Stantec UK Limited
7 Soho Square
London
W1D 3QB
UNITED KINGDOM

12th September 2023

Project/File: 33313478400

Stacey Robins
Head of Planning
Wealden District Council
Council Offices
Vicarage Lane,
Hailsham, BN27 2AX

Dear Stacey,

Reference: LAND AT DOWNLANDS FARM, UCKFIELD – ENVIRONMENTAL STATEMENT ADDENDUM LETTER

Background

We write on behalf of Gleeson Land and John Alison Land and Research Ltd with respect to proposed development on land at Downlands Farm, Uckfield

In June 2022 Gleeson Land and John Alison Land and Research Ltd submitted a hybrid planning application (WD/2022/1637/MEA) to Wealden District Council (WDC) for the demolition of Chicory Cottage and associated outbuildings, and the development of up to 424 residential dwellings, the creation of a Strategic Suitable Alternative Natural Greenspace (SANG), along with the provision of open space and associated access, parking, landscaping, infrastructure and earthworks. The application was accompanied by an Environmental Statement (ES) consisting of the following technical assessments: Landscape and Views; Biodiversity; Water Resources; Cultural Heritage; and Land Contamination.

In April 2023 WDC refused planning permission and Gleeson Land and John Alison Land and Research Ltd appealed the decision in May 2023 (appeal ref: APP/C1435/W/23/3321978).

In response to consultation comments provided on 9th August 2023 by Natural England, during the course of the Appeal (Natural England Appeal Statement dated 13th July 2023), the Appellant submitted revised plans to WDC setting out changes to the path proposed though the SANG to comprise the installation of a boardwalk. The plans were submitted to the Inspector on 14th August 2023, ahead of the Case Management Conference.

The requirement for the environmental impacts of the revised path to be considered in the ES were identified during the Appeal Case Management Conference on 16th August 2023 where the Inspector stated: "*The appellant should also advise on whether, in the light of any identified impacts on trees, the revised plans would constitute a change that would necessitate an update to the Environmental Statement*".

Environmental Statement Consideration

The amendment of the SANG path to a boardwalk has been considered by the Biodiversity Chapter of the ES and the Habitats Regulations Assessment (HRA), both of which haves taken into account a technical note produced in respect of the potential for impacts on trees from installation of the boardwalk.

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The ES Biodiversity chapter was also updated with the results of further baseline survey work.

The updates to the Biodiversity chapter and the Report to inform an HRA have not resulted in any changes to the residual effects identified in the original ES.

This letter confirms that the conclusions of the ES accompanying the planning application and prepared in accordance with the *Town and Country Planning (Environmental Impact Assessment) Regulations 2017*, as amended, remain valid following the amendments to the proposed SANG path structure and updated biodiversity surveys.

The revised SANG path plan is attached at Enclosure 1 to this letter (updated Figure 3.6A – Green Infrastructure Plan and Figure 6.6A SANG Detailed Hard and Soft Landscaping Plan. The original ES Biodiversity Chapter, with amendments made using the Track Change function addressing the potential for effects as a result of the amendment to include a boardwalk, is attached at Enclosure 2. The amended Report to inform an HRA (Appendix 7.2A) is attached at Enclosure 3. The updated baseline survey work is provided in Enclosure 4. A technical note setting out the rational for the piles that would form part of the boardwalk structure is attached at Enclosure 5.

The updated Biodiversity chapter, updated Report to inform an HRA, and ES Figures 3.3 and 3.3 have had the suffix 'A' added to distinguish from the information in the June 2022 ES.

Non-Technical Summary

Schedule 4 of the EIA Regulations requires a non-technical summary of information provided in an ES. The amendments to the June 2022 ES comprise changes to the proposed SANG path to boardwalk, a raised timber structure which will prevent damage to the woodland. The boardwalk will not result in new or significant effects. The amendments include the provision of additional surveys for great crested newts. The survey findings do not change the identified effects in the ES. No update has been made to the Non-Technical Summary submitted with the June 2022 as the changes in this Addendum do not amend the content of the NTS.

Conclusion

This information attached to this letter demonstrates that no likely significant effects would result from the amendment to the SANG area or the introduction of a boardwalk path. The conclusions of the June 2022 ES remain valid.

This update to the ES will be advertised by the applicants in accordance with the requirements of Regulation 25 of the 2017 EIA Regulations.

If you require any further information please do not hesitate to contact me.

Yours sincerely,

M Mescall

Mary Mescall
Environmental Planning Associate Director
Phone: +44 2074466881
Mobile: 07825092896

mary.mescall@stantec.com

Enclosure 1: Revised ES Figure 3.3A – Green Infrastructure Parameter Plan; and Figure 6.6A SANG Detailed Hard and Soft Landscaping Plan
Enclosure 2: June 2022 Environmental Statement Biodiversity, Chapter 7A, amended to reflect updated baseline survey information and SANG boardwalk proposal
Enclosure 3: Updated Appendix 7.2A – Report to Inform a Habitats Regulations Assessment
Enclosure 4: New Appendix 7.4 to the ES Ecology Chapter comprising updated baseline survey information
Enclosure 5: Boardwalk Tree Protection Technical Note

ENCLOSURE 1

Site

DOWNLANDS FARM, UCKFIELD

Drawing

PARAMETER PLAN
Green Infrastructure

Scale

1:2000@A1

Date

11.04.23

Drawing ref 1309.**04A**

KEY

- Site boundary
- Amenity open space
- Natural greenspace
- Boundary of SANG

N

A22

SKATTS ROAD

CLAREMONT RISE

LOY LANE

CAVENDISH

CORNELIA RISE

HUNTERS WAY

0 20 40 60 80 100m

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urban design

Sheet 5
Sheet 6
Sheet 8
Sheet 4
Sheet 7
Sheet 10
Sheet 3
Sheet 2
Sheet 9

Dust Cottage
Partridges Dust
Overwood Manor Cottage
Overwood Manor
The Hollies
Stanmore Cottages
Stanmore
Overwood Kingston
Overwood House
Mill Cottage
Brambly Cottage
Cowden Barn
The Cowden House
Cowden Barn
Cowden Farm
Cowden Farmhouse
Cowden Cottages
Cowden Manor
Cowden Manor Cottage
Cowden Manor Barn
Cowden Manor Barn
Cowden Manor Barn



notes

Drawing to be read in conjunction with Downlands Woodland Park SANG and Woodland Management Plan (Ref. 5719-SANGManPlan.dv2 MRD AB)

overview



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purpose of issue **PLANNING**

rev	description	date	by
j	Updates to footpath treatment - all paths through AW to become bardwalks	26-07-2023	NWa
i	SANG boundary & circular path updated	21-02-2023	NWa
h	Circular path updated	10-02-2023	NWa

client

Gleeson Land

project title

Land at Downlands Farm, Uckfield

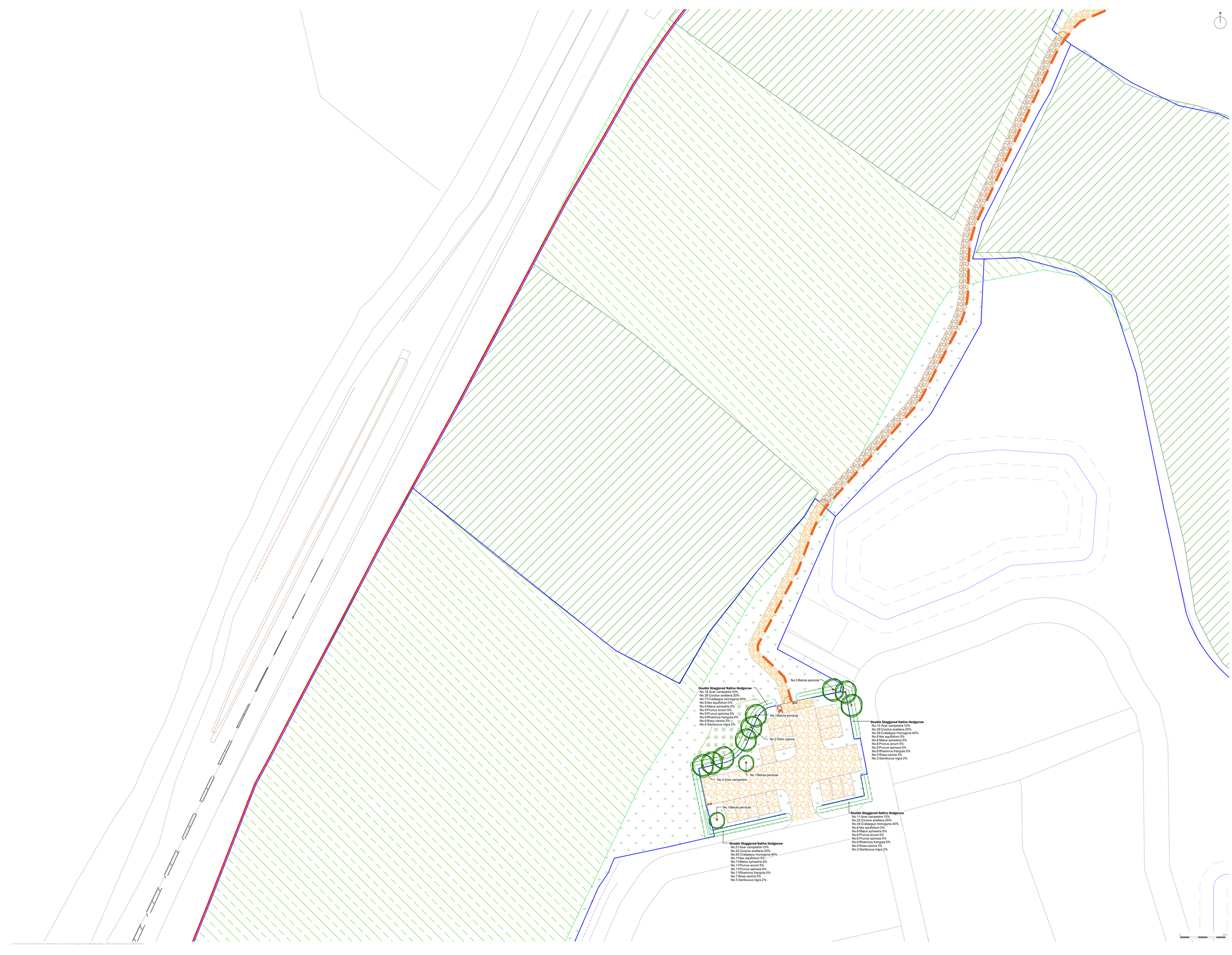
drawing title

Figure 6.3 (LVIA Figure ref.): SANG: Detailed Hard and Soft Landscape **Sheet 2 of 11**

date	**26 JULY 2023**	drawn by	**LHa**
drawing number	**edp6170_d016j**	checked	**TR**
scale	**1:250 @ A0**	QA	**GY**

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Site Boundary

SANG Boundary

Existing Ancient Woodland

Existing Woodland
To be enhanced in accordance with management plan.

Existing Scrub
To be enhanced in accordance with management plan.

Existing Bracken
To be enhanced in accordance with management plan.

Existing Trees

Proposed Woodland
Area: 1.7 ha. See **Sheet 9** for planting schedule.

Proposed Trees
See **Sheet 9** for planting schedule.

Proposed Orchard
Area: 0.34ha
See **Sheet 9** for planting schedule.

Proposed Hedgerow
See **Sheet 9** for planting schedule.

Proposed Shrub Planting
Area: 0.8ha. See **Sheet 9** for planting schedule.

Existing Species Rich Grassland
To be enhanced in accordance with management plan. See **Sheet 9** for details.

Proposed Species Rich Grassland
To be enhanced in accordance with management plan. See **Sheet 9** for details.

Existing Pond
To be enhanced in accordance with management plan.

2.3km Circular Footpath

Accessible Circular Footpath

Pedestrian Link Between Car Park & SANG

Timber Board Walk
The Widdeck Company Bespoke Timber Boardwalk and Bridge or similar approved. 2m wide with a single handrail.

Unsurfaced Footpath with Loose Log Edging
Footpaths to be lined with brash, approx. 0.5m high and aligned with, and set approx. 1m back from, the path to encourage people to stay on the route.

Self Binding Gravel

Mown Path

Ground Reinforced Gravel.

Dog Proof Fence
Pitt Chestnut Post and Rail Fence with wire mesh. See **Sheet 10** for product detail.

Pedestrian Timber Swing Gate
See **Sheet 10** for product detail.

Timber Field Gate
See **Sheet 10** for product detail.

Timber Sheltered Information Board
See **Sheet 10** for product detail.

Timber Interpretation Board
See **Sheet 10** for product detail.

Timber Bench
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Timber Circular Bench
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Public Art Focal Point
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Timber Finger Post
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Timber Round Waste Bin and Dog Waste Bin
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Cycle Stands
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Important View

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client
Gleeson Land

project title
Land at Downlands Farm, Uckfield

drawing title
Figure 6.3 (LVIA Figure ref.): SANG: Detailed Hard and Soft Landscape **Sheet 4 of 11**

date	**26 JULY 2023**	drawn by	**LHa**
drawing number	**edp6170_d016j**	checked	**TR**
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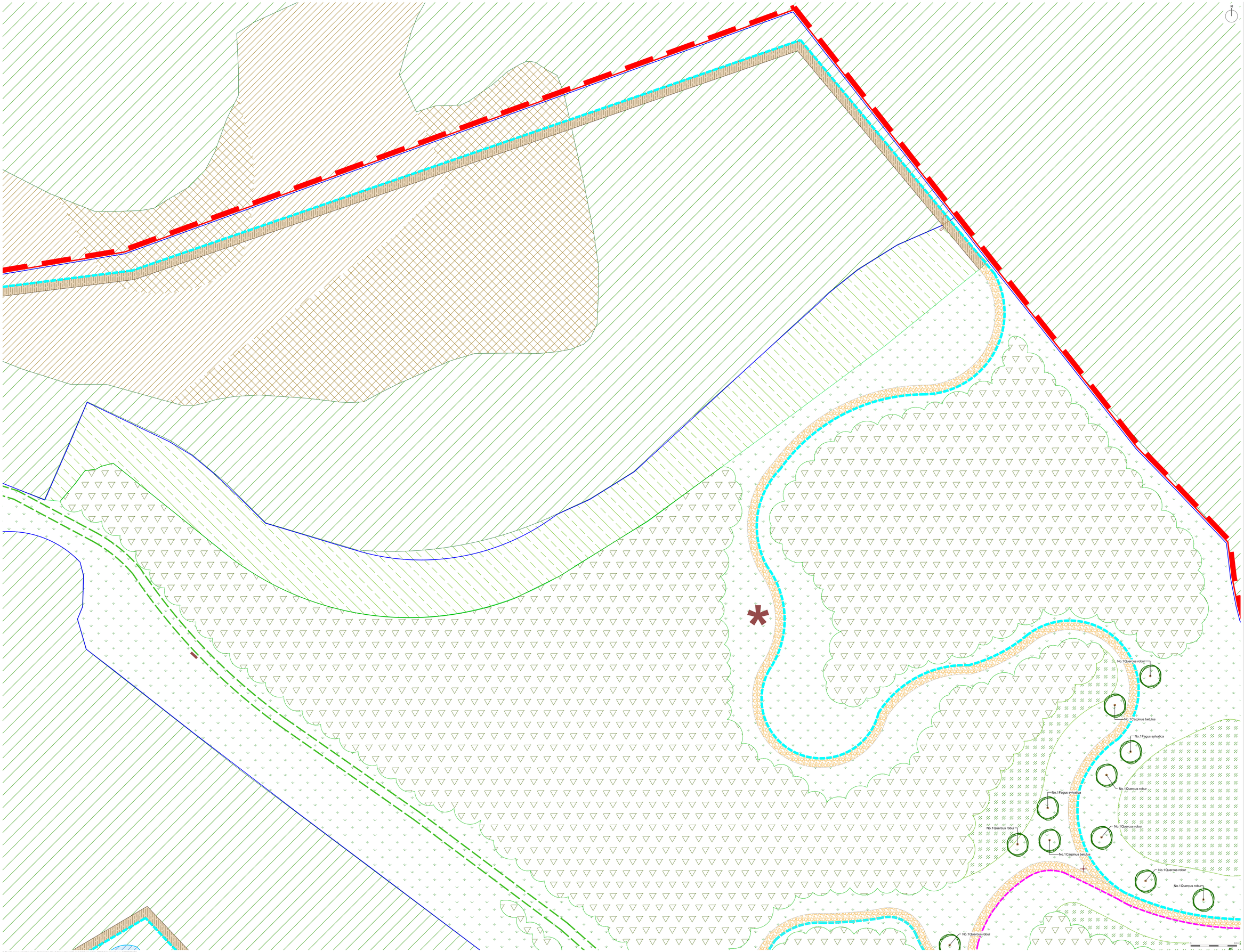
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Figure 6.3 (LVIA Figure ref.): SANG: Detailed Hard and Soft Landscape **Sheet 5 of 11**

date	**26 JULY 2023**	drawn by	**LHa**
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No.1 Quercus robur
No.1 Carpinus betulus
No.1 Fagus sylvatica
No.1 Quercus robur
No.1 Fagus sylvatica
No.1 Quercus robur
No.1 Carpinus betulus
No.1 Quercus robur
No.1 Quercus robur
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No.1Quercus robur
No.1Carpinus betulus
No.1Quercus robur
No.1Quercus robur
No.1Quercus robur
No.2 Acer campestre
No.1Betula pendula
No.1Quercus robur
No.1Quercus robur
No.1Carpinus betulus
No.2 Sorbus aucuparia
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No.1Quercus robur
No.1Carpinus betulus
No.1Quercus robur
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No.1Quercus robur
No.1Quercus robur
No.1Quercus robur
No.2 Malus sylvestris
No.1Fagus sylvatica
No.1Betula pendula
No.1Quercus robur
No.1Quercus robur
No.1Carpinus betulus
No.1Quercus robur
No.1Quercus robur
No.1Quercus robur

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No.1 Quercus robur
No.1 Carpinus betulus
No.1 Quercus robur
No.1 Quercus robur
No.1 Quercus robur
No.1 Quercus robur
No.1 Fagus sylvatica
No.1 Quercus robur
No.1 Quercus robur
No.1 Quercus robur
No.1 Salix caprea
Triple Staggered Native Hedgerow
No.47 Acer campestre 10%
No.93 Corylus avellana 20%
No.185 Crataegus monogyna 40%
No.24 Ilex aquifolium 5%
No.24 Malus sylvestris 5%
No.24 Prunus avium 5%
No.24 Prunus spinosa 5%
No.24 Rhamnus frangula 5%
No.14 Rosa canina 3%
No.10 Sambucus nigra 2%
No.2 Malus domestica 'Alfriston'
No.8 Malus domestica 'Alfriston'
Triple Staggered Native Hedgerow
No.19 Acer campestre 10%
No.38 Corylus avellana 20%
No.75 Crataegus monogyna 40%
No.10 Ilex aquifolium 5%
No.10 Malus sylvestris 5%
No.10 Prunus avium 5%
No.10 Prunus spinosa 5%
No.10 Rhamnus frangula 5%
No.8 Rosa canina 3%
No.4 Sambucus nigra 2%
No.1 Quercus robur
Triple Staggered Native Hedgerow
No.5 Acer campestre 10%
No.9 Corylus avellana 20%
No.17 Crataegus monogyna 40%
No.3 Ilex aquifolium 5%
No.3 Malus sylvestris 5%
No.3 Prunus avium 5%
No.3 Prunus spinosa 5%
No.3 Rhamnus frangula 5%
No.2 Rosa canina 3%
No.1 Sambucus nigra 2%
No.2 Salix caprea
No.1 Betula pendula
Triple Staggered Native Hedgerow
No.31 Acer campestre 10%
No.61 Corylus avellana 20%
No.121 Crataegus monogyna 40%
No.16 Ilex aquifolium 5%
No.16 Malus sylvestris 5%
No.16 Prunus avium 5%
No.16 Prunus spinosa 5%
No.16 Rhamnus frangula 5%
No.10 Rosa canina 3%
No.7 Sambucus nigra 2%
No.1 Acer campestre
No.2 Prunus avium
Triple Staggered Native Hedgerow
No.8 Acer campestre 10%
No.16 Corylus avellana 20%
No.32 Crataegus monogyna 40%
No.4 Ilex aquifolium 5%
No.4 Malus sylvestris 5%
No.4 Prunus avium 5%
No.4 Prunus spinosa 5%
No.4 Rhamnus frangula 5%
No.3 Rosa canina 3%
No.2 Sambucus nigra 2%
Triple Staggered Native Hedgerow
No.18 Acer campestre 10%
No.36 Corylus avellana 20%
No.72 Crataegus monogyna 40%
No.9 Ilex aquifolium 5%
No.9 Malus sylvestris 5%
No.9 Prunus avium 5%
No.9 Prunus spinosa 5%
No.9 Rhamnus frangula 5%
No.6 Rosa canina 3%
No.4 Sambucus nigra 2%
No.6 Malus domestica 'Mannington's Pearmain'
No.3 Malus domestica 'Sussex Mother'
Triple Staggered Native Hedgerow
No.15 Acer campestre 10%
No.37 Corylus avellana 20%
No.73 Crataegus monogyna 40%
No.10 Ilex aquifolium 5%
No.10 Malus sylvestris 5%
No.10 Prunus avium 5%
No.10 Prunus spinosa 5%
No.10 Rhamnus frangula 5%
No.6 Rosa canina 3%
No.4 Sambucus nigra 2%
No.6 Malus domestica 'Alfriston'
No.5 Malus domestica 'Mannington's Pearmain'
Triple Staggered Native Hedgerow
No.41 Acer campestre 10%
No.81 Corylus avellana 20%
No.162 Crataegus monogyna 40%
No.11 Ilex aquifolium 5%
No.11 Malus sylvestris 5%
No.11 Prunus avium 5%
No.11 Prunus spinosa 5%
No.11 Rhamnus frangula 5%
No.7 Rosa canina 3%
No.5 Sambucus nigra 2%
No.5 Malus domestica 'Sussex Mother'
No.6 Malus domestica 'Alfriston'
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No.13 Acer campestre 10%
No.25 Corylus avellana 20%
No.49 Crataegus monogyna 40%
No.7 Ilex aquifolium 5%
No.7 Malus sylvestris 5%
No.7 Prunus avium 5%
No.7 Prunus spinosa 5%
No.7 Rhamnus frangula 5%
No.4 Rosa canina 3%
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Triple Staggered Native Hedgerow
No.11 Acer campestre 10%
No.21 Corylus avellana 20%
No.41 Crataegus monogyna 40%
No.6 Ilex aquifolium 5%
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No.6 Rhamnus frangula 5%
No.4 Rosa canina 3%
No.3 Sambucus nigra 2%
Bramling Cottage
0 10m

N

Site Boundary
SANG Boundary
Existing Ancient Woodland
Existing Woodland
To be enhanced in accordance with management plan.
Existing Scrub
To be enhanced in accordance with management plan.
Existing Bracken
To be enhanced in accordance with management plan.
Existing Trees
Proposed Woodland
Area: 1.7 ha. See **Sheet 9** for planting schedule.
Proposed Trees
See **Sheet 9** for planting schedule.
Proposed Orchard
Area: 0.34ha
See **Sheet 9** for planting schedule.
Proposed Hedgerow
See **Sheet 9** for planting schedule.
Proposed Shrub Planting
Area: 0.8ha. See **Sheet 9** for planting schedule.
Existing Species Rich Grassland
To be enhanced in accordance with management plan. See **Sheet 9** for details.
Proposed Species Rich Grassland
To be enhanced in accordance with management plan. See **Sheet 9** for details.
Existing Pond
To be enhanced in accordance with management plan.
2.3km Circular Footpath
Accessible Circular Footpath
Pedestrian Link Between Car Park & SANG
Timber Board Walk
The Widdeck Company Bespoke Timber Boardwalk and Bridge or similar approved. 2m wide with a single handrail.
Unsurfaced Footpath with Loose Log Edging
Footpaths to be lined with brash, approx. 0.5m high and aligned with, and set approx. 1m back from, the path to encourage people to stay on the route.
Self Binding Gravel
Mown Path
Ground Reinforced Gravel.
Dog Proof Fence
Pitt Chestnut Post and Rail Fence with wire mesh. See **Sheet 10** for product detail.
Pedestrian Timber Swing Gate
See **Sheet 10** for product detail.
Timber Field Gate
See **Sheet 10** for product detail.
Timber Sheltered Information Board
See **Sheet 10** for product detail.
Timber Interpretation Board
See **Sheet 10** for product detail.
Timber Bench
See **Sheet 10** for product detail.
Timber Circular Bench
See **Sheet 10** for product detail.
Public Art Focal Point
See **Sheet 10** for information.
Timber Finger Post
See **Sheet 10** for product detail.
Timber Round Waste Bin and Dog Waste Bin
See **Sheet 10** for product detail.
Cycle Stands
See **Sheet 10** for product detail.
Important View

notes
Drawing to be read in conjunction with Downlands Woodland Park SANG and Woodland Management Plan (Ref. 57.19-SANGManPlan.dv2 MRD AB)

overview



This drawing is to be read in conjunction with all other drawings and specifications within the package. These drawings have been prepared for design development and costing purposes only.
All dimensions in millimetres unless otherwise specified.
Do not scale off this drawing, written dimensions is to be taken only.
All base plans used are provided by the client and architect, except where otherwise expressly agreed in writing. edp shall not be responsible for inaccuracies in such base plans.
This drawing must not be copied in whole or part without prior written consent from EDP.

purpose of issue **PLANNING**

rev	description	date	by
j	Updates to footpath treatment - all paths through AW to become bardwalks	26-07-2023	NWa
i	SANG boundary & circular path updated	21-02-2023	NWa
h	Circular path updated	10-02-2023	NWa

client
Gleeson Land

project title
Land at Downlands Farm, Uckfield

drawing title
Figure 6.3 (LVIA Figure ref.): SANG: Detailed Hard and Soft Landscape **Sheet 9 of 11**

date	**26 JULY 2023**	drawn by	**LHa**
drawing number	**edp6170_d016j**	checked	**TR**
scale	**1:250 @ A0**	QA	**GY**

the environmental dimension partnership
Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

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Specimen Trees

Naturalised planting of specimen trees in open parkland. Heavy standard trees planted as individual trees and selected standard trees planted in small groups. Oak to be favoured at 60%.

Trees

Number	Common Name	Species	Girth	Height	Specification	Density
2	Common Maple	Acer campestre	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem min. 200cm	Counted
8	Common Silver Birch	Betula pendula	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	Counted
6	Common Hornbeam	Carpinus betulus	12-14cm	350-425cm	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	Counted
7	Common Beech	Fagus sylvatica	12-14cm	350-425cm	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	Counted
2	Common Crab Apple	Malus sylvestris	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: B: Clear Stem 175-200cm	Counted
33	Common Oak	Quercus robur	12-14cm	350-425cm	Heavy Standard: 5 brks: C: Clear Stem 175-200cm	Counted
2	Rowan	Sorbus aucuparia	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	Counted

Total :60

Native Hedgerow and Hedgerow Trees

Hedgerow to be planting in double or triple staggered rows with 0.3m between plants within a row and 0.5m between rows. Species to be planted in groups of 3 to 5. Hedgerow trees to be planted naturalistically in groups of 3 or 4 within the hedge. There should be 1 tree planted for every 1 linear meter of hedge row planted.

