

**Ecological Appraisal of Land Adjacent to Sunnydale
Close, Surfleet, Spalding, Lincolnshire PE11 4BS**

March 2015



**Andrew P. Chick MPhil
Ecological Consultant**

The Old Farmhouse, Washdyke Lane, Fulbeck,
Grantham, Lincs NG32 3LB
Tel: 07880700313
E-mail: andrew@forktail.co.uk

Report Prepared by Andrew Chick

--- Page left blank ---

Ecological Appraisal of Land Adjacent to Sunnydale Close, Surfleet, Spalding, Lincolnshire PE11 4BS

CONTENTS

1	INTRODUCTION	5
1.1	Accurate lifespan of ecological data	5
2	SITE DESCRIPTION	5
2.1	Site communities and habitats	5
2.2	Survey constraints	8
2.3	Proposed work	8
3	METHODS	8
3.1	Data search	8
3.2	Bats	8
3.2.1	Bat activity survey	8
3.3	Common species of birds	9
3.4	Badgers	9
3.5	Water voles	9
3.6	Otter	9
3.7	Other statutorily protected species	9
4	RESULTS	9
4.1	Data search	9
4.2	Habitats and plant species	9
4.3	Bats	10
4.4	Birds	10
	Schedule 1 species of birds (Barn Owls)	10
4.5	Badgers	10
4.6	Water voles	10
4.7	Otter	11
4.8	Other statutorily protected species	11
5	DISCUSSION AND RECOMMENDATIONS	11
5.1	Bats	11
5.1.1	Legal protection	11
5.1.2	Recommendations	12
5.2	Badgers	12
5.2.1	Legal protection	12
5.2.2	Requirement for further work	12
5.3	Birds	13
5.3.1	Legal protection	13
5.3.2	Recommendations	13
5.4	Water Voles	13
5.4.1	Legal protection	13
5.4.2	Recommendations	14
5.5	Enhancement recommendations	14
5.5.1	Habitat creation	14
5.6	Further survey recommendations	14
5.6.1	Ecological walk-over	14
5.6.2	Nesting birds	14
6	REFERENCES	15
	APPENDIX 1	16
	FIGURE 2 Photographic reference map for land to Sunnydale Close, Surfleet, Spalding, Lincolnshire PE11 4BS	16
	APPENDIX 2	19
	Representative images of the survey site	19
	APPENDIX 3	21
	Native Species Suitable for Planting and Sowing	21

PHOTOGRAPHS

Photograph 1: Representative views of field drain showing the southern section looking north (left) and the northern section looking south (right).	6
Photograph 2: Representative view of one of the patches of Tuberous Comfrey (left) and image showing the western boundary hedgerow/fencing (right).	6
Photograph 3: Representative view of frog spawn.	11
Photograph 4: [1] - Representative image from Sunnydale Close, showing hawthorn hedgerow.	19
Photograph 5: [2] - Representative view of southern section of field drain looking north.	19
Photograph 6: [3] - Representative view of the southern field drain looking north,	19
Photograph 7: [4] - Representative view of the southern section looking south from infill section.	19
Photograph 8: [5] - Representative view of northern section looking north (note patch of tuberous comfrey).	19
Photograph 9: [6] - Representative view of the northern section looking south.	19
Photograph 10: [7] - Representative view of northern section showing wooden fencing and Leylandii boundary.	20
Photograph 11: [8] - Representative view of the northern sections showing trees T1 – T5.	20
Photograph 12: [9] - Representative view of the northern sections showing trees T1 – T5.	20
Photograph 13: [10] - Representative view of the drain field margin (public footpath).	20
Photograph 14: [11] - Representative view of arable fields looking east.	20

Ecological Appraisal of Land Adjacent to Sunnydale Close, Surfleet, Spalding, Lincolnshire PE11 4BS

1 INTRODUCTION

Independent Ecologist and Protected Species Consultant, Andrew Chick MPhil, was commissioned by Mr Brian Gilham (Status Design) to undertake an ecological appraisal of Ecological Appraisal of Land Adjacent to Sunnydale Close, Surfleet, Spalding, Lincolnshire PE11 4BS. The survey is required in connection with a planning application with South Holland District Council.

