



**Land adjacent to Springfields, Bognor Regis,
West Sussex PO21**

Preliminary Ecological Appraisal

December 2019

on behalf of Mr & Mrs Thorne

Windrush Ecology Limited -- Howbery Park -- Benson Lane -- Wallingford OX10 8BA

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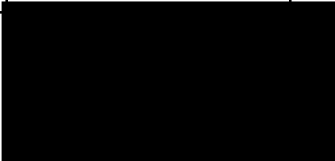
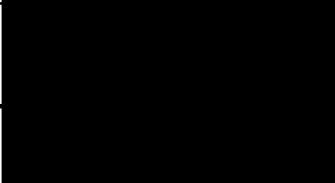
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Client	Mr & Mrs Thorne
Job name	Land adjacent to Springfields, Bognor Regis, West Sussex PO21
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1 Introduction

1.1 Site Description

The land at Springfields, referred to as 'the site' for the purpose of this report, is located on the northern outskirts of North Bersted to the east of the A259 approximately 3km to the north of Bognor Regis town centre, in West Sussex. The approximate Ordnance Survey grid reference for the site is SU 914 018. Site location plans can be found in Appendix 1.

The site comprises an area of amenity grassland (lawn) which forms part of an existing garden. To the west the site is bordered by an area of tall ruderal vegetation and scrub (alongside the A259) whilst to the north and east the site boundary is marked by a post and wire fence. There is no marked boundary to the south and the amenity grassland is contiguous with the garden of Springfields.

1.2 Aims of Study

The aims of this study are to describe and evaluate the habitats present within the site, and to assess the potential for the habitats to support protected and notable species. The report discusses the potential impacts of development on the ecology of the site, on valued habitats and on protected/notable species. The study also makes recommendations for appropriate mitigation measures and habitat enhancement with regard to habitats and species.

2 Methodology

2.1 Extended Phase 1 Habitat Survey

A walkover of the site was conducted on 4th December 2019 by Jan-Piet Stuursma on behalf of Windrush Ecology Ltd. A description of the habitats present was prepared using standard Phase 1 habitat survey methodology (JNCC 2010).

Target notes were also prepared on features of particular ecological interest and an assessment was made of the sites potential to support protected and/or notable species (such as species listed under Section 41 of the NERC Act 2006).

2.2 Assessment of Trees for Roosting Bats

Trees adjacent to the site were assessed for their potential to offer shelter to roosting bats in accordance with best practice guidelines published by the Bat Conservation Trust in 2016 (Collins, 2016). Trees were assessed from ground level (using binoculars) as either having high, moderate, low or negligible potential to shelter roosting bats according to the criteria shown in Table 1.

Table 1. Criteria for the assessment of buildings and trees for roosting bats (Collins, 2016)

Potential	Features
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure or tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation significance.

Potential	Features
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Potential roost features (PRFs) in trees that may be used by bats include (Collins, 2016):

- woodpecker holes;
- rot holes;
- hazard beams;
- other vertical or horizontal cracks and splits (such as frost cracks) in stems or branches;
- partially detached bark;
- knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar;
- man-made holes (e.g. cavities that have developed from flush cuts) or cavities created by branches tearing out from parent stems;
- cankers (caused by localised bark death) in which cavities have developed;
- other hollows or cavities, including butt-rots;
- double leaders forming compression forks with included bark and potential cavities;
- gaps between overlapping stems or branches;
- partially detached ivy with stem diameters in excess of 50mm; and bat, bird or dormouse boxes

3 Results & Evaluation

3.1 Habitats

Photographs of the site are presented in Appendix 2.

3.1.1 Amenity Grassland

The site comprises an area of amenity grassland (lawn) which appears to be managed through regular mowing. The sward is dominated by grasses, with only very few herbaceous species present, including species typical of amenity grassland such as dandelion *Taraxacum officinale* and ground ivy *Glechoma hederacea*. The grassland is species-poor and of a uniform structure.

The habitat does not meet the criteria for grassland habitats of ‘principal importance’ as listed under Section 41 of the NERC Act 2006, such as ‘Lowland Meadows’. The amenity grassland habitat is considered to be of negligible ecological value.