Trees

Number	Common Name	Species	Girth	Height	Specification	Density
7	Common Maple	Acer campestre	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem min. 200cm	Counted
6	Common Silver Birch	Betula pendula	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	Counted
4	Common Crab Apple	Malus sylvestris	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: B: Clear Stem 175-200cm	Counted
4	Wild Cherry	Prunus avium	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	Counted
2	Common Oak	Quercus robur	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	Counted
9	Goat Willow	Salix caprea	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	Counted

Total :32

Hedges

Number	Common Name	Species	Height	Specification	Density
126	Common Maple	Acer campestre	80-100cm	1+1: Transplant - seed raised: B	0.3Ctr Double Staggered at 0.5m offset
142	Common Maple	Acer campestre	80-100cm	1+1: Transplant - seed raised: B	0.3Ctr Double Staggered at 0.5m offset
249	Common Hazel	Corylus avellana	40-60cm	1+1: Transplant - seed raised: Branched: 2 brks: B	0.3Ctr Double Staggered at 0.5m offset
281	Common Hazel	Corylus avellana	40-60cm	1+1: Transplant - seed raised: Branched: 2 brks: B	0.3Ctr Triple Staggered at 0.5m offset
494	Common Hawthorn	Crataegus monogyna	60-80cm	1+1: Transplant - seed raised: Branched: 4 brks: C	0.3Ctr Double Staggered at 0.5m offset
558	Common Hawthorn	Crataegus monogyna	60-80cm	1+1: Transplant - seed raised: Branched: 4 brks: C	0.3Ctr Triple Staggered at 0.5m offset
65	Common Holly	Ilex aquifolium	60-80cm	Leader with Laterals: C	0.3Ctr Double Staggered at 0.5m offset
73	Common Holly	Ilex aquifolium	60-80cm	Leader with Laterals: C	0.3Ctr Triple Staggered at 0.5m offset
65	Common Crab Apple	Malus sylvestris	60-80cm	1+1: Transplant - seed raised: C	0.3Ctr Double Staggered at 0.5m offset
73	Common Crab Apple	Malus sylvestris	60-80cm	1+1: Transplant - seed raised: C	0.3Ctr Triple Staggered at 0.5m offset
65	Wild Cherry	Prunus avium	80-100cm	1+1: Transplant - seed raised: B	0.3Ctr Double Staggered at 0.5m offset
73	Wild Cherry	Prunus avium	80-100cm	1+1: Transplant - seed raised: B	0.3Ctr Triple Staggered at 0.5m offset
65	Blackthorn	Prunus spinosa	60-80cm	1+1: Transplant - seed raised: Branched: 2 brks: B	0.3Ctr Double Staggered at 0.5m offset
73	Blackthorn	Prunus spinosa	60-80cm	1+1: Transplant - seed raised: Branched: 2 brks: B	0.3Ctr Triple Staggered at 0.5m offset
65	Alder Buckthorn	Rhamnus frangula	40-60cm	1+1: Transplant - seed raised: Leader with Laterals: 3 brks: B	0.3Ctr Double Staggered at 0.5m offset
73	Alder Buckthorn	Rhamnus frangula	40-60cm	1+1: Transplant - seed raised: Leader with Laterals: 3 brks: B	0.3Ctr Triple Staggered at 0.5m offset
43	Dog Rose	Rosa canina	60-80cm	1+1: Transplant - seed raised: Branched: 3 brks: B	0.3Ctr Double Staggered at 0.5m offset
46	Dog Rose	Rosa canina	60-80cm	1+1: Transplant - seed raised: Branched: 3 brks: B	0.3Ctr Triple Staggered at 0.5m offset
29	Common Elder	Sambucus nigra	60-80cm	1+1: Transplant - seed raised: Branched: 3 brks: B	0.3Ctr Double Staggered at 0.5m offset
31	Common Elder	Sambucus nigra	60-80cm	1+1: Transplant - seed raised: Branched: 3 brks: B	0.3Ctr Triple Staggered at 0.5m offset

Total :2689

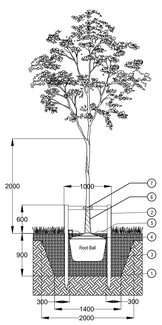
Orchard

Trees to be planting in rows running north/south at 5m centres and an offset of 6.5m between rows. Species to be grouped together in pairs of rows.

Trees

Number	Common Name	Species	Girth	Height	Specification	Density
22	Apple 'Alfriston'	Malus domestica 'Alfriston'			Bush: M26 rootstock: 2-3 tiers: 1 years	Counted
21	Apple 'Mannington's Pearmain'	Malus domestica 'Mannington's Pearmain'			Bush: M26 rootstock: 1 year	Counted
8	Apple 'Sussex Mother'	Malus domestica 'Sussex Mother'			Bush: M26 rootstock: 1 year	Counted

Total :51



Tree Pit Detail for Selected and Heavy Standard Trees

1. Excavate tree pit to sufficient size to accommodate tree root ball with 300mm free space around the root ball. Loosen any compaction in base of excavated pit to aid drainage. The tree should be planted at a depth where the root flare is still visible, just breaching the soil surface, following backfilling.

2. 2x tanalised timber tree stakes 1.8m, 75mm Ø and crossbar driven into backfilled pit to provide support to the tree.

3. Backfill tree pit with subsoil and topsoil excavated from pit if this is regarded as of sufficient quality to promote the healthy establishment of the tree. If either the top soil or sub soil excavated from the pit is of poor quality, then soil ameliorants may be used sparingly or imported topsoil compliant with BS3882 should be used.

4. *RootRain Metro* irrigation system or similar approved. Place around top of root ball and nail to supporting stake, ensuring filler cap finishes slightly above mulch level.

5. 75mm deep bark mulch layer to be spread evenly over a circular area 1000mm Ø around the tree to prevent weed growth and retain moisture. Alternatively, a suitable mulch mat can be used covering the same area.

6. Clear spiral guard to be fitted to trunk to protect against animal browsing.

7. Use a single tree tie comprising nylon reinforced rubber belt and pad/spacer fixed to cross bar in accordance with manufacturers guidance. *Green Blue Urban GLB35B* (35mm wide belt) and *GLPAA4* (38mm Extra Large Pad) or similar approved.

Immediately after planting, water the tree, saturating the tree pit to field capacity.

For further guidance on tree planting refer to BS 8545:2014 Section 10.

Products suggested in italics above are available from Green Blue Urban (http://greenblueurban.com/).

Tree Maintenance and Management During 5 Year Establishment Period

Immediately following planting, the tree should be watered thoroughly. Following this, and with regard to prevailing weather conditions, newly planted trees should be watered regularly during periods of dry weather. If the tree pit has been specified with an irrigation pipe, this should be used as the primary method of watering. If no irrigation pipe is specified, the square metre of ground around the tree should be soaked to field capacity (refer to BS8545:2014 for further detail) by surface watering. Watering frequency is more important than quantity to prevent the root ball of the newly planted tree from drying out.

All trees are fitted with protective guards to prevent animal damage. These should be checked regularly to ensure they remain in place and are providing adequate protection against the animals in the area. If damage to trees from browsing by animals still occurs, additional measures may be required.

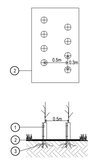
A formal assessment of young tree health and development should be carried out annually by a qualified arborist who will be able to advise on solutions should any problems be picked up. During this assessment, any stakes and ties should be checked to ensure they are providing support but not damaging the tree and that the tree is still firmly seated in the ground. If the tree has become loose in the ground, the soil around the base should be re-firmed and stakes and ties adjusted accordingly.

The mulched area around the base of the tree should be kept clear of competing vegetation and weeds at all times.

Tree stakes and ties should be removed once the tree has established a strong enough root system to support itself, likely to be 1-2 years after planting. Tree guards should only be removed if they are beginning to restrict tree growth or if it is felt the risk of damage has significantly reduced due to strong tree growth and development or changes in the surrounding environment.

Formative pruning should be carried out in accordance with BS3998 as required throughout the 5 year establishment period.

For further guidance on tree maintenance during establishment refer to BS8545:2014 Section 11.



Planting Detail for Double Staggered Native Hedgerow

1. *Tubex* shrub shelter with supporting cane or stake or similar approved.

2. 2m wide biodegradable weed mat roll pegged down with biodegradable pegs along line of hedgerow to prevent weed growth and retain moisture.

3. Whip to be notch planted following clearance of any existing vegetation.

Immediately after planting, water the whip, saturating the ground around its base to field capacity.

For further general guidance on planting refer to BS8545:2014 Section 10 and BS4428:1989 Section 9.

Products suggested in italics above are available from Tubex (http://www.tubex.com/).

Whip Maintenance and Management During 5 Year Establishment Period

Immediately following planting, the whip should be watered thoroughly. Following this, and with regard to prevailing weather conditions, newly planted whips should be watered regularly during periods of dry weather. When watering, the square meter of ground around the whip should be soaked to field capacity (refer to BS8545:2014 for further detail) by surface watering. Watering frequency is more important than quantity to prevent the roots of the newly planted whip from drying out.

All whips are fitted with protective guards to prevent animal damage. These should be checked regularly to ensure they remain in place and are providing adequate protection against the animals in the area. If damage to trees from browsing by animals still occurs, additional measures may be required.

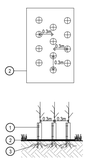
A formal assessment of areas of whip planting should be carried out annually by a qualified arborist who will be able to advise on solutions should any problems be picked up. During this assessment, any guards and canes/stakes should be checked to ensure they are providing protection but not damaging the developing whip and that its roots are still firmly seated in the ground. If the whip has become loose in the ground, the soil around the base should be re-firmed and guards adjusted accordingly.

The space above the mulch mat around the whip should be kept clear of competing vegetation and weeds at all times.

The shrub shelter/guard should be removed once the whip has established a strong enough root system to support itself and has begun to grow strongly clear of the top of the shelter/guard, likely to be 1-2 years after planting. Biodegradable mulch mats can remain in place indefinitely.

Formative pruning should be carried out in accordance with BS3998 as required during the first 5 years to ensure the desired form is achieved.

For further guidance on whip and tree maintenance during establishment refer to BS8545:2014 Section 11.



Planting Detail for Triple Staggered Native Hedgerow

1. *Tubex* shrub shelter with supporting cane or stake or similar approved.

2. 2m wide biodegradable weed mat roll pegged down with biodegradable pegs along line of hedgerow to prevent weed growth and retain moisture.

3. Whip to be notch planted following clearance of any existing vegetation.

Immediately after planting, water the whip, saturating the ground around its base to field capacity.

For further general guidance on planting refer to BS8545:2014 Section 10 and BS4428:1989 Section 9.

Products suggested in italics above are available from Tubex (http://www.tubex.com/).

Whip Maintenance and Management During 5 Year Establishment Period

Immediately following planting, the whip should be watered thoroughly. Following this, and with regard to prevailing weather conditions, newly planted whips should be watered regularly during periods of dry weather. When watering, the square meter of ground around the whip should be soaked to field capacity (refer to BS8545:2014 for further detail) by surface watering. Watering frequency is more important than quantity to prevent the roots of the newly planted whip from drying out.

All whips are fitted with protective guards to prevent animal damage. These should be checked regularly to ensure they remain in place and are providing adequate protection against the animals in the area. If damage to trees from browsing by animals still occurs, additional measures may be required.

A formal assessment of areas of whip planting should be carried out annually by a qualified arborist who will be able to advise on solutions should any problems be picked up. During this assessment, any guards and canes/stakes should be checked to ensure they are providing protection but not damaging the developing whip and that its roots are still firmly seated in the ground. If the whip has become loose in the ground, the soil around the base should be re-firmed and guards adjusted accordingly.

The space above the mulch mat around the whip should be kept clear of competing vegetation and weeds at all times.

The shrub shelter/guard should be removed once the whip has established a strong enough root system to support itself and has begun to grow strongly clear of the top of the shelter/guard, likely to be 1-2 years after planting. Biodegradable mulch mats can remain in place indefinitely.

Formative pruning should be carried out in accordance with BS3998 as required during the first 5 years to ensure the desired form is achieved.

For further guidance on whip and tree maintenance during establishment refer to BS8545:2014 Section 11.



Planting Detail for Whips

1. *Tubex* shrub shelter with supporting cane or stake or similar approved.

2. 50x50cm biodegradable mulch mat pegged down with supplied biodegradable plastic anchor pegs around the whip to prevent weed growth and retain moisture.

3.Whip to be notch planted following clearance of any existing vegetation.

Immediately after planting, water the whip, saturating the ground around its base to field capacity.

For further general guidance on planting refer to BS 8545:2014 Section 10 and BS4428:1989 Section 9.

Products suggested in italics above are available from Tubex (http://www.tubex.com/)

Whip Maintenance and Management During 5 Year Establishment Period

Immediately following planting, the whip should be watered thoroughly. Following this, and with regard to prevailing weather conditions, newly planted whips should be watered regularly during periods of dry weather. When watering the square meter of ground around the whip should be soaked to field capacity (refer to BS 8545:2014 for further detail) by surface watering. Watering frequency is more important than quantity to prevent the roots of the newly planted whip from drying out.

All whips are fitted with protective guards to prevent animal damage. These should be checked regularly to ensure they remain in place and are providing adequate protection against the animals in the area. If damage to trees from browsing by animals still occurs additional measures may be required.

A formal assessment of areas of whip planting should be carried out annually by a qualified arborist who will be able to advise on solutions should any problems be picked up. During this assessment any guards and canes/stakes should be checked to ensure they are providing protection but not damaging the developing whip and that its roots are still firmly seated in the ground. If the whip has become loose in the ground the soil around the base should be re-firmed and guards adjusted accordingly.

The space above the mulch mat around the whip should be kept clear of competing vegetation and weeds at all times.

The shrub shelter/guard should be removed once the whip has established a strong enough root system to support itself and has begun to grow strongly clear of the top of the shelter/guard, likely to be 1-2 years after planting. Biodegradable mulch mats can remain in place indefinitely.

Formative pruning should be carried out in accordance with BS3998 as required during the first 5 years to ensure the desired form is achieved.

For further guidance on whip and tree maintenance during establishment refer to BS8545:2014 Section 11.

Proposed Woodland

Woodland Mix comprising 90% whips and 10% standards. Woodland to be planted naturalistically, with species grouped in randomly shaped areas of approximately 5 to 7 plants.

Trees

Number	Common Name	Species	Girth	Height	Specification	Density
2632	Common Maple	Acer campestre		80-100cm	1+1: Transplant - seed raised: B	1/m²
881	Sycamore	Acer pseudoplatanus		80-100cm	1+1: Transplant - seed raised: B	1/m²
881	Common Alder	Alnus glutinosa		80-100cm	1+1: Transplant - seed raised: B	1/m²
392	Common Silver Birch	Betula pendula	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	1/m²
3157	Common Silver Birch	Betula pendula		80-100cm	1+1: Transplant - seed raised: B	1/m²
297	Downy Birch	Betula pubescens	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: B: Clear Stem 175-200cm	1/m²
881	Downy Birch	Betula pubescens		80-100cm	1+1: Transplant - seed raised: B	1/m²
881	Common Hornbeam	Carpinus betulus		60-100cm	1+1: Transplant - seed raised: Branched: 3 brks: C	1/m²
178	Common Beech	Fagus sylvatica		100-125cm	1+2: Transplant - seed raised: B	1/m²
881	Common Crab Apple	Malus sylvestris		60-80cm	1+1: Transplant - seed raised: C	1/m²
354	Aspen	Populus tremula		60-80cm	1+1: Transplant - seed raised: B	1/m²
297	Wild Cherry	Prunus avium	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	1/m²
354	Wild Cherry	Prunus avium		80-100cm	1+1: Transplant - seed raised: B	1/m²
392	Common Oak	Quercus robur	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	1/m²
178	Goat Willow	Salix caprea		80-100cm	0/1: Cutting: Branched: 2 brks: B	1/m²
1756	Rowan	Sorbus aucuparia		80-100cm	1+1: Transplant - seed raised: B	1/m²
297	Wild Service Tree	Sorbus torminalis	10-12cm	300-350cm	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	1/m²
178	Wild Service Tree	Sorbus torminalis		175-200cm	Feathered: 5 brks: 2x: B	1/m²

Total :14867

Shrubs

Number	Common Name	Species	Height	Pot Size	Specification	Density
2105	Common Hazel	Corylus avellana	40-60cm		1+1: Transplant - seed raised: Branched: 2 brks: B	1/m²
881	Common Holly	Ilex aquifolium	80-100cm	10L	Leader with Laterals: C	1/m²
703	Alder Buckthorn	Rhamnus frangula	40-60cm		1+1: Transplant - seed raised: Leader with Laterals: 3 brks: B	1/m²

Total :3689

Conifers

Number	Common Name	Species	Pot Size	Specification	Density
178	Corsican Pine	Pinus nigra maritima	10L	Leader with Laterals: C	1/m²
178	Scots Pine	Pinus sylvestris	5L	Leader with Laterals: C	1/m²
297	Common Yew	Taxus baccata	25L	Leaders: Feathered to base: C	1/m²
178	Common Yew	Taxus baccata		Leaders: Feathered to base: 3x: RB	1/m²
178	Western Hemlock	Tsuga heterophylla		Leader with Laterals: 2x: RB	1/m²

Total :1009

Proposed Scrub

Scrub to be planted naturalistically, with species grouped in randomly shaped groups of 5 to 15 plants.

Trees

Number	Common Name	Species	Girth	Height	Specification	Density
4249	Common Hawthorn	Crataegus monogyna		40-60cm	1+1: Transplant - seed raised: B	1/m²
610	Common Crab Apple	Malus sylvestris		60-80cm	1+1: Transplant - seed raised: C	1/m²

Total :4859

Shrubs

Number	Common Name	Species	Height	Pot Size	Specification	Density
1215	Common Dogwood	Cornus sanguinea	60-80cm		1+1: Transplant - seed raised: Branched: 3 brks: B	1/m²
3036	Common Hazel	Corylus avellana	100-125cm		Branched: 5 brks: RB	1/m²
367	Common Spindle Tree	Euonymus europaeus	40-60cm		1+1: Transplant - seed raised: Branched: 3 brks: B	1/m²
974	Common Holly	Ilex aquifolium	60-80cm	5L	Leader with Laterals: C	1/m²
247	Blackthorn	Prunus spinosa	60-80cm		1+1: Transplant - seed raised: Branched: 2 brks: B	1/m²
610	Alder Buckthorn	Rhamnus frangula	40-60cm		1+1: Transplant - seed raised: Leader with Laterals: 3 brks: B	1/m²
247	Grey Willow	Salix cinerea	60-80cm		0/1: Cutting: Branched: 2 brks: B	1/m²
610	Guelder Rose	Viburnum opulus	40-60cm		1+1: Transplant - seed raised: Branched: 2 brks: B	1/m²

Total :7306

Proposed Species Improved Grassland

All quality grassland to be retained where possible and enhanced with Emorgate EM3 Special General Purpose Meadow Mixture or similar approved.

Proposed Wildflower Grass

Emorgate EM1 Basic General Purpose Meadow Mixture or similar approved.

N

- Site Boundary
- SANG Boundary
- Existing Ancient Woodland
- Existing Woodland — To be enhanced in accordance with management plan.
- Existing Scrub — To be enhanced in accordance with management plan.
- Existing Bracken — To be enhanced in accordance with management plan.
- Existing Trees
- Proposed Woodland — Area: 1.7 ha. See **Sheet 9** for planting schedule.
- Proposed Trees — See **Sheet 9** for planting schedule.
- Proposed Orchard — Area: 0.34ha — See **Sheet 9** for planting schedule.
- Proposed Hedgerow — See **Sheet 9** for planting schedule.
- Proposed Shrub Planting — Area: 0.8ha, See **Sheet 9** for planting schedule.
- Existing Species Rich Grassland — To be enhanced in accordance with management plan. See **Sheet 9** for details.
- Proposed Species Rich Grassland — To be enhanced in accordance with management plan. See **Sheet 9** for details.
- Existing Pond — To be enhanced in accordance with management plan.
- 2.3km Circular Footpath
- Accessible Circular Footpath
- Pedestrian Link Between Car Park & SANG
- Timber Board Walk — The Wilddeck Company Bespoke Timber Boardwalk and Bridge or similar approved. 2m wide with a single handrail.
- Unsurfaced Footpath with Loose Log Edging — Footpaths to be lined with brash, approx. 0.5m high and aligned with, and set approx. 1m back from, the path to encourage people to stay on the route.
- Self Binding Gravel
- Mown Path
- Ground Reinforced Gravel.
- Dog Proof Fence — Pitt Chestnut Post and Rail Fence with wire mesh. See **Sheet 10** for product detail.
- Pedestrian Timber Swing Gate — See **Sheet 10** for product detail.
- Timber Field Gate — See **Sheet 10** for product detail.
- Timber Sheltered Information Board — See **Sheet 10** for product detail.
- Timber Interpretation Board — See **Sheet 10** for product detail.
- Timber Bench — See **Sheet 10** for product detail.
- Timber Circular Bench — See **Sheet 10** for product detail.
- Public Art Focal Point — See **Sheet 10** for information.
- Timber Finger Post — See **Sheet 10** for product detail.
- Timber Round Waste Bin and Dog Waste Bin — See **Sheet 10** for product detail.
- Cycle Stands — See **Sheet 10** for product detail.
- Important View

0 10m

notes

Drawing to be read in conjunction with Downlands Woodland Park SANG and Woodland Management Plan (Ref. 5719.SANGManPlan.0v2 MRD AB)

overview



This drawing is to be read in conjunction with all other drawings and specifications within the package. These drawings have been prepared for design development and costing purposes only.
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purpose of issue **PLANNING**

rev	description	date	by
j	Updates to footpath treatment - all paths through AW to become bardwalks	26-07-2023	NWa
i	SANG boundary & circular path updated	21-02-2023	NWa
h	Circular path updated	10-02-2023	NWa

client

Gleeson Land

project title

Land at Downlands Farm, Uckfield

drawing title

Figure 6.3 (LVIA Figure ref.): SANG: Detailed Hard and Soft Landscape **Sheet 10 of 11**

date	26 JULY 2023	drawn by	LHa
drawing number	edp6170_d016j	checked	TR
scale	1:250 @ A0	QA	GY

the environmental dimension partnership
Registered office: 01285 740427 - www.edp-uk.co.uk - info@edp-uk.co.uk

ENCLOSURE 2

7.A BIODIVERSITY

Chapter Alterations

This chapter has been updated to:

- **Consider the effects of providing a boardwalk path through the SANG, and**
- **Take account of the findings of updated ecological baseline survey work (provided in a new Appendix to the Chapter Appendix 7.4).**

The conclusions and findings of the June 2022 ES remain unchanged.

Introduction

7.1 This chapter of the ES assesses the likely significant effects of the Development on the environment in respect of biodiversity, including ecology and nature conservation, and with regard to the Irreplaceable Habitat types of Ancient Woodland and Veteran Trees. It incorporates a summary of the Baseline Ecological Appraisal, which is included as Appendix 7.1.

7.2 The Chapter describes the assessment methodology; the baseline conditions at the Site and its surroundings; the likely significant environmental effects; the mitigation measures required to prevent or reduce any significant adverse effects; the likely residual effects after these measures have been employed; any compensation measures to offset significant residual effects; and enhancement measures to provide gains in biodiversity.

7.3 This Chapter has been prepared by Aspect Ecology (refer to Appendix 1.2).

Policy Context

National Planning Policy

National Planning Policy Framework

7.4 The Government published a revised version of the National Planning Policy Framework (NPPF) in July 2021[1]. The NPPF confirms the Government's commitment to conserving and enhancing the natural and local environment through the planning system, including specific reference to maintenance and enhancement of biodiversity.

7.5 The NPPF requires local authorities to fully consider the effect of planning decisions on biodiversity and geodiversity, and ensure that appropriate weight is attached to statutory nature conservation designations, protected species and biodiversity, and geological interests within the wider environment. It also considers the potential biodiversity and geological conservation gains which can be secured within developments, including the use of planning obligations.

7.6 National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

7.7 Paragraph 174 of the NPPF states that

> *'Planning policies and decisions should contribute to and enhance the natural and local environment by:*
>
> *a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
>
> *b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.'*

7.8 Paragraph 174 of the revised NPPF[2] also states that:

> *'d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'*

7.9 With regard to planning applications and biodiversity, Paragraph 180 of the NPPF states that:

> *'When determining planning applications, local planning authorities should apply the following principles:*
>
> *a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
>
> *b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special*

scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.'

7.10 In Paragraph 185, the NPPF[2] advises that

'Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:'... 'c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

Local Planning Policy

7.11 The Wealden District Core Strategy Local Plan (adopted in February 2013)[3] in conjunction with the 'saved' policies of the Adopted Wealden Local Plan (1998)[4] form the current statutory policy framework for Wealden District Council (WDC). In addition, WDC produced a draft Local Plan (2019) in which was submitted for independent examination by the Planning Inspectorate. In February 2020, WDC formally withdrew its draft Wealden Local Plan 2019 following the Stage One examination process. The documents containing the Local Plan have been reviewed, as detailed below.

Adopted Wealden Local Plan (1998)[4]

7.12 There are several 'saved' policies outlined in the Adopted Wealden Local Plan (1998), three of which relate to ecology and nature conservation and are relevant to the site, namely:

7.13 Policy EN12 relates to protection of trees and woodlands:

The Council will seek to retain and enhance the contribution of trees and woodland areas to the landscape character of the District, including the amenity value of trees in built up areas. This will be promoted by:

(1) endorsement of the principles and guidelines contained in the Trees and

Woodland Strategy for East Sussex;

(2) support for the preparation of local Trees and Woodland Conservation and Management Plans;

(3) encouragement for woodland management through participation in tree and hedgerow planting schemes by farmers, voluntary organisations and others, and where appropriate, as part of development proposals;

(4) making Tree Preservation Orders where appropriate to protect trees and woodland areas of significant amenity value;

(5) giving weight to proposals, including business proposals, that help to sustain and manage forestry and woodland areas when considering them against other policies of the Plan;

(6) resisting development proposals which would result in the loss of trees which make a valuable contribution to the character of the landscape, a settlement or its setting.

7.14 Policy EN13 relates to development with effects on Ancient Woodland;

"The Council will resist development proposals that involve the clear felling or otherwise prejudice the ecology of Ancient Semi-Natural Woodlands, as defined by English Nature."

7.15 Policy EN14 relates to landscaping within developments;

In appropriate cases, the Council will require landscaping, including surface treatments, to be carried out as part of development proposals. Where required, such schemes should:-

(1) seek to retain existing trees, significant hedgerows and other valuable site features;

(2) normally comprise primarily native species;

(3) complement the scale and character of the proposed development and the locality;

(4) have regard to associated nature conservation benefits;

(5) be implemented at the earliest practicable opportunity and thereafter satisfactorily maintained during the early years.

7.16 Policy EN15 relates to designated nature conservation sites:

"The Council will seek to safeguard designated nature conservation sites by resisting development or land use changes which would be likely to adversely affect their nature conservation value. The weight to be afforded to nature conservation interests will have regard to their status:

(1) Within Ashdown Forest SSSI and Special Protection Area for Birds, and Pevensey Levels SSSI (proposed "Ramsar" site), development which would be likely to have an adverse effect on the nature conservation interest will not be permitted, unless otherwise in accordance with international obligations.

