



SEAWARD PROPERTIES LTD

Land to the East of Barn Rise, Barnham

- Preliminary Ecological Appraisal Survey Report
- Protected Species Assessment Survey

Planning Issue

Prepared by	GS
Checked by	JJ
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SUMMARY

Lizard Landscape Design and Ecology has been commissioned by Seaward Properties Ltd to undertake a preliminary ecological appraisal and protected species assessment of land to the east of Barn Rise, Barnham, West Sussex (*Grid Reference: SU 963 044 – hereafter referred to as 'the site'*). A preliminary ecological appraisal (*PEA*) was undertaken of the site on 3rd January 2018, to appraise the existing ecological resource within the site and surrounding area.

The site consists of a patch of well-maintained amenity grassland, surrounded by hard surfaces and a new housing development. The site contains several scattered trees, and is bounded by fences, a privet hedge, and roads.

The site is of '*negligible*' ecological value due to the lack of complex habitats, extremely limited extent and isolated nature of the site. No ecological constraints have been identified, and no further surveys are required at the site. Should any vegetation on the site require removal, this should be carried out outside of the bird nesting season (*bird nesting season: March-August inclusive*) or following a check by a suitably-qualified ecologist.

The design of the proposed development should consider ecological enhancements for the benefit of wildlife in line with the *National Planning Policy Framework* and *Local Planning Policy*. Recommendations for ecological enhancements are provided in Section 7.0 below. Due to the site's location and scale, potential for significant ecological enhancement may be limited.

1.0 INTRODUCTION

- 1.1 Lizard Landscape Design and Ecology has been commissioned by Seaward Properties Ltd to undertake a preliminary ecological appraisal and protected species assessment of land to the east of Barn Rise, Barnham, West Sussex (*Grid Reference: SU 963 044 – hereafter referred to as 'the site'*).
- 1.2 A preliminary ecological appraisal (PEA) was undertaken of the site on 3rd January 2018, to appraise the existing ecological resource within the site and surrounding area. The *PEA* was comprised of a baseline survey conforming broadly to the *JNCC Phase 1 Habitat Survey* protocol to identify the existing habitats. In addition, a protected species assessment was undertaken to identify the potential for *European and nationally protected species* within and adjacent to the site.
- 1.3 The field survey data and analysis contained within this report were undertaken and prepared by George Sayer (*BSc(Hons) PgDip; Assistant Ecologist; Lizard Landscape Design and Ecology*). The report has been reviewed by Joe Jackson; (*Director; Landscape Architect BA (Hons) LA DipLA CMLI; Lizard Landscape Design and Ecology*).

Site Information

- 1.4 The site consists of a patch of well-maintained amenity grassland, surrounded by hard surfaces and a new housing development. The site contains several scattered trees, and is bounded by fences, a privet hedge, and roads. The site is approximately 9.1 metres above sea level and measures approximately 1250.0 square metres. Soils on site are described as *loamy soils with naturally high groundwater*.
- 1.5 Several water bodies are recorded within 500.0 m of the development site; 139.0 m to the north-east of the site is a drainage stream, which runs north-east to south-west. 390.0 m to the east is a reservoir within a nursery. The nearest area of woodland is 145.0 m to the south-east of the site.

Surrounding Landscape

- 1.6 The site is located to the east of the large village of Barnham. The surroundings are relatively rural and dominated by large nursery glasshouses, grazing paddocks and arable farmland. The residential area of Barnham begins immediately to the north-west of the site. The site is surrounded by a new housing estate, however, several other green spaces with mature trees have been retained within the development. One such space is 10.0 m to the south-east, separated from the site by a residential road.
- 1.7 The immediate surroundings contain several patches of woodland, however because of the coastal, arable and residential nature of the surrounding area, woodland is generally sparse in the wider landscape. The nearest area listed on *The National Forest Inventory* is a 1.43 Hectare broadleaved woodland growing to the rear of houses and south of the railway line, 145.0 m to the south-east of the site. The nearest *Ancient Woodland* (1.07 Ha) is called 'Nanny Copse' and is located 226.0 m north of the site.

Development Proposals

- 1.8 The development proposals consist of the construction of 3 no. detached bungalows with associated hard surfaced access paths and hard surfaced parking. Each bungalow would be set within a soft landscape garden, with new planting proposed both within the gardens and to the property boundaries. The existing oak tree and privet hedge on the site are proposed to be retained and incorporated into the design proposals.