3.1.2 Improved Grassland

The north and east boundaries are marked by a post and wire fence, with an unmown strip of improved grassland associated with the fenceline. Species noted along the fenceline include creeping thistle *Cirsium arvense*, yarrow *Achillea millefolium* and bramble *Rubus fruticosus* with single shrubs of hazel *Corylus avellana* and elder *Sambucus nigra*.

The unmown improved grassland habitat does not meet the criteria for grassland habitats of ‘principal importance’ as listed under Section 41 of the NERC Act 2006. The improved grassland habitat is considered to be of low ecological value.

3.1.3 Tall Ruderal Vegetation & Scrub

An area of ruderal vegetation and scrub is present outside of the western site boundary. The scrub vegetation is dominated by bramble *Rubus fruticosus* and hawthorn *Crataegus monogyna*. Ruderal species include creeping thistle, comfrey *Symphytum officinale*, stinging nettle *Urtica dioica*, broad-

leaved dock *Rumex obtusifolius*, hogweed *Heracleum sphondylium*, cow parsley *Anthriscus sylvestris* and mugwort *Artemisia vulgaris*.

The areas of scrub and ruderal vegetation do not meet the criteria for habitats of 'principal importance' as listed under Section 41 of the NERC Act 2006. The scrub and ruderal vegetation are considered to be of low ecological value. The tall ruderal and scrub vegetation do not form a 'hedgerow'.

3.1.4 Other Habitats

To the north and west of the site boundary is a field of arable land. Arable land is considered to be of negligible ecological value.

To the north, the amenity grassland habitat of the site is contiguous with areas of amenity grassland within the property of Springfields. There are several mature holm oak trees *Quercus ilex* located outside of the site, within the amenity grassland beyond the southern site boundary.

3.2 Species

3.2.1 Birds

The amenity and improved grassland are not suitable breeding habitat for ground nesting bird species, such as the skylark *Alauda arvensis*. This is due to the short sward and disturbance through amenity use. The scrub and shrubs outside of the site boundary offer potential nest sites to breeding birds.

3.2.2 Bats

There are no trees within the area of scrub to the west of the site, and no structures or trees within the site that could offer shelter to bats.

The grassland habitats of the site are considered to be poor for foraging bats and bat activity. The tall ruderal vegetation and scrub beyond the western site boundary may offer some foraging and movement habitat for bats, forming habitat connectivity through the landscape.

3.2.3 Reptiles

The amenity grassland is unsuitable for reptiles. Whilst adjacent scrub, ruderal vegetation and unmanaged improved grassland may offer cover to common reptile species, it is considered likely that reptiles are also absent from these adjacent habitats.

3.2.4 Amphibians

There are no ponds or waterbodies within the site or in close proximity to the site boundary. There are therefore no habitats that amphibians could use for breeding within the site.

There is a pond located approximately 460m to the south-east of the site and it is possible that amphibians are present and breeding within this waterbody. However, it is considered that amphibians will not be moving from this pond to the site.

This is for a number of reasons. Firstly, the pond is far enough away for potential dispersal to be minimal. Secondly, the site is separated from the pond by the A259 and it is likely that this road will form a partial or full barrier to amphibian dispersal. Finally, it is considered that the amenity grassland habitat of the site is very poor for amphibians whilst on land.

Given the above, it is considered that amphibians are absent from the site.

3.2.5 Other Species

No evidence of badgers was noted during the survey.

It is considered that the amenity grassland habitat is poor for other species, and that species such as rare invertebrates and plants are absent.

4 Discussion

4.1 Relevant Legislation & Policy Guidance

4.1.1 Nesting Birds

Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. The nesting season for most species is between March and August inclusive.

4.1.2 National Planning Policy Framework (NPPF)

The revised National Planning Policy Framework was updated in February 2019 and sets out the government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous National Planning Policy Framework published in March 2012, and revised in July 2018.

The NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in

exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

- The need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;
- The cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and
- Any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.

To protect and enhance biodiversity and geodiversity, plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

When determining planning applications, local planning authorities should apply the following principles:

- 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;
- 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;
- 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; and
- 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.

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; and
- ❖ Sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

4.1.3 *The Natural Environment & Rural Communities Act 2006*

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on the Secretary of State to publish, review and revise lists of living organisms and types of habitat in England that are of principal importance for the purpose of conserving English biodiversity.