(2) Within SSSIs, including Lullington Heath NNR, as shown on the Proposals Map, development which would be likely to have an adverse effect on the nature conservation interest will not be permitted unless there is no reasonable alternative means of meeting the development need which also outweighs the nationally recognised nature conservation interest.

(3) Development which would be likely to have an adverse effect on a Local

> *Trust Reserve or a Site of Nature Conservation Importance will not be permitted unless it can be demonstrated that the need for development outweighs the identified nature conservation interest and that there are no reasonable alternative means of meeting that development need.*
>
> *In all cases, every effort should be made to minimise any damage to the nature conservation interests. Where appropriate, conditions and/or planning obligations may be used to provide appropriate compensatory measures.*

Wealden District Core Strategy Local Plan (2013)[3]

7.17 The current Wealden District Core Strategy Local Plan (2013) includes four policies relating to nature conservation:

7.18 Policy SPO1 includes reference to protection and enhancement of recognised biodiversity and geodiversity attributes. The policy states "*We will help manage countryside resources and assist in the development of the rural economy whilst protecting and enhancing recognised biodiversity and geodiversity attributes, in particular we will protect the internationally important sites of the Pevensey Levels and Ashdown Forest and other designated areas of bio and geodiversity. We will also protect, and will work with others to enhance and manage, the distinct landscapes of the District, particularly, but not exclusively, those nationally designated".*

7.19 Policy SPO11 references the intention to enhance the district's creation of a coherent network of green infrastructure to enhance geodiversity and biodiversity.

7.20 Policy WCS12 (Biodiversity) states that developments should seek to prevent net loss in biodiversity, adhering to the targets provided within the Sussex Biodiversity Action Plan. The policy sets out the aims of preventing a net loss of biodiversity, ensuring a comprehensive network of habitats and ensuring habitats, biodiversity features and ecological networks are maintained, restored, enhanced and where possible created.

Wealden Local Plan Submission Document (January 2019) – Withdrawn February 2020

7.21 The plan contained a number of draft policies which relate to ecology and nature conservation, as stated below:

7.22 Policy EA1 (Biodiversity) states *that*

> *"Development proposals should not result in a net loss of biodiversity and will be required to contribute to the enhancement of existing biodiversity, and should create and manage new habitats where appropriate. New development will be supported which retains and /or enhances significant features of biodiversity and nature conservation on development sites. Regard*

must be had to priority habitat and species to contribute to national and local biodiversity targets. New development will also be supported where a positive contribution to biodiversity is made through the creation of green spaces, and linkages between habitats to create local and regional ecological networks and enhance green corridors."

7.23 The policy includes reference to protection and enhancement of recognised biodiversity and geodiversity attributes, including Ashdown Forest SPA and SAC, Pevensey Levels SAC and Ramsar and Lewes Downs SAC, together with other national, regional and local sites and priority habitats and species.

7.24 Policy EA2 (Ashdown Forest Special Protection Area) states that *"Development will only be permitted if it can be concluded that there is no likely significant effect or that proposals will not adversely affect the integrity of Ashdown Forest SPA in view of the site's conservation objectives"*. The policy sets out requirements for developments within 400metres and 7km from Ashdown SPA will be required to mitigate and provide financial contribution towards the provision of the existing Strategic Suitable Alternative Natural Greenspaces (SANG) and the strategic Access Management and Monitoring (SAMM) Strategy.

7.25 Policy EA3 (Green Infrastructure) sets out how *"Development will be expected to protect, improve and enhance existing green infrastructure and contribute towards the provision of and creation of additional green infrastructure".*

7.26 Policy AF1 (Air Quality and Wealden Local Plan Growth) sets out requirements for developments in relation to air quality at Ashdown Forest SAC and Lewes Downs SAC, including mitigation and a full Habitats Regulations Assessment;

7.27 Policy AF2 (Air Quality Mitigation) sets out that developments which increase traffic movements across roads adjacent to Ashdown Forest SAC and Lewes Downs SAC will need to provide air quality mitigation in the form of a financial contribution to strategic measures and specific measures to be implemented for all new development.

National and Local Biodiversity Action Plans (BAPs)

7.28 The UK Biodiversity Action Plan, published in 1994[5] was the UK Government's response to signing the Convention on Biological Diversity (CBD) at the 1992 Rio Earth Summit. This has now been replaced by the new UK post-2010 Biodiversity Framework which focuses on the 4 individual countries of the United Kingdom and Northern Ireland.

7.29 Within England, the latest biodiversity strategy is entitled, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services', published by Defra on 19 August 2011 with a progress update provided

in July 2013[6]. This provides a comprehensive picture of how we are implementing our international and EU commitments and sets out the strategic direction for biodiversity policy for the next decade.

7.30 The approach is informed by the list of species and habitats of 'Principal Importance' under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006[7] which largely reflects those species and habitats previously listed under the UK Biodiversity Action Plan (BAP) that occur in England.

7.31 A number of local BAPS have also been produced, identifying priorities and targets for action at a local level. This includes Sussex Wildlife Trust's document 'Biodiversity and Planning in Sussex'[8]. A number of Biodiversity Opportunity Areas (BOAs) are also identified by the Sussex Local Nature Partnership which is an umbrella organisation for many statutory and non-statutory nature conservation organisations.

7.32 Reference to habitats and species listed as Priority Habitats and Species under Section 41 of the NERC Act and local BAPs is made, where relevant, in the following sections of this Chapter.

Legislative Context

7.33 The applicable legislative framework for ecology and nature conservation is summarised as follows:

- The Conservation of Habitats and Species Regulations, 2017[9]
- Wildlife and Countryside Act, 1981 (as amended)[10]
- The Natural Environment and Rural Communities Act, 2006[11]
- The Countryside and Rights of Way Act, 2000[12]
- Town and Country Planning (Environmental Impact Assessment) Regulations, 2017[13]
- The Hedgerows Regulations, 1997[14]
- The Protection of Badgers Act, 1992[15]; and
- The Wild Mammals (Protection) Act, 1996[16].

Assessment Methodology

Zone of Influence

7.34 To inform the scope of the assessment, consideration has been given to the zone of influence (ZoI) of the Development. The ZoI is defined as the area over which ecological features may be affected by the biophysical changes caused by the proposed project and associated activities. The extent of such changes will typically reduce over distance, and whether effects are experienced is dependent on the sensitivity of individual habitats, species or other ecological features, such that it is difficult to define a specific ZoI which captures all potential effects arising from the Development. As such, two broad zones

are identified:

- A primary ZoI largely relating to the Site itself, incorporating habitats and associated species directly affected by the Development footprint and associated works (in terms of habitat loss or damage). This zone also includes areas affected by factors such as noise, vibration, lighting, dust and pollution, the effects of which will be focused within the nearby surrounds (i.e. within 100m) of the Development. Survey work has specifically focused on this area, to allow an assessment of habitats and species directly affected by the Development.
- Beyond this, a wider (or secondary) ZoI exists, where ecological features may be subject to wider scale effects such as recreational disturbance, air pollution from traffic or water pollution within the wider river catchment. The assessment of features within this zone is largely based on background information identifying ecological designations, known habitats or species populations of importance which could be sensitive to such wider scale effects.

Consultation

7.35 The Development and the preparation of this Chapter has been informed by various scoping and consultation activities. A summary of consultations relating to ecology is set out in **Table 7.1** below.

Table 7.1: Summary of statutory consultations relating to ecology

Body / Organisation	Form of consultation	Summary of comments
Wealden District Council (WDC) (Ben Rainbow)	Scoping letter to WDC dated 2nd November 2020 and subsequent email correspondence (see Annex 2 of Baseline Ecological Appraisal at Appendix 7.1)	Agreement with proposed scope of surveys and methodologies and proposed approach to assessment and mitigation, including designated sites and potential effects to be considered. Agreement to scope of proposed SANG.
Wealden District Council (WDC) (planning officer)	Screening and scoping opinion dated October 2020	Notes that Phase 1 and Phase 2 surveys should be submitted as part of the planning application. Includes a summary of comments from other consultees: Environment Agency have requested that consideration is given to measures to prevent the spread of Himalayan Balsam, in addition to other invasive plant species; Natural England have provided advice on assessment requirements and indicate that consideration should be given to designated sites, protected species and habitats and species of principal importance. The response specifically notes proximity to Epping Forest Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) and potential for effects as a result of recreational pressure and air pollution, setting out that the assessment should include a full assessment of the effects of development on the interest features and identify any necessary mitigation measures.

Body / Organisation	Form of consultation	Summary of comments
Natural England (Discretionary Advice Service)	DAS Request letter dated 28th September 2020	Natural England declined to comment, citing a lack of resources.
Wealden District Council (WDC) (Chris Bending – Head of Policy and Economic Development	Information relating to Fir Tree Grove/Ancient Woodland. Correspondence between November 2021, and March 2022 with supporting information	Comments on boardwalk proposal in Fir Tree Grove, wider impacts to Ancient Woodland at this location.

7.36 The methodology utilised for the survey work can be split into three main areas: desktop study, habitat survey, and faunal survey. Further details on survey methodologies are provided in the full Baseline Ecological Appraisal at Appendix **7.1**, and a summary is set out below:

Desktop Study

7.37 In order to compile background information on the Site and its immediate surroundings, a number of recording organisations and online data sources were consulted:

- Sussex Biological Records Centre (SxBRC) search radius of 2km;
- Multi-Agency Geographic Information for the Countryside (MAGIC) database[17]; and
- Woodland Trust database of ancient, veteran or notable trees[18].

Habitat Survey

7.38 The Site was initially subject to habitat survey during August 2019 in order to ascertain the general ecological value of the land contained within the boundaries of the Site and to identify the main habitats present, based on extended Phase 1 survey methodology (Joint Nature Conservation Committee, 2010[19]) as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. Numerous additional visits were undertaken as part of faunal surveys between September 2019 to April 2022~~2020~~, allowing habitat information to be gathered within the optimal period for botanical surveys. Update survey work has also been carried out in 2023 and this information is provided in a new appendix to this ES chapter, Appendix 7.4.

7.39 For pond and hedgerow habitats in particular, detailed habitat descriptions and species lists were recorded to allow a comprehensive assessment of these habitat types.

7.40 The results of the Phase 1 Habitat Survey are presented in the Baseline Ecologicaly ~~Assessment~~Appraisal,

at Appendix 7.1. Findings of the 2023 update survey work are summarised in this ES Addendum where there is a difference to the findings of the prior survey work. The new baseline survey information is provided in Appendix 7.4.

Faunal Surveys

7.41 General faunal activity, such as mammals or birds observed visually or by call during the course of the surveys was recorded. Specific Phase 2 survey work was also undertaken for protected and notable species, as set out at Table 7.2 below. Further detail on survey methodologies is provided in the full in the Baseline Ecological Appraisal at Appendix 7.1, together with the results of the surveys. Findings of the 2023 update survey work are summarised in this ES Addendum where there is a difference to the findings of the prior survey work.

Table 7.2: Summary of Phase 2 floral and faunal surveys undertaken at the Site

Faunal Group	Survey Methodology	Date of Surveys	Guidance
Woodland Historic features and Botanical Surveys	A range of evidence was examined to evaluate woodland within the Site, including the presence of historical features, and ancient or veteran trees. A woodland botanical survey has been undertaken with particular emphasis on the presence of Ancient Woodland Indicator species.	May-July 2020 (April 2022 – Fir Tree Grove) Updated April and June 2023	Woodland Trust 'Field surveys for Ancient Woodlands: Issues and Approaches[20]'.
Other Phase 2 Botanical Surveys	Survey of an area of marshy grassland off Snatts Road.	July 2020	Surveyed using methodologies provided in the 'Higher Level Stewardship (HLS) Farm Environment Plan Handbook'[21], and 'NVC Users Handbook'[22].
Lower Plant Surveys (Bryophytes and lichens)	Surveys of sandstone outcrops in the vicinity of Fir Tree Grove/Chicory Cottage.	April 2022	Briggs 2001 (bryophytes), Sanderson et al. 2018 (lichens)
Bats (Manual activity surveys)	A series of dusk and dawn activity surveys were undertaken across the Site to gather information on the use of the Site by foraging and commuting bats. This involved surveyors walking a predetermined transect route, recording all bat activity. The transect routes were designed to cover all the habitat types within the survey area. The Site was covered by three transects, surveyed on eight occasions.	September 2019 and August 2020 May – October 2023	'Bat Mitigation Guidelines' (English Nature, 2004[23]); 'Bat Surveys – Good Practice Guidelines' (Bat Conservation Trust, 2012[24]); Bat Surveys for Professional Ecologists – Good Practice Guidelines" Bat Conservation Trust, 2016[25])
Bats (Automated activity surveys)	Static bat detectors were set out in six locations across the Site to monitor levels of bat activity. Detectors were left out for a number of days on eight separate occasions at each location with data collected and analysed for up to 5 consecutive nights during each survey period.	September 2019 and August 2020 May – October 2023	
Bats (Buildings –	Internal and External Inspections were carried out of all buildings within the	April and May 2022	

Faunal Group	Survey Methodology	Date of Surveys	Guidance
Roost Surveys)	Site to assess roost potential. Emergence/re-entry surveys were carried out of one building.		
Badger	The entire survey area and immediate surrounds were surveyed for evidence of Badger setts and activity, including presence of well-worn paths, push-throughs, snagged hair, footprints, latrines and foraging signs	Conducted during Phase 1 survey (August 2019) and subsequent survey visits April 2022	'Occasional Publication No.9 – Surveying Badgers' (Mammal Society, 1989[26])
Breeding Birds	A survey of breeding birds was undertaken over three visits to the Site, involving walking a route and recording all birds either seen or heard. These 'registrations' are recorded on a plan of the Site using standard British Trust for Ornithology (BTO) codes for each bird species. This survey methodology has the advantage over other techniques of mapping each registration to a specific point within the Site and this therefore illustrates those areas and habitats containing the highest density and diversity of bird species.	April to June 2020 April to June 2023	BTO Common Bird Census methodology[27]
Dormouse	Accordingly, a total of 175 Dormouse nest tubes were deployed within the Site, distributed evenly throughout the hedgerows and woodland edges within the Site. Nest tubes were checked monthly between October 2019 and July 2020, giving a total survey effort score of 20 points across the entire survey area.	October 2019 and July 2020	Surveying dormice using nest tubes: Results and experiences from the South West Dormouse Project' (English Nature, 2003[28])*;* The Dormouse Conservation Handbook, 2nd Edition (English Nature Research Report No. 524[29]); and Natural England (2011) '*Interim Natural England Advice Note – Dormouse surveys for mitigation licensing – best practice and common misconceptions'*, WML-537 (12/11)[30]
Great Crested Newt	Six waterbodies are present within the Site with an additional six offsite, of which were five on-site ponds, **P2-P6** and two off-site ponds (**P8** and **P22)** were subject to Great Crested Newt environmental DNA (eDNA) survey. The survey involved collecting water samples from the pond and analysed for Great Crested Newt DNA. Population size class assessments were carried out of four ponds (**P1, P6, P20 and P21**)	May and April 2020 April – June 2023	Natural England Standing Advice: Great Crested Newts'[31]; Evaluating the suitability of habitat for the Great Crested Newt (Oldham et al, 2000[32]); 'Great Crested Newt Mitigation Guidelines' (English Nature 2001)[33]; 'Analytical and Methodological Development for Improved Surveillance of Great Crested Newt' (Biggs et al. 2010)[34]
Reptiles	A number of artificial refugia in the form of a total of 140 50x50cm squares of thick roofing felt were strategically placed in suitable reptile habitat throughout the Site. These were checked at appropriate times of the day in suitable weather conditions to establish if they were being utilised by reptile species. In addition, reptiles were also actively searched for in suitable locations throughout the Site.	June and July 2020 April -May 2023	'Herpetofauna Workers Manual' (JNCC, 1998[35]) and 'Advice Sheet 10: Reptile Survey' (Froglife, 1999[36])

Evaluation of Ecological Baseline

7.42 The evaluation of ecological features and resources should be based on sound professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this chapter is based on that described in 'Guidelines for Ecological Impact Assessment in the UK and Ireland' published by the Chartered Institute of Ecology and Environmental Management (CIEEM) in 2018[37] (updated April 2022) whereby important ecological features are identified, and these are considered within a defined geographical context using the following frame of reference:

- International;
- National;
- Regional;
- County;
- District;
- Local; and
- Site (not of elevated importance at a local level).

7.43 Features considered to be of importance at the Site level only have been scoped out of this assessment (with the exception of protected species which are considered in terms of mitigation and any legislative requirements).

7.44 Further details on this approach and the criteria used for evaluation are provided in the Baseline Ecological Appraisal at Appendix 7.1.

Assessment of Impacts and Significance

7.45 The CIEEM publication 'Guidelines for Ecological Impact Assessment in the UK and Ireland' also sets out a methodology for the assessment of potential effects arising from development. These methods are followed which can be summarised as below.

7.46 Using the agreed parameters of the Development, likely significant effects are determined with reference to aspects of the ecological structure and function on which the feature or resource depends. This includes factors such as the available resources, ecological processes, human influences, historical context, ecological relationships, ecological role or function and ecosystem properties. Based on this context, the nature of the effect is characterised and considered under the following parameters:

- Positive or negative – will the activity lead to an adverse, beneficial or neutral effect;
- Extent – the size or amount of an impact, the area of habitat or number of individuals

affected;

- Duration – the time for which the impact is expected to last prior to recovery or replacement, i.e. short-term or long-term;
- Reversibility – an effect may be irreversible in that recovery is not possible within a reasonable timescale or there is no reasonable chance of action being taken to reverse it, i.e. permanent or temporary; and
- Timing and frequency – some changes may only cause an impact if they coincide with critical life-stages or seasons, whilst frequent events may cause a greater effect than a single event.

7.47 Based on these parameters, the scale of effect (or magnitude) can be summarised as follows. This is in relation to adverse effects, although a similar scale can be applied to beneficial effects.

Table 7.3. Methodology for Assessing Magnitude of Ecological Effects

Magnitude of Impact	Criteria for Assessing Impact
Major	Total loss or major/substantial alteration to key elements/features of the baseline (pre-Development) conditions such that the post Development character/composition/attributes will be fundamentally changed. Ecological interpretation: A permanent or long-term effect on the receptor, which may result in severe damage to key characteristics and implications for the integrity of the receptor or its conservation status.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post Development character/composition/attributes of the baseline will be materially changed. Ecological interpretation: Impacts resulting in partial loss of or damage to a receptor, which could have implications for the integrity of the receptor or its conservation status.
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the pre-Development circumstances/situation. Ecological interpretation: Short-term or temporary impacts resulting in only minor loss of or damage to a receptor, unlikely to have implications for the integrity of the receptor or its conservation status.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation. Ecological interpretation: No effect or only a short-term reversible impact with no long-term effect on the receptor.

7.48 The sensitivity of a receptor is based on the relative importance of the receptor using the scale in Table 7.4.

Table 7.4 Methodology for Determining Impact Sensitivity

Sensitivity	Examples of Receptor
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.
Moderate	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance.

7.49 The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the impacts can be beneficial or adverse. The Effect Significance Matrix is set out in Table 7.5.

Table 7.5 Effects Significance Matrix

Magnitude	Sensitivity		
	High	Moderate	Low
Major	Major Adverse/Beneficial	Major – Moderate Adverse/Beneficial	Moderate – Minor Adverse/Beneficial
Moderate	Major – Moderate Adverse/Beneficial	Moderate – Minor Adverse/Beneficial	Minor Adverse/Beneficial
Minor	Moderate – Minor Adverse/Beneficial	Minor Adverse/Beneficial	Minor Adverse/Beneficial – Negligible
Negligible	Negligible	Negligible	Negligible

7.50 In terms of what is ecologically 'significant', CIEEM guidance defines a 'significant effect' as *"an effect that either support or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general"*, going onto state that *"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)."*

7.51 Significance is also assessed at an appropriate geographic scale. For example, a significant effect on a SSSI would be of national significance. Notwithstanding this however, consideration is also given to whether an effect is significant at a scale below the geographic context in which the feature is considered important.

7.52 For some ecological features (notably designations), there may be an existing statement of the conservation status of a feature and objectives and targets against which the effect can be judged. For example, SSSIs are assessed under six condition categories, namely favourable, unfavourable recovering, unfavourable no change, unfavourable declining, part destroyed, and destroyed. An effect that exerts a change between these condition categories would be considered as significant.

7.53 Where no existing statement of conservation status is available, an assessment is made against the existing status and condition of the habitat or species population, as recorded by survey data and background information, taking into account the level of ecological resilience or existing conditions that a habitat or species is currently subject to. An effect resulting in a long-term change to the existing background population trend or status at a given geographical level would be considered as significant. In this regard, a significant beneficial impact could be defined as one that prevents or slows an existing decline in the favourable conservation status of a habitat or population as much as one that permitted a population or habitat area to increase.

7.54 The likelihood or uncertainty of an effect occurring as predicted is also considered. To assist with defining certainty, the following scale is used (with broad confidence levels indicated in percentage terms):

- Certain/near-certain: probability estimated at 95% chance or higher;
- Probable: probability estimated above 50% but below 95%;
- Uncertain: probability estimated above 5% but less than 50%; and
- Extremely unlikely: probability estimated at less than 5%.

Limitations and Assumptions

7.55 All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent during different seasons. The Phase 1 habitat survey was undertaken outside the optimal season, however, numerous subsequent visits to the Site were conducted during the optimal season, during which features of botanical interest were noted. In any event, no habitats of particular interest were identified during Phase 1 survey work which would require further botanical survey work. Therefore, the surveys undertaken are considered to allow a robust assessment of the ecological interest of the Site to be made.

7.56 The specific Phase 2 surveys were undertaken at the appropriate times of year and during suitable weather conditions to an appropriate level of survey effort. Any specific limitations are noted in the accompanying Baseline Ecological Appraisal (see **Appendix 7.1**), although no significant constraints were experienced.

Baseline Conditions

Ecological Designations

7.57 Ecological designations that occur within the local area are summarised in the Table 7.6 below, whilst those within 2km are shown on **Plan 7.1**. Further detail is provided in Section 3 of the Baseline Ecological Appraisal at **Appendix 7.1**.

Table 7.6 Ecological Designations within the zone of influence

Name	Designation	Brief Description	Distance from Site	Level of value
Statutory Designations				
International Designations (within 25km search radius)				
Ashdown Forest	Special Protection Area (SPA)	The designation is based on large continuous blocks of wet and dry heaths lowland, together with populations of Great Crested Newt.	3.4km to North	International
Ashdown Forest	Special Area of Conservation (SAC)	The SPA is designated on the basis of regularly supporting nationally important breeding populations of Nightjar *Caprimulgus europaeus* and Dartford Warbler *Sylvia undata*.	3.7km to North	International
Lewes Downs	SAC	Semi-natural dry grasslands and scrubland facies established on calcareous substrates, including important orchid sites.	10.7km to South	International
Castle Hill	SAC	Semi-natural dry grasslands and scrubland facies established on calcareous substrates, including important orchid sites.	17.3km to South-west	International
Pevensey Levels	SAC and Ramsar	Little whirlpool ram's-horn snail *Anisus vorticulus*	17.6km to South-east	International
National Designations (within 2km search radius)				
West Park, Uckfield	Uckfield Local Nature Reserve (LNR) and Local Wildlife Site (LWS)	The LNR is designated on the basis of a variety of habitats, including woodland, sandstone outcrops, marshland and open grassland.	100m to South	County
Buxted Park	Site of Special Scientific Interest (SSSI)	Unimproved grassland communities with parkland trees and areas of woodland.	800m to East	National
Hempstead Meadows	LNR	The area supports a variety of wildlife typical of undeveloped river corridors; including birds such as snipe and kingfisher and plants such as primrose, bluebell, tussock sedge and ferns. The meadow also forms a valuable foraging area for the bats that have been recorded from neighbouring properties.	1km to East	County
Non-statutory Designations (within 2km seach radius)				
Lake Woods	LWS and Local Geological Site (LGS)	Ancient woodland, managed by the Woodland Trust, surrounding a large man-made lake with sandstone outcrops supporting important populations of bryophytes.	Adjacent to Southern boundary	County
Butcher's Wood, Uckfield	LWS	Ancient woodland, together with a large population of Wild Daffodil *Narcissus pseudonarcissus*, and significant sandstone outcrops of rich and interesting bryophytes.	35m to West	County

Name	Designation	Brief Description	Distance from Site	Level of value
Uckfield Cemetery	LWS	The site contains neutral species-rich grassland comprising species-rich low acidic grassland sward and populations of Green-winged Orchids (*Orchis morio)*.	250m to East	County
Shortbridge Stream (Shortbridge Stream Meadow LWS)	EA main river and LWS	Shortbridge Stream is a tributary of the River Ouse that rises near Maresfield and joins the river near Sharpsbridge. It is classified as an Environment Agency Main River, and is known to support Sea Trout (*Salmo trutta trutta*). The LWS comprises a series of fields along Shortbridge Stream, and an extensive area of marshy grassland, tall herb and swamp-type vegetation. The habitats support a diverse range of invertebrates and sedge species.	250m to West	County
Budlett's Common Rocks	LWS	This site consists of extensive rocks which are situated in three large gardens. The site supports a number of rare and uncommon liverworts and mosses, including a number of characteristic sandrock species.	800m to North-east	County
Maresfield Churchyard LWS	LWS	The site contains neutral grassland fields which contain species-rich areas of the lawn whilst supporting a rich mix of CHEG fungi species.	1.4km to North-west	County
Piltdown Common	LWS	The site is a well-managed golf course with a complex mosaic of habitats comprising heathland, acid grassland, scrub, woodland and a large pond.	2km to West	County
Western Ouse Streams and Ashdown Forest	Biodiversity Opportunity Area (BOA)	Dominated in the north by protected heathland forming part of the European designation, which supports a number of habitats comprising open heath, ancient woodland, ghyll woodland and wetlands.	Within Site	Local

Ancient Woodland

7.58 A significant proportion of the woodland within the Site is identified as Ancient Semi-Natural Woodland (ASNW) on the current provisional Inventory of Ancient Woodland. The distribution of ASNW is identified on Figure 7.3**,** with the following woodland areas being within the red line area denoted by their respective woodland compartment number:

- Part of Budletts Wood (**W4**);
- Shermanreed Wood (**W5**);
- Longwood Gill (**W6**);
- Woodland adjacent to A22 – North (**W7**);
- Part of Woodland adjacent to A22 – South (**W8**); and
- Fir Tree Grove (**W9**).

7.59 Further areas of ASNW are located off-site, but within close proximity, as follows:

- Lake Wood;
- Budletts Wood – East (**W3**);
- Part of Budlett Wood - West (**W4**); and
- Butchers Wood.

Habitats and Ecological Features

7.60 Full descriptions of habitats and ecological features within the Site are given in Section 4 of the Baseline Ecological Appraisal at Appendix 7.1, whilst the location of habitats and ecological features are represented on Figure 7.3.

7.61 A summary of the habitats considered to be of ecological importance occurring within and adjacent to the Site (i.e. within the primary ZoI) is given in Table 7.7 below.