2.0 SCOPE OF THE SURVEY

- 2.1 The aim of the preliminary ecological appraisal survey has been:
- *To identify and display the main habitat types and plant communities;*
 - *To provide a species list for the major habitats;*
 - *To identify habitats with potential for protected species;*
 - *To provide recommendations for surveys of protected species and / or ecological enhancement / compensation.*

- 2.2 The aims of the protected species assessment were;
- *To identify the potential for protected species such as roosting bats;*
 - *Identify areas where future detailed survey effort would be required and should be focused;*
 - *To establish whether other habitat features for different species groups exist to warrant further investigation.*

3.0 METHODOLOGY

- 3.1 A preliminary ecological appraisal survey was undertaken on 3rd January 2018, and the site subjected to an ecology survey using guidelines set out in the *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit (JNCC, 2003)*. This has resulted in a Site Habitat Plan (*Figure No. 01*); Species Lists for Habitat Parcels (*Table No. 01*); and Target Notes for Protected Species (*Table No. 02*).
- 3.2 Habitats within the site were classified and the presence, or potential presence, of certain protected and / or notable species of flora and fauna were identified. A summary description of the habitat within the site following the ecology phase 1 habitat survey methodology is presented in *Section 4.0*.
- 3.3 Due to the field survey consisting of only one site visit, certain species, particularly some of the flowering plants may not have been visible or may have been otherwise inconspicuous at the time of survey and hence overlooked. These are accepted constraints associated with the standard ecology phase 1 habitat survey methodology.
- 3.4 Habitats within and immediately adjacent to the site were assessed for their potential for uncommon and protected fauna including mammals, birds, reptiles and amphibians. This involved identifying features that may be used by protected species, potential foraging areas and other signs of use. Stones, dead wood and rubble were turned over and any dug holes studied for recent activity by mammals. Water bodies were recorded wherever possible within 500.0 metres of the proposed development site.

- 3.5 The results are summarised and accompanied in part by photographic evidence contained in *Appendix A – Site Photographs*. Recommendations for further investigation and survey are made in the following report.

4.0 RESULTS

4.1 Desk Study – Background information

Designated Sites and Habitats

- 4.1.1 The following section outlines the ecological context of the development site, describing any designated nature conservation sites in the vicinity of the development site. The following designated sites and habitats are not necessarily representative of the existing site's ecology, but are indicative of the ecological context of the surrounding area; a factor that may be important when assessing the presence / absence potential of certain species groups.

Statutory Protected Sites

- 4.1.2 There are no Statutory Protected Sites within 2.0 km of the proposal site. The *South Downs National Park* is located 2.35 km from the proposal site. The proposals would not impact upon this Statutory Protected Site due to the proposal site's scale, current state, and isolation.
- 4.1.3 The development is within the *Impact Risk Zone* of *Climping Beach SSSI* and *Arundel Park SSSI*, but does not fall into a category requiring consultation with *Natural England*. The site is within a *Surface Water Nitrate Vulnerable Zone*. It has been determined that changes to runoff on the site would not have a significant impact upon local nitrate levels.
- 4.1.4 The site is relatively distant and isolated from any Statutory Protected Sites. The habitats at the Statutory Protected Sites are very different from those on the proposal site. No impacts upon Statutory Protected Sites are anticipated.

Non-Statutory Protected Sites

- 4.1.5 *Sites of Nature Conservation Interest (SNCIs)* are non-statutory designations given to areas of high, local conservation value.

- 4.1.6 There are no *SNCIs* within 2.0 km of the proposal site. *Binstead Woods Complex SSCI* is located 3.1 kilometres north-east of the site. This site contains a mixture of *Ancient Woodland*, conifer plantation and species-rich pasture with rich and diverse flora. *Rewell Wood Complex SSCI* is a large *Ancient Woodland* complex with a diversity of habitats and wide glades that support rich flora and butterfly fauna. This *SSCI* is located 2.7 kilometres north of the development site.
- 4.1.7 Given the distance to these *SNCIs*, and the proposal site's scale and isolation, impacts upon these Non-Statutory Protected Sites are not anticipated.

