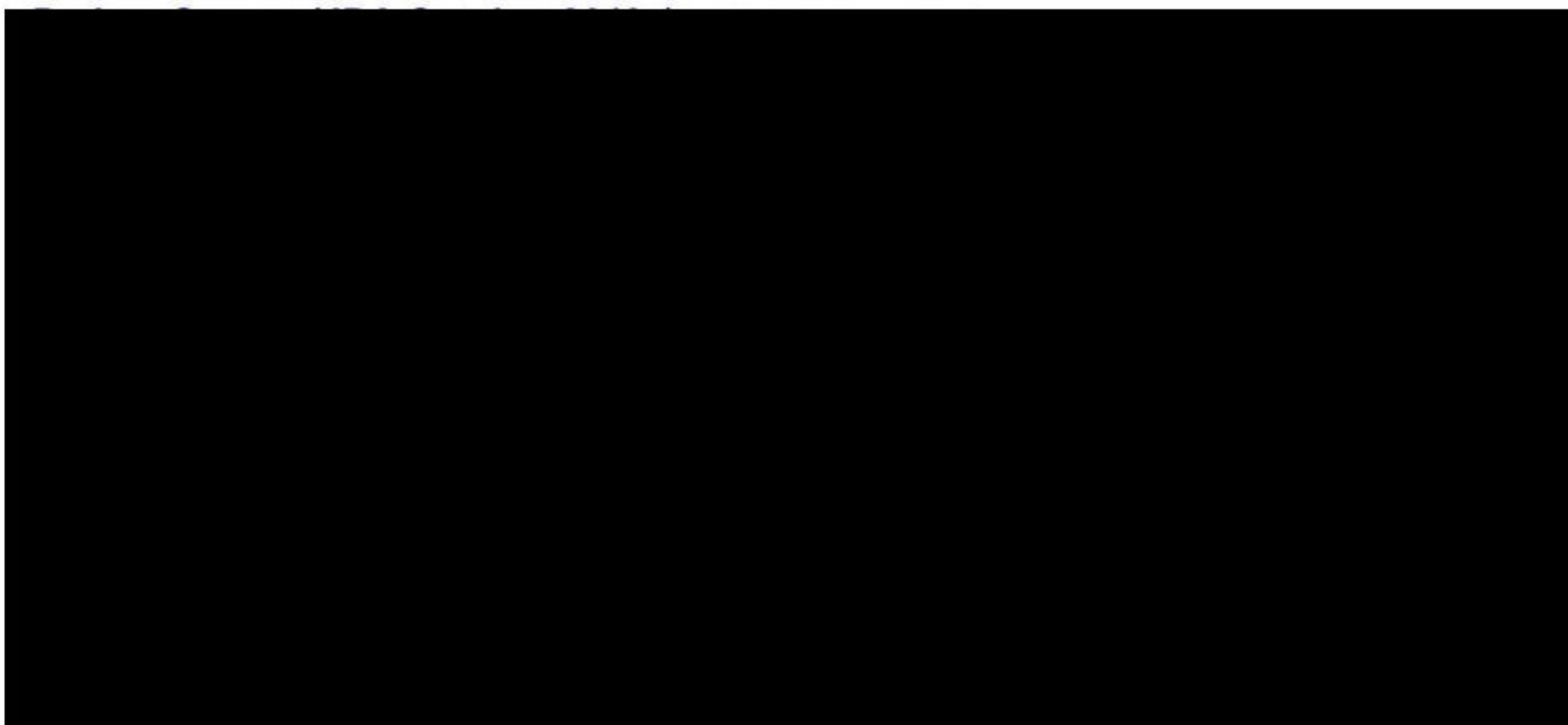
Ecological constraints

- At least two pairs of skylark were recorded using Phase 2A for breeding; a total of seven pairs were recorded on the larger development site as a whole and therefore off-site compensatory habitat will be required.
- Any vegetation clearance/management should be undertaken outside the breeding bird season or following a 'clear' nesting bird check. Nesting bird season is deemed to be March to September, weather dependant.

