

# A47 Blofield to North Burlingham Dualling

**Scheme Number: TR010040**

**Volume 6**

## **6.2 Environmental Statement Appendices**

### **Appendix 8.13 – Botanical Survey Report**

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009

December 2020

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning  
(Applications: Prescribed Forms and  
Procedure) Regulations 2009**

A47 Blofield to North Burlingham  
Development Consent Order 202[x]

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**ENVIRONMENTAL STATEMENT APPENDICES**  
**Appendix 8.13 Botanical Survey Report**

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# WILD FRONTIER ECOLOGY

A47 Blofield to North Burlingham



Botanical Survey Report

August 2020



Report produced by	Submitted to
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The data which we have prepared and provided is accurate, and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that any opinions expressed are our best and professional bona fide opinions.



This report conforms to the British Standard 42020:2013 Biodiversity - Code of practice for planning and development.



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## 1. Non-technical Summary

Wild Frontier Ecology was commissioned by Sweco to undertake botanical surveys on the proposed re-routing and dualling of the A47 trunk road between North Burlingham and Blofield. A previous study was carried out in 2017 by Amey.

The entire route was walked over on 7<sup>th</sup> and 14<sup>th</sup> July, with the survey covering the proposed works area of the A47 between Blofield and North Burlingham, including mainly arable habitat and 18 hedgerows.

The majority of the area surveyed is currently under arable cultivation. No county level habitats will be directly affected. No rare species were found during the surveys, with the majority of the habitats (other than arable) comprising poor semi-improved grassland areas with a high abundance of false oat grass. This is a widespread habitat, and therefore the impact will be at a local level.

Eighteen hedgerows were recorded in total, which will be impacted by the proposed development. Two potentially important hedgerows under the Hedgerow Regulations will be bisected. Where impact on hedgerows is unavoidable, compensatory planting of replacement hedgerow will be necessary in the surrounding landscape at a favourable ratio.

The scheme should be put through the Defra Metric<sup>1</sup> to produce a plan for measurable net gain at an early opportunity, to influence design going forward.

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<sup>1</sup>Natural England (2019) The Biodiversity Metric 2.0  
<http://publications.naturalengland.org.uk/publication/5850908674228224>



## 2. Background

Wild Frontier Ecology was commissioned to undertake botanical surveys on a proposed re-routing and dualling of the A47 trunk road between North Burlingham and Blofield. The route is shown in Figure 1.

There was a previous study completed in 2017<sup>2</sup> - this study achieved full coverage of the route. The brief was as follows:

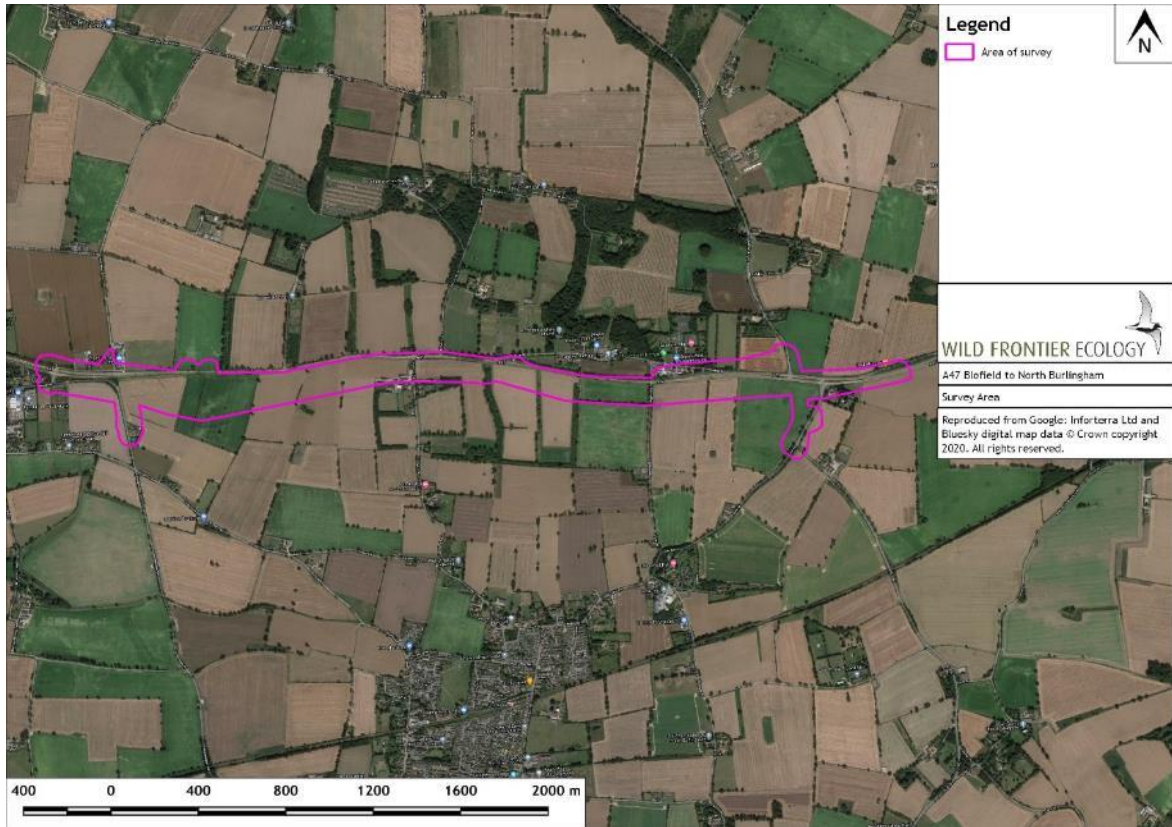
- Detailed walkover surveys of specific habitat types identified in the Phase 1 survey by Amey (2017) along the proposed road corridor, assessing dominant species communities and assigning habitats to National Vegetation Classification (NVC) habitat types wherever possible;
- Evaluation of species-rich hedgerows identified on the AMEY 2017 Phase 1 Habitat map under The Hedgerows Regulations for potential to be classed as 'Important'.
- A report containing an assessment of the value of the habitats present, and any constraints they pose to future development of the road scheme, with recommendations for any further surveys, avoidance, mitigation or enhancement measures that are required.

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<sup>2</sup> AMEY, (2017). A47 Blofield to North Burlingham, Norfolk. Botanical Survey (interim).



Figure 1. Survey Area (pink outline)





### **3. Relevant Legislation and Policy**

#### **3.1 Statutory and Non-statutory Site Designations**

##### *3.1.1 International (European) Site Designations*

The European Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) as amended directs the designation of important wildlife sites through the European Community as Special Areas of Conservation (SACs), and gives statutory protection to habitats and species listed in the Directive as being threatened or of community interest. Sites identified as candidate SAC (cSAC) are provided with the same level of protection as SAC.

Annex I of 92/43/EEC as amended lists habitat types which are regarded as being of European importance. Included within these are a number of 'priority habitat types' which are habitats regarded as being in danger of disappearance and whose natural range falls broadly within the European Union. This European law had been transposed into UK legislation by The Conservation (Natural Habitats) &c Regulations 1994, now replaced by The Conservation of Habitats and Species Regulations 2017.

Habitats of European-wide importance for birds are listed under the EC Wild Birds Directive (79/409/EEC) as amended. Habitats designated under this Directive are notified as Special Protection Areas (SPAs) and are identified for holding populations > 1% of the reference population as defined in Appendix 4 of the SPA review of bird species listed in Annex 1 of the same Council Directive. Sites identified as potential SPA (pSPA) are provided with the same level of protection as SPA.

Wetlands of International Importance are designated under the Ramsar Convention.

##### *3.1.2 National (UK) Site Designations*

National ecological designations, such as Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) are also afforded statutory protection. SSSIs are notified and protected under the jurisdiction of the Wildlife and Countryside Act 1981 (WCA 1981) as amended. SSSIs are notified based on specific criteria, including the general condition and rarity of the site and of the species or habitats supported by it.

##### *3.1.3 Non-Statutory County Site Designations*

Local authorities may designate certain areas as being of local conservation interest. The criteria for inclusion may vary between areas. Most individual counties have a similar scheme, within Norfolk such sites are designated as County Wildlife Sites (CWS). Designation of such sites does not itself confer statutory protection, but they are a material consideration when planning applications are being determined.

#### **3.2 Species Designation and Protection**

##### *3.2.1 Plants*

Schedule 8 of the WCA 1981 lists plant species which are afforded special protection. It is an offence to pick, uproot or destroy any species listed on Schedule 8 without prior authorisation, and all plants are protected from unauthorised uprooting (i.e. without the landowner's permission) under Schedule 13 of the WCA 1981.

A Vascular Plant Red List for England<sup>3</sup> provides a measure of the current state of England's flora measured against standardised IUCN criteria. Any taxon that is threatened - Critically Endangered (CR), Endangered (EN), Vulnerable (VU) - or Near Threatened (NT) does not have statutory protection but should be regarded as a priority for conservation in England. It should be noted that 'threat' is not synonymous with 'rarity', some of the species concerned are still relatively common and widespread.

It is an offence to plant or cause to spread in the wild of certain plant species under Schedule 9 of the Wildlife and Countryside Act 1981. Plant species relevant to the East of England are as follows:

Himalayan Balsam *Impatiens glandulifera*  
 Variegated yellow archangel *Lamiastrum galeobdolon* ssp *argentatum*  
 Virginia creeper *Parthenocissus quinquefolia*  
 False acacia *Robinia pseudoacacia*  
 Water fern *Azolla filiculoides*  
 Giant Hogweed *Heracleum mantegazzianum*  
 Knotweed species including Japanese knotweed *Fallopia japonica*  
 Parrot's feather *Myriophyllum aquaticum*  
 Floating pennywort *Hydrocotyle ranunculoides*  
 Rhododendron *Rhododendron ponticum*  
 Giant rhubarb *Gunnera tinctoria*  
 New Zealand Pigmyweed *Crassula helmsii*  
 Waterweeds *Elodea* spp.

All waste containing Japanese knotweed comes under the control of Part II of the Environmental Protection Act 1990 and is classified as controlled waste.

### 3.3 Priority Species and Habitats

Other priority species and habitats which are a consideration under the National Planning Policy Framework (NPPF) 2019, placing responsibility on Local Planning Authorities to aim to conserve and enhance biodiversity and to encourage biodiversity in and around developments. There is a general biodiversity duty in the Natural Environment and Rural Communities (NERC) Act 2006 (Section 40) which requires every public body in the exercising of its functions to 'have regard, so far as is consistent with the proper exercise of those 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.

Section 41 of the NERC Act lists a number of species and habitats as being Species/Habitats of Principal Importance. These are species/habitats in England (also known as Priority Habitats/ Species) which had been identified as requiring action under the UK BAP, and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. The protection of either Priority Species or Habitats is not statutory, but "specific consideration"<sup>4</sup> should be afforded by Local Planning Authorities when dealing with them in relation to planning and development control.

<sup>3</sup> Stroh, P.A., Leach, S.J., August, T.A., Walker, K.J., Pearman, D.A., Rumsey, F.J., Harrower, C.A., Fay, M.F., Martin, J.P., Pankhurst, T., Preston, C.D. & Taylor, I. 2014. A Vascular Plant Red List for England. Botanical Society of Britain and Ireland, Bristol.

<sup>4</sup> JNCC (2015) UK BAP priority species and habitats

<http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

Also, there is an expectation that public bodies would refer to the Section 41 list when complying with the Section 40 duty.