UK Priority Habitats

- 4.1.8 UK Priority Habitats within 2.0 km of the site include *Ancient Woodland*; *Coastal and Floodplain Grazing Marsh*; *Deciduous Woodland*; *Lowland Fens*; *Woodpasture and Parkland* and *Traditional Orchard*. These habitats are relatively limited in the immediate surroundings due to the urban nature of the location. None of these habitats are present within the site. The site's existing state and isolation would suggest that there will be no impact upon UK Priority Habitats.

UK Priority Species

- 4.1.9 *UK Priority Species* within the local area, include bats such as Common Pipistrelle (*Pipistrellus pipistrellus*); other mammals such as Badger (*Meles meles*); reptiles such as Slow-Worm (*Anguis fragilis*); and amphibians such as Great Crested Newt (*Triturus cristatus*).
- 4.1.10 There are relatively few records of protected species within the local area; Common Pipistrelle bats are recorded locally in association with dwellings.

Conservation Areas and Tree Preservation Orders

- 4.1.11 The site is not located within or adjacent to a conservation area. No *Tree Preservation Orders (TPOs)* are present within the site. *TPO Reference*: TPO/BN/1/15 protects an area of trees approximately 57.0 m to the south-east of the site.

4.2 Field Survey

4.2.1 The following habitats and features were recorded within the development site and the extended survey area. The general site character has been described along with a brief description of the habitat's physical characteristics. These are shown on the Site Habitat Plan in *Figure No. 1*; Target Notes are listed in *Table No. 01*. Species List for Site Habitats Parcels have been listed within *Table No. 02*.

4.2.2 Habitats within and adjacent to the development site area include:

- *Hard Surfaces*;
- *Amenity Grassland*;
- *Intact, Single-Species Hedge*;
- *Introduced Shrubs*;
- *Scattered Trees*.

Site Description - (Refer to Appendix A – Site Photographs)

4.2.3 The site is formed of a small patch of amenity grassland. The grassland is well maintained at a height of 5.0 cm. The grass is dominated by perennial rye-grass (*Lolium perenne*) with almost no other species within the main body of the grassland, suggesting the grassland is a relatively recent turf. Diversity increases slightly towards the margins, which are sparse but contain short perennial species such as black medick (*Medicago lupulina*). The grassland offers 'negligible' ecological value (*Refer to Photographs Nos. 01-02 – Appendix A*).

4.2.4 The north-eastern border of the site is bounded by an intact hedge formed of garden privet (*Ligustrum ovalifolium*). The foliage is dense and might offer some bird nesting habitat. There is no understorey to the hedge which would provide habitat for other species. (*Refer to Photograph No. 03 – Appendix A*). To the south-east of the site, between ornamental trees are a pair of common box shrubs, trained into conical shapes. The shrubs are too limited in size to offer significant habitat (*Refer to Photograph No. 04 – Appendix A*).

- 4.2.5 Within the grassland are a small number of scattered trees; 4 no. immature and recently-planted cherry trees, and a semi-mature pedunculate oak tree. The cherry trees are too young and small to offer any habitat potential at present. The oak tree contains a bird box and would offer potential for nesting birds. The tree contains a number of pruning scars, but no cavities or features which would offer potential for roosting bats. The tree is relatively isolated from large trees within grassland further to the south, and therefore offers no significant foraging or commuting resource for bats (*Refer to Photographs Nos. 05-06 – Appendix A*).

5.0 EVALUATION

- 5.1 The construction zone and immediate surroundings are largely formed of hard surfaces and amenity grassland. There are no habitats of significant extent or diversity within or adjacent to the site. The site area is generally considered to be of '*negligible ecological value*'.
- 5.2 The oak tree present within the site holds '*negligible*' bat roosting, commuting and foraging potential, being relatively large but lacking any significant features. The tree holds '*good*' bird nesting potential, with a small bird box noted to the stem.
- 5.3 The ornamental trees and introduced shrubs offer '*negligible*' ecological potential. The intact, single-species hedge offers '*moderate*' potential for nesting birds, being dense and continuous but relatively low.

6.0 PROTECTED SPECIES – CONCLUSIONS AND RECOMMENDATIONS

Reptiles

- 6.1 There is no suitable reptile habitat within the site. The likelihood of encountering reptiles on the site is considered to be '*negligible*'. No further survey with regards to reptiles is recommended. The site should be kept regularly maintained to avoid it becoming potentially suitable for reptiles.