Table 7.7 Summary and Evaluation of Important Habitat Receptors

Habitat Type	Description	Level of Importance
Ancient Semi-Natural Woodland	Budlett's Wood – East (**W3**) abutting Paygate Wood, is outside the Development area, and comprises mixed deciduous woodland with infrequent mature Oak, together with Birch, Hornbeam, Sweet Chestnut and frequently an understory of Hazel. A small number of Ancient Woodland Indicators are present (seven in total). Budlett's Wood – West (**W4**) is a large, wooded area, some parts of which fall within the Development area (woodland compartments **W4c**, **W4d** and **W4c**). The woodland comprises a wide range of deciduous stand types and is dissected by a watercourse which runs in an east-west orientation, including areas of climax oak woodland in the west (**W4e**), together with an area of wet Willow/Birch woodland (**W4d**), stands of Chestnut coppice (**W4b**), and areas of more mixed woodland. There is a large heathy clearing in the west part of the woodland (**W4c**). Shermanreed Wood (**W5**) is a diverse woodland forming a broad linear corridor between fields **SI1** and **SI3**, which includes stands of Oak and Birch woodland, with areas of Alder dominant along a central watercourse. Recently planted stands occupy a large part of the woodland, and some groups of Larch. In the south of the woodland there are several borrow pits which have been identified by historical map analysis as originating from iron-ore extraction activities. On the east side of the woodland is a historic ditch and wood-bank feature which has a number of old Ash coppice stools, including several veteran specimens. A total of 28 Ancient Woodland Indicator species are present. Longwood Gill (**W6**) is a narrow steep-sided wooded valley or ghyll, forming a linear feature along an ephemeral/dry stream bed. Steeply sloping banks are present on both sides, and sandstone outcrops are present at the head of the valley where there is evidence of erosion from flash flooding. Tree cover is mainly semi-mature to mature Oak, with Beech and Cherry also present, whilst an understory of hazel coppice occurs throughout. Woodland adjacent to A22 - North (**W7**), is a strip of woodland alongside the A22 which contains wet woodland with frequent Alder and Birch located around a series of silted damp hollows which are fed by from two minor tributaries to the south and possibly taking road run-off. The woodland becomes dryer to the south, and contains some semi-mature oak, together with Birch and an understory comprising Holly and Hazel. A large number of AWIs are present (22 in total) are present. Woodland adjacent to A22 – South (**W8**) is a continuation of W7, being a linear woodland located between the A22 and Field F2 which contains one block of Ancient Woodland (**W8b**). The woodland, which formed part of Thirty-acre Wood, before it was separated by the construction of the A22, contains frequent early mature Oak, Ash and Sycamore, together with Hornbeam, Sweet Chestnut and Horse Chestnut. A moderate number of AWIs are present (11 in total). Fir Tree Grove (**W9**) is a copse to the NW of the junction between Rocks Road and Snatts Road. forming part of the garden of Chicory Cottage. Sandstone outcrops are present. A mature mixed woodland canopy is present with frequent Scot's Pine alongside Oak and Ash. A large number of AWIs are present (20 in total) are present.	District
Other woodland	The majority of Woodland Adjacent to A22 – South (**W8a**, **W8c** and **W8d**) contains mainly secondary deciduous woodland with a number of distinct woodland blocks, with a variety of stand types, and with differing species composition and age class. Woodland compartment 8a is mainly recently planted woodland with Birch, Field Maple, Hawthorn, Ash, Hazel and Oak, with an element of self-sown Willow and Alder, with disturbance possibly resulting from the construction of the A22. The ground flora here is very poor, mainly limited to Ground Ivy and Enchanter's Nightshade with some Wood Anemone which has crept in from adjacent areas. Two AWIs are present. Area **W8c**, where the northern part of the woodland has grassy glades, with Bracken. A small number of AWIs are present (four in total). Further south, in Area W8d are further areas of young woodland containing a range of species which appear to have been relatively recently	Local

Habitat Type	Description	Level of Importance
	planted. Towards the far south of the area woodland grades into thick hazel-dominated scrub with Sweet Chestnut, Horse Chestnut and Sycamore. Only one AWI (Field Maple) is present, although this is likely to have been recently planted. A separate wooded copse (W6b) exists to the south of Longwood Gill, connected by hedgerow **H2**, which is designated as Ancient Semi-Natural Woodland. The copse surrounds pond **P6**, with has steep wooded banks with trees comprising Oak, Beech, and Cherry, with an understory of Blackthorn, Hawthorn and Grey Willow.	
Veteran Trees	A number of veteran trees were recorded within the Site. Trees **T3001**, **3003** and **3004-6** are a group of substantial Veteran Ash coppice stools located on a woodbank on the east side of Shermanreed Wood (**W5**). The stools are of large diameter with their boles being typically of between 1 and 2m across and having substantial basal cavities and deadwood. Tree **T3007** is a Veteran Gean located close to the group of Ash described above. It has a very stout upright stem, has bark loss on the lower stem and dry habitat spaces present on the stem, as well as major deadwood. Tree **T7041** is a Veteran free-standing Beech within field SI1. The main stem has extensive decay from base to top where historic storm damage has removed the main leader above c.8.5m with a diameter of approximately 800-900mm, and showing major storm damage, a lightning strike and having extensive rot. Fir Tree Grove contains a Veteran Oak **T8036**, which has a range of veteran features and a Veteran Beech **T8039**, having major stem decay with *Ganoderma* fungal fruiting bodies present.	District
Moderately Species-rich Grassland	Area **SI4** is an area of moderately species-rich tall-sward neutral grassland, parts of which appear to be flushed with spring water, and which also contains well-spaced mature Oak specimens (typically with 60-80cm diameter stems), and frequent scrub. It is being rapidly colonised by tree seedlings. Botanical survey results do not show a good fit with any particular National Vegetation Classification (NVC) community the habitat it does meet the criteria for Purple Moor-grass and Rush Pasture Priority Habitat type (type G07 under the Higher Level Stewardship Farm Environment Plan) and is considered to be of ecological value on a local level on account of its botanical diversity.	Local
Sandstone Outcrops - Lower Plant Communities	Sandstone outcrops to the south of Fir Tree Grove (**W9**) supported a number of bryophyte species, which did not include any that are considered Nationally Scarce, nor scarce in Sussex. Lichens on rock were very limited, but some notable species were recorded on several large trees near Chicory Cottage	Site
Native Hedgerows and Tree Lines	One hedgerow (**H1**) and one tree line (**TL1**) is present within the Site. Both features are native and considered to be likely to qualify as national priority habitats, as well as being considered to qualify as 'important' under the Hedgerows Regulations 1997[38].	Local
Watercourses	A series of small ephemeral watercourses flow through the woodland areas of the Site, which are shown as **WC1**, **WC2** and **WC3** on Figure 7.3. Some of these are associated with ghyll woodland (particularly those in Shermanreed Wood (**W5**) and Longwood Gill (**W6**)). Together with other minor tributaries originating from Budletts Wood to the north, these pass through two culverts under the A22 before joining the Shortbridge Stream to the west. The stream channels have mostly shallow banks, becoming steeper sided within the woodland gyhll sections.	Local
Ponds	Six ponds are located within the Site, along with a further six ponds located within 250m of the Site boundary, labelled **P1** to **P11** on Figure 7.3. The ponds recorded within the Site are generally located within woodland, many of them located on minor tributaries, which are very susceptible to drying. All are shaded by the surrounding woodland are likely to be very seasonal and are heavily silted and clogged with leaf litter. Most do not contain any aquatic vegetation and represent very low-quality examples of this habitat type. Ponds **P4** and **P6** would be considered as a Priority Habitat based on the fact that ~~it~~ they support~~s~~ a population of Great Crested Newt, whilst the other ponds are not considered to meet the criteria of BAP priority habitat description in their current form, although there is scope for their improvement.	Local

7.62 Other habitats present within the Site include semi-improved species-poor grassland, scrub, and tall ruderal vegetation. Such habitats are not considered to form habitats of ecological importance and are not subject to specific assessment.

Faunal Use of the Site

7.63 A range of faunal surveys were undertaken between 2019 and ~~2022~~ 2023 for bats, Badger, Dormouse, breeding and wintering birds, Great Crested Newt and reptiles. In addition, general observations were made of any faunal use of the Site with particular attention paid to the potential presence of protected or notable species.

7.64 Full details of this survey work are included in the Baseline Ecological Appraisal at Appendix 7.1, whilst a summary of faunal species considered to be of ecological importance occurring within the Site and its immediate surrounds (i.e. the primary ZoI) is set out in Table 7.8 below.

Table 7.8: Summary and evaluation of important faunal species present

Faunal species	Description	Level of Importance
Bats (roosting)	One building within the Site was identified as having 'low' potential for roosting bats, although emergence/re-entry surveys did not confirm any roost. A low number of trees within the Site have been identified as providing bat roosting potential, largely associated with wooded vegetation and hedgerows, although a small number are present within the grassland. No evidence indicating the likely presence of a substantial bat roost was recorded although it is possible that bats may utilise trees within the Site on at least an occasional or temporary basis.	Local
Bats (foraging and commuting)	Overall, low to moderate levels of activity were recorded within the Site, with at least seven species (or species groups) recorded during the surveys. Common Pipistrelle and Soprano Pipistrelle were most frequently recorded, with sustained foraging activity by a moderate number of bats throughout the Site, particularly along the woodland edges and within and around the semi-improved species-rich grassland in the east of the Site. Myotis sp. bats and Big bats (Noctule and Serotine) were recorded fairly frequently. The remaining species were recorded infrequently and in very low numbers, indicating that the Site is used sporadically and is unlikely to be of high importance for these species.	District
Badger	No active Badger setts have been identified within the Site, however, a number of disused setts and other field signs were recorded. In terms of foraging habitat, habitats across the Site are likely to provide good foraging opportunities for Badger in the form of wooded vegetation, hedgerows and grassland. However, limited evidence of foraging activity was recorded across the Site, and such areas may be subject to only relatively low levels of foraging activity.	Site
Dormouse	Suitable habitat is present in the form of woodland within and surrounding the Site. Dormouse were found to be widespread throughout the Site and wider study area during surveys, with the majority found in Woodland adjacent to A22 – south (W8), on the edge of Lake Wood with occasional evidence found on the edge of Longwood Gill (W6) and around the edges of the clearing within Budletts Wood (W4c). Dormouse is relatively widespread within Sussex.	Local
Other mammals (including Hedgehog)	The Site provides potential opportunities for Hedgehog, which is listed as a priority species under Section 41 of the NERC Act 2006, albeit this species remains common and widespread in England, whilst habitats within the Site are unlikely to be of importance in a local context.	Site
Birds	The Site offers a range of opportunities for bird species, particularly in the form of wooded habitats, hedgerows, and grassland margins, which offer foraging areas and potential nesting areas for a range of bird species. Being dominated by mature deciduous woodland, the Site supports a large population of breeding birds that is generally typical of the habitat, without being especially diverse, and resulting in a very high percentage of species that are definitely or probably breeding. In contrast, the open grassland areas were devoid of birdlife. RSPB Red or Amber List species breeding in woodland or scrub at the Site include stock dove, song thrush, mistle thrush, dunnock and bullfinch, with mallard on a woodland pond. All these species remain common and widespread in both a local and national context, as are all the other species recorded breeding at the Site.	Site
Great Crested Newt	A number of ponds are present at the Site and its immediate surrounds, whilst suitable terrestrial habitat is present at the Site in the form of areas of wooded vegetation and rough grassland. Great Crested Newt was recorded as being present within one pond in the east of the site (**P4**) and one pond in the southern central part of the Site (**P6**).	Local
Reptiles	The Site supports a range of potential habitats for reptiles, although the majority of opportunities are likely to be limited to the edges of the large grassland fields. A peak count of 10 Common Lizard was recorded scattered at low densities throughout the field margins of the Site, The area of suitable reptile habitat at the Site is estimated to be c.4.5ha and therefore the peak count equates to a population of two Common Lizard per hectare, which would be classified as a 'low' population under standard guidance[39]. A peak count of 11 Slow-worm was also recorded at low densities throughout the Site. Taking an area of c.4.5ha of suitable habitat, the peak count equates to a population of two Slow-worm per hectare, which would also be classified as a 'low' population. One grass snake was recorded on the edge of Budletts Wood – West. As such it is considered	Local

Faunal species	Description	Level of Importance
	that a 'low' population of Grass Snake is present at the Site, whilst this species typically ranges over a wide habitat area indicating only occasional use.	
Invertebrates	No evidence for the presence of any protected, rare or other notable invertebrate species was recorded within the Site during the survey work undertaken, whilst the majority of the Site, dominated by species-poor grassland, supports few micro-habitats that would typically indicate elevated potential for invertebrates. However, ponds, watercourses, hedgerows and other wooded vegetation within the Site are likely to provide some opportunities for common and widespread invertebrates.	Site

Schedule 9 Invasive Species

7.65 During the course of the survey work undertaken, Rhododendron spp. was observed in several localities including within Budletts Wood – West (woodland areas **W4c**, **W4d** and **W4e**), and within Shermanreed Wood (**W5**), and Fir Tree Grove (**W9**). Himalayan Balsam, Japanese Knotweed and Giant Rhubarb were recorded at the southern end of Shermanreed Wood (**W5**). These species are listed in the Wildlife and Countryside Act 1981 (as amended)[40] under Schedule 9 Part II which makes it an offence to cause to grow in the wild any plant listed on the schedule.

7.66 Within the wider study area, which included an additional area of woodland to the north of the site (illustrated at Figure 7.3), a number of additional instances of invasive species were recorded, which include the following:

- Extensive stands of Rhododendron in Budletts Wood – West (**W4g**);
- Occasional stands of Rhododendron in Budletts Wood – East (**W3**);
- Areas of Variegated Yellow Archangel, Japanese Knotweed,and Shallon in Budletts Wood (woodland compartment **W4g**); and
- Cherry Laurel in Fir Tree Grove (**W9**).

7.67 Consideration is given to Schedule 9 invasive species, and other invasive plant species, in the Mitigation Measures section, although given they do not form an important ecological feature they are not subject to specific assessment.

Likely Significant Effects

7.68 The Development that is assessed in terms of likely significant effects has been developed following an iterative process of design, with a number of mitigation measures incorporated as part of the Development as set out within Chapter 3 of the ES. Particular measures incorporated in relation to ecology include:

- Retention of key habitat areas, namely all Ancient Woodland, veteran trees, all ponds and watercourses, and all hedgerows and tree lines within the landscape and open space areas;
- All Development (with the exception of compatible features such as SuDs) has been excluded from a 15m buffer zone around all Ancient Woodland. This zone will be protected by suitable tree protection fencing during the construction phase of the Development. Further details of this embedded mitigation, which will form part of a CEMP are given in Paragraph 7.248-250 below.

- Creation of substantial area of public open space (Downlands Woodland Park) within the north of the Site, forming Sustainable Alternative Natural Greenspace (SANG) and including the retention of field **SI1**, **SI2** and **SI4** within retained public open space (with the SANG area being ~~18~~13.~~1ha~~2ha)
- Additional ~~areas of~~ semi-natural areas of informal public open space amounting to 7ha, as shown in the Green Infrastructure Parameters Plan (Figure 3.3);
- Creation of at least 2ha of new woodland planting and 2ha of scrub planting within the SANG and other public open spaces, and within Ancient Woodland buffer zones;
- Creation of a short section of residential road and dwellings within 50m of Pond **P4**;
- Creation of 2no. new permanent ponds within SuDs, and a further 1no. pond within the proximity of Pond **P6**;
- Provision of additional connective habitat in the form of corridors of landscape and open space between Development areas;
- Retention of Pond P4 with a ~40m buffer zone in the east and Pond **P6**, together with a buffer zone of 50m at the southern central part of the Site; and
- Retention of all watercourses within their woodland setting.
- New permanent boundary fencing between the Site and Lake Wood Local Wildlife Site (LWS). Details of the alignment of proposed fencing is shown on the Green Infrastructure Parameters Plan (Drawing ref. 1309.04).

7.69 Further detail on how these embedded measures avoid or mitigate significant effects is given in the following section.

7.70 This section sets out the potential significant efforts of demolition / construction and completed Development phase works on ecological receptors identified as being of ecological importance, as summarised in Table 7.9 below.

7.71 Receptors not considered to be of importance at the local level or above (of Site importance only) are scoped out of this assessment, although consideration of mitigation and legislative requirements for protected species, is given in the mitigation section later in the chapter.

Table 7.9: Potential ecological effects and receptors

Receptors	Potential effects											
	Construction phase (temporary effects)						Operational phase (permanent effects)					
	Habitat Loss/Direct Damage of Habitats	Pollution Effects (air and dust)	Hydrology and Water Pollution Effects	Lighting Effects	Disturbance Effects (Noise and Human ~~Disturbance~~Di	Direct Harm to faunal species	Permanent Loss/Damage of Habitat	Fragmentation Effects (Habitats)	Pollution Effects (air quality and dust)	Hydrology and water pollution	Anthropogenic effects (Disturbance /Urbanisation)	Lighting Effects
International Statutory Designations									x		x	
West Park, Uckfield LNR			x					x	x		x	
Lake Wood LWS	X	X	X	X	X			X	X	X	X	X
Butchers Wood LWS		X	X	X				X	X			
Shortbridge Stream (Main River and including Shortbridge Stream Meadows LWS)		X								X		
Other Non-statutory Designations (Uckfield LWS, Uckfield Cemetery LWS etc.)								x	X			
Other Ecological Designations								x	X			
Ancient Woodland	X	X	X	X	X		X	X	X	X	X	X
Other Woodland	X	X	X	X			X	X	X	X	X	X
Veteran Trees	X		X				X					
Species-Rich Grassland (off Snatts Road)	X	X	X	x			X	X	X			
Other Habitats (namely on-site watercourses; ponds; native hedgerows and tree lines)	X	X	X	x			X	X	X			
Shortbridge Stream			X							X		
Bats	X	X		X		X	X	X				X
Dormouse	X	X		X	X	X	X	X			X	X
Great Crested Newt	X	X	X			X		X	X			
Reptiles	X	X			X	X	X	X	X			

7.72 A number of woodlands listed on the provisional Ancient Woodland inventory are located within the proximity of the Development, whilst a number of veteran trees are also located within the Site. In the case of Ancient Woodland and Veteran Trees the potential for likely significant effects to occur during the construction and operational phases of the Development, is assessed against the Natural England and the Forestry Commission jointly publish Standing Advice on Ancient Woodland and Veteran Trees[41]. This Advice includes inter alia the following list of potential adverse impacts on these features from nearby development. For the purposes of this assessment these have been divided into several sub-headings, each representing a group of effect types.

Table 7.10. Ancient Woodland – Direct and Indirect Effect Types (from Natural England/Forestry Commission Standing Advice:

Impact Type	Description from NE/FC Standing Advice
Direct Effect Types	
Habitat Loss/Direct Deterioration Effects	• *Damage or destruction (including loss of soils, ground flora or fungi);* • *Damage to roots and understorey;* • *Damage or compaction of soil;* • *Damaging functional habitat connections;* • *Detrimental changes to the woodland ecosystem (ie. By removing woodland edge or thinning trees)*
Pollution Effects	• *Increased levels Air pollution* • *Increased levels Dust Pollution*
Hydrological Effects	• *Changing the water table or drainage of woodland or individual trees*
Lighting Effects	• *Increased levels of Light pollution*
Archaeological Effects (Assessed separately under Chapter 9 Cultural Heritage of this ES)	• *Damaging archaeological features or heritage assets*
Indirect Effect Types:	
Fragmentation Effects	• *Breaking up or destroying working connections between woodlands and ancient or veteran trees* • *Reducing the amount of semi-natural habitats next to ancient woodland*
Pollution Effects	• *Increased levels of Dust Pollution* • *Increased levels of Air Pollution*
Lighting Effects	• *Increased levels of Light Pollution*
Water Quality Effects	• *Increasing the amount of water pollution*
Disturbance/Urbanisation Effects	• *Damage to Habitat by increased access (e.g. trampling of plants and erosion)* • *Disturbance to wildlife from additional traffic and visitors* • *increased damaging activities like fly-tipping and the impact of domestic pets*
Landscape Effects (Assessed separately under Chapter 6 Landscape and Visual of this ES)	• *changing the landscape character of the area*

7.73 Information relating to the construction and operational phases as presented in Chapter 3 'Site and Development Description' and Chapter 5 'Construction Methodology and Phasing' forms the basis of this assessment. The extent of areas affected by the Development is therefore based on the Land Use and Access Parameter Plan (Figure 3.1) which shows built

development areas (e.g. residential development) within which habitats are likely to be lost, and the Green Infrastructure Parameters Plan, which shows areas of greenspace, within which habitats can be retained and enhanced. This has been informed further by the Illustrative Masterplan (Figure 3.5) which shows one way in which the Development ~~will~~ could be built. Given the outline nature of the application (save for the SANG), the specific detail of individual habitat losses will be confirmed at the detailed design stage.

Construction Phase

Design Solutions and Assumptions

7.74 The likely significant effects considered within this section are those relating to temporary factors arising from the construction process, such as construction Site noise or dust production, and which will cease to apply following completion of the Development (referred to as 'Operational Phase'). Thus, loss of habitats through permanent land take for development is considered as an 'Operational Phase' effect, although the land take actually occurs during the construction phase of the Development.

West Park (Uckfield) Local Nature Reserve

7.75 The statutory designation West Park (Uckfield) LNR is located approximately 100m to the south of the Development and is designated on the basis of having a variety of habitats, including woodland, sandstone outcrops, marshland and open grassland. The designation is fully retained under the Development, and the distance between the Site and the designation means that habitats will not suffer from direct damage or disturbance to vegetation. It is also considered unlikely that indirect effects, such as damage to habitats resulting from dust deposition and surface run-off of contaminants or silt, will result from the construction of the Development.

7.76 Effects on West Park (Uckfield) LNR are therefore considered to be negligible and non-significant (near certain), at the County Level.

Lake Wood Local Wildlife Site

7.77 Lake Wood LWS is located adjacent to the southern boundary of the Site and is designated on the basis of Ancient Woodland, managed by the Woodland Trust, surrounding a large man-made lake with sandstone outcrops supporting important populations of bryophytes.

7.78 The designation will be fully retained under the Development, with at least a 15m buffer provided between the built Development areas and the designation. This will safeguard habitats from direct damage or disturbance to vegetation, however, the designation could be subject to indirect effects, particularly as a result of dust deposition and surface run-off of contaminants or silt. Such effects will be temporary, although could lead to minor degradation of woodland or wetland habitats, in the short-term. It will also be necessary to construct a new roundabout to serve the main Site access, and the construction works proposed for this part of the Development will be located approximately 70m from the designation.

7.79 As such, without mitigation, construction effects on Lake Wood LWS are considered to be minor, adverse and permanent (given its status as Ancient Woodland), and would be significant at the County level (although uncertain).

Butcher's Wood Local Wildlife Site

7.80 Butchers Wood LWS is designated for its Ancient Woodland, together with a large population of Wild Daffodil *Narcissus pseudonarcissus*, and significant sandstone outcrops of rich and interesting bryophytes. It is located approximately 35m from the proposed red line boundary, at the nearest point, although this area of the Site comprises retained scrub and woodland, and will not be directly affected by the Development, being separated from the main construction areas by the A22.

7.81 Nevertheless, it will be necessary to construct a new roundabout to serve the main Site access, and the construction works proposed for this part of the Development will be located approximately 70m from the designation.

7.82 The designation is fully retained, and given the distance between the Site and the designation, and the topography of the intervening ground, it is also considered unlikely that any indirect effects, such as damage to habitats resulting from dust deposition and surface run-off of contaminants or silt, will result from the Development.

7.83 As such, without mitigation, construction effects on Butcher's Wood LWS are considered to be negligible, and non-significant at a County level.

Shortbridge Stream (Main River and including Shortbridge Stream Meadows LWS)

7.84 Shortbridge Stream is a main river located approximately 250m west of the Site and taking flows from the minor watercourses which are located within the Site, including those that flow through Longwood Gill and Shermanreed Wood. It is a designated as a 'main river' by the Environment Agency, and is known to support populations of sea trout (*Salmo trutto trutto*).

Which are a migratory fish species. The stream is classified under the Water Framework Directive as being in Moderate conditions for both biological and physico-chemical parameters, and is in Good condition with respect to chemical quality parameters[42].

7.85 As such, surface water discharges from the Site have the potential to negatively indirect effect on water quality within the Shortbridge Stream. Without mitigation, construction effects on Shortbridge Stream are considered to be minor, adverse and short term, and could be significant at the County level (although uncertain).

Other Ecological Designations

7.86 Apart from West Park (Uckfield) LNR, the next nearest statutory designation is Buxted Park SSSI located approximately 800m to the east of the Site. Buxted SSSI is designated for its range of unimproved grassland communities with parkland trees and areas of woodland.

7.87 The nearest European statutory designation is Ashdown Forest SAC/SPA, located approximately 2.7km to the north of the Site, whilst a number of other European designations are located further afield within the 25km search radius, as described in Table 7.6.

7.88 Apart from Lake Wood LWS, and Butcher's Wood LWS, the next nearest non-statutory designation is Uckfield Cemetery LWS, which is located approximately 250m to the east of the Site. The designation contains neutral species-rich grassland comprising species-rich low acidic grassland sward and populations of Green-winged Orchids (*Orchis morio*).

7.89 It is considered that all other statutory and non-statutory designations, are highly unlikely to be affected during the construction phase. Effects on other ecological designations are therefore considered to be negligible and not significant.

Ancient Woodland

7.90 A number of woodlands listed on the provisional Ancient Woodland inventory are located within the proximity of Development. There will be no direct loss of Ancient Woodland as a result of the Development. There is however potential for direct or indirect negative deterioration effects to result from a number of impact types during the construction phase, including those resulting from inadvertent damage or habitat loss and deterioration, and pollution from surface water run-off and light pollution.

7.91 A full list of impact types is provided in Table 7.10, based on Natural England and the Forestry Commission jointly published Standing Advice on Ancient Woodland and Veteran Trees[43].

7.92 Only those effect types relevant to the construction phase are considered in this section, with a full account of operational impacts given in the relevant section below. Construction Phase effects are limited to Habitat Loss/Direct Deterioration effects and Pollution effects (both direct and indirect).

7.93 Effects relating to light pollution during the construction phase are considered in the relevant faunal sections below, since they generally relate to the potential disturbance of these species from construction lighting. A Dark Areas Map (Richards Urban Design Plan Ref. 1307.07) has been produced (and submitted as part of the planning application) to define a series of Primary Dark Zones (areas which are most sensitive to light pollution), together with Secondary Dark Zone (which are of lesser sensitivity).

Habitat Loss/Direct Deterioration Effects

7.94 The Development will not result in the loss of any woodland areas of Ancient Woodland. This has been achieved by the careful planning of all Development to avoid such losses, including the positioning of the proposed main access and secondary emergency access to avoid such losses. During the construction phase of the Development, damage to roots and understory and compaction of soil within the root protection area of trees will be avoided by the provision of a 15m buffer zone to all Ancient Woodland areas, as embedded mitigation within the Development. The 15m depth figure has widespread currency as the typical depth applied for residential development adjacent to Ancient Woodland.

7.95 Nevertheless, in the absence of suitable safeguards, there is the potential for inadvertent damage to occur to trees within Ancient Woodland, and their associated roots and soils, resulting from construction traffic entering these zones. At the location of the emergency access construction will take place within Root Protection Areas of individual trees with the potential to cause damage to soils. Similarly, where the proposed cycleway/pedestrian link is proposed in Fir Tree Grove and the boardwalk within the woodland elements of the SANG, there is the potential for construction related damage resulting from the construction of the proposed boardwalk path.

7.96 As such, prior to mitigation, construction effects on habitats of importance within the Site are considered to be minor, adverse and permanent, and could be significant at a District level (although uncertain).