Widespread Priority Habitats in East Anglia include:

Arable field margins  
 Traditional orchards  
 Hedgerows  
 Eutrophic standing waters  
 Ponds  
 Rivers  
 Lowland calcareous grassland  
 Lowland dry acid grassland  
 Lowland meadows  
 Lowland fen  
 Coastal and floodplain grazing marsh  
 Reedbeds  
 Lowland mixed deciduous woodland  
 Wet woodland  
 Wood-pasture and parkland

Priority Species of higher plant in East Anglia (which have no specific legal protection) include:

<i>Arabis glabra</i>	Tower Mustard
<i>Artemisia campestris</i>	Field Wormwood
<i>Astragalus danicus</i>	Purple Milk-vetch
<i>Blysmus compressus</i>	Flat-sedge
<i>Bupleurum tenuissimum</i>	Slender Hare`s-ear
<i>Calamagrostis stricta</i>	Narrow Small-reed
<i>Carex divisa</i>	Divided Sedge
<i>Carex ericetorum</i>	Rare Spring-sedge
<i>Clinopodium acinos</i>	Basil Thyme
<i>Dryopteris cristata</i>	Crested Buckler-fern
<i>Euphrasia pseudokerneri</i>	Chalk Eyebright
<i>Filago lutescens</i>	Red-tipped Cudweed
<i>Filago pyramidata</i>	Broad-leaved Cudweed
<i>Galeopsis angustifolia</i>	Red Hemp-nettle
<i>Hordeum marinum</i>	Sea Barley
<i>Liparis loeselii</i>	Fen Orchid
<i>Lycopodiella inundata</i>	Marsh Clubmoss
<i>Melampyrum cristatum</i>	Crested Cow-wheat
<i>Muscari neglectum</i>	Grape-hyacinth
<i>Najas marina</i>	Holly-leaved Naiad
<i>Oenanthe fistulosa</i>	Tubular Water-dropwort
<i>Platanthera bifolia</i>	Lesser Butterfly-orchid
<i>Potamogeton acutifolius</i>	Sharp-leaved Pondweed
<i>Potamogeton compressus</i>	Grass-wrack Pondweed
<i>Puccinellia fasciculata</i>	Borrer`s Saltmarsh-grass
<i>Scandix pecten-veneris</i>	Shepherd`s Needle
<i>Scleranthus annuus</i>	Annual Knawel
<i>Silene gallica</i>	Small-flowered Catchfly
<i>Silene otites</i>	Spanish Catchfly

*Sium latifolium*  
*Stellaria palustris*  
*Veronica triphyllos*  
*Veronica verna*

Greater Water Parsnip  
 Marsh Stitchwort  
 Fingered Speedwell  
 Spring Speedwell

Many of these Priority Species are very restricted in range, and are unlikely to occur within the surveyed area.

### 3.4 Policy

The overarching policy guidance for biodiversity is included within the National Planning Policy Framework (NPPF<sup>5</sup>). Section 15 of this document (Conserving and Enhancing the Natural Environment) outlines the approach that Local Authorities should adopt when considering ecological issues within the planning framework, including the principles of the Mitigation Hierarchy. This espouses that in addressing impacts on valued features, avoidance should be the first option considered, followed by mitigation (minimising negative impacts). Where avoidance and mitigation are not possible, compensation for loss of features can be used as a last resort. Paragraphs 170, 174 and 175 of the NPPF give policy support to the provision of measurable **net gains** in biodiversity. Paragraph 174 specifies that plans should identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including locally designated sites (such as CWS); and promote the conservation, restoration and enhancement of priority habitats and ecological networks and the protection and recovery of priority species.

There is also policy guidance outlined in the National Networks National Policy Statement (NN NPS<sup>6</sup>). Section 5 of this document (Generic Impacts) outlines guidance on biodiversity and ecological conservation relating specifically to the construction of highways and railways in the UK. As a general principle the development of these transport links should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives.

<sup>5</sup> MHCLG (2019). National Planning Policy Framework. UK Government.

<sup>6</sup> Department for Transport (2015). NN NPS

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/387223/npsnn-web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/387223/npsnn-web.pdf)

## 4. Methods

### 4.1 Report Objectives

The report sets out the field survey results, and makes comparison with those found in 2017, updating the assessment where necessary.

### 4.2 Desk Study

No desk study was undertaken for this report, because it was considered that desk data used in 2017 would be sufficient to inform the report. In analysing the habitats and field data, extensive use has been made of aerial imagery<sup>7</sup>, of which there is an intermittent record from 1946 to present.

### 4.3 Field Survey

The site was walked over on 7<sup>th</sup> July 2020 by Robert Yaxley BSc CEcol CEnv MCIEEM and Adam Stickler BSc MSc and on 14<sup>th</sup> July by Adam Stickler and Ptolemy McKinnon BSc MSc. Priority was given to areas which had previously been covered in 2017, but other areas were also surveyed where the habitat was considered to be of interest or value.

Compared to the 2017 surveys and report by Amey, a similar area was covered. More hedgerows were surveyed this year with a comparison of hedgerows from this year to last year.

Wild Frontier Ecology 2020	AMEY 2017
H1	Not noted
H2	Not noted
H3	Not noted
H4	Not noted
H5	H1
H6	Not noted
H7	H3
H8	Not noted
H9	H4
H10	H5
H11	Not noted
H12	H7
H13	H8
H14	H9
H15	H10
H16	Not noted
H17	Not noted
H18	Not noted
Now part of allotment, of no botanical importance due to being an area of amenity	H2
Now a plantation (Area 13)	H6

<sup>7</sup> <http://www.historic-maps.norfolk.gov.uk/mapexplorer/>; Google Earth Pro.



Habitats were found to be relatively similar with the majority of land cultivated for arable and any margins or verges comprised of poor semi-improved or improved grassland with no rare species recorded.

During the botanical survey, each of the individual habitats has been subject to walkover survey of vegetation cover and the dominant plant species noted, using the DAFOR scale (D = dominant, A= abundant, F= frequent, O= occasional and R= rare, with L=local often used as a prefix to moderate abundance categories). Photographs were taken of habitats and species. Where rare or scarce species of plant were encountered, the location was recorded and the species photographed.

Hedgerows were surveyed for species richness, gathering sufficient information to judge whether the hedgerow was likely to be an important hedgerow under the Hedgerow Regulations 1997. Hedges were not subject to a full assessment under the Regs, but an estimate of species richness was made in order to screen hedgerows for likely importance.

## 5. Results

### 5.1 Site Survey

The site was surveyed for hedgerows and areas of botanical interest.

There was coverage of the whole site by the survey, with the exception of an area in the east due to access restrictions during the survey (shown in Figure 2b).

Eighteen hedgerows were recorded during the surveys (see Figures 3a and 3b). Two hedgerows considered 'important' under The Hedgerow Regulations were recorded. These were both species rich hedgerows which comprise five woody species or more.

Many of the grassland areas surveyed (roadside verges, permanent field margins) show a high abundance of False oat *Arrhenatherum elatius*, which indicates an NVC community of MG1 *Arrhenatherum elatius* grassland. This is a widespread vegetation community which is probably the most common vegetation community in these habitats across England.

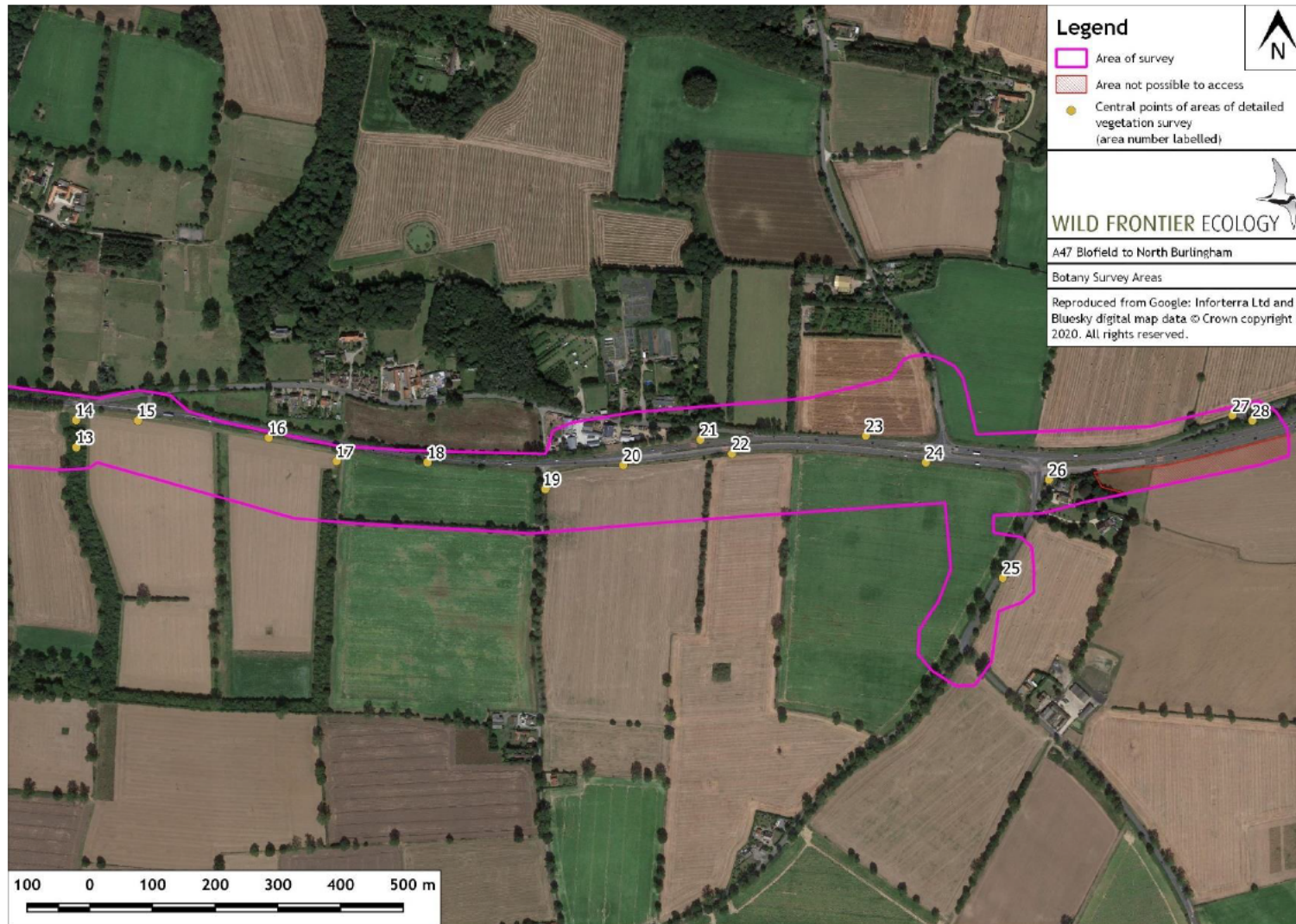
No rare species of plant were located, and species diversity was generally low. This is a reflection of the fact that the entire survey area has long been intensively farmed, as shown by the aerial image record. Even in 1946 the land appears to have neat arable fields, with heavily managed hedgerows and no obvious areas of semi-natural or unmanaged habitat.