This report details the methods used, describes the habitats and species found on the site, discusses the results and makes recommendations for further work. The common English names are used for all species referred to throughout the text.

1.1 Accurate lifespan of ecological data

The majority of ecological data remains valid for only short periods of time due to the inherently transient nature of the subject. Where the species/group being surveyed for is present within the site, the data is considered to be accurate for two years. However, an update may be needed in order to obtain a European Protected Species licence, if such a licence is required. Where absent, although the data is considered accurate for two years, an update may be required if the habitats surrounding the site are of a quality that are likely to encourage the species to move into the site in the interim.

2 SITE DESCRIPTION

2.1 Site communities and habitats

The survey site is a steep-sided field drain which forms the western boundary of an intensively managed arable field, located on the eastern site of Surfleet. The eastern edge of the drain forms a public footpath. There are no buildings on the survey site. The site is located to the east of dwellings adjacent to the B1356 Surfleet Road which runs between Gosberton and Pinchbeck. Access to the site is via Sunnydale Close, through a small wooden gateway located at TF 25194 27844 beside a short section of hawthorn hedgerow *Crataegus monogyna*. A general site location is given in Appendix 1 as Figure 1 and shows the approximate survey boundary (marked with a red line). Representative photos of the site are given in Appendix 2, with the location of all photographs marked on Figure 2.

The field drain is broken into two sections (total length approximately 100 metres), with the southern section located between TF 25192 27850 and TF 25185 27870 (approximately 20 metres) and the northern section between TF 25183 27878 and TF 25163 27953 (approximately 80 metres).



Photograph 1: Representative views of field drain showing the southern section looking north (left) and the northern section looking south (right).

The water in the drain is an average of 5cms deep and at the time of the survey appeared to be static with no obvious direction of flow. The banks are at an incline of 50° and are approximately 2 metres tall. They are populated with a mosaic of neutral grassland and emergent ruderal vegetation. Between TF 25185 27870 and 25183 27878 (approximately 10 metres) the drain has been filled in without any obvious pipe or culvert.

At the time of the survey, the land immediately to the east of the field drain had been ploughed leaving a narrow grass margin (max 0.5 – 1 metre). The species composition of the field margin included cock's-foot *Dactylis glomerata*, false oat-grass *Arrhenatherum elatius*, common nettle *Urtica dioica* and cleavers *Galium aparine*.

For the most part, the species composition and structure across the eastern bank is uniform with a similar variety of species to the field margins. Additional species present include lesser celandine *Ranunculus ficaria*, great willowherb *Epilobium hirsutum* and broad-leaved dock *Rumex obtusifolius*. There are three large patches of tuberous comfrey *Symphytum tuberosum* which in places engulf much of the bank (this species is likely to be a garden escapee, now naturalised on site).



Photograph 2: Representative view of one of the patches of Tuberous Comfrey (left) and image showing the western boundary hedgerow/fencing (right).

The western bank runs parallel to gardens associated with Sunnydale Close and Surfleet Road, and is defined by an assortment of wooden fences, brick walls, temporary metal fencing and Leyland cypress hedge/screen. There are seven semi-mature trees (T1 – T7) consisting of five silver birch *Betula pendula*, one beech *Fagus sylvatica* and one cherry *Fagus sylvatica* (see Figure 1 for details of tree locations etc.). The tops of the silver birch and beech have all been pollarded. The western bank has similar species composition, additional species include Spanish Bluebell *Hyacinthoides hispanica* and daffodil *Narcissus* spp. In places, sections of the eastern bank is heavily shaded by the Leyland cypress hedge.

Aquatic flora recorded within the drain was limited, suggesting the site had been recently managed (cleaned out), but included fool's-water-cress *Apium nodiflorum* and emerging common reed *Phragmites australis*. In areas, large amounts of floating blanket weed had developed.