Badgers

- 6.2 No evidence of badgers using the site or surrounding area were noted, and the site presents extremely limited foraging resources for badgers. The surroundings offer little habitat for badgers. No further survey with regards to badgers is required for this site.

Bats

- 6.3 The site offers '*negligible*' foraging or commuting potential for bats due to the lack of vegetation and isolated nature of the site. Trees within the site offer '*negligible*' bat roosting potential. No further survey is required with regards to bats.

Birds

- 6.4 The oak tree within the site offers '*good*' potential for nesting birds. The intact, single-species hedge offers '*moderate*' potential for nesting birds. Should any vegetation require removal, this should be carried out outside of the bird nesting season (*bird nesting season: March-August inclusive*) or following a check by a suitably-qualified ecologist.

Great Crested Newts

- 6.5 There is no aquatic or terrestrial habitat for amphibians within the site area. The site is very limited in scale, and isolated from water bodies and other habitats likely to hold Great Crested Newts. The likelihood of encountering Great Crested Newt on the proposal site is considered to be '*negligible*'. No further surveys, or assessment of watercourses with regards to Great Crested Newt is required. The site should be kept regularly maintained to avoid it becoming potentially suitable for amphibians.

Others

- 6.6 No habitat for other protected species, such as water vole (*Arvicola amphibious*) was noted on the site.

7.0 ECOLOGICAL ENHANCEMENTS

- 7.1 The design of the proposed development should consider ecological enhancements for the benefit of wildlife in line with the *National Planning Policy Framework* and *Local Planning Policy*. Given the scale of the site, significant ecological enhancement is considered to be unfeasible.
- 7.2 Recommendations for ecological enhancements that could be considered as part of development proposals could include:
- *The use of flowering shrubs as listed within the RHS 'Perfect for Pollinators' plant list to provide year-round interest for invertebrates;*
 - *Incorporation of native trees, hedges and shrubs within the development proposals, which reflect those found in the surrounding area, and provide a foraging resource for birds and invertebrates which may visit the site from adjacent areas;*
 - *Shrub, hedge and tree species which could be utilised include cherry (*Prunus* sp.); Sorbus species (*Sorbus aria*; *Sorbus aucuparia*; *Sorbus intermedia*); dogwood (*Cornus sanguinea*); hawthorns (*Crataegus monogyna*; *crataegus laevigata*); field maples (*Acer campestre*); wild privet (*Ligustrum vulgare*); guelder rose (*Viburnum opulus*); birches (*Betula* spp); holly (*Ilex aquifolium*); common box (*Buxus sempervirens*);*
 - *Seeding of the proposed gardens with a diverse seed mix or turf, to create more interest for invertebrates and birds than a standard lawn. A seed mix which responds well to frequent mowing should be selected such as Emorsgate EL1 – Flowering Lawn Mixture;*
 - *Installation of a bird box to a building, fence or a proposed tree, to provide nesting opportunities for birds. Birds present locally which could be considered include Robin (*Erithacus rubecula*); House Sparrow (*Passer domesticus*) and Blue Tit (*Cyanistes caeruleus*) among others;*
 - *Installation of an invertebrate box, such as the CJ Wildlife 'Insect Tower' to increase habitat potential for invertebrates.*

8.0 REFERENCES

JNCC: Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit; (2003);

Mitchell-Jones and McLeish: Bat Workers Manual; JNCC, 3rd Edition (2004);

Streeter, D.: The Most Complete Guide to the Flowers of Britain and Ireland; Harper Collins, London (2010);

www.magic.gov.uk.

Land to the West of Neville Duke Way, Tangmere

Table No. 01 – Species List - Preliminary Ecological Appraisal Survey

Scattered Trees, Intact Single-Species Hedge and Introduced Shrubs

Common Name	Scientific Name	DAFOR
Common Box	<i>Buxus sempervirens</i>	O
Garden Privet	<i>Ligustrum ovalifolium</i>	LD
Ornamental Cherry	<i>Prunus sp.</i>	F
Pedunculate Oak	<i>Quercus roobur</i>	R