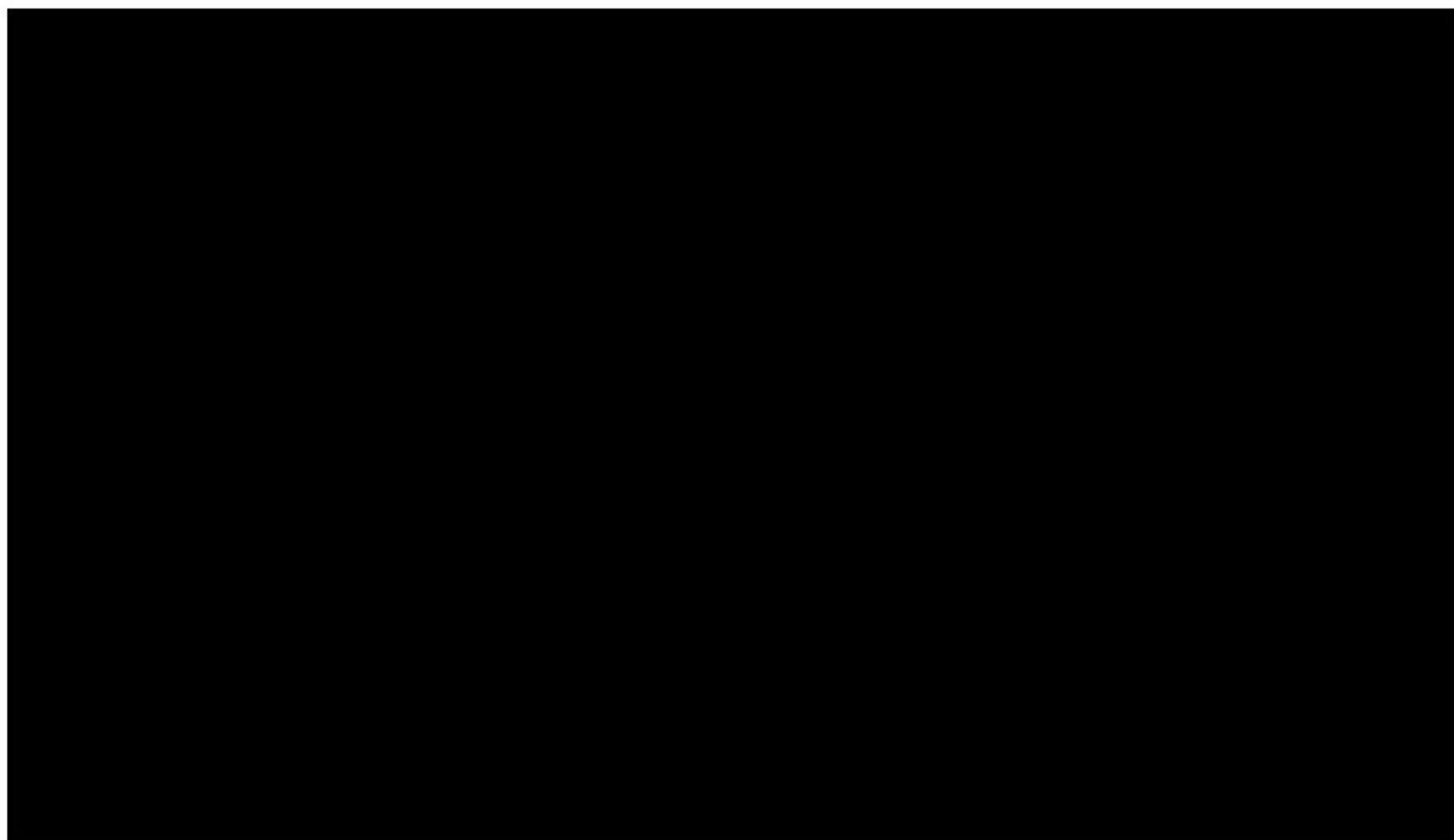
Ecological enhancement recommendations

- It is recommended that a LEMP is designed for the site which takes into consideration the results of the breeding bird survey.
- Open space within the development, including Sustainable Urban Drainage Systems (SuDS), is recommended to be designed, created and managed to provide nesting and foraging habitat for birds. Public access should be carefully managed to ensure that sensitive bird species and the habitats they depend on are not subject to disturbance.
- Proposed waterbodies within the SuDS scheme could be planted with emergent and aquatic species, for example marsh marigold (*Caltha palustris*), bog bean (*Menyanthes trifoliata*), water forget-me-not (*Myositis scorpiodes*), common reed (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*) and pendulous sedge (*Carex pendula*). This will create a valuable wetland area to attract invertebrates for foraging swifts, swallows and house martins post-development.