A full list of all flora species recorded during the survey undertaken on March 26th 2015 is shown below:

Species	Common name
<i>Apium nodiflorum</i>	Fool's-water-cress
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Betula pendula</i>	Silver Birch
<i>Bryonia dioica</i>	White Bryony
<i>Crataegus monogyna</i>	Hawthorn
<i>Cuprocyparis leylandi</i>	Leyland Cypress
<i>Dactylis glomerata</i>	Cock's-foot
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Fagus sylvatica</i>	Beech
<i>Galium aparine</i>	Cleavers
<i>Hedera helix</i> subsp. <i>helix</i>	Common Ivy
<i>Hyacinthoides hispanica</i>	Spanish Bluebell
<i>Lamium album</i>	White Dead-nettle
<i>Lamium purpureum</i>	Red Dead-nettle
<i>Narcissus</i> spp	Daffodil
<i>Phragmites australis</i>	Common Reed
<i>Prunus</i> spp	Cherry Tree
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus ficaria</i>	Lesser Celandine
<i>Rubus fruticosus</i> agg.	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Sambucus nigra</i>	Elder
<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio vulgaris</i>	Groundsel
<i>Symphytum tuberosum</i>	Tuberous Comfrey

Taraxacum officinale agg.

Dandelion

Urtica dioica

Common Nettle

2.2 Survey constraints

There were no constraints to the survey, with full access available to the whole site.

2.3 Proposed work

The proposed work entails installation of a drainage pipe and infilling the field drain.

3 METHODS

The site was surveyed on 26th March 2015 by Andrew Chick (Natural England bat licence number CLS01487 (Class 2) and great crested newt licence number CLS01487). All habitats and plant communities within and adjacent to the site were recorded and mapped. Representative photographs were taken.

During the initial appraisal of the site the protected species considered likely to occur on site were identified. These were:

- Bats
- Common species of birds
- Schedule 1 Species of bird – Barn Owls
- Water Voles
- Otter
- Badgers

The methods used to survey for these species are detailed below.

3.1 Data search

The NBN (National Biodiversity Network) Gateway website was consulted in order to check for records of protected species from the area.

3.2 Bats

With the aid of binoculars, a visual inspection was made of all trees on and adjacent to the survey area for features with the potential to support roosting bats. Such features included dis-used woodpecker holes, cracks and splits in boughs, delaminated bark and ivy-clad trunks.

3.2.1 Bat activity survey

A bat activity and emergence survey could not be carried out as March is outside of the bat active season (which runs from April until late-September). During the colder months of the

year bats spend their time in hibernation, with intermittent activity coinciding with milder weather.

3.3 Common species of birds

All habitats were assessed for their potential to support nesting birds. All bird species seen or heard were noted. All disused and active nests were recorded.

3.4 Badgers

The survey site and within a 30m distance of the survey site boundary were searched for signs of the presence of badger setts, footprints, padways, feeding signs and latrines.

3.5 Water voles

The water course was assessed for its potential to support water voles. The full length of both sections of the field drain were walked, and a search was made for signs of use by water voles including feeding stations, burrows, latrine sites/droppings, runs through the vegetation, characteristic 'plop' sound as the animals enter the water and cropped grass around burrow entrances.

3.6 Otter

The water course was assessed for habitat that may be used by otters. This includes significant habitats, but also features within close proximity of water bodies that provide lying up or denning sites, such as fallen trees or bankside holes.

3.7 Other statutorily protected species

As part of the extended walkover of the site and its environs, a search for signs of use by other statutorily protected species was also undertaken. Particular attention was focused on the habitats and plants and the presence of any ponds.

4 RESULTS

4.1 Data search

The National Biodiversity Network (NBN) www.nbn.org.uk was searched for records of protected species within the 10km OS grid square TF22.

4.2 Habitats and plant species

The habitat types and plant species recorded within the site during the survey on 26th March 2015 are common in the local context and the region as a whole, with no plants of local importance or significance found. None of the plant species recorded on site appear on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended).

4.3 Bats

The field drain and western boundary are likely to support foraging and commuting bats. The semi-mature trees (T1 – T7) on the western border were all considered to be too young to contain features that could support roosting bats. Under the proposals, the trees are unaffected by the proposed works.