It also requires the Secretary of State to take, and promote the taking of, steps to further the conservation of the listed organisms and habitats. This is important in the context of planning decisions as the National Planning Policy Framework affords planning policy protection to the habitats of species listed by virtue of Section 41.

There are no habitats or species listed within Section 41 of the NERC Act 2006 that are considered to be relevant to the site.

4.2 Potential Impacts

4.2.1 *Habitats*

Loss of amenity grassland is unlikely to result in any ecological impacts; this is due to the very low ecological value of this habitat. It is considered that loss of amenity grassland will not require compensation.

There are no potential impacts on habitats of 'principal importance'. There are no foreseeable impacts on other habitats, such as scrub and ruderal vegetation beyond the site boundaries.

4.2.2 *Species*

4.2.2.1 *Bats*

There are no foreseeable impacts on roosting bats.

External lighting can have an impact on bats by affecting their activity and behaviour. In that certain species of bat have been shown to be attracted to mercury vapour lamps which emit light over a very broad-spectrum including UV light to which insects are particularly sensitive.

Furthermore, insects can be attracted in large numbers to mercury lamps and so can bats of the genera *Nyctalus* and *Pipistrellus*, including noctules *N. noctula* and common pipistrelles *P. pipistrellus* (Rydell and Racey 1993). Lighting has shown to have an opposite effect on certain other species, such as the lesser horseshoe bat *Rhinolophus hipposideros*, which have been shown to avoid areas of artificial light (Stone *et al.* 2009).

4.2.2.2 *Birds*

Loss of amenity grassland will result in no foreseeable impacts on bird species, including ground nesting species.

4.2.2.3 *Other Species*

There are no foreseeable impacts on other species such as reptiles, amphibians and badgers.

5 Recommendations

5.1 Further Surveys

No further surveys are recommended at the current time.

5.2 Habitats

It is recommended that any new planting comprises native species of tree and shrub, as well as ornamental species that are of known ecological value.

It is recommended that habitat enhancement is provided through the planting of a new, species-rich hedgerow along the northern, eastern and southern boundaries of the site. Species recommended for hedgerow planting are:

- Hawthorn *Crataegus monogyna*
- Blackthorn *Prunus spinosa*
- Hazel *Corylus avellana*
- Dogwood *Cornus sanguinea*
- Field maple *Acer campestre*
- Dog rose *Rosa canina*
- Spindle *Euonymus europaeus*

5.3 Species

5.3.1 Bats

It is recommended that external lighting is avoided within the site, unless it is necessary for reasons of security and safety. In particular, light spillage along the western boundary should be avoided, so that a dark corridor is created around the peripheries of the site in order to facilitate the movement of bats, as well as other nocturnal wildlife.

Where external lighting is required, it should be kept at low level and a low intensity, with hoods and baffles used to direct the light to where it is required (Bat Conservation Trust 2008, Emery 2008). To minimise the impact on bats, the use of low pressured sodium lamps is recommended in preference to mercury or metal halide lamps which have a UV element that can affect the distribution of insects and attract bats to the area, affecting their natural behaviour (Bat Conservation Trust 2008).

The key principals for choosing a suitable type of lamp are:

- Avoid blue-white short wavelength lights: these have a significant negative impact on the insect prey of bats. Use alternatives such as warm-white (long wavelength) lights as this will reduce the impact on insects and therefore bats.
- Avoid lights with high UV content: (e.g. metal halide or mercury light sources) or reduce/completely remove the UV content of the light. Use UV filters or glass housings on lamps which filter out a lot of the UV content.

Selecting an appropriate lamp unit that is designed to be environmentally friendly will minimise light spill, but further controls can be imposed by installing directional accessories such as baffles, hoods and louvres on lamps to direct light away from ecologically sensitive areas.

LED (Light Emitting Diode) units are an effective way to direct the light into small target areas and are recommended for lighting the proposed parking and turning area. Composite LEDs can be switched off to reduce/direct the light beam to specific areas.

5.3.2 Birds

If required, trimming of trees and/or shrubs should be undertaken outside of the bird breeding season (avoiding March to August, inclusive) so as to avoid any impacts on active birds' nests.