Figure 2a. Central Points of areas of detailed vegetation survey





Figure 2b. Central points of areas of detailed vegetation survey (cont.) and area not possible to access



**Figure 3a. Hedgerows surveyed**

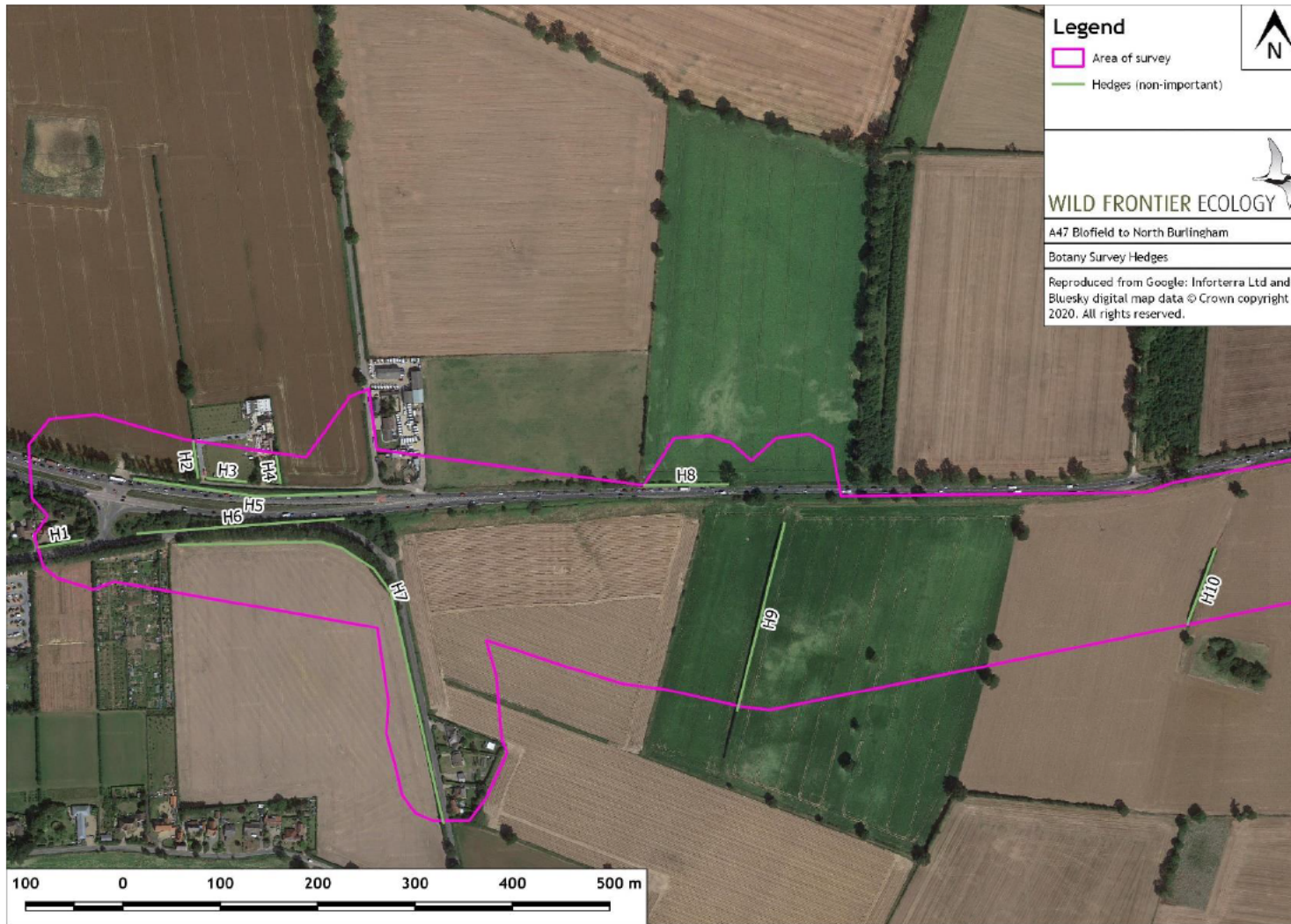
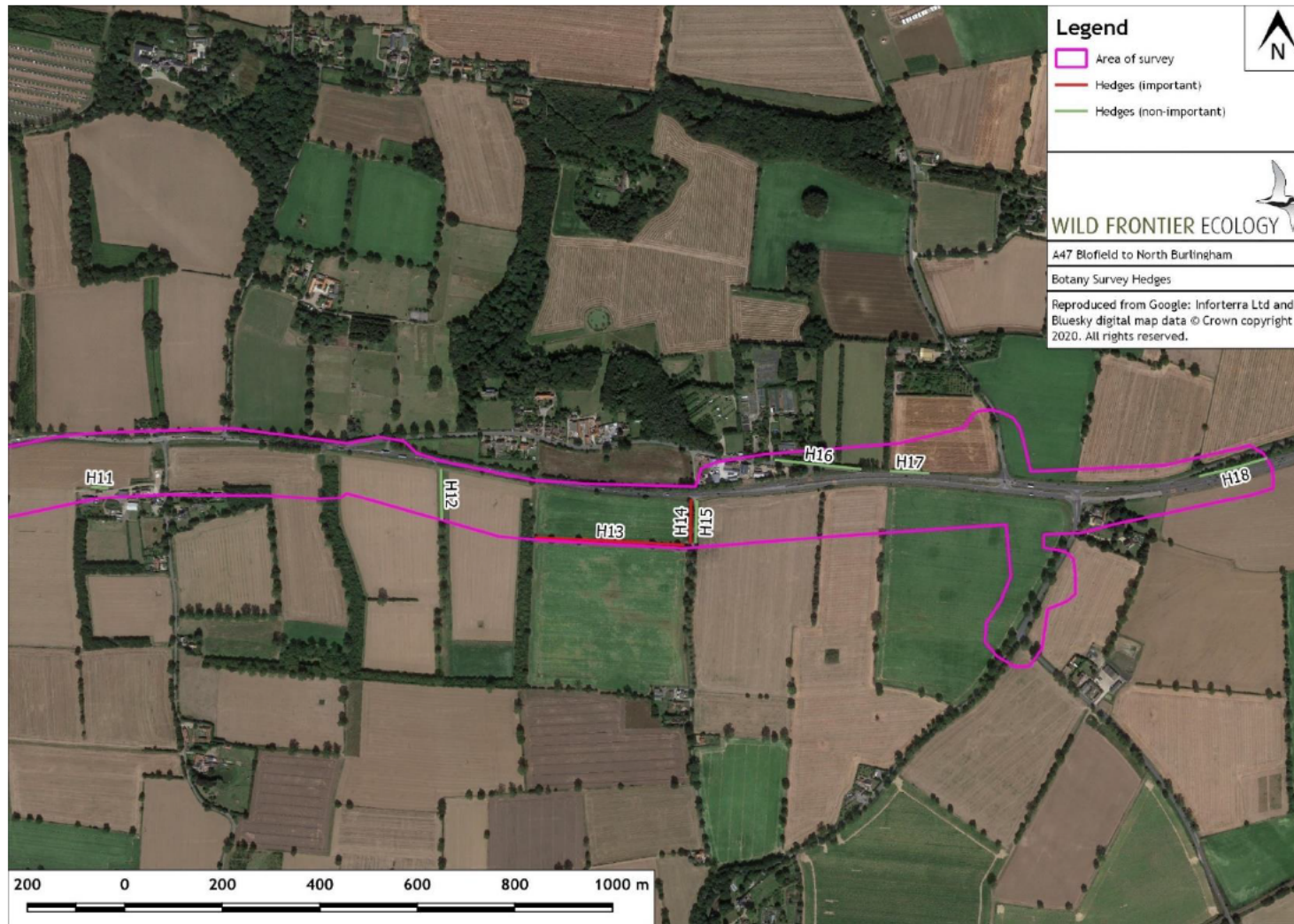


Figure 3b. Hedgerows surveyed (cont.)



The majority of the site is comprised of arable land with margins consisting of reasonably low species diversity. The plant species in the arable fields have not been listed in detail as they were mainly crops or sparse common “weed” species. There are occasional pockets of plantation woodland and grassland, where detailed vegetation was noted in the areas outline below below.

#### Area 1 (photo 1)

A field margin along a track with a line of poplars at the west end.

Common name	Latin name	DAFOR rating	Notes
Annual Meadow Grass	<i>Poa annua</i>	LA	Margin
Creeping Thistle	<i>Cirsium arvense</i>	LA	Margin
Herb Robert	<i>Geranium robertianum</i>	F	Margin
Nipplewort	<i>Lapsana communis</i>	F	Margin
Hogweed	<i>Heracleum sphondylium</i>	F	Margin
Mugwort	<i>Artemisia vulgaris</i>	F	Margin
False Oat	<i>Arrhenatherum elatius</i>	F	Margin
Common Bent	<i>Agrostis capillaris</i>	F	Margin
Red Dead Nettle	<i>Lamium purpureum</i>	F	Margin
Perennial Rye Grass	<i>Lolium perenne</i>	F	Margin
Black Medick	<i>Medicago lupulina</i>	F	Margin
Common Couch	<i>Elymus repens</i>	F	Margin
Poppy	<i>Papaver rhoeas</i>	F	Margin
Snowberry	<i>Symphoricarpos album</i>	F	Margin
Curled Dock	<i>Rumex crispus</i>	O	Margin
Hornbeam	<i>Carpinus betulus</i>	O	Margin
Common Field Speedwell	<i>Veronica persica</i>	O	Margin
Ribwort Plantain	<i>Rosa canina</i>	O	Margin
Mallow	<i>Malvus sylvestris</i>	O	Margin
Ragwort	<i>Jacobaea vulgaris</i>	O	Margin
Ribwort Plantain	<i>Plantago lanceolata</i>	O	Margin
Scentless mayweed	<i>Tripleurospermum inodorum</i>	O	Margin
Common Mouse Ear	<i>Cerastium fontanum</i>	O	Margin
Lesser Swinecress	<i>Lepidum didymum</i>	R	Margin
Upright Hedge Parsley	<i>Torilis japonica</i>	R	Margin
Rough Chervil	<i>Chaerophyllum temulentum</i>	R	Margin
Poplar (hybrid)	<i>Populus spp.</i>		Line of



### Area 2 (photo 2)

Road verge on south side of A47, bordering blackthorn and hawthorn scrub to the east.

Common name	Latin name	DAFOR rating	Notes
Blackthorn	<i>Prunus spinosa</i>	D	Scrub
Cocks-foot	<i>Dactylis glomerata</i>	A	Road Verge
Yarrow	<i>Achillea millefolium</i>	LF	Road Verge
Common Couch Grass	<i>Elymus repens</i>	F	Road Verge
False Oat	<i>Arrhenatherum elatius</i>	F	Road Verge
Hogweed	<i>Heracleum sphondylium</i>	O-F	Road Verge
Ribwort Plantain	<i>Plantago lanceolata</i>	O	Road Verge
Wall Barley	<i>Hordeum murinum</i>	R	Road Verge
Mallow	<i>Malva sylvestris</i>	R	Road Verge
White Champion	<i>Silene latifolia</i>	R	Road verge
Red Champion	<i>Silene dioica</i>	R	Road Verge
Upright Hedge Parsley	<i>Torilis japonica</i>	R	Road Verge
Black Horehound	<i>Ballota nigra</i>	R	Road Verge
Common Couch Grass	<i>Elymus repens</i>	R	Road Verge
Hawthorn	<i>Crataegus monogyna</i>		Scrub
Brambles	<i>Rubus agg.</i>		Scrub
Common Nettle	<i>Urtica dioica</i>		Scrub
Dog Rose	<i>Rosa canina</i>		Scrub
Cleavers	<i>Galium aparine</i>		Scrub
Barren Brome	<i>Anisantha sterilis</i>		Scrub

### Area 3

A scrubby field boundary and ditch on the west side of High Noon Lane dominated by nettles.