4.4 Birds

A typical assemblage of common British birds was recorded on the site and in the immediate environs of the site. A total of 9 species were noted during the survey in March; these are listed below:

English Name	Latin Name
Collared Dove	<i>Streptopelia decaocto</i>
Carrion Crow	<i>Corvus corone</i>
Blue Tit	<i>Cyanistes caeruleus</i>
Great Tit	<i>Parus major</i>
Wren	<i>Troglodytes troglodytes</i>
Blackbird	<i>Turdus merula</i>
Robin	<i>Erithacus rubecula</i>
Chaffinch	<i>Fringilla coelebs</i>
Greenfinch	<i>Chloris chloris</i>

The drain bank, hedgerows and trees within the site offer nesting/shelter habitat and year round foraging opportunities to a range of common bird species. No nests were recorded during the survey undertaken in March 2015.

Schedule 1 species of birds (Barn Owls)

No barn owls were seen during the course of the daylight survey, no **evidence** of either current or past roosting by this species was found within the survey site.

4.5 Badgers

No evidence of badger was found within the actual survey area. There were some tracks in the field margins, which may be attributed to badger, but may also be the grazing animals (rabbits). No setts were found within the survey area, and none were found in the land adjacent.

4.6 Water voles

No evidence indicating the presence of water vole, such as burrows, droppings or feeding remains was recorded in association with the field drain. The site was considered to provide optimal habitat for water vole, due to the soft mud banks suitable for burrowing. However, the lack of connectivity to other habitats was considered to be a limiting factor.

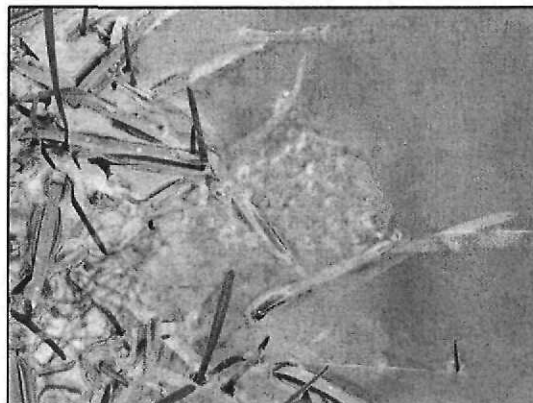
4.7 Otter

No evidence indicating the presence of otter, such as footprints or spraints, was recorded in association with the field drain. The field drain is relatively small and exposed, and was considered that its suitability to support otter was very limited. The lack of connectivity to other habitats was considered to be an additional limiting factor.

4.8 Other statutorily protected species

No ponds were found in the immediate environs of the survey site. No ponds were located on the local Ordnance Survey 1:25 000 scale map.

During the survey undertaken on 26th March 2015 at least four separate concentrations of frog spawn were recorded in both sections of the field drain.



Photograph 3: Representative view of frog spawn.

5 DISCUSSION AND RECOMMENDATIONS

5.1 Bats

5.1.1 Legal protection

In England, Scotland and Wales, all bats are strictly protected under the Wildlife and Countryside Act 1981 (and as amended); in England and Wales this legislation has been amended and strengthened by the Countryside and Rights of Way (CROW) Act 2000.

Bats are also protected by European legislation; the EC Habitats Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 – often referred to as 'The Habitat Regs'. Taken together, all this legislation makes it an offence to:

- Deliberately capture (or take), injure or kill a bat
- Intentionally or recklessly disturb a group of bats where the disturbance is likely to significantly affect the ability of the animals to survive, breed, or nurture their young or likely to significantly affect the local distribution or abundance of the species whether in a roost or not
- Damage or destroy the breeding or resting place of a bat
- Possess a bat (alive or dead) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost
- Sell (or offer for sale) or exchange bats (alive or dead) or parts of bats

A roost is defined as being 'any structure or place that is used for shelter or protection', and since bats regularly move roost site throughout the year, a roost retains such designation whether or not bats are present at the time.

5.1.2 Recommendations

The survey site is considered likely to be used generally for foraging by bats, and the boundary hedgerow/field drain as a flight corridor.

No assessment was made for the presence of any foraging bats as March is outside of the bat active season (which occurs between April and late-September). During the colder months of the year bats spend their time in hibernation, with only intermittent activity coinciding with milder weather.

5.2 Badgers

5.2.1 Legal protection

Badgers are legally protected under The Protection of Badgers Act 1992.