- It is recommended that foraging habitat is retained and/or incorporated into Public Open Space (POS) within landscape plans.
- Retention of on-site foraging and nesting habitat, including hedgerows, scrub and mature trees within the site.
- Native hedgerow and tree planting such as site-native fruit and nut bearing species such as hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*) and field maple (*Acer campestre*) within the scheme, with areas of less intensive management to allow scrub encroachment will provide additional nesting and foraging habitat.
- It is recommended that a seed mix rich in seed-bearing species is used along boundaries and retained hedgerows (although not along hedgerows such as H2 where sulphur clover is present).
- Suitable areas of POS should be sown with shrubs, wildflowers and grasses, such as common bent (*Agrostis capillaris*), red fescue (*Festuca rubra*), and smooth-stalked meadow grass (*Poa pratensis*), to provide additional foraging resources for birds.
- Clear pathways should be mown and maintained in POS to reduce trampling of habitat and disturbance to birds.
- Any areas set aside primarily for birds and other key species should be fenced off or designed to reduce access by residents and their dogs.
- It is recommended that bird boxes suitable for house sparrow (Schwegler 1SP), kestrel (Schwegler no.28), swifts (Schwegler 16S swift boxes) and starling (Schwegler 3SV) are used. House martin nest cups (No. 13 Schwegler Modular House Martin Nest) can be installed on buildings.



Ecological constraints



Bat Activity Survey (JBA December 2019b) survey summary:

A number of bat species were recording using boundary vegetation and hedgerows as commuting routes and for foraging. Bat species recorded on the larger development site included; common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus noctula*), brown long-eared (*Plecotus auritus*) and barbastelle (*Barbastella barbastellus*). Pipistrelle bats were recorded at a time that would suggest a roost is nearby. It is likely that a barbastelle roost is located in a nearby woodland and they are using the site for foraging activities.

For a comprehensive detailing of the bat activity survey (JBA 2019b) please refer to the full survey report issued.

Ecological constraints

To minimise risk of disturbance to foraging and commuting, and potentially roosting bats on the site, the following lighting minimisation precautions are recommended for the development:

- No works on site should be conducted after sunset and if security lighting is required then this should be kept to the minimal level (as necessary for safety and

security).

- Post development lighting should be directed away from boundary and on-site trees and hedgerows that are to be retained, particularly those to the south and north of the site.
- Any external lighting which is required for access (particularly where these occur along hedgerows) should be positioned low down (no higher than 1m from the ground) and the lights should be covered with a hood.
- Installation of lighting columns at the lowest practical height level with box shield fittings will minimise glare and light spillage.
- Lux level of lamps should be as low possible with covers made from glass rather than plastic as this minimises the amount of UV light, reducing the attraction effects of lights on insects.
- Security lights should be set on short timers, and be sensitive to large moving objects only.

Ecological enhancement recommendations

- Bat boxes to be installed on the proposed buildings and/or retained trees within the site to provide additional roosting opportunities.

Dormouse Survey (JBA December 2019e) survey summary:

No dormouse were recorded using the site during the survey period, therefore no mitigation or constraints to the development apply to the site with respect to dormouse.

For a comprehensive detailing of the dormouse survey (JBA 2019e) please refer to the full survey report issued.

Ecological constraints

- No ecological constraints were identified with regards to dormouse

References

Bat Conservation Trust (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*, 3rd edition. Bat Conservation Trust, London.

Eaton, M. Aebischer, N. Brown, A. Hearn, R. Lock, L. Musgrove, A. Noble, D. Stroud, D. & Gregory, R. (2015) *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*. *British Birds* **108**: 708-746.

Edgar, P., Foster, J., and Baker, J. (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

English Nature (2004) *Guidelines for Developers*. English Nature, Peterborough

James Blake Associates (2019b) *Bat Activity of Haverhill Phases (2-6) and Relief road*, on behalf of Persimmon Homes Suffolk.

James Blake Associates (2019c) *Botanical Survey (including Sulphur Clover Survey) of Haverhill Phases (2-6) and Relief road*, on behalf of Persimmon Homes Suffolk.