Common name	Latin name	DAFOR rating	Notes
Common Nettle	<i>Urtica dioica</i>	D	
False Oat	<i>Arrhenatherum elatius</i>	A	
Perennial Rye Grass	<i>Lolium perenne</i>	A	
Bramble	<i>Rubus agg.</i>	A	
Broad-leaved Dock	<i>Rumex obtusifolius</i>	F	
Creeping Thistle	<i>Cirsium arvense</i>	F	
Mallow	<i>Malva sylvestris</i>	F	
Yorkshire Fog	<i>Holcus lanatus</i>	F	
Hairy Willowherb	<i>Epilobium hirsutum</i>	F	
Ribwort Plantain	<i>Plantago lanceolata</i>	F	
Cock's Foot	<i>Dactylis glomerata</i>	F	
Hedge Bindweed	<i>Calystegia sepium</i>	F	
Creeping Buttercup	<i>Ranunculus repens</i>	F	
Perennial Sow-Thistle	<i>Sonchus arvensis</i>	O	
Yarrow	<i>Achillea millefolium</i>	O	
Ragwort	<i>Jacobaea vulgaris</i>	O	
White Deadnettle	<i>Lamium album</i>	O	
Scentless Mayweed	<i>Tripleurospermum inodorum</i>	O	
Common Sorrel	<i>Rumex acetosa</i>	O	
Cut-leaved Cranesbill	<i>Geranium dissectum</i>	O	
Black Mustard	<i>Brassica nigra</i>	O	

Hedge Mustard	<i>Sisymbrium officinale</i>	O	
Cow Parsley	<i>Anthriscus sylvestris</i>	O	
Creeping Bent	<i>Agrostis stolonifera</i>	O	
Nipplewort	<i>Lapsana communis</i>	O	
Mugwort	<i>Artemisia vulgaris</i>	O	
Dog Rose	<i>Rosa canina</i>	O	
Groundsel	<i>Senecio vulgaris</i>	O	
Black Medick	<i>Medicago lupulina</i>	R	
Ground Ivy	<i>Glechoma hederacea</i>	R	

#### Area 4 (photo 3)

Road verges on road running south from Blofield.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	A	Road Verge
Cocks-foot	<i>Dactylis glomerata</i>	F	Road Verge
Broad-leaved Dock	<i>Rumex obtusifolius</i>	F	Road Verge
Hogweed	<i>Heracleum sphondylium</i>	O-F	Road Verge
Yarrow	<i>Achillea millefolium</i>	O-F	Road Verge
Ribwort Plantation	<i>Plantago lanceolata</i>	O	Road Verge
Hedge Woundwort	<i>Stachys sylvatica</i>	O	Road Verge
Curled Dock	<i>Rumex crispus</i>	O	Road Verge
Mallow	<i>Malva sylvestris</i>	O	Road Verge
Hedge Mustard	<i>Sisymbrium officinale</i>	O	Road Verge
Creeping Buttercup	<i>Ranunculus repens</i>	R	Road Verge
Red Fescue	<i>Festuca rubra</i>	R	Road Verge
Knapweed	<i>Centaurea nigra</i>	R	Road Verge
Nipplewort	<i>Lapsana communis</i>	R	Road Verge
Field Bindweed	<i>Convolvulus arvensis</i>	R	Margin

#### Area 5 (photo 4)

A field margin on the south side of the A47 with a dry ditch running along it.

Common name	Latin name	DAFOR rating	Notes
Yorkshire Fog	<i>Holcus lanatus</i>	A-D	Field Margin
False Oat	<i>Arrhenatherum elatius</i>	A	Field Margin
Creeping Thistle	<i>Cirsium arvense</i>	A	Field Margin
Wild Madder	<i>Rubia peregrina</i>	F-A	Field Margin
Hogweed	<i>Heracleum sphondylium</i>	F	Field Margin
Hemlock	<i>Conium maculatum</i>	F	Field Margin
Cocks-foot	<i>Dactylis glomerata</i>	F	Field Margin
Hedge Bindweed	<i>Calystegia sepum</i>	F	Field Margin
Yarrow	<i>Achillea millefolium</i>	O-F	Field Margin
Ragwort	<i>Jacobaea vulgaris</i>	O	Field Margin
Field Bindweed	<i>Convolvulus arvensis</i>	O	Field Margin
Hairy Willowherb	<i>Epilobium hirsutum</i>	O	Field Margin
Perennial Sow-Thistle	<i>Sonchus arvensis</i>	R	Field Margin
Toad rush	<i>Juncus bufonius</i>		Ditch
Redshank	<i>Persicaria maculosa</i>		Ditch



### Area 6 (Photo 5)

An arable margin on the north side of the A47 with a single Oak present. Margin dominated by False Oat Grass with a small selection of forbs.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	D	Margin
Barren Brome	<i>Anisantha sterilis</i>	LD	Margin
Mugwort	<i>Artemisia vulgaris</i>	F	Margin
Creeping Thistle	<i>Cirsium arvense</i>	F	Margin
Hogweed	<i>Heracleum sphondylium</i>	F	Margin
Cleavers	<i>Galium aparine</i>	F	Margin
Common Nettle	<i>Urtica dioica</i>	F	Margin
Fat Hen	<i>Chenopodium album</i>	F	Margin
Black Mustard	<i>Brassica nigra</i>	O	Margin
Mallow	<i>Malva sylvestris</i>	O	Margin
Curly Dock	<i>Rumex crispus</i>	O	Margin
Common Couch Grass	<i>Elymus repens</i>	O	Margin
Cocks-foot	<i>Dactylis glomerata</i>	O	Margin
Ragwort	<i>Jacobaea vulgaris</i>	O	Margin
Pedunculate Oak	<i>Quercus robur</i>		Single tree in margin

### Area 7

Field margin bordering the south side of the A47. A line of poplars runs along the road verge and perennial rye grass dominates. The margin has no species of importance in and were not given a DAFOR rating due to the lack of botanical interest.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>		Field Margin
Mugwort	<i>Artemisia vulgaris</i>		Field Margin
Common Nettle	<i>Urtica dioica</i>		Field Margin
Hemlock	<i>Conium maculatum</i>		Field Margin
Hedge Bindweed	<i>Calystegia sepum</i>		Field Margin
Yarrow	<i>Achillea millefolium</i>		Field Margin
Ribwort Plantain	<i>Plantago lanceolata</i>		Field Margin
Perennial Rye Grass	<i>Lolium perenne</i>		Field Margin
Poplar	<i>Populus spp.</i>		Line of Trees

### Area 8

Field margin on south side of the A47 and area of hawthorn scrub on west side of Lingwood Road. Similar to the margin in area 7, this has no species of importance and includes a non-native species, winter heliotrope.

Common name	Latin name	DAFOR rating	Notes
Hogweed	<i>Heracleum sphondylium</i>		Margin
Common Couch Grass	<i>Elymus repens</i>		Margin
Cleavers	<i>Galium aparine</i>		Margin
Creeping Thistle	<i>Cirsium arvense</i>		Margin
Poppy	<i>Papaver rhoeas</i>		Margin
Lesser Swinecress	<i>Lepidium didymum</i>		Margin



Winter Heliotrope	<i>Petasites fragrans</i>	Margin
Cocks-foot	<i>Dactylis glomerata</i>	Margin
Mallow	<i>Malva sylvestris</i>	Margin
White Deadnettle	<i>Lamium album</i>	Margin
Common Nettle	<i>Urtica dioica</i>	Margin
Mugwort	<i>Artemisia vulgaris</i>	Margin
Black Horehound	<i>Ballota nigra</i>	Margin
Prickly Lettuce	<i>Lactuca serriola</i>	Margin
Bramble	<i>Rubus agg.</i>	Margin
Perennial Rye Grass	<i>Lolium perenne</i>	Margin
False Oat	<i>Arrhenatherum elatius</i>	Margin
Hemlock	<i>Conium maculatum</i>	Margin
Hawthorn	<i>Crataegus monogyna</i>	Scrub

### Area 9 (photo 6)

Small area of grassland on western side of Lingwood Road. A scrubby ruderal patch at the southern end of this grassland and a line of scrub runs south along Lingwood Road.

Common name	Latin name	DAFOR rating	Notes
Barren Brome	<i>Anisantha sterilis</i>	LD	
Cocks-foot	<i>Dactylis glomerata</i>	A	
Yarrow	<i>Achillea millefolium</i>	A	
Common Nettle	<i>Urtica dioica</i>	A	
Fat Hen	<i>Chenopodium album</i>	F	
Cleavers	<i>Galium aparine</i>	F	
False Oat	<i>Arrhenatherum elatius</i>	F	
Mugwort	<i>Artemisia vulgaris</i>	F	
Creeping Thistle	<i>Cirsium arvense</i>	F	
Hogweed	<i>Heracleum sphondylium</i>	F	
Black Mustard	<i>Brassica nigra</i>	O	
Mallow	<i>Malva sylvestris</i>	O	
Ragwort	<i>Jacobaea vulgaris</i>	O	
Curled Dock	<i>Rumex crispus</i>	O	
Common Couch Grass	<i>Elymus repens</i>	O	
Cocks-foot	<i>Dactylis glomerata</i>	O	
Ribwort Plantation	<i>Plantago lanceolata</i>	O	
Mallow	<i>Malva sylvestris</i>	R	
Yorkshire Fog	<i>Holcus lanatus</i>		
Wall Barley	<i>Hordeum murinum</i>		
Fiddleneck	<i>Amsinckia micrantha</i>		
Scentless Mayweed	<i>Tripleurospermum inodorum</i>		
Redshank	<i>Persicaria maculosa</i>		
Knotgrass	<i>Polygonum aviculare</i>		
Black Mustard	<i>Brassica nigra</i>		
Common Nettle	<i>Urtica dioica</i>		
Poppy	<i>Papaver rhoeas</i>		
Creeping Bent	<i>Agrostis stolonifera</i>		
Mugwort	<i>Artemisia vulgaris</i>		
Smooth Sow Thistle	<i>Sonchus oleraceus</i>		
Great Lettuce	<i>Lactuca virosa</i>		
White Willow	<i>Salix alba</i>		Scrub

Elm	<i>Ulmus sp.</i>		Scrub
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### Area 10 (photo 7)

Arable Margin on east side of Lingwood Road.

Common name	Latin name	DAFOR rating	Notes
Common Nettle	<i>Urtica dioica</i>	D	
False Oat Grass	<i>Arrhenatherum elatius</i>	D	
Perforate St John's-wort	<i>Hypericum perforatum</i>	LA	
Cow Parsley	<i>Anthriscus sylvestris</i>	F	
Ragwort	<i>Jacobaea vulgaris</i>	O	
Creeping thistle	<i>Cirsium arvense</i>	O	
Prickly Lettuce	<i>Lactuca serriola</i>	O	
Wild Oat	<i>Avena fatua</i>	R	

### Area 11

Field margin on the south side of the A47, running east from Lingwood Road.

Common name	Latin name	DAFOR rating	Notes
Curled Dock	<i>Rumex crispus</i>	D	Margin
Soft Brome	<i>Bromus hordeaceus</i>	LD	Margin
Wild Oat	<i>Avena fatua</i>	LD	Margin
Bramble	<i>Rubus agg.</i>	A-D	Margin
False Oat Grass	<i>Arrhenatherum elatius</i>	A	Margin
Winter Wild Oat	<i>Avena sterilis</i>	A	Margin
Large Bindweed	<i>Calystegia silvatica</i>	F-A	Margin
Mugwort	<i>Artemisia vulgaris</i>	O	Margin
Black Horehound	<i>Ballota nigra</i>	R	Margin

### Area 12

A young broadleaved plantation adjacent an arable margin on the northern side. The margin is dominated by false oat grass and includes other species typical of an arable margin. The plantation lacks any ground layer vegetation.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	D	Margin
Creeping Thistle	<i>Cirsium arvense</i>		Margin
Smooth Sow Thistle	<i>Sonchus oleraceus</i>		Margin
Hogweed	<i>Heracleum sphondylium</i>		Margin
Germander Speedwell	<i>Veronica chaemedrys</i>		Margin
Petty Spurge	<i>Euphorbia peplus</i>		Margin
Field Pansy	<i>Viola arvensis</i>		Margin
Common Nettle	<i>Urtica dioica</i>		Margin
Hedge Bindweed	<i>Calystegia sepum</i>		Margin
Pedunculate Oak	<i>Quercus robur</i>		Canopy
Field Maple	<i>Acer campestre</i>		Canopy
Ash	<i>Fraxinus excelsior</i>		Canopy
Cherry	<i>Prunus avium</i>		Canopy
Sycamore	<i>Acer pseudoplatanus</i>		Canopy
Ash	<i>Fraxinus excelsior</i>		Canopy

Grey Willow	<i>Salix cinerea</i>		Canopy
Hazel	<i>Corylus avellana</i>		Understorey
Hawthorn	<i>Crataegus monogyna</i>		Understorey

### Area 13 (photo 8)

A young broad-leaved plantation which was previously an area of hedgerow in the Amey (2017) report. The plantation consists of a variety of trees including silver birch and field maple.