Under this piece of legislation it is an offence:

- To wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so;
- To recklessly or deliberately interfere with a sett by damaging or destroying it;
- To recklessly or deliberately obstruct access to, or any entrance of, a badger sett;
- To disturb a badger when it is occupying its sett.

A badger sett is defined in the legislation as 'any structure or place which displays signs of current use by a badger'. If a sett is clearly unused and has been so for a period of 12 months or more then it can be considered disused and it falls outwith the Protection of Badgers Act 1992.

Any sett disturbance/destruction must only be carried out under licence from Natural England, the Statutory Nature Conservation Organisation.

5.2.2 Requirement for further work

No badger setts or field signs were found within the actual survey site.

However, badgers are likely to be present within the vicinity of the survey site. Therefore good working practices should be adhered to during any future development work, with any trenches covered overnight and any pipes over 200mm in diameter capped off at night.

The results of the survey indicate that badgers are not using the immediate survey area at present and therefore no further work is considered necessary at this stage. Badgers do

occur in the area and it is recommended that regular checks are undertaken of the site prior to development commencing; they are a mobile species and the site occupies a rural location on the edge of the village with links to the wider countryside.

5.3 Birds

5.3.1 Legal protection

All common wild birds are protected under The Wildlife and Countryside Act 1981 (and as amended). Under this legislation it is an offence to:

- Kill, injure or take any wild bird
- Take, damage or destroy the nest of any wild bird while it is in use or being built
- Take or destroy the egg of any wild bird

Certain rare breeding birds are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (and as amended). Under this legislation they are afforded the same protection as common wild birds and are also protected against disturbance whilst building a nest or on or near a nest containing eggs/unfledged young.

5.3.2 Recommendations

The field drain and ground cover on the field margin offer nesting, shelter and foraging opportunities to a range of common bird species.

To minimise any potential impact or disturbance to protected breeding birds, any proposed clearance/infill work should be undertaken outside of the bird breeding season, i.e. from late-August and be completed by late February.

If the proposed work is to be carried out during the breeding season, an ecologist should be consulted. It is likely that work will have to be delayed if any active nests of birds are found in the field drain and ground cover present, until such time as the young have fledged.

5.4 Water Voles

5.4.1 Legal protection

Water vole is a mammal species which in the United Kingdom typically inhabits well vegetated banks of slow flowing rivers, ditches, dykes and other water bodies such as ponds and lakes. They feed on fringe vegetation and live in extensive burrow systems in banks and densely matted vegetation along the margins of such water bodies.

In recent years water voles have undergone a substantial decline in their numbers in many parts of the United Kingdom as a result of habitat degradation, pollution and predation by introduced American mink *Mustela vison*.

The protection to water vole under the Wildlife & Countryside Act 1981 (as amended) has been extended since 6 April 2008. This means that water vole is now fully protected under section 9 of the WCA. This legal protection makes it an offence to:

- intentionally kill, injure or take (capture) a water vole;
- possess or control a live or dead water vole, or any part of a water vole;
- intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb water voles while they are using such a place;
- sell, offer for sale or advertise for live or dead water voles.

5.4.2 Recommendations

At the time of the survey no signs of use by water voles were noted.

It is recommended that a precautionary check for signs of use by water voles is undertaken immediately ahead of work commencing.

5.5 Enhancement recommendations

5.5.1 Habitat creation

Habitat creation could be carried out to compensate for the works and to enhance the site for nature conservation and wildlife. In particular BAP Priority Habitats should be considered. It is important that ecological 'corridors' are maintained along the site boundaries. Habitat creation could include planting of native species-rich hedgerows along the boundary and sowing wildflower rich grassland areas in the proposed open space. A list of suitable native species for planting and sowing is provided in Appendix 3.

For the proposed habitats to provide some compensation for the works it is essential that native species suitable to the local area are used for planting and that they are designed to maximise their wildlife potential.

5.6 Further survey recommendations

5.6.1 Ecological walk-over

An ecological walk-over survey should be carried out approximately one month prior to proposed works commencing. This will update the present survey results and ascertain whether any badgers have dug setts on the site in the intervening period.

5.6.2 Nesting birds

If it is necessary to carry out works during the bird breeding season, then a nesting bird survey must be carried out by a qualified ecologist prior to works going ahead to ensure that

no active nests will be affected. If active nests are found then work will have to be delayed until all chicks have fledged.