Pollution Effects (Air and Dust)

7.97 Air quality changes resulting from construction activities are not expected to change outside

the range of acceptable thresholds. However, dust pollution arising from construction may also have a negative effect, through deposition on vegetation.

7.98 As such, prior to mitigation, construction effects on habitats of importance within the Site are considered to be minor, adverse and permanent, and could be significant at the local level (although uncertain).

Hydrology and Water Pollution Effects

7.99 It is possible that in the absence of suitable mitigation, polluted surface water run-off resulting from construction activities, containing contaminants have a direct or indirect effect on Ancient Woodland, which may result in deterioration of the woodland.

7.100 As such, prior to mitigation, construction effects on habitats of importance within the Site are considered to be minor, adverse and permanent, and could be significant at the local level (although uncertain).

Veteran Trees

7.101 Within the jointly published Standing Advice, the list of potential direct impacts for veteran trees is the same as that for ancient woodland, as set out in Table 7.10. Those potential impacts relating to the construction phase of the Development include Loss of Habitat/Direct Deterioration Effects and Pollution Effects.

Habitat Loss/Direct Deterioration Effects

7.102 All of the veteran trees would be retained as part of the Development.

7.103 Nevertheless, in the absence of suitable safeguards, there is the potential for inadvertent damage to occur to Veteran Trees, and their associated roots and soils, resulting from construction traffic entering these zones.

7.104 As such, prior to mitigation, construction effects on habitats of importance within the Site are considered to be minor, adverse and permanent, and could be significant at the local level (although uncertain).

7.105 Veteran trees are not generally susceptible to other types of effects that might arise during construction, such as those arising from dust deposition, or light pollution or changes in air quality.

7.106 As such, prior to mitigation, construction effects on habitats of importance within the Site during the construction phase are considered to be minor, adverse and permanent, and could be significant at the local level (although uncertain).

Other Habitats

7.107 Large parts of the Site will be subject to construction works resulting in the loss of existing habitats. This permanent land-take of habitats (and resultant effects on fauna supported by such habitats) is discussed in the Operational Phase section below. This section relates to effects during the construction phase, which are largely temporary in nature.

7.108 Retained habitats of importance within the Site including other woodland, species-rich grassland, hedgerows and tree lines, and ponds which may be subject to potential effects such as dust deposition and damage to trees from compaction or other damage from construction machinery or vehicles. Topsoil stripping and movement undertaken for construction could also result in degradation of the ponds and watercourses within and adjacent to the Site.

7.109 As such, prior to mitigation, construction effects on habitats of importance within the Site are considered to be minor, adverse and medium-term, and could be significant at the local level (although uncertain).

Faunal Species

Foraging and Commuting Bats

7.110 The Site is considered to be of district level importance for foraging and commuting bats, with low-moderate levels of activity by at least seven species (or species groups) recorded during the surveys. Full details are provided with the Ecological Baseline Appraisal (Appendix 7.1).

7.111 Foraging and commuting bats could be affected during the construction phase of the Development by lighting of construction areas. However, such effects would only be for the duration of the construction phase, and the requirement for lighting during construction works is expected to be relatively minimal given the general restrictions on working to daylight hours. Further, lighting requirements are likely to be mostly during the winter months when bats are hibernating and less likely to be using these habitats, whilst the main habitats of value to foraging and commuting bats are located away from construction areas. Foraging and commuting bats could also be affected by noise disturbance during construction, although

this would be mostly during the day when foraging or commuting bats would be absent. Other construction effects such as airbourne pollutants are unlikely to result in a direct effect on foraging or commuting bats.

7.112 Accordingly, prior to mitigation, construction effects on foraging and commuting bats are considered to largely relate to temporary increases in lighting levels, and would be minor, adverse and short-term at a District scale and non-significant (probable).

Birds

7.113 Likely significant effects on bird species during the construction phase of the Development relate to a direct loss of active nests, resulting in a direct effect on local populations and also constituting an offence under the Wildlife and Countryside Act 1981 (as amended), which affords protection to wild birds and their eggs. In this regard, a number of trees and shrubs contained within woodland are to be removed as part of the Development. Construction activities could also result in noise and visual disturbance to nesting birds in close proximity to construction areas, albeit these effects are anticipated to be highly localised.

7.114 Accordingly, prior to mitigation, construction effects on birds are considered to be minor, adverse and short-term at a Local scale, and would be non-significant (probable).

Dormouse

7.115 Suitable habitat in the form of woodland was recorded as being present within and surrounding the Site, and dormouse was recorded widely within suitable habitats.

7.116 Removal of woodland could result in an offence under relevant domestic and European legislation.

7.117 The majority of woodland habitats are retained. However, the Development will result in the removal of small amounts of woodland to create the main Site access, secondary emergency access, and to create a SuDs feature.

7.118 Accordingly, prior to mitigation, construction effects on Dormouse are considered to be minor, adverse and long-term at a local scale, and could be significant at the local level (probable).

Great Crested Newts

7.119 A number of ponds are present at the Site and Great Crested Newt was recorded as being

present within one pond in the east (**P4**) and one pond in the southern central part of the Site (**P6**). This species is also likely to use suitable terrestrial habitat present at the Site in the form of areas of wooded vegetation and rough grassland, especially in the vicinity of Ponds **P4** and **P6**.

7.120 This species will make use of terrestrial habitat within the vicinity of its breeding ponds, with most activity concentrated within 50m of the pond and little activity beyond a distance of 250m. As such, construction works could result in disturbance to breeding and foraging habitat and a risk of injury to any individuals present.

7.121 Such actions could result in an offence under relevant domestic and European legislation. Ponds supporting Great Crested Newts could also be at risk of hydrological changes (e.g. effects on the water table, increased siltation and contamination of surface run-off).

7.122 The majority of the habitats surrounding Ponds **P4** and– **P6** will be retained. However, the Development will result in the temporary disturbance of terrestrial habitat within 50m of the ponds to create residential development (near P4) a SuDs basin (near P6), ~~and~~ with further losses of terrestrial habitats within 250m.

7.123 Accordingly, prior to mitigation, construction effects on Great Crested Newt are considered to be minor, adverse and short-term at a local scale, and could be significant at the local level (probable).

Reptiles

7.124 Clearance of vegetation and groundworks during site preparation within the Site has the potential to kill and/or injure individual reptiles that may be occupying the areas of suitable habitat at the time of construction works. The risk of harming reptiles is highest during the hibernation period of November to March inclusive and where groundworks occur within areas where reptiles have been found. However, the quantum of habitat loss is likely to be very low, since the majority of the field boundaries where suitable reptile habitat occurs will be retained under the Development (mostly as buffer zones to adjacent woodland).

7.125 This could result in an offence under the provisions of the Wildlife and Countryside Act (as amended), and consequently will need to be avoided and mitigated.

7.126 Accordingly, prior to mitigation, construction effects on reptiles are considered to be minor, adverse and short-term, and could be significant at the local level (probable).

Operational Phase

Statutory Designations

Ashdown Forest SAC/SPA

7.127 Ashdown Forest SAC is located approximately 2.7km north of the Site. It covers a total area of 2,716ha, located between the main settlements of East Grinstead, Crowborough and Uckfield. Ashdown Forest SPA covers the same area, together with a number of additional land areas subject to SPA designation only, totalling 3,207ha.

7.128 Ashdown Forest SAC is designated on the basis of the Annex I habitats 'Northern Atlantic wet heaths with *Erica tetralix'* and 'European dry heaths'. The Annex II species Great Crested Newt *Triturus cristatus* is also present but does not form a primary reason for site selection.

7.129 Ashdown Forest SPA is designated as it supports breeding populations of European importance of the Annex I species Dartford warbler *Sylvia undata* and Nightjar *Caprimulgus europaeus*.

7.130 A Site Improvement Plan (SIP) has been produced by Natural England in relation to Ashdown Forest SAC and SPA (dated November 2014). This identifies prioritised issues (pressures or threats) affecting the designation, which are summarised as follows:

1. Change in land management (largely relating to lack of appropriate grazing)
2. Air pollution – impact of atmospheric nitrogen deposition
3. Public access/disturbance (largely in relation to breeding birds)
4. Hydrological changes

7.131 Of these effects, items 1 (changes in land management) and 4 (hydrological changes) are unlikely to be caused by the Development and can be scoped out. The remaining effect types are considered as part of this assessment and are reported in further detail in the report to inform a Habitats Regulations Assessment (HRA), including Appropriate Assessment, which is included as Appendix 7.2.

Anthropogenic Effects

7.132 Ashdown Forest is designated as an SPA on the basis of the bird populations of European importance which are listed on Annex I of the Habitats Directive. Natural England last published the conservation objectives for Ashdown Forest SPA on 21 February 2019 where it aims to ensure that the integrity of the designation is maintained or restored as appropriate,

and ensure that the Site contributes to achieving the aims of the Wild Birds Directive 2009. The main threats to those qualifying features include disturbance by humans and their pets, recreational activities, development pressure and the loss of nesting/feeding habitats.

7.133 Under the Development, 424 residential units will be constructed on the Site, which may result in an increase in recreational pressure on the qualifying features of the Ashdown Forest SPA over and above the existing baseline.

7.134 Policy WCS12 of the Wealden Core Strategy sets out an exclusion zone of 400m for net increases in dwellings in the Delivery and Sites Allocations Development Plan Document, and requires provision of Suitable Alternative Natural Greenspace (SANG) and contributions to strategic access, management and monitoring (SAMM) at the designation for any residential development within 7km of the Ashdown Forest SPA. This ZoI had been based on visitor surveys of the Ashdown Forest, including an assessment of the origin of the visitors. The Core Strategy was subject to a High Court challenge and in 2015 in response to a Court of Appeal decision, WDC was ordered to make changes to Policy WCS12, by removing reference to the 7km zone or the specified mitigation requirements. Since this time, the draft Wealdon Local Plan (2019) which contained new re-drafted policies relating to the Ashdown Forest SPA was withdrawn in February 2019.

7.135 Nevertheless, the Development is within the 7km of the SPA which evidence shows is the zone within recreational impacts will likely require mitigation. It is therefore considered likely that the development will result in an increase in visitor pressure resulting from the Development.

7.136 Accordingly, prior to mitigation, operational effects resulting from recreational changes on Ashdown Forest SPA are considered to be minor, adverse and long-term at an International level, and are likely to be significant (near certain).

Pollution Effects (Air Quality and Dust)

7.137 A consideration of air quality is relevant as many nature conservation designations in England are sensitive to alterations in air quality. The main pollutants that could increase due to residential development of the Site are nitrogen (in the form of Nitrogen Dioxide and Ammoniacal Nitrogen) resulting from an increase road traffic associated with the Development), which has the potential to result in Nitrogen deposition on the SAC potentially increasing under the Development.

7.138 Background information on air quality in relation to Ashdown Forest SAC is available on the Air Pollution Information System (APIS) website[44]. This indicates that ammonia and nitrogen

deposition levels are above the established critical levels/loads. Detailed modelling of air quality to inform the Wealden Local Plan HRA also predicts an exceedance of the critical level for NOx across 4.61ha of the SAC, with a maximum concentration of 89.6µg/m3.

7.139 Under the Development, up to 424 residential units will be constructed on the Site. A Transport Assessment (TA) for the Development has been undertaken (and submitted in support of the planning application), to determine the number of traffic movements that are likely occur within 200m of the SAC as a result of the Development.

7.140 In summary, the TA predicts the number of daily trips (or Annual Average Daily Trips – AADT) which will be generated from the Development, on the two main roads passing within 200m of Ashdown Forest SAC, both of which are located to the north of the Development. At the A26 less than 225 AADT are predicted, whilst less than 93 AADT are predicted at the A22. This level of increase is far less than the typical threshold of 1,000 AADT that would typically trigger a potential significant effect, both alone and in-combination with effects predicted under the draft local plan HRA (now withdrawn alongside the plan).

7.141 Natural England (the government's Statutory Nature Conservation Organisation) provided a Regulation 19 consultation response to the Wealden Pre-Submission Local Plan (dated 05 October 2018). In this response, Natural England set out that *'Natural England is satisfied that it can be ascertained that the plan or project will not adversely affect the integrity of Ashdown Forest Special Area of Conservation (SAC), Lewes Downs SAC and Pevensey Levels SAC and Ramsar from air quality impacts. Natural England's advice regarding air quality is that this conclusion can be reached without mitigation measures being needed under the specific requirements of the Habitats Regulations'* [our emphasis]. Subsequently, the Wealden Local Plan Inspector carefully considered all evidence in respect of air quality at the examination in public in 2019. The Inspector's findings were published on 20 December 2019 and these concluded that Natural England's position was well evidenced and supported and could be relied upon.

7.142 A report has been produced to inform a Habitat Regulations Assessment of the Development proposals by the Competent Authority, which is presented separately alongside the planning application. This concludes that there are not likely to be significant air quality effects resulting from the Development.

7.143 Accordingly, prior to mitigation, operational effects resulting from air quality changes on Ashdown Forest SAC/SPA are considered to be negligible at an international level and not significant both alone and in combination with other development.

Other Effects

7.144 Other effect types to Ashdown Forest SAC/SPA are unlikely to occur, due to the distance between the Site and the designation and as such are considered to be negligible and are considered to be not significant (probable).

West Park (Uckfield) LNR

Anthropogenic Effects

7.145 The statutory designation West Park (Uckfield) LNR is located approximately 100m to the south of the Development and is designated on the basis of having a variety of habitats, including woodland, sandstone outcrops, marshland and open grassland. The designation is managed by Uckfield Town Council, with open public access, and there are several permissive paths, and boardwalks.

7.146 An increase in recreational use of West Park (Uckfield) LNR resulting from elevated levels of usage resulting from the Development has the potential to cause impacts through trampling and disturbance of vegetation, disturbance to faunal species, littering and dog fouling leading to localised eutrophication[1]. However, the designation is sufficiently removed from the Development, and separated by a road and the intervening Lake Wood, such that it is not expected that these effects would be concentrated on the designation. The provision of public open space and SANG as part of the Development (as a form of embedded mitigation) are intended to provide extensive opportunities for the public to recreate and walk dogs, such that these will be the focus of these kinds of recreation activities.

Other Effects

7.147 The immediate effects of urbanisation (such as tipping of garden waste and uncontrolled access from the Site into the designation) are unlikely to be felt given the degree of separation. Other effect types are also considered unlikely to occur.

7.148 Accordingly, operational effects on West Park (Uckfield) LNR are considered to be negligible and not significant (probable).

[1] Eutrophication: the gradual increase in the concentration of phosphorus, nitrogen, and other plant nutrients in an aging aquatic ecosystem such as a lake or other waterbody.

Non-Statutory Designations

Lake Wood LWS

Anthropogenic Effects

7.149 There is potential for negative effects from increased recreational usage of Lake Wood LWS, due to the proximity of the designation to the location of proposed residential dwellings. The designation is located immediately adjacent to the southern boundary of the Site.

7.150 Lake Wood is managed by the Woodland Trust, comprising a large man-made lake with sandstone outcrops, and is known to have aquatic ecological features (including invertebrates and micro-organisms) which are sensitive to recreational disturbance with the Lake Wood Management Plan such as those resulting from swimming and boating. The Management Plan for the Lake Wood Site[45] reports that the Site suffers from regular anti-social behaviour problems such as camping, fires, litter and vandalism. The LWS has public open access with two existing access points off Rock's Road to the south. Informal access also exists between the Lake Wood area and the southern part of the Site. There is a well-established informal track originating from the south-west corner of the Site, and a further informal access in the south-east of the Site, but neither constitute a public right of way (PRoW).

7.151 An increase in recreational use of Lake Wood LWS is considered likely as a result of the Development. Some effects, which might otherwise be expected where residential development and associated gardens back directly onto woodland areas (such as the dumping of garden waste, back-gate access to the woods and the escape of invasive plant species), will be prevented by mitigation embedded into the design of the Development, specifically the incorporation of a 15m buffer zone along the southern side of the development, separating the proposed gardens from the woodland, and the installation of a new fence along the boundary.

7.152 Development has the potential to cause impacts through disturbance to aquatic flora and fauna, trampling of vegetation, including informal access from the residential areas and dog fouling leading to localised eutrophication. Populations of protected faunal species, including Dormouse may be adversely affected from an increase in disturbance. However, as part of the Development (as embedded mitigation) it is proposed to provide a robust fence to separate the residential parts of the Development and Lake Woods, blocking the existing informal access point. This will prevent residents from accessing it, and will also help to control existing pressures resulting from the existing informal access from the Site to Lake Woods. In addition, the provision of a SANG as part of the proposals provides an alternative

visitor destination, which is likely to attract a number of visitors who will use the SANG instead of Lake Wood.

7.153 Accordingly, following a consideration of the embedded mitigation which will be included within the Development, operational effects resulting from increased recreational pressure and urbanisation on Lake Wood LWS are considered not to be significantly increased by residents living at the Development. These effects are considered to be negligible and not significant (probable).

Other Effects

7.154 Other effects, such as reductions in air quality or dust pollution, along with any other effect types are considered unlikely to be significant. Accordingly, other operational effects on West Park (Uckfield) LNR are considered to be negligible and not significant (probable).

Shortbridge Stream (including Shortbridge Stream Meadows LWS)

7.155 Shortbridge Stream is a main river located approximately 250m west of the Site, and taking flows from the minor watercourses which are located within the Site, including those that flow through Longwood Gill and Shermanreed Wood. It is a designated as a 'main river' by the Environment Agency, and is known to support populations of sea trout (*Salmo trutto trutto*). Which are a migratory fish species. The stream is classified under the Water Framework Directive as being in Moderate conditions for both biological (fish, invertebrates and macrophytes and phytobenthos combined) and physico-chemical parameters, and is in Good condition with respect to chemical quality parameters[46].

7.156 During the operational phase, there is the potential for a reduction in water quality within the receiving waterbody, resulting from pollutants occurring in surface water run-off from the Development, which may have a detrimental effect on the downstream ecosystems.

7.157 However, the drainage design (which forms embedded mitigation within the Development) allows for a series of SuDS basins which have been designed with sufficient pollution treatment capabilities so as to meet the requirements of the CIRIA SuDS Manual C753[47]. As such, surface water discharges from the Site will be fully treated and have no potential to negatively indirectly effect water quality within the Shortbridge Stream. Accordingly the effects on the Shortbridge Stream are considered to be negligible and not significant (probable).

Other Non-Statutory Designations

7.158 Butchers Wood LWS is designated for its Ancient Woodland, together with a large population of Wild Daffodil *Narcissus pseudonarcissus*, and significant sandstone outcrops of rich and interesting bryophytes. It is located approximately 35m from the proposed red line boundary on the other side of the A22, at the nearest point, although this area of the Site comprises retained scrub and woodland, with the nearest proposed residential development being approximately 150m from the LWS.

7.159 An increase in recreational use of Butcher's Wood LWS resulting from elevated levels of usage resulting from the Development has the potential to cause impacts through trampling and disturbance of vegetation, disturbance to faunal species, littering and dog fouling leading to localised eutrophication. However, the woodland is privately owned, with no vehicular access. It can be reached on foot by walking a route of approximately 600m through Lake Wood LWS and walking across the Rocks Road bridge over the A22. At this point public access is restricted to a single established public footpath heading in the direction of Park Wood.

7.160 All other designations within 2km of the Development, including Uckfield Cemetery LWS, Shortbridge Stream Meadow LWS, Budlett's Common Rocks LWS, Maresfield Churchyard LWS, and Piltdown Common LWS are well separated from the Development, with many being on privately owned land, and it is unlikely that there will be a substantial increase in visitors resulting from the Development.

7.161 Accordingly, operational effects resulting from increased recreational pressure on Other Non-statutory designations are considered to be negligible, and not significant (probable).

Ancient Woodland

Types of Impact

7.162 A number of woodlands listed on the provisional Ancient Woodland inventory are located within the proximity of the Development. There is therefore potential for indirect negative effects (deterioration) to result from a number of impact types during the operational phase, including those resulting from increased recreational usage, urbanisation effects such the eutrophication and the introduction of non-native plant species resulting from garden waste tipping, as well as changes in the floral composition of woodland resulting from changes in hydrology.

7.163 A full list of impact types is provided in Table 7.10, following Natural England and the Forestry Commission jointly published Standing Advice on Ancient Woodland and Veteran Trees[48]. The same list of potential effects to Ancient Woodland has been used to assess the operational effects.

Habitat Loss/Direct Deterioration Effects

7.164 The Development will not result in the loss of any woodland areas which are listed on Natural England's provisional inventory of Ancient Woodland. This has been achieved by the careful planning of the Development to avoid such losses, including the positioning of the proposed main access and secondary emergency access. During the operational phase, damage to roots and understory and compaction of soil within the root protection area of trees will be avoided by the provision of a 15m buffer zone to all Ancient Woodland areas, as embedded mitigation within the Development. The 15m depth figure has widespread currency as the typical depth applied for residential development adjacent to Ancient Woodland.

7.165 At the location of the proposed emergency access route to the north of the Site, a 15m buffer zone is not provided, and whilst there is no loss of ancient woodland, the road impinges on the Root Protection Area of a number of individual trees contained within woodland on either side of the proposed road. These impacts are addressed in the Construction Effects section, and will be fully mitigated by embedded mitigation by the road being formed above ground level, without any effect on the underlying woodland soil.

7.166 The pedestrian/cycle-path connection through Fir Tree Grove in the south-east of the Site has the potential to cause loss of ancient woodland along the 93.4m length which falls within the Ancient Woodland area. However the path will be constructed in the form of a boardwalk which will be elevated slightly above the existing ground level, with supporting pillars mounted on stainless steel screw piles to prevent any loss of ancient woodland (through excavation or damage to soils). A detailed design for the boardwalk is submitted with the planning application. This embedded mitigation will avoid any loss of Ancient Woodland.

7.167 Woodland ground flora, including Ancient Woodland Indicator species, is patchily present along the alignment of the Fir Tree Grove boardwalk route, which would be overshaded by the proposed boardwalk and as a consequence be unlikely to survive. Further details of the ground flora present are provided in the Baseline Ecological Report (Appendix 7.1) and Fir Tree Grove Technical Note at (Appendix 7.3). In the absence of appropriate mitigation, the boardwalk would result in the overshading of woodland ground flora which includes ancient woodland indicator species. However, this amounts to a small area of effect, with approximately 297m^2 of the ground to be covered by the boardwalk (93m x 3m), only a

proportion (128m^2) of which supports Ancient Woodland indicator species such as Bluebell.

7.168 At the request of Natural England, a boardwalk is similarly proposed through the woodland elements of the SANG which extends for ~464m with a length of 166m in the bracken covered glade (with a boardwalk width of 1.5m). This measure will serve to improve the current condition of pathways which are presently muddy in places and to ensure that increased footfall within the SANG can be readily accommodated without risk to deterioration of ground conditions. The boardwalk would be of a standard nature with a timber / recycled composite structure with a hand rail on one side and a non-slip walking surface. Survey by FLAC has identified that occasional low quality trees may need to be removed to facilitate boardwalk installation numbering up to 20 with a similar number of coppice stools potentially requiring translocation. However, this assessment is based on a 2m wide boardwalk installation while the actual boardwalk to be installed is 1.5m in width and hence effects on trees will be reduced. These effects would be reduced still further by utilising localised narrowings of the boardwalk where possible to avoid trees at the time of installation. The management of trees for timber is part of normal woodland management (and any losses would be replanted elsewhere). The standard boardwalk construction of wooden legs utilised in nature reserves (which are most cost effective) is proposed to be replaced by steel needle ground screws e.g. 76mm diameter at 5m centres (total ~186 ground screws required). These are beneficial over standard wooden supports as they are minimally invasive and specifically designed for use in tree root protection zones as they avoid harm to roots and are of a non-rot nature so reducing future maintenance requirements. This embedded mitigation will avoid any loss or deterioration of Ancient Woodland.

~~7.167~~7.169 Woodland ground flora, including Ancient Woodland Indicator species, is largely absent present along the alignment of the SANG boardwalk route as this follows the route of existing pathways. Accordingly, overshading of ground flora is almost wholly avoided. Nonetheless, upon installation should any ancient woodland ground flora be shaded mitigation will be applied.

~~7.168~~7.170 Accordingly, prior to mitigation, operational effects resulting from direct deterioration on Ancient Woodland (at Fir Tree Grove) are considered to be minor, adverse and long-term at an International level, but are likely to be non-significant (near certain).

~~7.169~~7.171 Elsewhere, following the implementation of embedded mitigation, the effects of habitat loss and Direct damage to ancient Woodland are considered to be negligible and not significant.

Fragmentation Effects (Habitats)

~~7.170~~7.172 All areas of currently contiguous Ancient Woodland would remain physically connected, though with one minor exception: an existing track between the northerly end of Shermanreed Wood, and the northerly fragment of Thirty Acre Wood would be upgraded to form an emergency access. The emergency access would be 3m wide and would occupy an existing gap between the Inventory woodlands of 6m wide, such that no loss of Ancient Woodland would occur (refer to Figure 3.1).

~~7.171~~7.173 Given the nature of the gap and the proposed track upgrading works, there is no space available for the formation of an ancient woodland buffer zone. However, the very intermittent nature of the emergency access' use, the maintenance of continuous potential for woodland canopy linkage, and the avoidance of loss of ancient woodland indicates that a buffer zone would not be required in this case.

~~7.172~~7.174 In terms of the connection between ancient and secondary woodland, the Site's main access off the A22 would interrupt the link along the A22 between Lake Wood, off-site to the southwest, and the secondary/ancient woodland mosaic along the A22. It is not considered that this would result in its deterioration due to the critical mass area it comprises. Forestry Commission guidance considers that woodlands over 5ha in size are of sufficient size to be self-sustaining, a size which is exceeded by both Lake Wood and the complex of on-site and off-site woodland to the north. The main Site access will also be formed to enable the creation of an ecological 'hop-over', with separation of the carriageways and to ensure the continuity of canopy cover habitat for nocturnal species such as dormouse and bats.

~~7.173~~7.175 The Development is located adjacent to ancient woodland in a number of instances, where there is a potential for the reduction in semi-natural habitat:

- To the north, adjacent to Budletts Wood (W4), and Shermanreed Wood (**W5**), is an area of SANG (which also partially sits within woodland);
- Residential units in the central part of the Development will be in the proximity of Shermanreed Wood (**W5**), Longwood Gill (**W6a**), and a fragment of Ancient Woodland forming part of Woodland adjacent to A22 (**W8**); and
- Residential units in the south of the Site will be in the proximity of Lake Wood and Fir Tree Grove, and the southern extremity of Longwood Gill (**W6a**).

~~7.174~~7.176 In the case of the SANG area, this will essentially continue the current land-use as semi-natural habitat. In respect to those other instances where development is in close

proximity to Ancient Woodland, a 15m buffer zone is provided as embedded mitigation within the Development. The 15m depth figure has widespread currency as the typical depth applied for residential development adjacent to Ancient Woodland in accordance with the Forestry Commission's and Natural England's Standing Advice. In addition to these minimum buffer zones, residential development is further and considerably set back from Ancient Woodland in ten locations due to formation of drainage basins (which are located to avoid tree root protection areas), and public open spaces.

~~7.175~~7.177 Following consideration of the above factors, during the operational phase, the likely effect due to fragmentation on the Ancient Woodland complex, and from the loss of adjacent semi-natural habitat is considered to be negligible and not significant.