Common name	Latin name	DAFOR rating	Notes
Silver Birch	<i>Betula pendula</i>		Canopy
Pedunculate Oak	<i>Quercus robur</i>		Canopy
Field Maple	<i>Acer campestre</i>		Canopy
Grey Willow	<i>Salix cinerea</i>		Canopy
Ash	<i>Fraxinus excelsior</i>		Canopy
Hawthorn	<i>Crataegus monogyna</i>		Understorey
Blackthorn	<i>Prunus spinosa</i>		Understorey
Dogwood	<i>Cornus sanguinea</i>		Understorey
Elder	<i>Sambucus nigra</i>		Understorey
Hazel	<i>Corylus avellana</i>		Understorey
Hogweed	<i>Heracleum sphondylium</i>		Ground Layer
Rough Meadow Grass	<i>Poa trivialis</i>		Ground Layer
Cock's Foot	<i>Dactylis glomerata</i>		Ground Layer
Perennial Rye Grass	<i>Lolium perenne</i>		Ground Layer
Upright Hedge Parsley	<i>Torilis japonica</i>		Ground Layer

### Area 14 (photo 9)

Small area of grassland bordered by arable to east and west and the plantation in Area 13 to the south. The grassland included one spike of Pyramidal Orchid (photo 10).

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	A	
Cocks-foot	<i>Dactylis glomerata</i>	F	
Hogweed	<i>Heracleum sphondylium</i>	F	
Common Vetch	<i>Vicia sativa</i>	F	
Rosebay Willowherb	<i>Chamerion angustifolium</i>	O	
Spear Thistle	<i>Cirsium vulgare</i>	O	
Creeping Thistle	<i>Cirsium arvense</i>	O	
Red Campion	<i>Silene dioica</i>	R	
Pyramidal Orchid	<i>Anacamptis pyramidalis</i>	R	One spike
Dove's-foot Cranesbill	<i>Geranium molle</i>	R	
Black Horehound	<i>Ballota nigra</i>		
Ribwort Plantain	<i>Plantago lanceolata</i>		
Tall Fescue	<i>Festuca arundinacea</i>		

### Area 15

Arable field margin with oak and small ash trees along the south side of the A47.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>		Margin
Yarrow	<i>Achillea millefolium</i>		Margin
Ribwort Plantain	<i>Plantago lanceolata</i>		Margin
Yorkshire Fog	<i>Holcus lanatus</i>		Margin
Bramble	<i>Rubus agg.</i>		Margin
Tall Fescue	<i>Festuca arundinacea</i>		Margin
Coltsfoot	<i>Tussilago farfara</i>		Margin
Dewberry	<i>Rubus caesius</i>		Margin
Mugwort	<i>Artemisia vulgaris</i>		Margin
Pedunculate Oak	<i>Quercus robur</i>		Tree
Ash	<i>Fraxinus excelsior</i>		Tree

### Area 16

Arable Margin on south side of the A47.

Common name	Latin name	DAFOR rating	Notes
Tall Fescue	<i>Festuca arundinacea</i>	A	Margin
Bramble	<i>Rubus agg.</i>	LA	Margin
Rosebay Willowherb	<i>Chamerion angustifolium</i>	LA	Margin
Field Bindweed	<i>Convolvulus arvensis</i>	F	Margin
False Oat Grass	<i>Arrhenatherum elatius</i>	F	Margin
Creeping Thistle	<i>Cirsium arvense</i>	F	Margin
Hogweed	<i>Heracleum sphondylium</i>	O-F	Margin
Mugwort	<i>Artemisia vulgaris</i>	O	Margin
Field Horsetail	<i>Equisetum arvense</i>	R	Margin

### Area 17 (photo 11)

Arable margin and young plantation on the south side of the A47. The plantation has been planted since 1980s and with a ground cover of mainly bramble, it is not long established.

Common name	Latin name	DAFOR rating	Notes
Rough Meadow Grass	<i>Poa trivialis</i>	D	Plantation Ground Layer
False Oat	<i>Arrhenatherum elatius</i>	A	Margin
Field Bindweed	<i>Convolvulus arvensis</i>	A	Margin
Hogweed	<i>Heracleum sphondylium</i>	F	Margin
Cock's Foot	<i>Dactylis glomerata</i>	F	Margin
Common Couch Grass	<i>Elymus repens</i>	O	Margin
Goat's Beard	<i>Tragopogon pratensis</i>	R	Margin
Bramble	<i>Rubus agg.</i>		Plantation Ground Layer
Pedunculate Oak	<i>Quercus robur</i>		Plantation Tree
Hawthorn	<i>Crataegus monogyna</i>		Plantation Undergrowth
Silver Birch	<i>Betula pendula</i>		Plantation Tree
Apple	<i>Malus domestica</i>		Plantation Tree

Plum	<i>Prunus domestica</i>		Plantation Tree
Beech	<i>Fagus sylvatica</i>		Plantation Tree
Field Maple	<i>Acer campestre</i>		Plantation Tree
Grey Willow	<i>Salix cinerea</i>		Plantation Tree

### Area 18

Field margin bordering the south side of the A47

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	A	Margin
Common Nettle	<i>Urtica dioica</i>	A	Margin
Creeping Thistle	<i>Cirsium arvense</i>	A	Margin
Field Bindweed	<i>Convolvulus arvensis</i>	LF	Margin
Hogweed	<i>Heracleum sphondylium</i>	O	Margin
Spear Thistle	<i>Cirsium vulgare</i>	O	Margin
Goat's Beard	<i>Tragopogon pratensis</i>	R	Margin

### Area 19

Species poor verges on either side of Lingwood Lane which border hedgerows 14 and 15.

Common name	Latin name	DAFOR rating	Notes
Rough Meadow Grass	<i>Poa trivialis</i>	A	Verge
Cock's Foot	<i>Dactylis glomerata</i>	F	Verge
Field Bindweed	<i>Convolvulus arvensis</i>	O	Verge
Dandelion	<i>Taraxacum agg.</i>	O	Verge
Perennial Rye Grass	<i>Lolium perenne</i>	O	Verge
Spear Thistle	<i>Cirsium vulgare</i>	O	Verge
Herb Robert	<i>Geranium robertianum</i>	O	Verge
Hogweed	<i>Heracleum sphondylium</i>	R	Verge
Ribwort Plantain	<i>Plantago lanceolata</i>		Verge
Yarrow	<i>Achillea millefolium</i>		Verge
Hedge Woundwort	<i>Stachys sylvatica</i>		Verge
Burdock	<i>Arctium sp.</i>		Verge
White Clover	<i>Trifolium repens</i>		Verge
Common Nettle	<i>Urtica dioica</i>		Verge

### Area 20

Road verge on the south side of the A47 bordering cultivated arable land. A ditch runs along this verge. Hawthorn and buckthorn bushes are present and two ash trees, one of which was dead.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	A	Verge
Common Nettle	<i>Urtica dioica</i>	F	Verge
Field Bindweed	<i>Convolvulus arvensis</i>	LF	Verge
Knapweed	<i>Centaurea nigra</i>	LF	Verge
Ivy	<i>Hedera helix</i>	LF	Verge
Hogweed	<i>Heracleum sphondylium</i>	O-F	Verge
Broad-leaved Dock	<i>Rumex obtusifolius</i>	O	Verge

Hairy Willowherb	<i>Epilobium hirsutum</i>	O	Verge
Creeping Thistle	<i>Cirsium arvense</i>	O	Verge
Ragwort	<i>Jacobaea vulgaris</i>	O	Verge
Scentless Mayweed	<i>Tripleurospermum inodorum</i>	R	Verge
Ash	<i>Fraxinus excelsior</i>		Two trees (one dead)
Buckthorn	<i>Rhamnus cathartica</i>		
Hawthorn	<i>Crataegus monogyna</i>		

### Area 21 (photo 12)

Patch of poor semi-improved grassland dominated by false oat grass and a line of trees including lime and London plane surrounding buildings and hardstanding at the east end of North Burlingham. At the west end of this grassland are two trees, a single white willow and a single elm.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	D	Grassland
Cleavers	<i>Galium aparine</i>	LD	Grassland
Common Nettle	<i>Urtica dioica</i>	LD	Grassland
Ribwort Plantain	<i>Plantago lanceolata</i>	F	Grassland
Yarrow	<i>Achillea millefolium</i>	F	Grassland
Hogweed	<i>Heracleum sphondylium</i>	F	Grassland
Black Nightshade	<i>Solanum nigrum</i>	F	Grassland
Ivy	<i>Hedera helix</i>	F	Grassland
Ragwort	<i>Jacobaea vulgaris</i>	F	Grassland
Bramble	<i>Rubus agg.</i>	LF	Grassland
Hairy Willowherb	<i>Epilobium hirsutum</i>	O	Grassland
Creeping Bent	<i>Agrostis stolonifera</i>	O	Grassland
White Deadnettle	<i>Lamium album</i>	O	Grassland
Nipplewort	<i>Lapsana communis</i>	O	Grassland
Curled Dock	<i>Rumex crispus</i>	O	Grassland
Creeping Cinquefoil	<i>Potentilla reptans</i>	O	Grassland
Creeping Thistle	<i>Cirsium arvense</i>	O	Grassland
Bird's-foot Trefoil	<i>Lotus corniculata</i>	O	Grassland
Pineappleweed	<i>Matricaria discoidea</i>	O	Grassland
Yorkshire Fog	<i>Holcus lanatus</i>	O	Grassland
Spear Thistle	<i>Cirsium vulgare</i>	O	Grassland
Field Bindweed	<i>Convolvulus arvensis</i>	R	Grassland
Wood Avens	<i>Geum urbanum</i>	R	Grassland
White Willow	<i>Salix alba</i>		Single Tree
Elm	<i>Ulmus sp.</i>		Single Tree
Lime	<i>Tilia sp.</i>		Line of Trees
Cherry	<i>Prunus avium</i>		Line of Trees
London Plane	<i>Platanus x hispanica</i>		Line of Trees

### Area 22

Verge bordering the A47 with an arable field to the south and a line of Scots Pine running south along the field boundary (photo 13). A plum and field maple tree single buckthorn bush and an area of damson (plum) scrub were recorded on this verge.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	D	Verge

Hairy Willowherb	<i>Epilobium hirsutum</i>	LA	Verge
Common Nettle	<i>Urtica dioica</i>	F	Verge
Creeping Thistle	<i>Cirsium arvensis</i>	F	Verge
Yarrow	<i>Achillea millefolium</i>	F	Verge
Ivy	<i>Hedera helix</i>	LF	Verge
Goat's Beard	<i>Tragopogon pratensis</i>	O	Verge
Broad-leaved Dock	<i>Rumex obtusifolius</i>	O	Verge
Hogweed	<i>Heracleum sphondylium</i>	O	Verge
Ribwort Plantain	<i>Plantago lanceolata</i>	O	Verge
Ragwort	<i>Jacobaea vulgaris</i>	O	Verge
Cock's Foot	<i>Dactylis glomerata</i>	O	Verge
Cleavers	<i>Galium aparine</i>	O	Verge
Scentless Mayweed	<i>Tripleurospermum inodorum</i>	R	Verge
Plum	<i>Prunus domestica</i>		Single Tree and scrub
Field Maple	<i>Acer campestre</i>		Single Tree
Scots Pine	<i>Pinus sylvestris</i>		Line of Trees
Buckthorn	<i>Rhamnus cathartica</i>		