6 References

Bat Conservation Trust, 2018. *Bats and artificial lighting in the UK: Bats and the Built Environment series*. The Bat Conservation Trust, London.

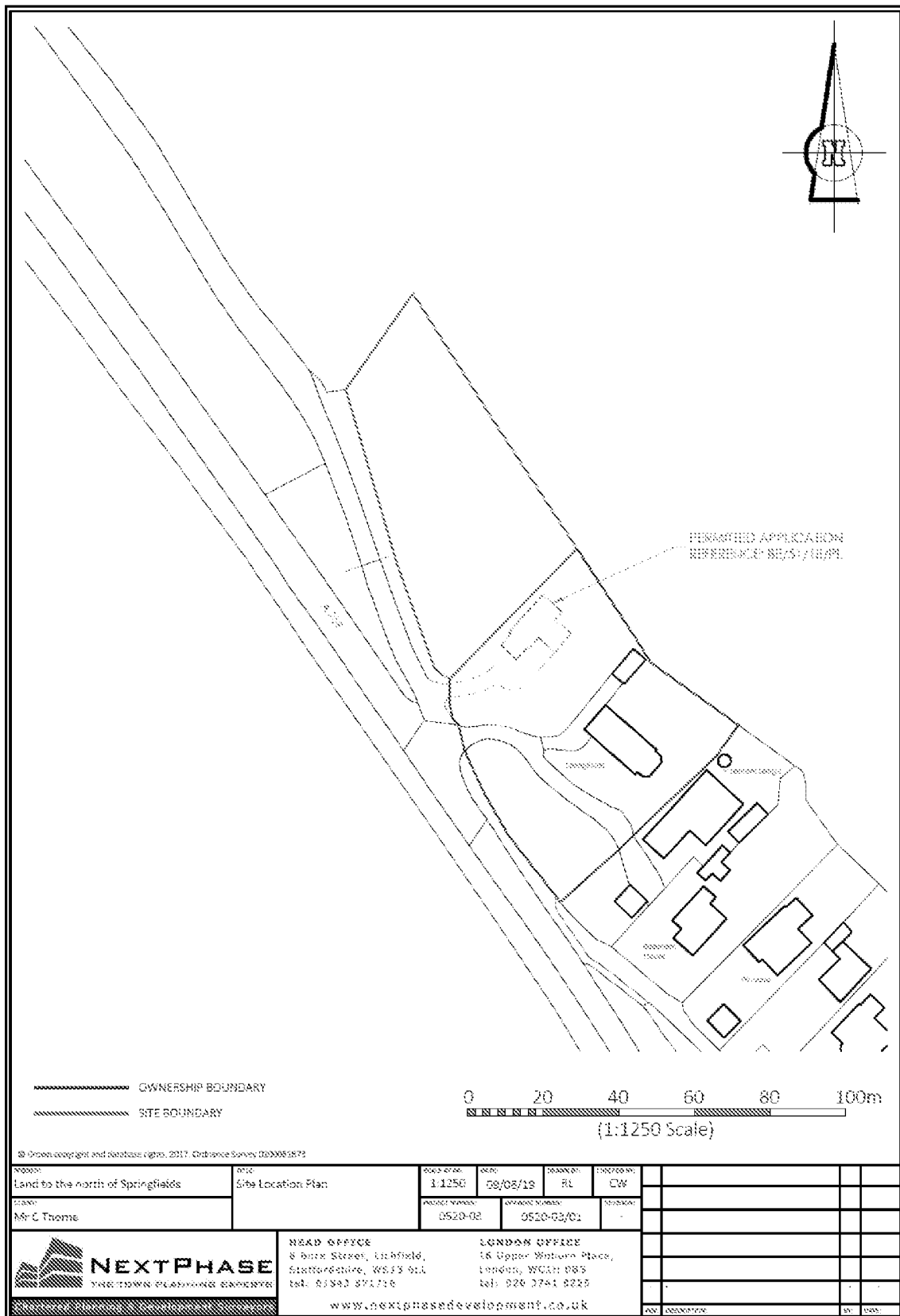
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Collins, J. 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.