Amenity Grassland

Common Name	Scientific Name	DAFOR
Black Medick	<i>Medicago lupulina</i>	LF
Broadleaved Plantain	<i>Plantago major</i>	R
Catsear	<i>Hypochaeris radicata</i>	R
Common Daisy	<i>Bellis perennis</i>	O
Common Sow-Thistle	<i>Sonchus oleraceus</i>	R
Creeping Buttercup	<i>Ranunculus repens</i>	O
Dandelion	<i>Taraxacum officinale</i>	O
Ground Ivy	<i>Glechoma hederacea</i>	LF
Hairy Bittercress	<i>Cardamine hirsutum</i>	O
Lesser Celandine	<i>Ficaria verna</i>	R
Mosses	<i>Mosses spp.</i>	F
Mouse-Ear Chickweed	<i>Cerastium sp.</i>	LF
Perennial Rye-Grass	<i>Lolium perenne</i>	D
Prickly Sow Thistle	<i>Sonchus asper</i>	O
Willowherb	<i>Epilobium sp.</i>	O

D – Dominant; A – Abundant; F – Frequent; O – Occasional; R – Rare; L – Locally

Land to the East of Barn Rise, Barnham

Table No. 02 – Target Notes (TN) for Preliminary Ecological Appraisal and Day-time Bat Roost Assessment

TN	Feature	Description	Protected Species	Potential
<i>TN 01</i>	Mature Tree with Nestbox.	The mature oak tree within the site contains a nestbox for small birds. The tree is relatively isolated but could be used by small passerine birds.	<i>Nesting Birds</i>	<i>‘Good’</i>
<i>TN 02</i>	Scattered Trees.	The intact privet hedge is intact and of dense growth habit, and would offer some potential for nesting birds.	<i>Nesting Birds</i>	<i>‘Moderate’</i>

Appendix A – Preliminary Ecological Appraisal – Site Photographs

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LAND TO THE EAST OF BARN RISE, BARNHAM, WEST SUSSEX
LLD1345-ECO-PEA-Rev00.08.01.18

APPENDIX A - SITE PHOTOGRAPHS



Photograph No. 01 - View of the site looking north.



Photograph No. 02 - The amenity grassland was of very low diversity and well-maintained; only at the margins were other non-grasses present.

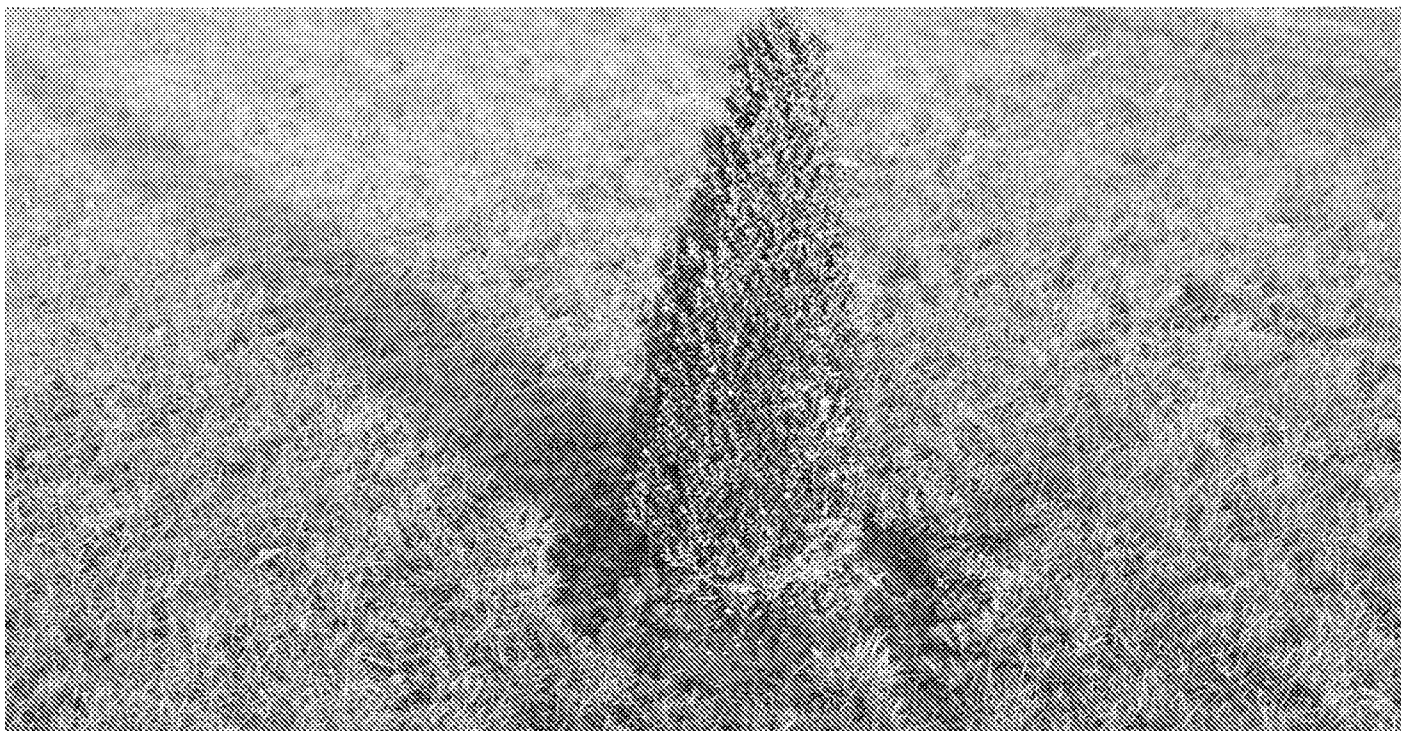
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LAND TO THE EAST OF BARN RISE, BARNHAM
PRELIMINARY ECOLOGICAL APPRAISAL SURVEY REPORT