### Area 23

Arable margin on the north side of A47 which extends east of Hedgerow 17. A line of poplar and ash trees interspersed with elder runs to the west of here. The margin is dominated by false oat grass and patches of nettles and brambles.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	D	Margin
Common Nettle	<i>Urtica dioica</i>	LD	Margin
Bramble	<i>Rubus agg.</i>	LD	Margin
Timothy	<i>Phleum pratense</i>	F	Margin
Creeping Thistle	<i>Cirsium arvense</i>	F	Margin
Perennial Sow Thistle	<i>Sonchus arvensis</i>	F	Margin
Cock's Foot	<i>Dactylis glomerata</i>	F	Margin
Red Campion	<i>Silene dioica</i>	O	Margin
Soft Brome	<i>Bromus hordeaceus</i>	O	Margin
Mugwort	<i>Artemisia vulgaris</i>	O	Margin
Common Fumitory	<i>Fumaria officinalis</i>	O	Margin
Great Lettuce	<i>Lactuca virosa</i>	R	Margin
Wild Parsnip	<i>Pastinaca sativa</i>	R	Margin
Poplar	<i>Populus sp.</i>		Line of Trees
Ash	<i>Fraxinus excelsior</i>		Line of Trees
Elder	<i>Sambucus nigra</i>		Among line of trees

### Area 24

Verge and dry ditch on south side of the A47 to the west of B1140.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	A	Margin
Bramble	<i>Rubus agg.</i>	LA	Margin
Creeping Thistle	<i>Cirsium arvense</i>	F	Margin
Common Nettle	<i>Urtica dioica</i>	F	Margin
Hairy Willowherb	<i>Epilobium hirsutum</i>	F	Margin

Perennial Rye Grass	<i>Lolium perenne</i>	LF	Margin
Fleabane	<i>Pulicaria dysenterica</i>	LF	Margin
Coltsfoot	<i>Tussilago farfara</i>	O	Margin
Yarrow	<i>Achillea millefolium</i>	O	Margin
Hogweed	<i>Heracleum sphondylium</i>	O	Margin
Scentless mayweed	<i>Tripleurospermum inodorum</i>	O	Margin
Mugwort		O	Margin
Spear Thistle	<i>Cirsium vulgare</i>	O	Margin
Tufted Vetch	<i>Vicia cracca</i>	R	Margin
Meadow Vetchling	<i>Lathyrus pratensis</i>	R	Margin
Common Mallow	<i>Malva sylvatica</i>	R	Margin
Hawthorn	<i>Crataegus monogyna</i>	R	Scrub
Dog Rose	<i>Rosa canina</i>	R	

### Area 25

Verge on east side of B1140 bordering a field of sugar beet.

Common name	Latin name	DAFOR rating	Notes
Cocks-foot	<i>Dactylis glomerata</i>	F-A	Road Verge
Yorkshire Fog	<i>Holcus lanatus</i>	F	Road Verge
Perennial Rye Grass	<i>Lolium perenne</i>	F	Road Verge
Yarrow	<i>Achillea millefolium</i>	F	Road Verge
Knapweed	<i>Centaurea nigra</i>	LF	Road Verge
Common Mouse-ear	<i>Cerastium fontanum</i>	LF	Road Verge
Red Campion	<i>Silene dioica</i>	O	Road Verge
Goat's Beard	<i>Tragopogon pratensis</i>	O	Road Verge
Ribwort Plantain	<i>Plantago lanceolata</i>	O	Road Verge
Ground Ivy	<i>Glechoma hederacea</i>	O	Road Verge
Germander Speedwell	<i>Veronica chaemedrys</i>	O	Road Verge
Annual Meadow Grass	<i>Poa annua</i>	O	Road Verge
Cow Parsley	<i>Anthriscus sylvestris</i>	O	Road Verge
Field Bindweed	<i>Convolvulus arvensis</i>	O	Road Verge
Soft Brome	<i>Bromus hordeaceus</i>	O	Road Verge
Hogweed	<i>Heracleum sphondylium</i>	O	Road Verge
White Campion	<i>Silene latifolia</i>	R	Road Verge
Fat Hen	<i>Chenopodium album</i>	R	Road Verge
Mugwort	<i>Artemisia vulgaris</i>	R	Road Verge
Creeping Buttercup	<i>Ranunculus repens</i>	R	Road Verge
Perennial Sow Thistle	<i>Sonchus arvensis</i>	R	Road Verge
White Deadnettle	<i>Lamium album</i>	R	Road Verge
Creeping Thistle	<i>Cirsium arvense</i>	R	Road Verge
Curled Dock	<i>Rumex crispus</i>	R	Road Verge
Grass-leaved Orache	<i>Atriplex littoralis</i>	R	Road Verge
Dandelion	<i>Taraxacum agg.</i>	R	Road Verge

### Area 26

Small area of buckthorn scrub and grass verge on east side of the A47-B1140 junction. A dry ditch runs alongside this area.





Common name	Latin name	DAFOR rating	Notes
Buckthorn	<i>Rhamnus cathartica</i>	A	Scrub
Yarrow	<i>Achillea millefolium</i>	A	Verge
Perennial Rye Grass	<i>Lolium perenne</i>	F	Verge
Yorkshire Fog	<i>Holcus lanatus</i>	F	Verge
Daisy	<i>Bellis perennis</i>	LF	Verge
Clustered Bellflower	<i>Campanula glomerata</i>	O	Verge
Common Couch Grass	<i>Elymus repens</i>	O	Verge
Black Medick	<i>Medicago lupulina</i>	O	Road Verge
Ribwort Plantain	<i>Plantago lanceolata</i>	O	Road Verge

### Area 27

Margin along layby on north side of A47.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	D	
Ribwort Plantain	<i>Plantago lanceolata</i>	A	
Black Knapweed	<i>Centaurea nigra</i>	F	
Field bindweed	<i>Convolvulus arvensis</i>	F	
Yarrow	<i>Achillea millefolium</i>	F	
Beaked Hawksbeard	<i>Crepis vesicaria</i>	F	
Bramble	<i>Rubus</i> agg.	F	
Black Medick	<i>Medicago lupulina</i>	O	
Greater Stitchwort	<i>Stellaria holostea</i>	O	
Ragwort	<i>Jacobaea vulgaris</i>	O	
Common Bent	<i>Agrostis capillaris</i>	O	

### Area 28 (photo 14)

Small area of woodland plantation on north side of A47 with hedgerow 17 running on its south side.

Common name	Latin name	DAFOR rating	Notes
Bramble	<i>Rubus</i> sp.	D	Ground Layer
Blackthorn	<i>Prunus spinosa</i>	F	Understorey
Pedunculate Oak	<i>Quercus robur</i>	F	Canopy
Ribwort Plantain	<i>Plantago lanceolata</i>	F	Ground Layer
Rough Meadow Grass	<i>Poa trivialis</i>	F	Ground Layer
Cocks-foot	<i>Dactylis glomerata</i>	F	Ground Layer
False Oat	<i>Arrhenatherum elatius</i>	F	Ground Layer
Rough Chervil	<i>Chaerophyllum temulentum</i>	F	Ground Layer
Herb Robert	<i>Geranium robertianum</i>	F	Ground Layer
Perennial Rye	<i>Lolium perenne</i>	F	Ground Layer
Yarrow	<i>Achillea millefolium</i>	O	Ground Layer
Ash	<i>Fraxinus excelsior</i>	O	Canopy
Hogweed	<i>Heracleum sphondylium</i>	O	Ground Layer
Ground Ivy	<i>Glechoma hederacea</i>	O	Ground Layer
Creeping cinquefoil	<i>Potentilla reptans</i>	O	Ground Layer

Ragwort	<i>Jacobaea vulgaris</i>	O	Ground Layer
Elder	<i>Corylus avellana</i>	O	Understorey

### Hedgerow 1 (photo 15)

Hawthorn dominant hedgerow bordering pavement in Blofield.

Common name	Latin name	DAFOR rating	Notes
Hawthorn	<i>Crataegus monogyna</i>	D	Hedgerow
Bramble	<i>Rubus</i> Agg.	A	Hedgerow

### Hedgerow 2 (photo 16)

Species poor hedge which borders arable to the west.

Common name	Latin name	DAFOR rating	Notes
Blackthorn	<i>Prunus spinosa</i>	F	Hedgerow
Common Hawthorn	<i>Crataegus monogyna</i>	A	Hedgerow
Bramble	<i>Rubus</i> agg.	F	Hedgerow

### Hedgerow 3 (Photo 17)

Species poor hedgerow including non-native Cherry Laurel. It borders buildings and amenity on the north side of High Noon Lane.

Common name	Latin name	DAFOR rating	Notes
Common Hawthorn	<i>Crataegus monogyna</i>	A	Hedgerow
Dog Rose	<i>Rosa canina</i>	O	Hedgerow
Cherry Laurel	<i>Prunus laurocerasus</i>	O	Hedgerow
Bramble	<i>Rubus</i> agg.	O	Hedgerow

### Hedgerow 4 (photo 18)

A hawthorn dominated hedgerow bordering arable.

Common name	Latin name	DAFOR rating	Notes
Common Hawthorn	<i>Crataegus monogyna</i>	D	Hedgerow
Silver Birch	<i>Betula pendula</i>	R	Hedgerow
Black Bryony	<i>Tamus communis</i>	O	Hedgerow

### Hedgerow 5 (photo 19)

On the south side of High Noon Lane, close to the A47 with hedgerows H2, H3 and H4 closeby (on north side of High Noon Lane. This is unlikely to qualify as an important hedgerow under the Hedgerow Regulations with hawthorn being the main species.

Common name	Latin name	DAFOR rating	Notes
Common Hawthorn	<i>Crataegus monogyna</i>	A	Hedgerow
Elder	<i>Sambus nigra</i>	O	Hedgerow
Dog Rose	<i>Rosa canina</i>	F	Hedgerow
Wild Cherry	<i>Prunus avium</i>	R	Hedgerow
Sycamore	<i>Acer pseudoplatanus</i>	R	Hedgerow
Bramble	<i>Rubus</i> agg.	F	Hedgerow
Ivy	<i>Hedera helix</i>	A	Hedgerow

**Hedgerow 6 (photo 20)**

A species poor hedgerow on the east side of Blofield, close to the south side of the A47.

Common name	Latin name	DAFOR rating	Notes
Common Hawthorn	<i>Crataegus monogyna</i>	A	Hedgerow
Bramble	<i>Rubus</i> agg.	F	Hedgerow
Ivy	<i>Hedera helix</i>	F	Hedgerow
Sycamore	<i>Acer pseudoplatanus</i>	O	Hedgerow
Dog Rose	<i>Rosa canina</i> agg.	R	Hedgerow

**Hedgerow 7 (photo 21)**

A species poor hedgerow which is dominated by hybrid poplar.

Common name	Latin name	DAFOR rating	Notes
Poplar	<i>Populus</i> sp.	D	Hedgerow
Plum	<i>Prunus domestica</i>	R	Hedgerow

**Hedgerow 8 (photo 22)**

Species poor hedgerow on the north side of the A47 with a species poor verge dominated by false oat grass.