Pollution Effects (Air Quality and Dust)

~~7.176~~7.178 Air Quality Effects resulting from increases in traffic, and effects resulting from dust generation are not expected to occur during the operational phase, since the number of vehicles will generally be very low along any particular service road within the Development.

~~7.177~~7.179 The overall effect from air pollution and dust during the operation phases, is assessed as being negligible, and non-significant.

Hydrology and Water Pollution

~~7.178~~7.180 Ancient woodland provides conditions for unique plant communities, with a predominance of Ancient Woodland Indicator plant species, which are associated with a lack of ground disturbance, combined with a continuity of soil conditions, including the degree of moisture within the soil. Detailed botanical surveys have been undertaken of the woodland flora as part of the current assessment which are reported at Appendix 7.1 (Baseline Ecological Appraisal).

~~7.179~~7.181 As set out in the Natural England/Forestry Commission Standing advice, changes in hydrology are likely to be harmful, resulting in alterations to soil moisture content, with the result that the composition of plant communities could be altered. Ghyll woodlands (such as Longwood Gill and Shermanreed Wood, which surround watercourses **WC1** and **WC2** are considered to be particularly sensitive to such changes.

~~7.180~~7.182 The Development has the potential to cause changes in the hydrology of the woodlands primarily by changing the quantity and quality of water entering the woodland streams. These are most likely to arise from the substitution of a natural surface water

drainage regime (where water seeps diffusely into watercourses) to an artificial one in which attenuation ponds are used to collect surface water and are then discharged to the watercourses through various point sources. Surface water drainage catchments for residential development which lie immediately up-stream of Ancient Woodland receptors are those most likely to result in change. In this case, some of the residential areas proposed in the southern part of field (**SI3**) have surface water catchments which drain towards Longwood Gill, whilst some of the land proposed for residential development in the northern part of field **SI3** has catchments which drain towards both Longwood Gill and Shermanreed Wood.

~~7.181~~7.183 A drainage strategy has been developed collaboratively between the project drainage consultants, ecologists and arboriculturists for the Development which will replicate the natural inflow of surface water into these watercourses. The drainage strategy (Appendix 8.1) allows for the provision of a relatively large number of separate attenuation basins, carefully positioned to allow inflow into the woodland ghylls in a controlled manner, with inflows making best use of existing flank incision features (natural channels entering the main ghyll) where these exist. Inflow from SuDS features would occur at 8 points into the watercourse at Longwood Gill, and a further 3 to Shermanreed Wood. Flow control devices located at the downstream end of the SuDS feature would be used to restrict runoff into a short swale.

~~7.182~~7.184 In turn the swales would be aligned with the natural incisions to create a seamless flowpath into the brooks. Appropriate trenchless technologies (such as directional drilling or laser-guided auger bore) will be used to insert the pipe connections where necessary within the Ancient woodland, and pre-fabricated headwalls used (if necessary) where an inflow is proposed within the area of Ancient Woodland. The method would not require excavation in the form of a trench, reception pit, nor for the installation of the headwall which would be pinned to the woodland floor.

~~7.183~~7.185 Further details of how the drainage strategy has taken account of Ancient Woodland sensitivities is provided in Chapter 8 Water Resources and Flood Risk of the ES.

~~7.184~~7.186 These drainage proposals will result in the attenuation of surface water flow rates (which will be limited to the natural greenfield run-off rate).

~~7.185~~7.187 Following the implementation of these measures, no change the existing hydrology is expected such that neither loss nor deterioration of ancient woodland would occur.

~~7.186~~7.188 Chemicals, such as hydrocarbon drippage and de-icing salt, that enter into existing inflows, or that become inclusions in new inflows (e.g. run-off from parking courts), can toxify the habitat in multiple ways.

~~7.187~~7.189 Quality of water entering the adjacent ancient woodland areas will be maintained as part of embedded mitigation incorporated within the Development - specifically through the implementation of a SuDS strategy with attenuation ponds which will buffer flows prior to their entry into woodland watercourses.

~~7.188~~7.190 The SuDs drainage system has been specified so it performs to the relevant treatment standard so as to ensure the quality of water discharged is 'clean' and acceptable, following the pollution hazard index approach contained with CIRIA's 'The SuDS Manual'. Further assessment of pollution hazards is provided in section 4.35-4.39 of the Flood Risk Assessment (FRA) carried out for the Development (Appendix 8.1).

~~7.189~~7.191 Accordingly, following the implementation of the drainage strategy (as embedded mitigation) operational effects resulting from changes in hydrology on Ancient Woodland are considered to be negligible, and not significant.

Anthropogenic Effects (Recreational Pressure)

~~7.190~~7.192 There is potential for negative effects to arise from increased recreational usage of areas of Ancient Woodland which are located within the Site, and off-site in its surroundings, such as effects caused by trampling, den building, and dog fouling leading to localised eutrophication.

~~7.191~~7.193 Part of Budletts Wood – West (**W4c-e**), Longwood Gill (**W6**), Shermanreed Wood (**W5**), Copse Surrounding Pond P6 (**W6a**), Woodland Adjacent to A22 (north) (**W7**) and part of Woodland adjacent to A22 – south (**W8**) are located within the immediate proximity of residential units. These woodlands are privately owned and not Open Access Land under the Countryside and Rights of Way Act 2000. Neither are there any PRoW across them. Nevertheless, it is evident that many parts of the woodlands are subject to a degree of current use by existing residents for recreation with the presence of informal paths throughout these areas. Budletts Wood (West) and the northern part of Shermanreed Wood are primarily visited, with the remaining woodlands experiencing less frequent use.

~~7.192~~7.194 Outside of the Development, there are a number of further areas of Ancient Woodland, including Lake Wood, Budletts Wood – East, and further woodland forming Parts of Budletts Wood – West where some existing recreational use also takes place. Recreational effects on Lake Wood are considered separately within Paragraphs 7.152-157 above.

~~7.193~~7.195 In terms of Longwood Gill the topography of the woodland, taking the form of a steep-sided ghyll with very little opportunity for safe access, largely precludes recreational usage.

Similarly, woodland within Copse Surrounding Pond **P6** is located on steeply sloping banks largely precluding access. Other woodland areas are well removed from existing residential dwellings and experience little use because of their relative isolation, or the presence of alternative informal paths in the open fields adjacent.

~~7.194~~7.196 In the absence of mitigation, pressure from increased recreational use is expected to be greatest where woodlands are closest to the proposed residential areas, for example Longwood Gill and Shermanreed Wood. That said the topography of these woodlands (Longwood Gill is steeply incised and Shermanreed Gill has deep former iron ore pits) and the relative absence of well used paths within them for the most part, is such that effects may not manifest themselves. It is noted that these are also woodlands with elevated numbers of Ancient Woodland Indicator species and hence may be of increased sensitivity.

~~7.195~~7.197 The SANG proposals which form part of the Development utilise some areas of Ancient Woodland within the Site, which are considered to be less sensitive to disturbance, including the northern parts of Shermanreed Wood~~,~~ and part of Budlett's Wood – West~~, and parts of Woodland adjacent to the A22 (South)~~. Within these areas it is proposed to formalise the existing informal pathways, and to create a small length of new path with some forming part of a proposed circular walk, and others being used to provide secondary connecting pedestrian routes.

~~7.196~~7.198 Other areas of woodland are considered to less susceptible to recreational pressure, either as result of having higher levels of baseline recreational use (and hence existing ecological value), or because they have lower ecological value for natural reasons.

~~7.197~~7.199 As part of the Development, all Ancient Woodland areas will be provided with a 15m buffer zone, within which areas of semi-natural habitats will be allowed to develop in all or part of the buffer, and areas of which will also be planted with native woodland and scrub planting. This will prevent access directly from residential areas into the surrounding woodlands. These buffer zones have been designed to conform to the current Natural England/Forestry Commission standing advice, including the following features:

- They contain a mixture of woodland together with other semi-natural habitats such as scrub and grassland;
- Any SuDS contained avoid the root protection area of trees within the adjacent woodland.
- Aside from SuDS all ground levels will remain unaffected (with the exception of one location at Fir Tree Grove – see paragraph 7.191 below).
- Fences will be provided on the woodland boundary where required, to prevent access from

the buffer zones into the adjacent woodland.

~~7.198~~7.200 In one location (on the southern boundary of Fir Tree Grove), it will be necessary to raise the existing ground levels sufficiently to support the boardwalk at its eastern end outside of the ancient woodland. An area of ground filling will therefore be necessary within the Ancient Woodland buffer zone. However, at this location there is significant grade separation with the Ancient Woodland and area to be raised, provided by the sandstone boulder outcrop which is present. This effectively ensures that there are no effects on tree roots within the woodland.

~~7.199~~7.201 Following the implementation of embedded mitigation in the form of buffer zones, operational effects resulting from increased recreational pressure on Ancient Woodland within and surrounding the Site, are considered to be negligible and non-significant (probable).

Anthropogenic Effects (Urbanisation)

~~7.200~~7.202 The proximity of woodland to residents houses and gardens means that there is a risk of adverse effects from urbanisation, such as back garden extensions, gates being introduced in garden fences to enable direct access to the woodland, damage from polluted run-off and the introduction of non-native plant species resulting from garden waste tipping. However, a minimum 15m buffer zone between proposed residential development and Ancient Woodland, has been included within the Development Masterplan (in some cases these buffer zones are considerably wider), which will effectively avoid the risk of these impacts occurring, as residential properties will not back onto the woodland areas.

~~7.201~~7.203 Taking this embedded mitigation into account, it is considered that the effects of urbanisation on Ancient Woodland within and surrounding the Site, are considered to be negligible and not significant.

Lighting Effects

~~7.202~~7.204 During the operational phase, there is the potential for adverse effects to arise from an increase in light pollution, to faunal species which might be using them. These effects are considered fully in the relevant sections below.

Veteran Trees

~~7.203~~7.205 Within the jointly published Forestry Commission and Natural England Standing Advice, the list of potential direct impacts for veteran trees is the same as that for ancient woodland,

as set out in Table 7.10.

~~7.204~~7.206 However, all veteran trees stand either within the Inventory woodland of Shermanreed Wood (**W5**), within the woodland at Fir Tree Grove (**W9**) or in the existing grassland area which will be retained undeveloped as SANG (refer to the Illustrative Masterplan (Figure 3.1)). A single tree (7041 - a veteran beech) stands outside the protection of retained woodland and would be provided with a 12.75m diameter buffer zone (as recommended by the Standing Advice), which would be safeguarded by the erection of permanent tree protection fencing. This would be inherent within the design of the Development.

~~7.205~~7.207 As such, effects on Veteran Trees during the operational phase are considered to be negligible and non-significant.

Other Woodland

Habitat Loss/Direct Damage

~~7.206~~7.208 The Development will result in the loss of approximately 0.54ha of secondary deciduous (non-ancient) woodland, as described below:

- 0.12ha (15m x 80m) of woodland area **W8c**, to create the proposed main Site access from the A22;
- 0.04ha (7m x 55m) within area **W7**, to create the proposed secondary emergency access and pedestrian link; and
- 0.38ha of secondary deciduous woodland (woodland area **W5b**) to create a proposed SuDS feature. This is an area of young mixed woodland.

~~7.207~~7.209 The Development also includes for the provision of approximately 2ha of new woodland planting, which will be located within the proposed SANG and within the open space areas surrounding the Site, including proposed green corridors and Ancient Woodland buffer zones. There will be an approximately four-fold increase in the total amount of woodland within the Development, compared with the existing baseline. Whilst these woodland areas will take time to mature and develop their full ecological functionality, there will be a significant long-term increase in this habitat type.

~~7.208~~7.210 Following the planting of new woodland areas, the impacts of woodland loss/gain are considered to be moderate, beneficial and long-term, which are significant (near-certain).

Moderately Species-Rich Grassland (off Snatts Road)

Habitat Loss and Deterioration/Improvement

~~7.209~~7.211 The Development will result in the loss of approximately 0.06ha of moderately species-rich grassland habitat within the area identified as SI4 on Plan 5719/ECO3 of the Baseline Ecological Appraisal at Appendix 7.1, to create a proposed car-park off Snatts Road, which will serve the SANG.

~~7.210~~7.212 A full description of the grassland is provided in Appendix 7.1. As a whole it is currently lacking management and is in poor condition, resulting from the invasion of scrub, rank species of grass, and taller sedges, which are almost certain to result in the overall decline, and ultimately loss of the ecological interest which is present.

~~7.211~~7.213 To minimise the impacts of the proposed car-park, it has been located close to an existing informal access point on Snatts Road, which is currently a particularly heavily degraded section, comprising worn pathways, together with areas of Bramble scrub, Bracken, and grassland of a reduced species richness. This effectively reduces the impact on the grassland.

~~7.212~~7.214 Nevertheless, in the absence of any mitigation, the impacts on the Moderately Species-rich Grassland are considered to be minor, adverse and long-term, which are significant (near-certain).

Sandstone Outcrops - Lower Plant Communities

~~7.213~~7.215 At one point, the route of the proposed boardwalk passes across a sandstone outcrops in the vicinity of Fir Tree Grove which support communities of bryophytes and lichens. Parts of the outcrops will be covered by materials (soils etc.) where it is necessary to create a ramp which will allow a suitable gradient to be achieved. Similar outcrops in the vicinity of the Site (such as those at Lake Woods and elsewhere) are known to support nationally important communities of lower plants, and as such a specialist survey and assessment of the lower plant communities at Fir Tree Grove was carried out. The results of these surveys are presented as an Appendix to the Ecological Baseline report (Appendix 7.1).

~~7.214~~7.216 All species recorded were relatively common, and none were considered Nationally Scarce, nor scarce in Sussex. Lichens on rock were very limited (again with no notable species recorded), but some notable species were recorded on several large trees near Chicory Cottage. These trees are retained. Those plant communities which are affected are considered

to be of a Site level of importance at most, and are not considered to be a sensitive receptor. As such, the effects on these lower plant communities are considered to be negligible and non-significant, and no further mitigation is considered to be necessary

Native Hedgerows and Tree Lines

~~7.215~~7.217 Both of the significant linear features within the Site (Hedgerow **H1** and Tree Line **TL1**) will be fully retained as part of the Development.

~~7.216~~7.218 In addition, approximately 1.5km of new tree lines are proposed within the streetscape of the residential Development areas, a large proportion of which will be native, whilst within the SANG 130m of mature native hedgerow with standard Oak trees will be created.

~~7.217~~7.219 Following the implementation of new linear planting proposals, the impacts on Native Hedgerows and Tree Lines are considered to be minor, beneficial and long-term, which are significant (near-certain).

Ponds

~~7.218~~7.220 The operational Development will not directly affect any of the existing ponds within the Site, which are all situated within woodland, and well buffered from the proposed residential Development. A number are located on existing watercourses (such as Pond **P2**), whilst others are located where springs emerge at the head woodland ghylls (such as Pond **P4**), and the current condition of the ponds is generally very poor. A number of opportunities to restore ponds are detailed in the SANG/woodland management plan, such as the thinning of surrounding trees to allow more light to penetrate and encourage the growth of aquatic plants.

~~7.219~~7.221 Three additional ponds (two located within proposed attenuation ponds, and one separate clay-lined pond), will also be created in the vicinity of Pond **P6**. As well as serving to increase the amount of available breeding habitat for Great Crested Newts, these will also have an inherent value for other species of flora and fauna.

~~7.220~~7.222 Following the implementation of pond restoration, the impacts on Ponds are considered to be minor, beneficial and long-term, which are significant (near-certain).

Watercourses

~~7.221~~7.223 All the watercourses within the Site, which are identified as WC1-3 on plan 5719/ECO3

within Appendix 7.1 are located within a woodland setting and will be fully retained as part of the Development. The potential changes to the hydrological regime of the watercourses within the Site resulting from changes to Site drainage (such as those relating to changes to impermeable surfaces), are discussed further in the Ancient Woodland section above, due to the interdependence of the two features. There is also the potential for increased sediment input, and the risk of pollution from oil residues and sediments from vehicles and use of household and garden chemicals. However, given that all watercourses will be well buffered from the residential Development, and that attenuation ponds will be provided with a suitable treatment capacity, the potential for negative impacts is far reduced. Appropriate treatment will be incorporated into the drainage system to ensure that the quality of water discharged is acceptable following the pollution hazard index approach contained with CIRIA's 'The SuDS Manual'. Further assessment of pollution hazards is provided in the FRA carried out for the Development (Appendix 8.1).

~~7.222~~7.224 The effects to watercourses within the Site are therefore considered to be negligible and not significant.

Bats

~~7.223~~7.225 The Site is considered to support low to moderate levels of foraging and commuting bat activity, with at least seven species (or species groups) recorded during the course of the survey work, as reported in Appendix 7.1.

~~7.224~~7.226 Whilst large areas of habitat will be affected by the Development, this largely comprises open species-poor semi-improved grassland which is of relatively low value to foraging and commuting bats (with woodland edge and hedgerows preferred), whilst a network or proposed green infrastructure corridors will be retained through and around the built Development, and large areas of habitat will be retained within the north of the Site. However, small areas of woody vegetation will be lost to the Development, resulting in minor losses of suitable foraging and commuting habitat. Furthermore, bat species may be affected by disturbance associated with the Development, notably as a result of light spill into areas used by foraging and commuting bats.

~~7.225~~7.227 With regards to lighting in particular, effects vary between species, with some bat species such as Common Pipistrelle and Soprano Pipistrelle able to cope with relatively high light levels (of up to 14 lux) (Fure, 2006)[49] whilst species such as Noctule are known to utilise lights as a foraging focus for insects attracted to lights (BCT and ILE, 2009)[50]. However, many bat species (particularly late emerging species such as Brown Long-eared and Myotis bats) will avoid lit areas, and attraction of insects to lit areas can result in adjacent habitats

supporting reduced numbers of insects, further impacting on the ability of bats being able to feed.

~~7.226~~7.228 Common Pipistrelle and Soprano Pipistrelle were most frequently recorded, with sustained foraging activity by a moderate number of bats throughout the Site, particularly along the watercourses and woodland edges. Given these species are relatively tolerant of lighting, bats are likely to continue to forage and commute across the site using gardens and new green corridors to be established as part of the Development.

~~7.227~~7.229 The occurrence of light sensitive species such as *Myotis* sp. and Barbastelle were recorded only very occasionally during surveys, such that the Development is unlikely to result in any significant effect on local populations of these species.

~~7.228~~7.230 Bats may also be at risk of traffic collisions where roads are located across commuting routes. However, given that roads will be subject to speed restrictions to 30mph or lower, at these speeds bats can effectively avoid collisions.

~~7.229~~7.231 Overall therefore, largely as a result of habitat losses and increased light levels in the southern part of the Site, effects on foraging and commuting bats from the Development prior to mitigation are considered to be minor-moderate, adverse and long-term, and could be significant at the district level (uncertain).

Dormouse

~~7.230~~7.232 Dormouse nest tube surveys recorded the presence of Dormouse in a number of the woodland compartments within and around the Site, including within woodland adjacent to A22 (**W8**), within the clearing in Budletts Wood (**W4c**), within Longwood Gill (**W6**), and on margins of Lake Wood the South of the Site. Animals were recorded in four instances, and six additional nests were identified which were considered likely to have been made by Dormouse. No animals in breeding condition, or juveniles were found. It is considered that there is no reason why breeding should not be taking place, although many of the woodland areas are lacking the habitat structure that would provide optimal conditions for the species.

~~7.231~~7.233 The distribution of Dormice within the Site suggests that the population is spread through the woodland areas in the south and western parts of the Site. Although individual animals are not likely to move far within any given season, woodland along the A22 woodland corridor is likely to be of some importance to ensure continuity of habitat and dispersal of animals. As well as providing habitat in its own right it connects larger woodland areas to the south (Lake Wood) and north (Budletts Wood).

~~7.232~~7.234 Dormouse are susceptible to losses of woodland, which would result in a reduced the amount of habitat for breeding and foraging, and the carrying capacity present to support the population. A small quantum of woodland habitat will be lost to the Development in the short term (approximately 0.5ha in total), although this is compensated for by approximately 2ha of new woodland planting which is included within the Development, and will be strategically placed adjacent to existing dormouse habitat to ensure its future functionality.

~~7.233~~7.235 There is also a risk that Dormice will be adversely affected by disturbance from operational lighting, and through the severance of woodland preventing dispersal in the short and long term, especially along the linear woodland formed by woodland areas **W7** and **W8**.

~~7.234~~7.236 Dormice, do not generally suffer from predation by domestic pets. Reference to the Dormouse Conservation Handbook[51] finds that it states that dormice "*are rarely caught…. by predators such as cats*" and as such cat predation is not considered to cause a significant impact on populations. This finding is supported by work undertaken by Woods et al (2003)[52] looking at predation of wildlife by domestic cats which found that Dormice made up only 0.084% of prey items brought back to houses by domestic cats.

~~7.235~~7.237 In summary, prior to mitigation, operational effects are likely to result from light disturbance, and from habitat fragmentation (but not from pet predation or woodland loss/gain), are considered to be minor-moderate, adverse and long-term, and could be significant at the local level (uncertain).

Great Crested Newt

~~7.236~~7.238 Survey work recorded the presence of a small population of Great Crested Newt (GCN) in Pond **P4** and a medium population of ~~Great Crested Newt (~~GCN~~)~~ within pond **P6** (dropping to a small population in 2023)~~, which is located within the central southern part of the Site~~. ~~The p~~Pond **P4** is ~~relatively isolated and currently~~ in poor condition and GCN were not recorded from 2023 eDNA surveys suggesting only a sporadic presence.~~,~~ Pond **P6** remain~~ings~~ dry for a large part of the year and occupies a relatively isolated location in the south of the site. A small population of GCN was also recorded in pond P1 in 2022 (but not during 2020 or 2023 surveys), which is located within retained woodland in the far north of the Site.

~~7.237~~7.239 This species will make use of terrestrial habitat within the vicinity of its breeding ponds, with most activity concentrated within 50m of the pond and little activity beyond a distance of 250m. As such, loss of terrestrial habitat resource could have a negative effect on the population of Great Crested Newts.

7.240 Pond **P4** is located at the head of Shermanreed Ghyll and accordingly is surrounded by extensive terrestrial habitat. The majority of habitat within a 50m radius of pond **P4** will be retained save for some minor loss to residential development in the west. Beyond this further habitat losses occur to the proposed development, however given the abundance of suitable terrestrial habitat retained to the north, south and east, which also provide linkages to other ponds, the loss of this habitat is of no significance.

~~7.238~~ On a long-term basis, all terrestrial habitats within a 50m radius of Pond **P6** will be retained and enhanced. There will be a small temporary loss/disturbance of terrestrial habitat (approximately 0.12ha) to create a SuDs basin within this area, although following establishment, this will also become suitable terrestrial habitat. Three new permanent ponds will also be created as part of the Development (two within the proposed SuDS), designed to provide additional breeding habitats for the species.

~~7.239~~7.241 Within the wider 50-250m zone, approximately 6ha of low-grade terrestrial habitat (species-poor managed grassland) will be lost to residential Development, although hedgerow **H1** will be retained, which is expected to provide a key habitat corridor.

~~7.240~~7.242 Several additional green corridors have been proposed within the development layout, which will be enhanced to provide additional connections to surrounding blocks of suitable woodland habitats on the margins of the Site.

~~7.241~~7.243 Following receipt of planning permission, a Natural England European Protected Species Licence for development will be required with respect to Great Crested Newt. The application will set out all proposed mitigation and enhancement measures (for both the construction and operational phase), which are considered to be embedded mitigation. These will include the details of pond creation and enhancement.

~~7.242~~7.244 In summary, once the embedded mitigation has been taken into account (secured through a Natural England licence), operational effects are likely to result from habitat loss from on Great Crested Newt, are considered to be negligible and non-significant.

Reptiles

~~7.243~~7.245 Low populations of three species of reptiles (Slow-worm, Common Lizard and Grass Snake) have been identified, which are confined largely to longer sward grassland on edges of fields SI1, SI3 and SI4. The majority of these habitats will be retained within proposed buffer zones. Nevertheless, in a number of instances the Development will result in the loss of small amounts of habitat recorded to support reptiles, as follows;

- A strip of grassland on the western edge of field **SI3** required to facilitate the main Site access;
- Small amounts of grassland within **SI4** (adjacent to Snatts Road) required to create the SANG car-park and improved pathways.

~~7.244~~7.246 As part of the Development, additional reptile habitat will be created within the proposed SANG, proposed green corridors and retained woodland buffer zones, which will be managed to include scrub and grassland to ensure that suitable conditions are in place for reptile species.

~~7.245~~7.247 Accordingly, following the implementation of the Development there will an overall increase in reptile habitat, the effects of which are considered to be minor, beneficial and long-term.

Mitigation Measures

Construction Phase

General Construction Safeguards

~~7.246~~7.248 A number of potentially significant effects on Lake Wood LWS, Ancient Woodland and other retained habitats of ecological value during the construction phase have been identified, largely as a result of potential encroachment of construction activities into proposed buffer zones, dust deposition and surface run-off of contaminants or silt. As such, it is proposed that standard mitigation measures are put in place during the construction phase, to include the following:

- Prior to works commencing, a full Site investigation will be undertaken to identify any potential sources of contamination and advise on appropriate safeguards to be implemented during construction works;
- Erection of tree protection fencing around retained trees, hedgerows and other woody vegetation in accordance with BS5837:2012;
- Dampening down of potential sources of dust;
- Storage of chemicals and hazardous materials in line with best practice guidelines, ensuring that they are secure, well away from the Site boundaries and cannot be accessed or knocked over by roaming animals;
- Fires should only be lit in secure compounds and not allowed to remain lit during the night; and

- Implementation of engineering safeguards as part of construction works to control surface water run-off and avoid contamination of watercourses. This could include measures such as the use of a temporary silt trap in order to form an intercept for silt and other potential pollutants.

~~7.247~~7.249 Furthermore, a number of general safeguarding measures will be implemented in relation to faunal species:

- All contractors will be briefed prior to the construction works as to the possible presence of protected and notable faunal species within the Site, with particular reference to the implications of legislation and licensing;
- Any trenches or deep pits within the Site that will be left open overnight will be provided with a means of escape should a Badger or other mammal enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water;
- Any trenches/pits will be inspected each morning to ensure no animals have become trapped overnight;
- The storage of topsoil or other 'soft' building materials in the Site will be given careful consideration. Badgers will readily adopt such mounds as setts. So as to avoid the adoption of any mounds, these will be kept to a minimum and will be subject to inspections by site contractors with consideration given to temporarily fencing any such mounds to exclude Badgers;
- The storage of any chemicals at the Site will be contained in such a way that they cannot be accessed or knocked over by any roaming animals;
- Fires will only be lit in secure compounds and not allowed to remain lit during the night;
- Food and litter will not to be left within the working area overnight;
- To minimise adverse effects as a result of lighting during the construction phase, temporary lighting will be minimised, wherever practical. Where required for health and safety, security or other reasons, it will be positioned so as to minimise light spill on to the watercourse corridors, hedgerows and other boundary features; and
- Disturbance from noise will be minimised by the adoption of good working practice.

~~7.248~~7.250 It is proposed that the measures referred to in paragraphs above are detailed in a Construction Environmental Management Plan (CEMP) produced at an appropriate stage prior to works commencing. This could be secured by a planning condition.