James Blake Associates (2019d) *Breeding Bird Survey of Haverhill Phases (2-6) and Relief road*, on behalf of Persimmon Homes Suffolk.

James Blake Associates (2019e) *Hazel Dormouse Survey of Haverhill Phases (2-6) and Relief road*, on behalf of Persimmon Homes Suffolk.

James Blake Associates (2019f) *Great Crested Newt eDNA Survey of Haverhill Phases (2-6) and Relief road*, on behalf of Persimmon Homes Suffolk.

James Blake Associates (2019g) *Hedgerow Survey of Haverhill Phases (2-6) and Relief road*, on behalf of Persimmon Homes Suffolk.

James Blake Associates (2019h) *Preliminary Ecological Appraisal of Haverhill Phases (2-6)*, on behalf of Persimmon Homes Suffolk.

James Blake Associates (2019i) *Reptile Survey of Haverhill Phases (2-6) and Relief road* on behalf of Persimmon Homes Suffolk.

James Blake Associates (2020) *Wintering Bird Survey of Haverhill Phases (2-6) and Relief road*, on behalf of Persimmon Homes Suffolk.

National Planning Policy Framework (2019) ISBN: 9781409834137

The Hedgerow Regulations (1997):

<http://www.legislation.gov.uk/ukxi/1997/1160/contents/made>

Appendix B: Ecological Constraints Plan – Phase 2A



Important Hedgerows

It is recommended that H2 is retained by the development

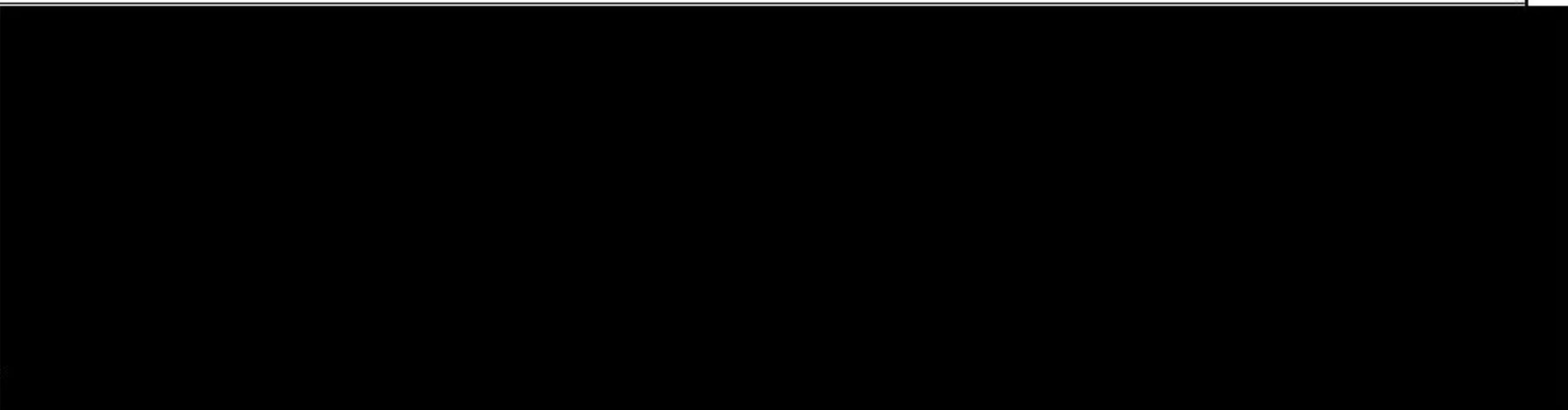
- Sensitive lighting scheme for hedgerows.
- 4m buffer from hedge base on both sides to protect ground flora such as sulphur clover.
- Specific management regimes to be highlighted in the LEMP.