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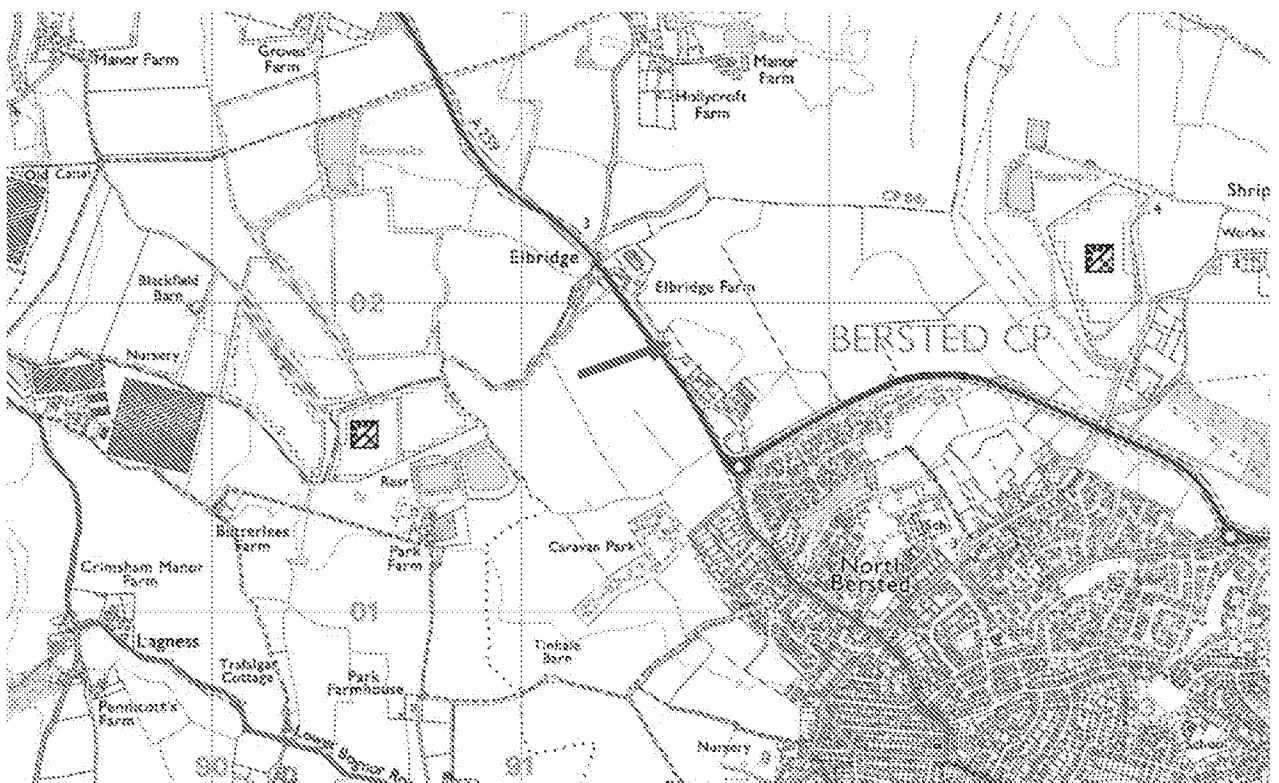
JNCC, 2010. *Handbook for Phase 1 Habitat Survey - a technique for environmental audit*. JNCC First published 1990; reprinted in 2010.

7 Appendix 1. Site Location Plans





Aerial photograph showing location of the site (outlined in red). Source: Google Earth Pro



Ordnance Survey map showing the approximate location of the site (indicated by the red arrow) within the local area. Source: www.bing.com/maps/

8 Appendix 2. Photographs



Photograph 1. The site viewed from the south-west, showing vegetation beyond the west boundary (left).



Photograph 2. Unmarked south site boundary (foreground) with the garden of Springfield beyond. It should be noted that the holm oak trees are all located outside of the site.



Photograph 3. Mown amenity grassland (left) and unmown improved grassland (right) along the eastern boundary of the site.



Photograph 4. Scrub and ruderal vegetation adjacent to the western boundary of the site.



Photograph 5. The site viewed from the north.



Photograph 6. Detail of the amenity grassland, showing the species-poor nature of the sward.