Roosting Bats

~~7.249~~7.251 No evidence of roosting activity was recorded within the Site during the survey work, although a number of trees with bat roosting potential are located within development areas. Where possible, such features will be accommodated within the layout at the detailed design stage, such that roosting opportunities can be maintained at the Site in the long-term.

~~7.250~~7.252 Where identified roosting features cannot be retained, detailed surveys will be undertaken at the appropriate stage prior to construction works to confirm presence/absence of roosting bats and inform implementation of appropriate safeguarding measures (such as pre-inspection checks, soft-felling of trees or soft-stripping of features of bat roosting potential within the pill boxes). Should any roosts be identified at this time, a European Protected Species licence may need to be sought from Natural England. It is anticipated that these further surveys will be secured through a relevant planning condition.

Badger

~~7.251~~7.253 Three Badger setts have been identified within the Site. Given their location within existing woodland, it is possible to fully retain these setts within the Development.

~~7.252~~7.254 However, given Badgers are a highly mobile species which readily move and re-use setts, such that there is potential for the status of setts to change or new setts be dug, a check survey will be undertaken prior to the commencement of construction works within any area of the Site to record current Badger activity and confirm any mitigation or licensing requirements.

Dormouse

~~7.253~~7.255 Having given due regard to the relevant legislative protection afforded to Dormouse, and having reviewed appropriate statutory guidance material, it is considered that a licensed approach is necessary which will provide the highest legislative safeguard for the proposed activities at the Site.

~~7.254~~7.256 As part of this licence, in order to maintain the favourable conservation status of Dormouse within the local area, a suite of mitigation measures will be put in place as part of the Development to ensure that Dormice are safeguarded during the construction period. In accordance with best practice guidelines, this will include reasonable steps to minimise any potential impact on Dormice pre-construction, and will include phased clearance of vegetation which may include timings to avoid breeding and hibernation periods, and a series of checks

to be carried out by the project ecologist. The details will be set out in a Dormouse Mitigation Strategy, which will be provided to inform of each phase of the Development, and which will accompany the European Protected Species Licence (EPSL) application. It is anticipated that the dormouse mitigation strategy will be secured through a suitable planning condition.

Birds

~~7.255~~7.257 To avoid an offence under the Wildlife and Countryside Act 1981, the potential loss of active nests during construction will be avoided by either undertaking clearance of potential bird nesting habitat outside of the bird nesting season (March to August inclusive) or, if necessary, preceding any clearance with an inspection by a suitably qualified ecologist. Any nests identified will be cordoned off and protected until they cease to be active. Disturbance from noise will be minimised by the adoption of good working practice, such as restricted hours of working and noise-reducing construction measures.

Great Crested Newt

~~7.256~~7.258 Construction effects have been identified in relation to Great Crested Newt prior to mitigation, specifically in relation to the populations of Great Crested Newts present in Ponds **P4** and **P6**. Having given due regard to the relevant legislative protection afforded to Great Crested Newts, and having reviewed appropriate statutory guidance material, it is considered that a licensed approach is necessary which will provide the highest legislative safeguard for the proposed activities at the Site.

~~7.257~~7.259 As part of this licence, in order to maintain the favourable conservation status of Great Crested Newts within the local area, a suite of mitigation measures will be put in place under the Development to ensure that Great Crested Newt are safeguarded during the construction period. In accordance with best practice guidelines, this will include reasonable steps to minimise any potential impact on Great Crested Newts pre-construction. This will include the provision of temporary amphibian fencing and translocation of animals from the areas directly affected by development within a 250m zone of Ponds **P4** and **P6**, with animals being moved into retained habitats within the vicinity of the ponds. These habitats will also be enhanced in advance of construction works, to increase their carrying capacity, through a variety of means, including the creation of new ponds, and the provision of new planting and creation of new hibernacula and refugia. To prevent mortality of GCNs from falling into roadside gully pots, it is proposed that gully pots and associated drain covers are off-set from the kerbs.

~~7.258~~7.260 The details will be set out in a Great Crested Mitigation Strategy, which will be provided to inform of each phase of development, and which will accompany the European Protected

Species Licence (EPSL) application. It is anticipated that the Great Crested Newt mitigation strategy will be secured through a suitable planning condition.

Reptiles

~~7.259~~7.261 The majority of reptile habitats will be retained within proposed buffer zones. Nevertheless, in a number of instances, construction works will result in the loss of habitat recorded to support reptiles, as follows;

- Loss of a small amount of grassland on the western edge of field SI3 required to facilitate the main site access;
- Loss of a small amount of grassland at the eastern boundary of SI4 (adjacent to Snatts Road) required to create the SANG carpark.

~~7.260~~7.262 In these areas, and any other similar areas of habitat which will be lost, measures will be implemented to avoid killing or injury of reptile species.

~~7.261~~7.263 In accordance with best practice guidelines, this will include reasonable steps to minimise any potential impact on reptiles pre-construction. This will include displacement of reptiles through gradual removal of habitats followed by the implementation of destructive searches. This will involve a pre-works contractor briefing and cutting of vegetation using hand tools under weather conditions suitable for reptiles to be active, in a two-stage process (i.e. to around 15 cm, then to ground level) to encourage reptiles to disperse towards retained habitats.

~~7.262~~7.264 Retained habitats will also be enhanced in advance of construction works, to increase their carrying capacity, through a variety of means, including the creation of log piles, hibernacula and refugia, and the provision of new planting to create additional habitat edges which can be used by reptiles for basking and shelter.

Non-native Invasive Plant Species

~~7.263~~7.265 A number of non-native plant species have been recorded during the ecological surveys completed to assess the effects of the Development, although none have been identified which would be directly affected by proposed construction activities. Nevertheless, an update survey in regard to invasive species will be undertaken prior to works commencing. If necessary, a control strategy will be prepared before any works commence in the vicinity of the affected area so as to ensure the species is not spread during the construction phase.

This is likely to involve treatment of any stands before any works commence and works to be carried out under a specific method statement to avoid any contamination during works.

Operational Phase

Design of the Built Environment

~~7.264~~7.266 A number of measures will be implemented as part of the detailed design of the built development to minimise adverse effects on habitats during the operational phase. This will include:

- The Outline layout of housing areas adjacent to retained habitats have been designed so that houses face out onto open space areas, providing visual surveillance and avoiding gardens backing onto habitats, preventing issues such as informal garden extensions and fly tipping. This principle will be carried forward to the detailed design phase, and will be further reinforced by provision of a hard edge to the built development where practical, in the form of roads or footpaths;
- A SuDS scheme will be implemented to manage run-off from built development areas, comprising a network of swales, soakaways, infiltration trenches and balancing ponds. Further detail is provided at Chapter 12. The use of SuDS features will help to reduce the potential effect of point source pollution incidents from garden chemicals and/or domestic chemicals. The proposed attenuation basins, swales and permeable paving provide sufficient treatment for both the major access roads, as well as roof run-off and residential access roads. Attenuation areas are also proposed to control surface water runoff rates to the required greenfield rate and to attenuate pollutants prior to discharge into the wider surface water network;
- Crossings of watercourse corridors by roads has been avoided in the Outline proposals, which is a principle that will be carried through to the detailed design stage.
- To maintain connectivity across the Site for ground-based fauna such as Hedgehogs, other small mammals, amphibians and reptiles, boundary treatment solutions such as fence cut-outs, missing bricks at wall bases, or landscaped boundaries (e.g. hedgerows) will be employed within areas of built development.

Sensitive Lighting Design

~~7.265~~7.267 To minimise effects on foraging and commuting bats and Dormice (as well as other nocturnal species) as a result of light spill, a Dark Zones Plan (Richards Urban Design Plan Ref. 1307.07) is submitted separately with the planning application. This sets out the

parameters for a series of dark zones and corridors which will provided throughout the Development. In line with current best practice, primary dark zones will aim to achieve light levels of 0.2 lux horizontally and 0.4 lux vertically wherever practical, and will be applied to all Ancient Woodland areas, and a central band of woodland along the A22, whilst in secondary zones light will be controlled to a maximum of 1 lux horizontally at ground level. These areas will include the proposed green corridors within the development and any woodland buffer zones.

~~7.266~~7.268 Further lighting design for the Development will be prepared at the detailed design stage incorporating measures to reduce the effects of lighting on wildlife. This will be reviewed by a suitably qualified ecologist to ensure that effects on sensitive habitats are avoided. Measures which will be incorporated into the lighting design include:

- No lighting to be used within the SANG and other woodland areas (however, see para 7.269), whilst the lighting design should avoid light spill into the area, with the use of screening vegetation as required;
- Avoidance of lighting where practical within green infrastructure areas, particularly along boundary habitats and watercourse corridors;
- Where lighting is required, consideration will be given to the use of low-level bollard lighting, wayfinding studs or handrail lighting, avoiding upward light spill into tree canopies. Otherwise, directional lighting will be implemented, with the use of louvres, shields or hoods as required to avoid light spill away from features to be lit;
- Where road crossings are proposed through green infrastructure areas, consideration will be given to spacing of lighting columns or other lighting control measures to maintain a central dark or low light area;
- LED lights will be used where appropriate, as these have a lower attraction to insects; and
- In addition, the location and orientation of buildings, the proposed landscape treatment and the retention and enhancement of the existing vegetation within the Site will further act as secondary mitigation to screen and soften the effects of installed artificial light sources. Where necessary, further shrub and tree planting will be provided to create screening against lighting from roads and residential areas.

~~7.267~~7.269 Since proposals for the Fir Tree Grove form a detailed element of the planning application, a lighting strategy has been carefully developed to accompany the proposed boardwalk design in this area. This has followed the principles of minimising lighting intensity and duration, minimising horizonal and vertical light spill and maintaining a continuous dark tree canopy linkage above the boardwalk. Lighting will comprise low intensity lighting

mounted on one side of the boardwalk. Mitigation for light spill is built into the design by the inclusion of solid panelling on the side opposite the lighting units, and through the use of warm colour temperature lamps (2700k). Modelling of predicted light levels (in both the horizontal and vertical planes) has been carried out, the results of which are presented in a standalone report (Downlands Lighting Impact Assessment – Lighting Bee, May 2022). The modelling demonstrates that light spill will be minimal - limited to less than 0.2 lux horizontally at ground level either side of the boardwalk, and 0.4 lux vertically at 1.2m distance from the edge of the boardwalk either side.

Ashdown Forest SPA/SAC - Provision of Sustainable Alternative Natural Greenspace (SANG)

~~7.268~~7.270 To mitigate the effects of recreational disturbance on Ashdown Forest SPA, it is proposed to create a bespoke SANG, comprising ~~18~~13.~~1ha~~ 2ha of public open space. There is existing informal public access available into the majority of SANG (primarily from Snatts Road to the south) but there is only a relatively low level of current use by the public. As such the capacity of the SANG is considered unaffected, but nonetheless taking a precautionary approach, a 10% discount is applied to the SANG capacity calculation. ~~Even after a~~Allowing for a precautionary 10% reduction in capacity ~~to allow for existing public use~~ – as set out in the accompanying Downlands SANG and Woodland Management Plan ~~–~~– and with the application of an additional 'ecological discount' to omit the ancient woodland area (3.2ha) from the SANG capacity calculation (as advised by Natural England) this nonetheless represents an ~~significant~~ over-provision of SANG for the requirements of the Development.

~~7.269~~7.271 Based on the 8ha per 1000 population standard as set out by Natural England's SANG guidelines, the required SANG provision for the Development would be a minimum of 8.14ha (given an estimated population of 1,018 people based on 424 dwellings at an average occupancy rate of 2.4 persons per dwelling). However, in order to provide a 2.3km circular walk within the SANG extension itself, it is intended that a larger area of open space will be established as SANG, totalling ~~18~~13.~~2~~1ha. Following discounting, t~~T~~his provides sufficient capacity for ~~2~~1,~~036~~125 residents (or ~~942~~ 468 residential units).

~~7.270 There is existing informal public access available into the majority of SANG (primarily from Snatts Road to the south) but there is only a relatively low level of current use by the public. As such the capacity of the SANG is considered unaffected, but nonetheless taking a precautionary approach, the capacity of the SANG has been discounted to account for this existing use. Consequently, the residual capacity available for recreational use within the area of SANG has been discounted by 10%, with its functional area calculated to be the equivalent of 16.29ha. Under Natural England guidance this equates to a capacity of 2,036 residents (or 848 residential units).~~

~~7.271~~7.272 The SANG will be served by ~~two proposed~~a car-park~~s, namely one~~ off Snatts Road~~, and~~ with a further ~~one~~ car park also available within the southern development parcel.~~, and~~ It will provide a circular walk of 2.3km length, together with the provision of a range of habitat creation and enhancement, intended to meet the qualifying criteria set out by Natural England. These will include:

- Provision of a range of natural habitats including open grassland, varied native woodland, scrub, an orchard and areas of scattered trees.
- Appropriate use of sympathetic hard landscaping, such as the formalisation of paths and provision of benches and interpretation boards.
- Fencing of Ancient Woodland areas adjacent to the SANG to prevent pedestrians from walking into the adjacent woodland.
- Further measures to prevent straying from paths where these are routed through the ancient woodland, including brash piles on either side of the paths.
- The provision of focal points.
- The provision of all weather access, including through boardwalk provision in the woodland areas (with new native tree planting provided for any minor losses of trees required for its installation).

~~7.272~~7.273 Detailed proposals for the SANG are included within a SANG and Woodland Management Plan (submitted separately with the planning application), which also incorporates proposals for woodland management which are to be managed exclusively for nature conservation and are not included within the SANG area.

~~7.273~~7.274 The mix of habitats and topographic variation provided by the SANG means it provides a very interesting user experience and accordingly, it is considered that it would be highly effective at attracting visits away from the SPA. The SANG will be managed and maintained in perpetuity with development related funding provided for this purpose.

~~7.274~~7.275 Contributions will also be made to the Strategic Access Management and Monitoring (SAMM) tariff, in line with WDC's local plan policies.

~~7.275~~7.276 The potential for negative effects have also been identified from increased recreational usage of Lake Wood LWS, due to the proximity of the designation residential dwellings. In this regard, the SANG will provide a new area of publicly accessible open space which is also expected to mitigate for the adverse effects on Lake Wood LWS, with visitors drawn to the new facility. These will comprise not only new residents but also existing users of Lake Wood

who will take advantage of improved car parking at the SANG, hence providing a balancing reduction in users of Lake Wood, thereby offsetting visits which may be undertaken by new residents. A range of other incidental open spaces are also available to new residents which will serve to provide further alternative areas to utilise, avoiding visits to Lake Wood.

~~7.276~~7.277 Following the implementation of the SANG (including the provision of new/enhanced path network within a semi-natural setting, together with car-parks, appropriate SANG signage, and dog waste bins etc.) alongside SAMM, adverse effects on the Ashdown Forest SAC/SPA's integrity resulting from increased recreational disturbance and urbanisation are avoided. Neither are there any residual effects expected to the woodlands within and surrounding the Site (including Lake Wood LWS and other areas of Ancient Woodland), resulting from the proximity of these woodlands to residential housing.

Ancient Woodland – Translocation of Ancient Woodland Vascular Plants ~~at Fir Tree Grove (W9)~~

7.278 The Development will result in the loss or overshading of approximately 128m^2 of ground flora comprising patches of Ancient Woodland Vascular Plants (AWVPs), resulting from the construction of the proposed boardwalk within Fir Tree Grove (W9). Whilst the boardwalk would not cause a direct loss of ancient woodland, due to its sensitive construction method, the loss of these localised patches of ground flora may, without mitigation, constitute deterioration of the Ancient Woodland, as they represent part of the woodland ecosystem. There effects are considered to be extremely minor given the extent and shifting patterns of ground flora which occur in any case. However, to ensure their continued survival, any affected colonies of ground flora which are within the working area will be translocated a suitable location within the same woodland, thereby wholly avoiding deterioration. Works will be subject to a Ground Flora Translocation Method Statement, which could be secured through a suitably worded planning condition.

~~7.277~~7.279 The boardwalk in the SANG follows existing pathways. Accordingly, it will not shade any ancient woodland ground flora present along its route for the most part. In the event any AWVPs are shaded, they will be translocated using the same method as utilised for Fir Tree Grove, thereby ensuring that the installation of the boardwalk avoids any potential to cause a deterioration effect on the woodland.

Dormouse Mitigation

~~7.278~~7.280 Effects have been identified on Dormouse prior to mitigation, largely in relation to loss of woodland habitat, and severance of woodland connectivity, such that implementation of mitigation will be required, to be carried out under licence from Natural England. Details of

the proposed mitigation will be set out in a Dormouse Mitigation Strategy, together with consideration of the three derogation tests under the Conservation of Habitats and Species Regulations 2017 in relation to European Protected Species (EPS).

~~7.279~~7.281 The mitigation strategy will seek to fully retain the Dormouse population within the Site, as well as bringing forward substantial habitat enhancements. In summary, this will include:

1. Planting of 1.7ha of new woodland and 0.8ha of new scrub habitat, in the proposed SANG, connected to Budletts Wood (**W4**) and Shermanreed Wood (**W5**), together with an additional 0.3ha of woodland planting in buffer zones between the proposed residential development and adjacent woodlands. These are likely to provide a significant improvement in the long-term baseline for Dormouse;
2. Enhancement of existing retained woodlands to increase their suitability for Dormice, including the re-introduction of coppice regime, planting of suitable fruit and nut-bearing plants species to supplement existing food availability, and provision of dense understory planting where this is lacking;
3. The main site access has been designed to include a Dormouse crossing point, of a type which has been previously demonstrated to be acceptable to Natural England. Carriageways of the proposed access road are split to minimise the width of the crossing points, and a 4m wide central reservation will be planted with scrub planting to allow Dormouse to cross at ground level. Dropped kerbs will be provided to ensure that no barriers to movement at ground level are present, and light levels will be kept to a bare minimum, with no artificial lighting provided at these points. Standard trees will also be planted in the central reservation and on verges adjacent to the crossing point, so that in the long term arboreal connectivity of canopies will form across each of the carriageways, providing additional arboreal links;
4. Buffer zones which have been designed into the Development will mitigate for the adverse effects of light disturbance, and other lighting restrictions which are set out in the Dark Zones Map (Plan Ref. 1309.07 - submitted separately with the application) will ensure that light levels are minimal in woodland areas;
5. Banks of thorny scrub will be provided at the woodland boundaries to deter domestic pets from entering woodland areas.

~~7.280~~7.282 In conclusion, the proposed mitigation and enhancements will create substantial new areas of high-quality woodland habitats, which will represent a positive enhancement over the existing situation. Notably, there will be a significant gain in the overall woodland available to Dormouse.

Great Crested Newt Mitigation

~~7.281~~7.283 Effects have been identified on Great Crested Newt prior to mitigation, largely in relation to loss of terrestrial habitat, such that implementation of mitigation will be required, to be carried out under licence from Natural England. Details of the proposed mitigation will be set out in a Great Crested Newt Mitigation Strategy, together with consideration of the three derogation tests under the Conservation of Habitats and Species Regulations 2017 in relation to EPS, given that when determining a planning application for a development which has an impact on EPS, the LPA must have regard to the derogation tests at the planning stage.

~~7.282~~7.284 The mitigation/enhancement strategy seeks to fully retain the Great Crested Newt population within the Site, as well as bringing forward substantial habitat enhancements. In summary, this will involve:

1. Enhancement of the all ~~main~~ existing ponds in the site (including **P4** and **P6**) by removing silt and leaf litter and creating a more beneficial depth profile;
2. The use of low level fencing, planting or similar to deter dogs from entering the ponds P4 and P6;
3. Creation of three dedicated Great Crested Newt ponds and provision of hibernacula and refugia (which represents a significant enhancement for the species);
4. Site-wide habitat creation and enhancement works, including additional waterbodies, and habitat enhancements within woodland buffer zones and proposed green corridors; and
5. Gully pots along the edges of all service roads within 250m of ponds **P4** and **P6** will also be designed to prevent the entrapment of Great Crested Newts, such as off-setting them from the road edge and/or the installation of amphibian ladders.

~~7.283~~7.285 In conclusion, the proposed mitigation and enhancements will create new areas of substantially improved aquatic breeding habitats as well as high quality terrestrial habitats, which will represent a positive enhancement over the existing situation. Notably, enhancement of existing ponds, creation of new waterbodies (three of which will form dedicated Great Crested Newt ponds) and enhancement of terrestrial habitat is considered to more than offset the loss of low-quality terrestrial habitat caused by the Development, whilst new green corridors proposed as part of the Development are likely to result in an increased probability for Great Crested Newt populations to link with others and form larger metapopulations.

Enhancement Measures

~~7.284~~7.286 The National Planning Policy Framework (NPPF) encourages new developments to maximise the opportunities for biodiversity through incorporation of enhancement measures. The Development presents the opportunity to deliver ecological enhancements at the Site for the benefit of local biodiversity, thereby making a positive contribution towards the broad objectives of national conservation priorities and the Sussex BAP. Such measures will also help to offset non-significant habitat losses and other effects of the Development, helping to achieve an overall net gain in biodiversity.

~~7.285~~7.287 Significant ecological enhancements will be provided within the proposed SANG, whilst areas of public open space within the Development will also be provided with a range of habitat and faunal enhancements.

~~7.286~~7.288 The enhancements summarised below are considered appropriate given the context of the Site and the scale and nature of the Development.

~~7.287~~7.289 It is proposed that such measures will be detailed in an Ecological Enhancement and Management Plan to be produced at the detailed design stage and secured by planning condition.

Habitat Creation and Management

Habitat Enhancements (Within SANG and Public Open Spaces)

~~7.288~~7.290 The proposed SANG (measuring approximately ~~18~~13.~~1ha~~2ha) is to be provided within the northern parcel of the Site, forming a dedicated area for informal public recreation and new habitat creation, whilst additional open space areas will be provided between and within buffer zones around built Development areas, forming a network of green infrastructure corridors and within the Site totalling approximately 7ha (not including woodland and SANG). Within these areas, it is proposed that a range of habitats are created:

- Substantial native tree and shrub planting will be provided within areas of open space across the Site, forming new blocks of woodland and shrubs, scattered wooded vegetation and treelines. This will benefit woodland species such as Song Thrush and Brown Long-eared bat;
- Tree and shrub planting will also be provided within built Development areas. Although a proportion of this is likely to include ornamental species or cultivars, species of wildlife

benefit will be chosen where appropriate, providing additional resources for wildlife such as fruits or nectar;

- A new orchard will be created, providing habitats for a range of bird and invertebrate species;
- Scrub habitat will be established along existing woodland edges and within grassland areas creating scrub mosaics and forming valuable ecotone habitats for a range of wildlife, including amphibians, reptiles, small mammals and invertebrates;
- A large part of the SANG and other open grassland areas will be established as wildflower grassland, subject to a varied management regime to provide a range of sward types. Larger blocks of grassland will be managed as hay meadow, subject to cutting 2-3 times a year to promote a flower rich sward, whilst areas of rough, tussocky grassland will be established along woodland and hedgerow margins with dead stems retained in places during winter to provide a hibernation resource for invertebrates. As such, grassland areas will provide a rich habitat resource for invertebrate species, in turn providing increased foraging opportunities for wildlife including birds and bats;
- New lengths of hedgerow planting will be provided along the boundaries of green space areas and along the edges of existing woodland to create opportunities for dormice and other species and
- A SuDS scheme is to be implemented as part of the Development. In addition to the downstream water quality benefits this will provide in terms of attenuating surface run-off and capture of sediments and nutrients, a variety of wetland habitats will be provided by the proposed drainage and attenuation areas including swales and balancing ponds. Although these features will be designed and managed with flood control in mind, they will be designed to be of benefit to biodiversity where possible, incorporating measures such as shallow, sinuous margins, areas of permanent water and planting with native vegetation. Such measures will benefit a range of wetland species including birds and aquatic invertebrates and will provide ‘stepping-stones’ through the Development and contribute to the potential breeding resource for Great Crested Newts within the Site.

Woodland Management

~~7.289~~7.291 A number of woodland areas located outside the Development area are currently in poor condition resulting from a lack of management, which has resulted in a lack of age structure and diversity of woodland and presence of detrimental factors, such as the presence of non-native invasive plant species. Some of these are located within the SANG area, whilst others are outside.

~~7.290~~7.292 An excellent opportunity therefore exists to enhance these currently unmanaged woodlands which would also serve to offset any residual adverse effects in the unlikely event any remain. The introduction of an enhanced woodland management package within areas of existing woodland areas (amounting to 21.6ha) will be brought forward in order to bring them into a favourable conservation status. These measures are set out in a separate management plan (Downlands SANG and Woodland Management Plan), and include the following:

- Introduction of coppicing regimes to areas which are suited to this technique, which will provide structure, and habitat enhancement for dormouse.
- Thinning and restocking of woodland areas lacking age structure and diversity.
- Removal and control of non-native invasive plant species where they occur.
- Creation of deadwood habitats from cut material arising from woodland management.
- Provision of fencing, management of paths and other deterrents to control public access as necessary.
- Regular monitoring of woodland to detect and control instances of littering, fly tipping and other damaging activities.

~~7.291~~7.293 Following the implementation of these measures, woodland areas will be significantly improved in terms of their ecological functionality and resilience and will be able to withstand the additional recreational and urbanisation pressure which they may be placed under.

~~7.292~~7.294 New woodland areas will also be provided, as part of the SANG proposals, and within Public Open Greenspace within the main residential development, which will also be brought under appropriate management to maximise the conservation gain which they contribute.

Faunal Enhancements (Within SANG and Public Open Spaces)

~~7.293~~7.295 The above habitat creation and enhancement measures will provide benefits to a range of fauna. In addition, in order to provide specific nesting and roosting opportunities for bird and bat species, and to compensate for the loss of bird nesting habitat under the Development, it is proposed that faunal habitat features are provided in association with new buildings and open space areas:

- Bat boxes will be provided on new residential buildings and retained trees within the Site. Box specifications will be selected to be long lasting and provide benefits to Priority Species recorded in the local area, such as Brown Long-eared Bat, Soprano Pipistrelle and Noctule;
- Nesting opportunities for birds will be provided in the form of nest boxes installed on new buildings and retained trees. Box specifications will be selected to benefit the UK Priority

Species Starling and House Sparrow, and the Amber List species Swift;

- Provision of habitat piles and dedicated hibernacula will provide shelter for reptile and amphibian species; and
- Enhancements for invertebrates will be provided by creating habitat piles, using arisings from site clearance works and management.

Biodiversity Net Gain (BNG) Assessment

~~7.294~~7.296 A Biodiversity Net Gain Assessment has been carried out as part of this planning application, which is submitted separately with the planning application. The latest Defra Metric (v3.1), has been used to quantify the Net Gain/Loss in biodiversity units which result from the Development, including any proposed habitat creation and enhancement (Ancient Woodland areas are excluded from the calculation, due to their status as Irreplaceable Habitats under the NPPF).

~~7.295~~7.297 The BNG Assessment indicates that there will be a significant net gain in habitat biodiversity units resulting from the Development, which represents a considerable gain from the existing baseline. Further additional benefits will be provided by the proposed enhancements to the ancient woodland areas surrounding the site, which are captured separately within the metric.

~~7.296~~7.298 In addition, it is anticipated that significant gains will flow from the enhancement of Ancient Woodlands within the Site, which are excluded from the metric.

Residual Effects

Construction

Lake Wood Local Wildlife Site (LWS)

~~7.297~~7.299 In the absence of mitigation, minor adverse effects were predicted to occur in relation to Lake Wood LWS during construction through dust deposition and surface run-off of contaminants or silt. However, following the implementation of measures contained within the Construction Environmental Management Plan (CEMP), and the implementation of a suitable lighting strategy, the residual effect would be negligible.