6 REFERENCES

Bat Conservation Trust 2012 'Good Practice Guidelines'

Eaton M A et al 2009. *Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man*. British Birds 102, pp296–341.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155.

Natural England – Badgers and Development – A Guide to Best Practice and Licensing. Version 10/11

JNCC 2003 Handbook for Phase 1 Habitat Survey: a technique for environmental audit. JNCC, Peterborough.

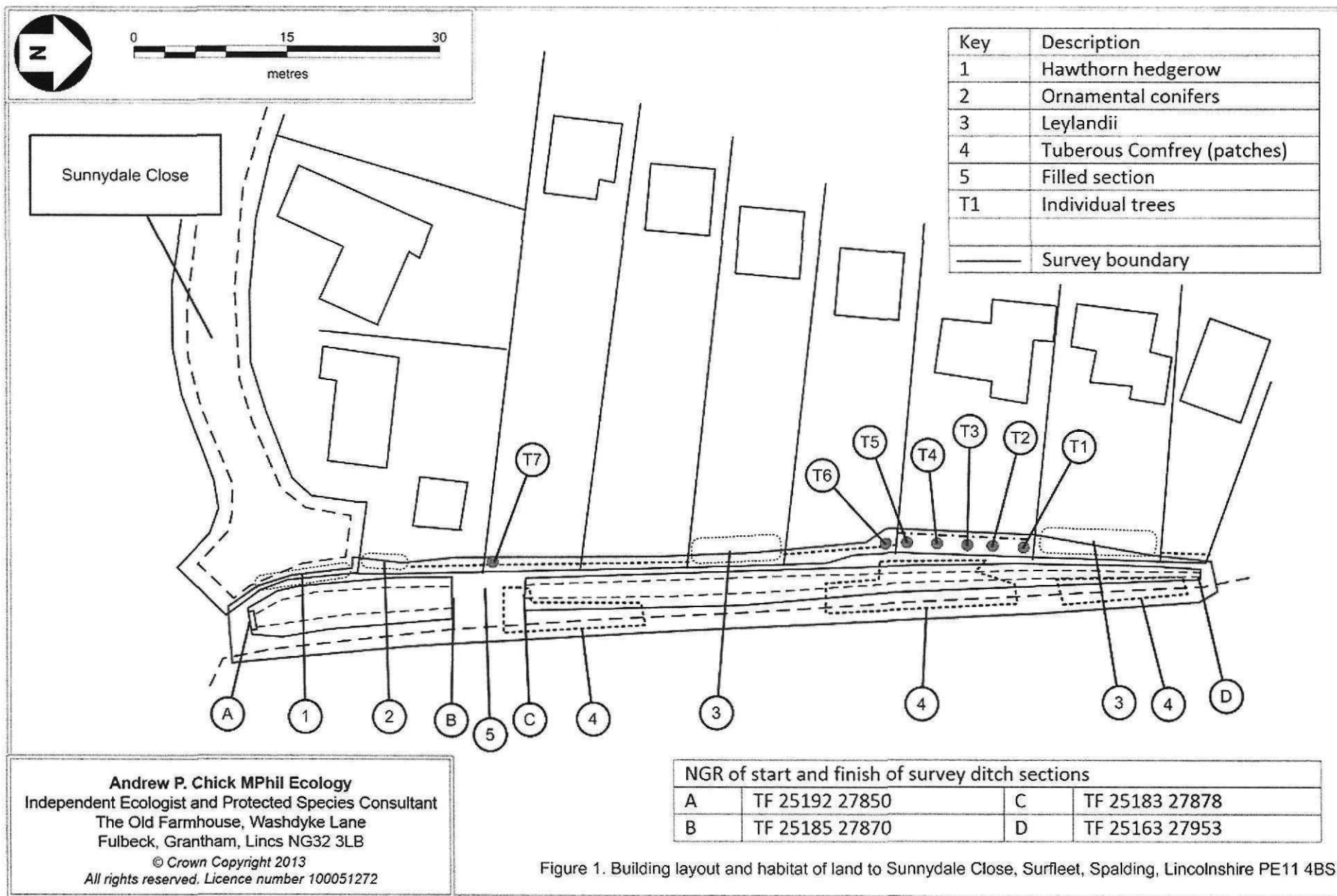
NBN Gateway. Available: nbn.org.uk.