Bat Activity

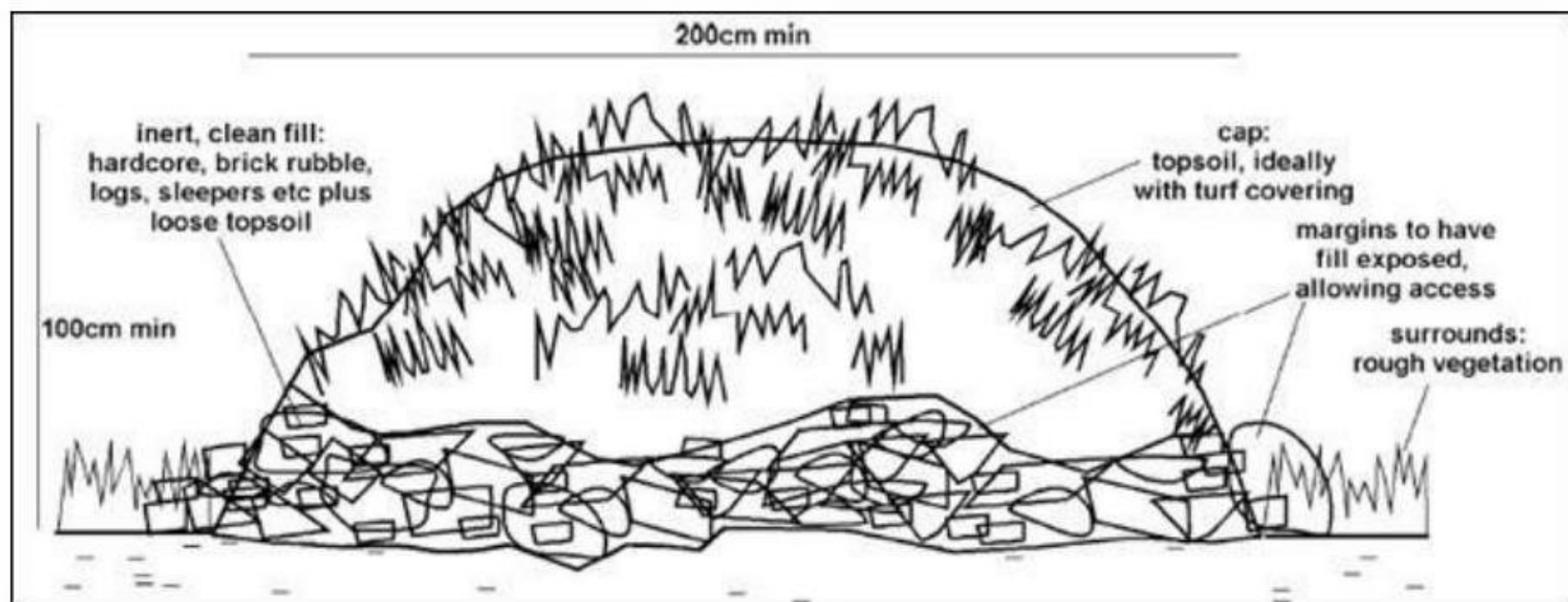
- Sensitive lighting for hedgerows and trees.

Breeding & Wintering Birds

- Nesting bird checks prior to vegetation clearance/management scheduled within months March to September (weather dependant).



Appendix C: Hibernacula design



Appendix D: Relevant protected species legislation

Species	Relevant Legislation	Level of Protection
Bats	<ul style="list-style-type: none"> Full protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended Classified as European protected species under Conservation of Habitats and Species Regulations 2010, as amended Also protected by the Wild Mammals (Protection) Act 1996 	Under the WCA (1981), it is an offence to: <ul style="list-style-type: none"> intentionally kill, injure, or take any species of bat intentionally or recklessly disturb bats intentionally or recklessly damage destroy or obstruct access to bat roosts
Birds	<ul style="list-style-type: none"> Protection under the Wildlife and Countryside Act (1981) as amended 	Under the WCA (1981), it is an offence to: (with exceptions for certain species): <ul style="list-style-type: none"> Intentionally kill, injure or take any wild bird Intentionally take, damage or destroy nests in use or being built (including ground nesting birds) Intentionally take, damage or destroy eggs Species listed on Schedule 1 of the WCA or their dependant young are afforded additional protection from disturbance whilst nesting
Widespread reptiles	<ul style="list-style-type: none"> Partially protected under Schedule 5 of the Wildlife and Countryside Act (1981) as amended. 	Under the WCA (1981), it is an offence to: <ul style="list-style-type: none"> intentionally kill or injure these animals sell, offer for sale, advertise for sale, possess or transport for the purposes of selling any live or dead animals or part of these animals