LLD1345-ECO-PEA.Rev00.08.01.18

APPENDIX A - SITE PHOTOGRAPHS



Photograph No. 03 - Intact single-species hedge composed of garden privet (*Ligustrum ovalifolium*). the hedge offers 'moderate' potential for nesting birds.



Photograph No. 04 - Small ornamental shrubs present on the site consisted of conical box (*Buxus sempervirens*) bushes.

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APPENDIX A - SITE PHOTOGRAPHS



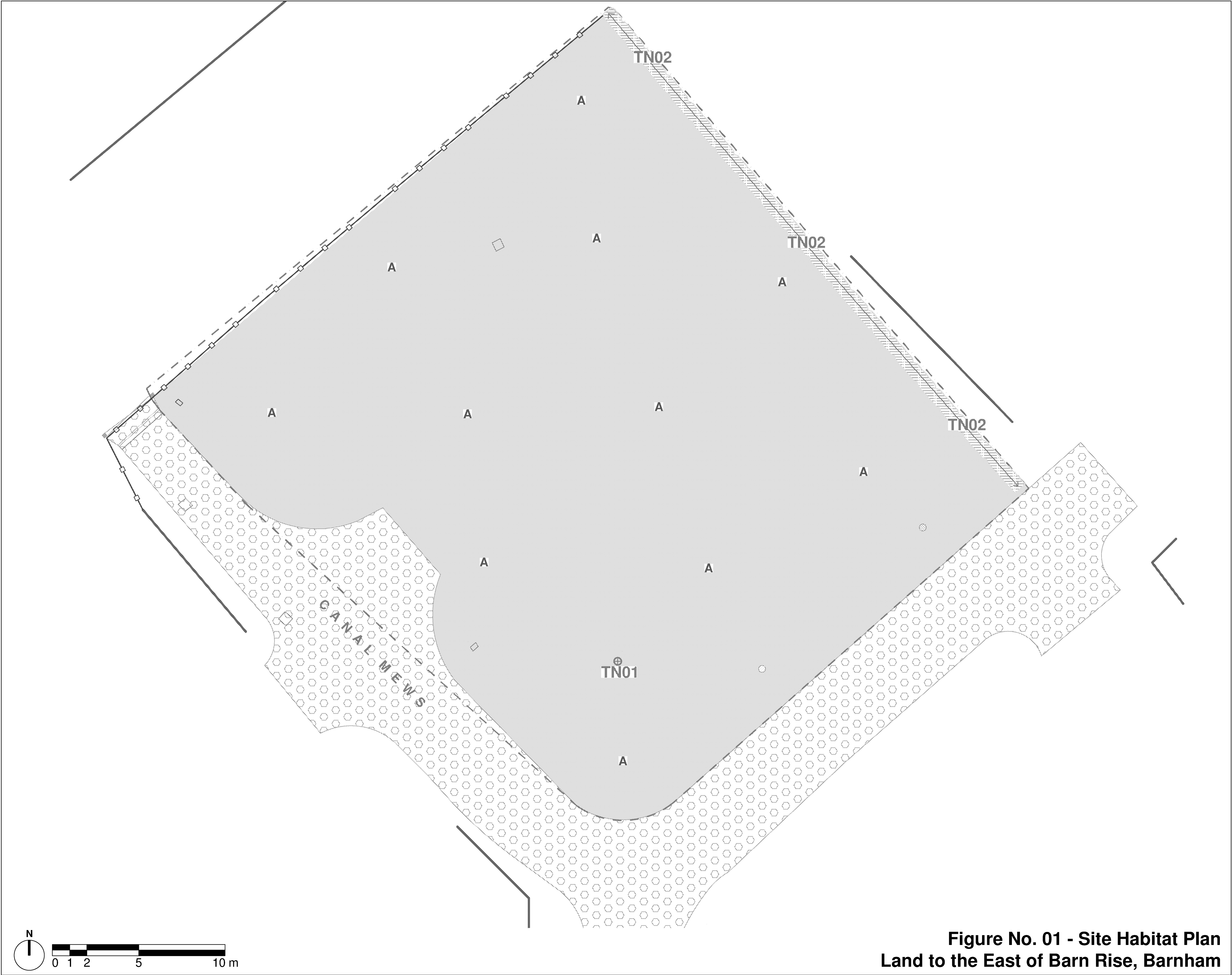
Photograph No. 05 - Immature trees within the site appear recently-planted and offer little ecological value.