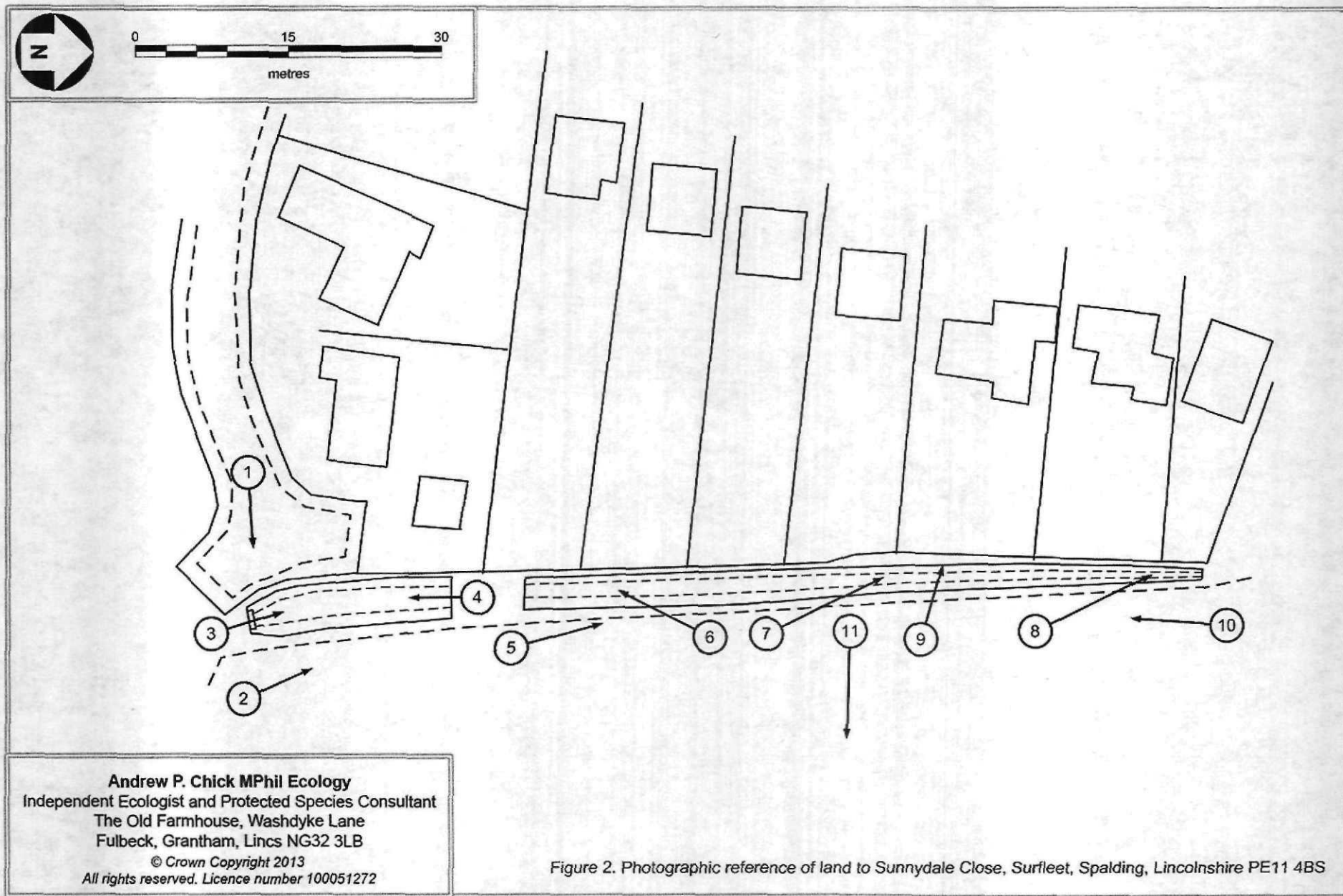
Stace, C. 1997 New Flora of the British Isles. University Press, Cambridge.