Common name	Latin name	DAFOR rating	Notes
False Oat Grass	<i>Arrhenatherum elatius</i>	D	Verge
Hawthorn	<i>Crataegus monogyna</i>	A	Hedgerow
Bramble	<i>Rubus</i> agg.	A	Hedgerow
Mugwort	<i>Artemisia vulgaris</i>	F	Verge
Curled Dock	<i>Rumex crispus</i>	F	Verge
Creeping Thistle	<i>Cirsium arvense</i>	F	Verge
Hogweed	<i>Heracleum sphonfylum</i>	F	Verge
Mallow	<i>Malva sylvestris</i>	F	Verge
Common Nettle	<i>Urtica dioica</i>	F	Verge
Fat Hen	<i>Chenopodium album</i>	F	Verge
Black Mustard	<i>Brassica nigra</i>	O	Verge
Ragwort	<i>Jacobaea vulgaris</i>	O	Verge
Common Couch Grass	<i>Elymus repens</i>	O	Verge
Cock's Foot	<i>Dactylis glomerata</i>	O	Verge
Dog Rose	<i>Rosa canina</i>	O	Hedgerow

**Hedgerow 9 (photo 23)**

Species rich intact hedgerow comprising mainly hawthorn and blackthorn. It is considered unlikely to qualify based on ecological characteristics as an 'Important' hedgerow under The Hedgerow Regulations as it does not include 6 or more species in a 30 metre length of hedgerow.

Common name	Latin name	DAFOR rating	Notes
Common Hawthorn	<i>Crataegus monogyna</i>	F	Hedgerow
Blackthorn	<i>Prunus spinosa</i>	F	Hedgerow
Hazel	<i>Corylus avellana</i>	O	Hedgerow
Dogwood	<i>Cornus sanguinea</i>	O	Hedgerow
Plum	<i>Prunus domestica</i>	R	Hedgerow

**Hedgerow 10 (photo 24)**

An isolated species poor hedgerow surrounded by arable with a species poor margin including false oat and common couch grass. This is unlikely to qualify as an important hedgerow under the Hedgerow Regulations.

Common name	Latin name	DAFOR rating	Notes
Common Hawthorn	<i>Crataegus monogyna</i>	D	Hedgerow
Dogwood	<i>Cornus sanguinea</i>	O	Hedgerow
Hazel	<i>Corylus avellana</i>	O	Hedgerow
Field Maple	<i>Acer campestre</i>	O	Hedgerow
Common Nettle	<i>Urtica dioica</i>		Margin
Field Bindweed	<i>Convolvulus arvensis</i>		Margin
False Oat Grass	<i>Arrhenatherum elatius</i>		Margin
Creeping Buttercup	<i>Ranunculus repens</i>		Margin
Creeping Thistle	<i>Cirsium vulgare</i>		Margin
Hogweed	<i>Heracleum sphondylium</i>		Margin
Soft Brome	<i>Bromus hordeaceus</i>		Margin
Curled Dock	<i>Rumex crispus</i>		Margin
Broad-leaved Dock	<i>Rumex obtusifolius</i>		Margin

**Hedgerow 11 (photo 25)**

A species poor hedge which is considered unlikely to qualify based on ecological characteristics as an 'Important' hedgerow under The Hedgerow Regulations.

Common name	Latin name	DAFOR rating	Notes
Elder	<i>Sambucus nigra</i>	F	Hedgerow
Common Hawthorn	<i>Crataegus monogyna</i>	F	Hedgerow
Field Maple	<i>Acer campestre</i>	F	Hedgerow
Holly	<i>Ilex aquifolium</i>	O	Hedgerow
Ivy	<i>Hedera helix</i>		Hedgerow

**Hedgerow 12 (photo 26)**

Species rich hedge with false oat and Yorkshire fog abundant margins including Lucerne and bird's foot trefoil on the eastern side of this hedge. As noted in the previous report, although there are 6+ locally native woody species over the entire length of the hedgerow, these do not all occur within any 30m section so it is considered unlikely to qualify based on ecological characteristics as an 'Important' hedgerow under The Hedgerow Regulations.

Common name	Latin name	DAFOR rating	Notes
Bramble	<i>Rubus</i> agg.	A	Hedgerow
False Oat	<i>Arrhenatherum elatius</i>	A	Margin
Yorkshire Fog	<i>Holcus lanatus</i>	A	Margin
Lucerne	<i>Medicago sativa</i>	A	Margin
Bird's Foot Trefoil	<i>Lotus corniculatus</i>	F	Margin
Knapweed	<i>Centaurea nigra</i>	F	Margin
Field Maple	<i>Acer campestre</i>	F	Hedgerow
Elder	<i>Sambucus nigra</i>	F	Hedgerow
Common Hawthorn	<i>Crataegus monogyna</i>	F	Hedgerow
Hazel	<i>Corylus avellana</i>	F	Hedgerow
Dogwood	<i>Cornus sanguinea</i>	O	Hedgerow

Pedunculate Oak	<i>Quercus robur</i>	O	Hedgerow
Ash	<i>Fraxinus excelsior</i>	O	Hedgerow
Field Bindweed	<i>Convolvulus arvensis</i>	O	Margin
Mugwort	<i>Artemisia vulgaris</i>	O	Margin
Ribwort Plantain	<i>Plantago lanceolata</i>	O	Margin
Hogweed	<i>Heracleum sphondylium</i>	O	Margin
Red Campion	<i>Silene dioica</i>	O	Margin
Ivy	<i>Hedera helix</i>		Hedgerow

### Hedgerow 13 (photo 27)

Runs parallel to the A47 on the south side of a field to the south of the A47 and west of Lingwood Lane. It includes a margin with common couch, perennial rye grass, false oat grass and several forbs. It is considered likely to qualify based on ecological characteristics as an 'Important' hedgerow under The Hedgerow Regulations.

Common name	Latin name	DAFOR rating	Notes
False Oat	<i>Arrhenatherum elatius</i>	A	Margin
Perennial Rye Grass	<i>Lolium perenne</i>	A	Margin
Hogweed	<i>Heracleum sphondylium</i>	F-A	Margin
Creeping Bent	<i>Agrostis stolonifera</i>	F	Margin
Cock's Foot	<i>Dactylis glomerata</i>	F	Margin
Creeping Thistle	<i>Cirsium arvense</i>	F	Margin
Yorkshire Fog	<i>Holcus lanatus</i>	F	Margin
Common Hawthorn	<i>Crataegus monogyna</i>	F	Hedge
Field Maple	<i>Acer campestre</i>	F	Hedge
Hazel	<i>Corylus avellana</i>	F	Hedge
Pedunculate Oak	<i>Quercus robur</i>	F	Hedge and Standard Trees
Alexanders	<i>Smyrniolum olusatrum</i>	LF	Margin
Common Nettle	<i>Urtica dioica</i>	LF	Margin
White Clover	<i>Trifolium repens</i>	O-F	Margin
Sycamore	<i>Acer pseudoplatanus</i>	O	Hedge
Blackthorn	<i>Prunus spinosa</i>	O	Hedge
Dogwood	<i>Cornus sanguinea</i>	O	Hedge
Elder	<i>Sambucus nigra</i>	O	Hedge
Plum	<i>Prunus domestica</i>	O	Hedge
Hornbeam	<i>Carpinus betulus</i>	R	Hedge
Field Horsetail	<i>Equisetum arvense</i>	R	Margin
Red Fescue	<i>Festuca rubra</i>	R	Margin
Bramble	<i>Rubus</i> agg.		Hedge
Ivy	<i>Hedera helix</i>		Hedge

### Hedgerow 14 (photo 28)

This hedgerow, located on the west side of Lingwood Lane, is species rich. It qualifies as an important hedge as it includes six or more species which are found regularly along the hedgerow.

Common name	Latin name	DAFOR rating	Notes
Common Hawthorn	<i>Crataegus monogyna</i>	F	Hedge
Blackthorn	<i>Prunus spinosa</i>	F	Hedge
Dogwood	<i>Cornus sanguinea</i>	O	Hedge
Field Maple	<i>Acer campestre</i>	O	Hedge

Hazel	<i>Corylus avellana</i>	O	Hedge
Sycamore	<i>Acer pseudoplatanus</i>	O	Hedge and Standard Trees
Holly	<i>Ilex aquifolium</i>	O	Hedge
Ash	<i>Fraxinus excelsior</i>	R	Hedge and Standard Trees
Pedunculate Oak	<i>Quercus robur</i>	R	Hedge
Bramble	<i>Rubus</i> agg.		Hedge
Ivy	<i>Hedera helix</i>		Hedge

### Hedgerow 15 (photo 28)

A species poor hedge as it includes less than five woody species, located on the eastern side of Lingwood Lane, bordering an area of arable to the east.

Common name	Latin name	DAFOR rating	Notes
Blackthorn	<i>Prunus spinosa</i>	A	Hedge
Hawthorn	<i>Crataegus monogyna</i>	A	Hedge
Holly	<i>Ilex aquifolium</i>	F	Hedge
Ivy	<i>Hedera helix</i>	F	Hedge
Bramble	<i>Rubus</i> agg.	O	Hedge
Sweet Chestnut	<i>Castanea sativa</i>		Standard Tree

### Hedgerow 16 (photo 29)

Intact hedge with a single ash standard, but species poor. It has a verge mainly dominated by hemlock, nettles and bramble. It is considered unlikely to qualify based on ecological characteristics as an 'Important' hedgerow under The Hedgerow Regulations.

Common name	Latin name	DAFOR rating	Notes
Hemlock	<i>Conium maculatum</i>	D	Verge
Nettle	<i>Urtica dioica</i>	LD	Verge
Bramble	<i>Rubus</i> agg.	LD	Verge
Common Hawthorn	<i>Crataegus monogyna</i>	A	Hedgerow
Ivy	<i>Hedera helix</i>	F	Hedgerow
Perennial Sow Thistle	<i>Sonchus arvensis</i>	F	Verge
Fat Hen	<i>Chenopodium album</i>	F	Verge
Barren Brome	<i>Anisantha sterilis</i>	F	Verge
Garlic Mustard	<i>Alliaria petiolata</i>	F	Verge
Perennial Rye Grass	<i>Lolium perenne</i>	F	Verge
Cock's Foot	<i>Dactylis glomerata</i>	F	Verge
Elder	<i>Sambucus nigra</i>	O	Hedgerow
Holly	<i>Ilex aquifolium</i>	O	Hedgerow
Bramble	<i>Rubus</i> agg.	O	Hedgerow
Bristly Oxtongue	<i>Helminthotheca echioides</i>	O	Verge
White Champion	<i>Silene latifolia</i>	O	Verge
Yarrow	<i>Achillea millefolium</i>	O	Verge
Common Mallow	<i>Malva sylvestris</i>	O	Verge
Groundsel	<i>Senecio vulgaris</i>	O	Verge
White Deadnettle	<i>Lamium album</i>	O	Verge
Ash	<i>Fraxinus excelsior</i>	R	Hedgerow
Agrimony	<i>Agrimonia eupatoria</i>	R	Verge
Ribwort Plantain	<i>Plantago lanceolata</i>	R	Verge

**Hedgerow 17 (photo 30)**

Species poor hedgerow with no standards.

Common name	Latin name	DAFOR rating	Notes
Common Hawthorn	<i>Crataegus monogyna</i>	F	Hedgerow
Silver Birch	<i>Betula pendula</i>	A	Hedgerow
Bramble	<i>Rubus</i> agg.	F	Hedgerow
Ivy	<i>Hedera helix</i>	F	Hedgerow

**Hedgerow 18 (photo 31)**

Species poor hedgerow which borders DAFOR Point 11 on the south side with ditch running close to A47. It is considered unlikely to qualify based on ecological characteristics as an 'Important' hedgerow under The Hedgerow Regulations.