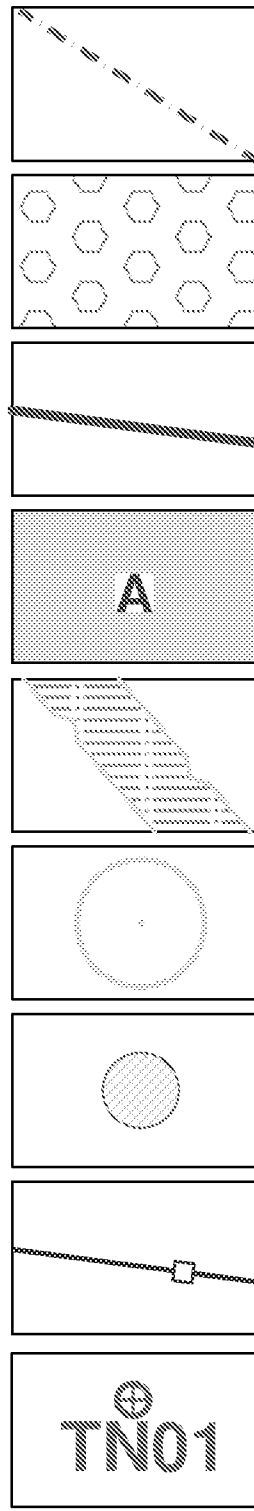
Photograph No. 06 - The semi-mature oak tree, with bird nest box present to the right. The tree offers 'good' bird nesting potential.

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PRELIMINARY ECOLOGICAL APPRAISAL SURVEY REPORT

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Legend



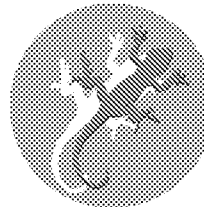
- Site Survey Boundary.
- Hard Surfaces.
- Buildings.
- Amenity Grassland.
- Intact, Single-Species Hedge.
- Scattered Trees.
- Introduced Shrubs.
- Fence.
- Target Notes.

Notes: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

Habitat areas are indicative and for information only - please do not scale from this drawing.

PLANNING ISSUE

Rev	Description	Date	Initials
00	Planning Issue	03.01.18	GS

**LIZARD**
Landscape Design and Ecology

The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7UH
T: 01903 216633 E: lizard.landscapes@btconnect.com W: lizardlandscapesecology.com

Project Title and Location		
Land to the East of Barn Rise, Barnham		
Client		
Seaward Properties Ltd		
Drawing Title		
Site Habitat Plan		
Scale	Drawn	Date
1:100@A1	GS	03.01.2018
	Approved	JJ
Drawing No.	Revision	
Figure No.01	00	
CAD Filename		
LLD1345/CAD/ECO		

Figure No. 01 - Site Habitat Plan
Land to the East of Barn Rise, Barnham