APPENDIX 1

**FIGURE 1 Site habitat and location map for land to Sunnydale Close, Surfleet, Spalding,
Lincolnshire PE11 4BS**

**FIGURE 2 Photographic reference map for land to Sunnydale Close, Surfleet, Spalding,
Lincolnshire PE11 4BS**

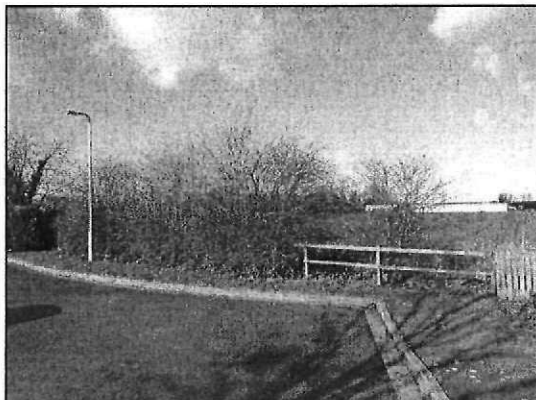




APPENDIX 2

Representative images of the survey site

Numbers in square brackets refer to references on figure 2.



Photograph 4: [1] - Representative image from Sunnydale Close, showing hawthorn hedgerow.



Photograph 5: [2] - Representative view of southern section of field drain looking north.



Photograph 6: [3] - Representative view of the southern field drain looking north,



Photograph 7: [4] - Representative view of the southern section looking south from infill section.



Photograph 8: [5] - Representative view of northern section looking north (note patch of tuberous comfrey).



Photograph 9: [6] - Representative view of the northern section looking south.



Photograph 10: [7] - Representative view of northern section showing wooden fencing and Leylandii boundary.



Photograph 11: [8] - Representative view of the northern sections showing trees T1 – T5.



Photograph 12: [9] - Representative view of the northern sections showing trees T1 – T5.



Photograph 13: [10] - Representative view of the drain field margin (public footpath).



Photograph 14: [11] - Representative view of arable fields looking east.

APPENDIX 3**Native Species Suitable for Planting and Sowing**

The plants should be obtained from specialist nurseries and preferably be of local genetic stock.

1. Native Shrub and Tree Species

Shrubs	
Blackthorn	<i>Prunus spinosa</i>
Buckthorn	<i>Rhamnus catharticus</i>
Crab apple	<i>Malus sylvestris</i>
Dog rose	<i>Rosa canina</i>
Dog wood	<i>Cornus sanguinea</i>
Field maple	<i>Acer campestre</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Spindle	<i>Euonymus europaeus</i>
Wild privet	<i>Ligustrum vulgare</i>
Trees	
Ash	<i>Fraxinus excelsior</i>
Pedunculate oak	<i>Quercus robur</i>
Silver birch	<i>Betula pendula</i>
Wild cherry	<i>Prunus avium</i>

2. Native Wildflower Species

Grasses	
Common bent	<i>Agrostis capillaris</i>
Crested dog's-tail	<i>Cynosurus cristatus</i>
Meadow fescue	<i>Festuca pratensis</i>
Red fescue	<i>Festuca rubra</i>
Rough meadow-grass	<i>Poa trivialis</i>
Small timothy	<i>Phleum bertolonii</i>
Smooth meadow-grass	<i>Poa pratensis</i>
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>
Yellow oat-grass	<i>Trisetum flavescens</i>
Herbs	
Bird's-foot trefoil	<i>Lotus corniculatus</i>
Black knapweed	<i>Centaurea nigra</i>
Common cat's-ear	<i>Hypochoeris radicata</i>
Common sorrel	<i>Rumex acetosa</i>
Common vetch	<i>Vicia sativa</i>
Cowslip	<i>Primula veris</i>
Field scabious	<i>Knautia arvensis</i>
Lady's bedstraw	<i>Galium verum</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow vetchling	<i>Lathyrus pratensis</i>
Oxeye daisy	<i>Leucanthemum vulgare</i>
Red clover	<i>Trifolium pratense</i>
Selfheal	<i>Prunella vulgaris</i>
Yarrow	<i>Achillea millefolium</i>