Common name	Latin name	DAFOR rating	Notes
Dog Rose	<i>Rosa canina</i> agg	O	Hedgerow
Blackthorn	<i>Prunus spinosa</i>	A	Hedgerow
Holly	<i>Ilex aquifolium</i>	A	Hedgerow

### 5.3 Constraints and Limitations of Survey

The optimal period to undertake botanical survey including identification of plant species is between April and September. The botanical survey was completed in mid-July which is within the optimal survey window for a Phase 1 habitat survey. Therefore, this is not considered to be a limitation to the accurate assessment of the habitats and the dominant species of the respective vegetation types were visible and identifiable.

The survey did not involve detailed NVC quadrat work within the survey area and hence this report cannot be considered a comprehensive assessment of the botanical composition of each unit. However, it is considered that additional quadrat survey would be unlikely to inform the overall ecological evaluation of each of the habitats.

Access was generally available across the survey area except for a small area at the east end, on the south side of the A47. This was inaccessible due to the access route being in close proximity to the A47; apart from this there were no known limitations in areas where access was required.

## 6. Evaluation of Features

### 6.1 DAFOR Points

No habitats or DAFOR points surveyed were found to be of importance on a County or District Level. The majority of areas along the survey area were arable land. The various field margins and road verges which were subject to detailed survey showed low species diversity and a lack of species of ecological value.

### 6.2 Hedgerows

Hedgerow	Likely to be important?
H1	No
H2	Yes
H3	Yes
H4	No
H5	No
H6	No
H7	No
H8	No
H9	No
H10	No
H11	No
H12	No
H13	No
H14	No
H15	No
H16	No
H17	No
H18	No



## 7. Impact Assessment

### 7.1. Potential impacts on ecological receptors

*Note - definitions: Impact - Actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.*

*Effect - Outcome to an ecological feature from an impact. For example, the effects on a dormouse population from loss of a hedgerow.*

Impact assessment is made with reference to the CIEEM EclA Guidelines<sup>8</sup>.

Throughout, italicised words are used in the technical sense defined within the CIEEM guidance. This refers to the geographical context of the impact or effect. Hence, the following geographical frame of reference will be used to describe the ecological impacts and effects, or adapted to suit local circumstances:

- International and European
- National
- Regional
- County
- District\*
- Local

\*District level is not listed in the EclA guidance, but is included within WFE reports as it is a useful and readily identifiable geographic unit.

The local/parish geographical context for the proposal site is defined here as the collective civil parishes of Blofield and Lingwood & Burlingham. The district context is problematic to define, since the corridor is partly in two LPA districts, but it is all included in The Broads National Character Area<sup>9</sup>, in which the site is situated. The county context is Norfolk, and the region is East Anglia.

The EclA guidelines espouse a quantification of impact/effect magnitude where possible. Where this is not available or uncertain, impact magnitude categories and criteria are defined based on Byron (2000)<sup>10</sup>. These categories are often also used as shorthand to summarise magnitude.

- *Major negative* - that which has a harmful effect on the integrity of a conservation site or the conservation status of a population of a species within a defined geographical area; e.g., fundamentally reduces the capacity to support wildlife for the entirety of a conservation site, or compromises the persistence of a species' population at a defined locality.
- *Intermediate negative* - that which has no adverse effect on the integrity of a conservation site or the conservation status of a species' population, but does have an important adverse effect in terms of achieving certain ecological objectives; e.g.,

<sup>8</sup> CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

<sup>9</sup> <http://publications.naturalengland.org.uk/publication/11549064?category=587130>

<sup>10</sup> Byron H. (2000) Biodiversity Impact - Biodiversity and environmental impact assessment: a good practice guide for road schemes. The RSPB, WWF-UK, English Nature and the Wildlife Trusts, Sandy

sustaining target habitat conditions and levels of wildlife for a conservation site, or maintaining population growth for a species.

- *Minor negative* - some minor detrimental effect is evident, but not to the extent of the above.
- *Neutral* - that which has no predictable effect.

### 7.1.2 Positive or Negative Impacts/ Effects

The nature of a predicted impact is as per CIEEM definition:

*“Positive impact - a change that improves the quality of the environment e.g. by increasing species diversity, extending habitat or improving water quality. Positive impacts may also include halting or slowing an existing decline in the quality of the environment.”*

*Negative impact - a change which reduces the quality of the environment e.g. destruction of habitat, removal of species foraging habitat, habitat fragmentation, pollution.”*

## 7.2 Duration of Impact/ Effect

Impacts/ effects are described as short, medium or long-term, and as either permanent or temporary.

## 7.3 Impact/ Effect Reversibility

Reversibility is judged per the CIEEM Guidelines for Ecological Impact Assessment description: *“An irreversible effect is one from which recovery is not possible within a reasonable timescale or there is no reasonable chance of action being taken to reverse it. A reversible effect is one from which spontaneous recovery is possible or which may be counteracted by mitigation.”*

## 7.4 Impact/ Effect Significance

The CIEEM Guidelines for Ecological Impact Assessment provide a working definition of ‘significant effects’ which includes the statements:

*“For the purpose of EclA, ‘significant effect’ is an effect that either supports or undermines biodiversity conservation objectives for ‘important ecological features’ or for biodiversity in general.” and “In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).”*

In this assessment, a significant impact is not attributed to any effect on a receptor which is predicted to occur at no greater than minor negative magnitude. Similarly any impact, regardless of magnitude, is not regarded as significant if its geographic scale of importance is lower than a local/ parish level.

## 7.5 Description of Impacts/ Effects

A number of impacts/ effects on ecological receptors may result from the proposed development.



### *7.5.1. Change of land use*

This impact will be the most important for valued habitats. A new route will permanently alter existing habitats. Some will have capacity to be recreated elsewhere, others can be regarded as irreplaceable (for example ancient woodland, or old species rich meadows). A new road can also cause fragmentation and severance of existing habitats. There are also opportunities for new cuttings or embankments to create new corridors of habitat, or for cut-off sections of land to be managed for biodiversity.

### *7.5.2. Construction activities*

The land required for construction may be greater than the final footprint of the road. Construction vehicles, materials storage and other activities may destroy or devalue existing habitats.

### *7.5.3. Operational activities*

A new road will have similar in-use impacts to the existing road, although an increase in vehicle use may increase non-direct effects such as diffuse pollution.

## **7.6 Habitats**

The majority of the survey habitats was arable land. Other areas recorded were poor-semi-improved grassland margins or verges with no species of botanical interest or rarity and all woodlands present were plantation woodland with relatively similar structure and no ancient trees or important ground flora. Therefore, there will be no likely significant impact from the proposal.



## 8. Conclusions

The surveyed corridor mainly contains arable land, species poor neutral grassland hedgerows and woodland plantation. No rare plants or plants of botanical interest were found. Therefore, there will be no likely significant impact from the proposal.

It is likely that some important hedgerow may be lost, and compensation should aim to replace lost hedgerow by a favourable ratio.

The scheme should be put through the Defra Metric<sup>11</sup> to produce a plan for measurable net gain at an early opportunity, to influence design going forward.

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<sup>11</sup> Natural England (2019) The Biodiversity Metric 2.0  
<http://publications.naturalengland.org.uk/publication/5850908674228224>



## Appendix 1. Site Photographs



Photo 1. Example of Area 1- Line of Poplars, arable margin and verge



Photo 2. Example of Area 2



Photo 3. Example of Area 4- Road verge to the south-east of Blofield



Photo 4. Field margin in Area 5





Photo 5. Area 6- Arable Margin including single oak and hedgerow 8



Photo 6. Area 9 - Small grassland area on west side of Lingwood Road



Photo 7. Area 10 Example



Photo 8. Plantation in Area 13



Photo 9. Area 14 example



Photo 10. Single spike of Pyramidal Orchid in area 14



Photo 11. Plantation example in Area 17



Photo 12. Area 21 Example





Photo 13. Line of Scots Pines running south from arable margin in Area 22

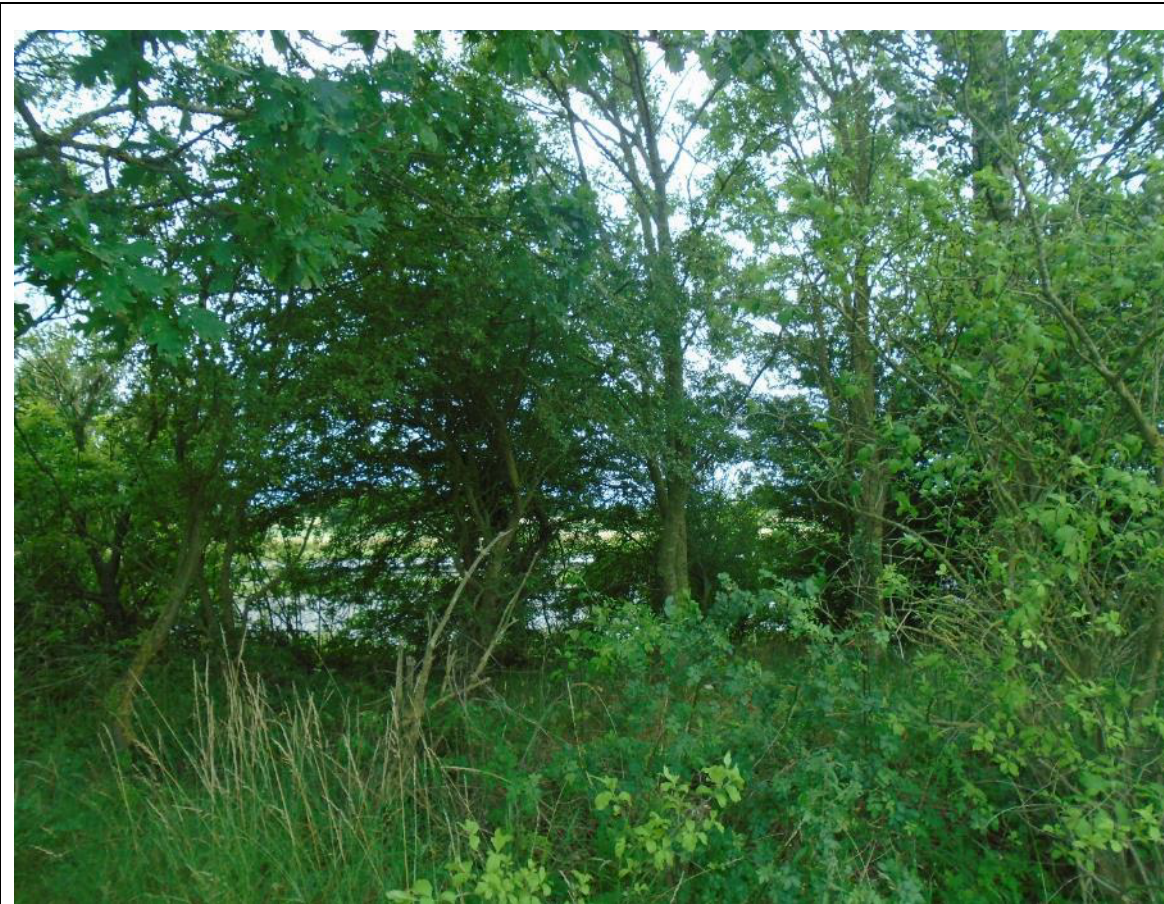


Photo 14. DAFOR Point 11- Plantation Woodland at east end of survey area



Photo 15. Hedge 1



Photo 16. Hedge 2



Photo 17. Hedge 3



Photo 18. Hedge 4



Photo 19. Hedge 5



Photo 20. Hedge 6





Photo 21. Hedge 7



Photo 22. Hedge 8



Photo 23. Hedge 9



Photo 24. Hedge 10



Photo 25. Hedge 11



Photo 26. Hedge 12



Photo 27. Hedge 13



Photo 28. Hedges 14 & 15





Photo 29. Hedge 16



Photo 30. Hedge 17



Photo 31. Hedge 18