Habitats

~~7.298~~7.300 Prior to mitigation, there is a possibility of effects to occur to Ancient Woodland, Veteran Trees and other habitats within the Site and immediately adjacent. However, following the implementation of embedded mitigation measures, including the provision of buffer zones, together with further mitigation measures contained within the Construction Environmental Management Plan (CEMP), the residual effect would be negligible.

Fauna

~~7.299~~7.301 Prior to mitigation, minor adverse effects are predicted to occur to faunal species within the Site, including bats, Dormouse, Great Crested Newt and Reptiles. In respect of bats, effects are limited to disturbance effects through lighting which are fully mitigated through the implementation of construction safeguards outlined in the CEMP, and the implementation of a suitable lighting design.

~~7.300~~7.302 Mitigation for protected faunal species during the construction phase (Dormouse, Great Crested Newts and reptiles), will be provided in the form of suitable mitigation strategies - one for each species/species group. In the case of European protected species (Dormouse and Great Crested Newt), a European Protected Species licence application will also need to be made. Following the implementation of these measures, any residual effects relating to these species are considered to be negligible and non-significant.

~~7.301~~7.303 Following implementation of the mitigation measures set out above all adverse construction and operation effects are considered to be negligible and non-significant. As such, there is no identified requirement for compensation measures for these effects.

Completed Development

Designations

~~7.302~~7.304 Prior to mitigation, minor adverse effects were predicted to occur at an International Level in respect to Ashdown Forest SPA, with regards to Recreational Disturbance resulting from increased visitor pressure, which has the potential to have a cumulative effect combined with other schemes. However, following the implementation of mitigation measures in the form of the on-site SANG and SAMMS contributions, these effects are fully mitigated within the proposals. Residual effects are therefore considered to be negligible and non-significant.

Habitats – Ancient Woodland

~~7.303~~7.305 Loss and deterioration effects to ancient woodland have been avoided though the embedded and secondary mitigation provided through the design of the Development, including the provision of 15m buffer zones around the ancient woodland, and through the careful design of drainage solutions which might otherwise result in hydrological changes. At one location (the proposed boardwalk within Fir Tree Grove), direct deterioration was predicted to occur resulting from the localised loss of woodland ground flora. However, following the translocation of the plants concerned, and associated monitoring, the residual effects are expected to be negligible.

Habitats – Other Habitats

~~7.304~~7.306 A number of beneficial residual effects are predicted with respect to habitats, including Woodland, Moderately Species-rich Grassland (off Snatts Road), Hedgerows and Tree Lines and Ponds.

~~7.305~~7.307 Although there will be a loss of approximately 0.54ha of (non-ancient) woodland, at least 2ha of new woodland planting and 2ha of scrub planting is proposed as mitigation within the SANG and other public open spaces, and within Ancient Woodland buffer zones. Following the implementation of these enhancements, the residual effect on woodland is considered to be moderate beneficial and significant in the long term.

~~7.306~~7.308 Similarly following the creation of two new ponds and the restoration of a~~n~~ existing ponds, there will be a residual minor beneficial effect with respect to Pond Habitats. There will also be a minor beneficial effect resulting from the creation of new proposed native hedgerows within the proposed residential Development.

~~7.307~~7.309 Further beneficial residual effects are expected with regards to some species, particularly Dormouse, Great Crested Newt and reptiles, where additional habitats will be created. In these instances, where the quantity and quality of habitat will improve, there is a considered to be a minor beneficial effect.

Cumulative Effects

~~7.308~~7.310 Cumulative effects relating to ecology, resulting from the Development in combination with other developments, are considered in the following section below. A total of five schemes have been identified within the ZoI where there is the potential for cumulative impacts, the locations of which are shown on Figure 2.1. Table 7.11 below, provides a

summary of relevant cumulative effects.

Table 7.11. Summary of Cumulative Ecological Effects

Scheme Name and Application Number	Scheme Details	Current Planning Status	Distance from site	Proposed/Implement Mitigation Measures for the scheme	Cumulative effect
Approved Applications					
1a) Land West of Uckfield, Ridgewood Farm, Uckfield – Site SD1 (WD/2015/0209/MEA)	Outline planning application for the redevelopment of land at Ridgewood Farm comprising of up to 1000 net residential dwellings, and associated primary school and early years facilities, retail, community and leisure facilities. The associated development includes pedestrian/cycle routes, open spaces and car parking with vehicular access.	Approved 24th March 2016	1km to S	Mitigation measures are set out for Ancient Woodland (Ridgewood Bridge Shaw), where a 15m buffer is proposed, together with an 8m buffer zone around the Ridgewood Stream Corridor. Mitigation measures relating to the control of non-invasive species, and mitigation during the construction phase to safeguard bats, dormice, reptiles, amphibians (including Great Crested Newt) and invertebrates. The measures are detailed under a Construction Environmental Management Plan (CEMP) and Landscape and Ecology Management Plan (LEMP). During the operational phase, effects relating to indirect recreational disturbance effects on Ashdown Forest SPA are mitigated for through the provision of a bespoke SANG, and contributions towards SAMMS tariffs. Following implementation of the mitigation no negative residual effects are reported, and positive effects are reported in relation to habitats and faunal species.	A range of habitats and faunal species are receptors shared with the Development, although they are sufficiently isolated geographically that species populations and habitat networks are not likely to overlap and these effects are not considered likely to act in combination. In summary, since all effects are have been fully mitigated in the case of Approved Project 1 and the Proposed Scheme, the magnitude of these effects alone in each case is expected to be negligible and not Significant, and there cannot be any in combination effect. In summary, there are no cumulative effects.
1b) Land West of Uckfield - Site SD1 (WD/2017/1368/MRM)	Reserved matters application for Phase 1a & 1b of development at Ridgewood Farm (details of appearance, landscaping, layout and scale) pursuant to planning consent (reference WD/2015/0209/MEA) for the erection of 250no. Dwellings and associated car parking, play areas and hard and soft landscaping, drainage, ponds and earthworks.	Approved 21st September 2017	1km to S	Effects are described under the main application (WD/2015/0209/MEA) above.	Cumulative effects are assessed under the main application (WD/2015/0209/MEA) above.

Scheme Name and Application Number	Scheme Details	Current Planning Status	Distance from site	Proposed/ Implement Mitigation Measures for the scheme	Cumulative effect
1c) Land West of Uckfield - Site SD1 (WD/2019/1773/MRM)	Reserved matters application in pursuant to the Phase 2 development outline planning permission, reference WD/2015/0209/MEA. This is to facilitate the construction of the new roundabout requiring early groundworks.	Approved 20th November 2019	1km to S	In February 2019, the site was subject to an updated habitat survey and an Ecological Assessment in May 2019 by Ecology Solutions (submitted to discharge condition 20) of part of the development site relating to the road network and 4 stockpiles for the soil. A wildlife mitigation plan (WMP) has been submitted to address condition 20 of the outline planning permission reference WD/2015/0209/MEA. The plan covers mitigation strategies to create new areas of species-rich grassland within the wider development to mitigate the losses of arable fields with additional planting of hedgerows to benefit dormice and other wildlife. The Ridgewood stream is to be retained with an appropriate buffer zone as initially proposed. Other mitigations measures are proposed prior to construction for dormouse by which a licence will be obtained for vegetation clearance of hedgerows and woodland in the south of the site. Other mitigation safeguard strategies are to be implemented for bats, Badgers, dormice, birds, reptiles, amphibians and invertebrates during construction.	Cumulative effects are assessed under the main application (WD/2015/0209/MEA) above.
2a) Land North of Mallard Drive, Uckfield TN22 5JQ (WD2010/2874/FE)	Residential development comprising of 146 dwellings, including affordable housing, open space including children's play areas and an equipped play area, structural landscaping and associated works, with access from Mallard Drive.	Outline Application Approved 15 March 2011	1.7km to SE	There do not appear to be any documents relating to ecological impacts on the planning portal, and it has not been possible to carry out an assessment of the Cumulative Effects at this stage.	There do not appear to be any documents relating to ecological impacts on the planning portal, and it has not been possible to carry out an assessment of the Cumulative Effects.

Scheme Name and Application Number	Scheme Details	Current Planning Status	Distance from site	Proposed/Implement Mitigation Measures for the scheme	Cumulative effect
2b) Land North of Mallard Drive, Uckfield TN22 5JQ (WD/2013/0415/MRM)	Reserved Matters application for application WD/2010/2874/FE for 119 dwellings.	Committee resolution to approve Reserved Matters application given 14 May 2020	1.7km to SE	The Ecological Enhancement and Management Plan (EEMP) states that prior to construction a reptile receptor site will be prepared with a suitable buffer zone located on site prior to any clearance. In addition, a dormouse licence will be obtained followed by the implementation of a detailed mitigation strategy. During construction a 15m buffer zone will be applied to protect the Ancient Woodland alongside a management plan which will be executed post-development. Other mitigation measures implemented during the construction phase to safeguard bats, Dormice, reptiles and hedgehogs with the creation of newly planted hedgerows and SUDs. During the operational phase, effects relating to indirect recreational disturbance effects on Ashdown Forest SPA are mitigated for through the provision of a financial contribution to the local SANG and SAMM. Following implementation of the mitigation no negative residual effects are reported, and positive effects are reported in relation to habitats and faunal species.	A range of habitats and faunal species are receptors shared with the Development, although they are sufficiently isolated geographically the species populations and habitat networks are not likely to overlap and these effects are not considered likely to act in combination. In summary, since all effects are have been fully mitigated in the case of this scheme and the Development, the magnitude of these effects alone in each case is expected to be negligible and not Significant, and there cannot be any cumulative effect.
3) Land Off Eastbourne Road (WD/2020/0410/MAO)	Outline planning application for up to 90 residential dwellings with associated landscaping, public open space, vehicular access and ancillary works.	Application under review	2.5km to SE	Mitigation measures are proposed for this scheme safeguarding bats, breeding birds, reptiles and amphibians during the constructional phase with an additional post development monitoring programme for reptiles. The HRA report details that the proposed development will make a financial contribution to the delivery of the local council's mitigation strategy for both the SANG and SAMM's.	A range of habitats and faunal species are receptors shared with the Development, although they are sufficiently isolated geographically. The species populations and habitat networks are therefore not likely to overlap and these effects are not considered likely to act in combination. In summary, since all effects are have been fully mitigated in the case of this scheme and the Development, the magnitude of these effects alone in each case is expected to be negligible and not Significant, and there cannot be any cumulative effects.

Scheme Name and Application Number	Scheme Details	Current Planning Status	Distance from site	Proposed/ Implement Mitigation Measures for the scheme	Cumulative effect
Pending Consideration					
4) Charlwood Manor (WD/2020/1650/F) (WD/2021/1764/MAJ)	Demolition of existing buildings and construction of five dwellings with new access provided.	Submitted August 2020	Adjacent to E of site	The ecological appraisal proposes safeguarding measures for bats, nesting birds, reptiles (a low population of slow worm) which will also cover amphibians during the construction phase of the scheme. Following the implementation of mitigation measures for reptiles and bats, there are considered to be any residual effects.	Reptiles (slow worm) are shared receptors with the Development, and are in close proximity. However, both schemes mitigate impacts in full, and there are not expected to be any cumulative effects.
	Conversion and extension of the existing care home and the demolition of the existing bungalow and garage building to allow for the creation of 17 no. dwellings, 6 no. of which are affordable tenure. The creation of a new road access, closure of the existing access and associated works.	Submitted July 2021			
5) Land at Bird in Eye Farm, south of Bird in Eye Hill, Framfield, TN22 5HA (WD/2021/2198/MAO)	Outline planning application for the erection of up to 290 dwellings, associated landscaping, informal open space and strategic SANG, with access from the B2102.	Submitted August 2021	2km to SE	The Ecological Impact Assessment proposes mitigation in respect of reptiles, dormouse and populations and foraging bats. Mitigation has been proposed to address potential impacts on these protected species and ensure compliance with applicable legislation. The Site lies within the 7km ZoI of the Ashdown Forest SAC/SPA and prior to mitigation are assessed as likely to result in a significant effect on these Designations. Mitigation has been proposed in the form of an on-site SANG and through contributions to the Strategic Access Management and Monitoring Strategy (SAMMS).	A range of habitats and faunal species are receptors shared with the Development, although they are sufficiently isolated geographically. The species populations and habitat networks are therefore not likely to overlap and these effects are not considered likely to act in combination. In summary, since all effects have been fully mitigated in the case of this scheme and the Development, the magnitude of these effects alone in each case is expected to be negligible and not Significant, and there cannot be any cumulative effects.

Scheme Name and Application Number	Scheme Details	Current Planning Status	Distance from site	Proposed/ Implement Mitigation Measures for the scheme	Cumulative effect
				Mitigation measures are also proposed in respect of SANG paths through ancient woodland including provision of buffer planting, interpretation boards and dog mess bins. Enhancements proposed include new woodland and tree planting, nectar-rich grasslands, incorporation of dormouse, bat and bird boxes and new wildlife ponds and SUDs features.	

Summary

~~7.309~~7.311 Ecological surveys of the Site have been undertaken, including a desk study, an extended Phase 1 Habitat survey, detailed woodland botanical surveys, and a range of Phase 2 faunal surveys.

~~7.310~~7.312 A number of ecological designations were identified by the desk study. These include Lake Wood LWS located adjacent to the southern boundary of the Site, whilst the nearest statutory designation is West Park (Uckfield) LNR, located approximately 100m to the south of the Site. Ashdown Forest SPA/SAC, is located approximately 3.4km to the north of the Site.

~~7.311~~7.313 The Site has a large proportion of woodland, including some Ancient Woodland, although the areas proposed for Development are dominated by species-poor semi-improved grassland, not considered to be of ecological importance, together with other habitats including young woodland, tall ruderal vegetation, and scrub. Habitats which are considered to be of importance at the local level or above comprise woodland, an area of species-rich grassland, hedgerows and tree lines, ponds and watercourses. Surveys of protected species have found that the Site is of local importance for foraging and commuting bats, Dormouse, Great Crested Newts and reptiles, whilst Badger, breeding birds and other common mammal and invertebrate species are also supported by the Site.

~~7.312~~7.314 A range of potential effects have been identified on habitats and fauna within and surrounding the Site, with potentially significant effects identified in relation to Ashdown Forest SPA/SAC, Lake Wood LWS, Ancient Woodland and other habitats of ecological importance, foraging and commuting bats, Dormouse, Great Crested Newt and reptiles.

~~7.313~~7.315 Mitigation for recreational disturbance effects on Ashdown Forest SPA/ SAC will be provided in the form of a bespoke SANG which forms part of the Development and contributions to SAMM. Further mitigation measures are also proposed, including proposed woodland management for the surrounding woodland areas, and a lighting strategy has been put in place to provide a network of dark corridors for wildlife. A range of construction safeguards has been put in place with regards to faunal species, including a translocation exercise and new habitat creation in regard to Great Crested Newt. Particular mitigation measures and habitat enhancements are also proposed for Dormouse. Such measures are considered to avoid, minimise or offset any significant adverse effects resulting from the Development.

~~7.314~~7.316 Furthermore, a range of additional enhancement measures have been identified to provide gains in biodiversity across the Site, including significant habitat creation within the

SANG area and within new green corridors and existing woodland buffer zones. Other enhancements will provide new nesting and shelter opportunities for a range of faunal species.

~~7.315~~7.317 The Development and mitigation scheme have also been designed to achieve compliance with relevant legislation and planning policy. Measures are proposed to avoid killing or injury of protected species such as bats, Dormouse, birds, Great Crested Newt and reptiles (protected under the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations 2017) and opportunities for enhancements to biodiversity are also proposed, in accordance with NPPF, the NERC Act 2006 and local policy. Proposed enhancements will also deliver significant benefits in terms of green infrastructure, providing an extensive network of green links and corridors through and around the Site.

~~7.316~~7.318 Following mitigation, it is considered that the Development would result in an overall gain in the existing ecological interest supported by the Site, with no significant residual adverse effects and significant beneficial effects in respect of woodland habitats, birds, Dormouse, and other fauna.

7.1 Table 7.12 contains a summary of the likely significant effects of the Development.

Table 7.12: Table of Significance – Biodiversity

Potential Effect	Nature of Effect (Permanent/Temporary)	Significance (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement Measures	Geographical Importance*							Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/Negligible)
				I	UK	E	R	C	B	L	
Construction											
West Park (Uckfield) LNR	-	Negligible	None required					X			Negligible
Lake Wood LWS - dust deposition, surface run-off of contaminants or silt	Permanent	Minor Adverse	Construction Safeguards (provided under CEMP).					X			Negligible
Butchers Wood LWS	-	Negligible	None required					X			Negligible
Other Ecological Designations	-	Negligible		X	X	X	X	X	X	X	Negligible
Ancient Woodland	Permanent	Minor Adverse	Construction Safeguards (provided under CEMP) and sensitive lighting design.						X		Negligible
Veteran Trees	Permanent	Minor Adverse							X		Negligible
Habitats	Temporary	Minor Adverse								X	Negligible
Faunal Species (Foraging and Commuting Bats, Dormouse, Birds, Great Crested Newt, reptiles.	Temporary	Minor Adverse	Construction Safeguards (provided under CEMP). Specific method statements for Great Crested Newt and Dormouse						X		Negligible
Completed Development											
Ashdown Forest SPA/SAC – Recreational Disturbance	Permanent	Minor Adverse	Provision of SANG as strategic mitigation	X							Negligible
Ashdown Forest SPA/SAC – Air Quality Effects	-	Negligible	None required		X						Negligible
West Park (Uckfield) LNR	Permanent	Negligible	None required					X			Negligible
Lake Wood LWS	Permanent	Negligible	Embedded mitigation, in the form of buffer zones and proposed boundary fencing.					X			Negligible
Other Non-statutory Designations	-	Negligible	None required					X	X	X	Negligible

Ancient Woodland – Direct Deterioration (reduction in opportunities for woodland flora at boardwalk location)	Permanent	Minor Adverse	Translocation of ancient woodland ground flora from the route of the boardwalk						X		Negligible
Ancient Woodland – Other Effects	-	Negligible	None required (embedded mitigation in the form of 15m+ buffer zones).						X		Negligible
Veteran Trees	-	Negligible	None required						X		Negligible
Other Woodland	Permanent	Moderate Beneficial	Woodland management. Provision of additional woodland within SANG and public open space within residential areas.							X	Moderate Beneficial
Moderately Species-rich Grassland (off Snatts Road)	Permanent	Minor Adverse	Implementation of favourable management							X	Moderate Beneficial
Sandstone Outcrops – Lower Plants	Permanent	Negligible	None Required								Negligible
Native Hedgerows and Tree Lines	Permanent	Minor Beneficial	Planting of additional linear features as part of Development							X	Minor Beneficial
Ponds	Permanent	Minor Beneficial	Creation and restoration of ponds							X	Minor Beneficial
Watercourses	-	Negligible	None required							X	Negligible
Foraging and Commuting Bats	Permanent	Minor-moderate Adverse	Lighting Strategy. Wildlife-friendly lighting plan							X	Negligible
Dormouse	Permanent	Minor-moderate Adverse	Mitigation strategy. Additional woodland planting.							X	Minor beneficial
Great Crested Newt	-	Minor Adverse	Mitigation strategy. Pond restoration and new ponds							X	Minor beneficial
Reptiles	Permanent	Minor Beneficial	Habitat creation and enhancement							X	Minor beneficial
Cumulative Effects											
Construction											
None											

Completed Development
None

*** Geographical Level of Importance**

I = International; UK = United Kingdom; E = England; R = Regional; C = County; B = Borough; L = Local

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ENCLOSURE 3

Land at Downlands Farm, Uckfield

Report to Inform a Habitats Regulations Assessment (HRA)

(Update August 2023)

August 2023

Quality Management	
Client:	Gleeson Strategic
Project:	Land at Downlands, Uckfield
Report Title:	Report to Inform a Habitats Regulations Assessment (HRA)
Project Number:	1005719
File Reference:	5719 HRA vf6/MRD/AB
Date:	22/08/2023

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Contact Details

Aspect Ecology Ltd
Hardwick Business Park I Noral Way I Banbury I Oxfordshire OX16 2AF
t 01295 279721 e info@aspect-ecology.com w www.aspect-ecology.com

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Plans:

5719/HRA1	Site Location and European Designations within 25km
5719/HRA2	Main Roads Located within 200m of a European Designation

Appendices:

Appendix 5719/1	(Figure 1) within ODPM circular 06/2005
Appendix 5719/2	Natural England SANG Criteria
Appendix 5719/3	Correspondence from Natural England; dated 13 July 2023

1. Introduction and Background

1.1. Background and Proposals

1.1.1. Aspect Ecology has been commissioned by Gleeson Strategic Land Ltd to prepare a report to inform a Habitats Regulations Assessment (HRA) in respect of proposed redevelopment at land at Downlands, Uckfield, in West Sussex, centred at grid reference TQ 4661 2223 (see Plan 5719/HRA1).

1.1.2. The site is proposed for residential development for up to 424 dwellings, along with associated parking, infrastructure, landscaping and access. The proposed development will also include the provision of SANG/recreation provision, to be located within the east of Site.

1.1.3. A number of European designations are located within the site surrounds, and as such, the proposed development will need to be subject to a Habitats Regulations Assessment (HRA) under the Conservation of Habitats and Species Regulations 2017 (as amended).

1.1.4. The following report sets out a Shadow Habitats Regulation Assessment (including an Appropriate Assessment) of the proposed development, identifying whether the specific proposals for the site are likely to result in an adverse effect on integrity of any international designations.

1.2. Site Overview

1.2.1. The site is located to the west of Uckfield, in West Sussex, and occupies land between Snatt's Road, Uckfield, in the east, and the A22 Uckfield bypass to the west.

1.2.2. The site is bounded to the north by areas of woodland forming part of Budletts Wood and Paygate Wood, beyond which are further areas of woodland, farmland and scattered rural dwellings. To the east, the site is bound by Snatt's Road, with residential areas forming the urban fringe of Uckfield beyond this. Lake abuts the site to the south, and Fir Tree Grove is immediately adjacent to the south-east corner of the site, beyond which is Rock's Road.

1.2.3. Residential development is proposed within one large agricultural field, with a further agricultural field being used for the creation of the SANG, whilst a new vehicular access and secondary emergency access will be created from the A22.

1.3. Purpose of this report

1.3.1. The following report sets out information to inform an assessment under the Habitat Regulations of the proposed development at the site, identifying whether the specific proposals for the site are likely to result in an adverse effect on integrity of any international designations to inform the competent authority (or Inspector or Secretary of State at appeal) in undertaking its HRA/AA.

2. Legislation and Assessment Methodology

2.1. Legislation

2.1.1. All areas in England classified as Special Areas of Conservation (SACs) or Special Protection Areas (SPAs), collectively known as European sites, receive statutory protection under the Conservation of Habitats and Species Regulations 2017 (the Regulations). These Regulations transpose into UK legislation the 'Habitats Directive' 1992 (92/43/EEC) and the 'Birds Directive' 2009 (2009/147/EC). National planning policy in the form of the National Planning Policy Framework (NPPF) explicitly sets out that listed Ramsar sites should be considered in the same way, as if they had been classified or designated as SACs or SPAs.

2.1.2. The Regulations impose a duty on Local Planning Authorities (competent authorities) to carefully consider whether any proposals may have a significant effect on a European designation, either alone or in combination with other plans or projects. In most circumstances, permission may only be granted for a plan or project to proceed if it has been ascertained that it will not have an adverse effect on the integrity of any such designation.

2.1.3. The process for assessment is set out at regulation 63(1):

"A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which:

(a) is likely to have a significant effect on a European site or a European offshore marine site(either alone or in combination with other plans or projects), and

(b) is not directly connected with or necessary to the management of that site,

must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives".

2.1.4. Following this assessment, regulation 70(3) outlines when planning permission can be granted:

"… outline planning permission must not be granted unless the competent authority is satisfied (whether by reason of the conditions and limitations to which the outline planning permission is to be made subject, or otherwise) that no development likely adversely to affect the integrity of a European site or a European offshore marine site could be carried out under the permission, whether before or after obtaining approval of any reserved matters."

2.2. Assessment Methodology

2.2.1. Guidance on the process and procedures for assessment are contained in a number of documents, principally:

- Habitats Regulations Assessments: Protecting a European site (Gov.uk)[1] – government standing advice on HRA;
- National Planning Policy Framework (NPPF) and the accompanying ODPM/DEFRA Circular (ODPM 06/2005, DEFRA 01/2005);

[1] Habitats Regulations Assessments: Protecting a European site. February 2021 https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

- Managing Natura 2000 sites 'The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. European Commission. Nov 2018;
- Assessment of plans and projects significantly affecting Natura 2000 sites. European Commission November 2001.

2.2.2. As set out within government standing advice and as laid out within the flow chart (Figure 1) within ODPM circular 06/2005 (see Appendix 5719/1), the procedure for assessment is an ordered process following a number of key stages as discussed below.

Stage 1 :Screening

2.2.3. Box 1 of the flow chart is not of relevance to development proposals and hence the first stage is to identify whether the proposals are will result in any 'likely significant effect' on the internationally important features of the European sites, either alone or in combination with other plans or projects (box 2 of the flow chart).

2.2.4. In line with the Court of Justice of the European Union (CJEU) ruling (People over Wind, Peter Sweetman v Coillte Teoranta, Case C-323/17, dated 12 April 2018), mitigation measures intended to avoid or reduce the harmful effects of a plan or project on a European site should not be taken into account at this screening stage, and instead these must be considered as part of an Appropriate Assessment (Stage 2).

2.2.5. Where it is considered that a plan or project will result in no such 'likely significant effects', no further assessment is necessary and permission should not be refused under the assessment.

2.2.6. If any 'likely significant effects' are identified or where it remains unclear whether effects will be significant, the assessment procedure should follow on to Stage 2 (box 3 of the flow chart).

2.2.7. In reaching this decision, the plan or project should be considered 'likely' to have an effect if the competent authority is unable on the basis of objective information to exclude the possibility that it could have significant effects on any European designation, either alone or in combination with other plans or projects. The test of significance is therefore set at a relatively low bar, with significant effects considered as any negative effects, that are not negligible or inconsequential, which are capable of having an adverse effect[2].

2.2.8. If the proposal can be screened out for effects from it alone, it should then be screened for any potential for it to combine with any other proposal planned or underway. If, in combination the proposal could have a significant effect on a European designation, it is necessary to progress to Stage 2.

Stage 2: Appropriate Assessment

2.2.9. Should it be determined that a plan or project could result in 'likely significant effects' on a European site, as set out on the flow chart, the Competent Authority should proceed to the next stage within flow chart boxes 3 and 4 onwards. This requires an 'Appropriate Assessment' of the likely effects of the plan or project to be undertaken by the Competent Authority.

[2] Case C-258/11: Judgment of the Court (Third Chamber) of 11 April 2013 and Opinion of the Advocate General dated 22nd November 2012. Peter Sweetman and Others v An Bord Pleanála. Reference for a preliminary ruling: Supreme Court - Ireland

2.2.10. Under Appropriate Assessment, it is necessary to determine whether the proposals, either alone or in combination with other projects or plans, will result in any adverse effects on the integrity of the European designation as defined by the conservation objectives and status of the relevant SAC/SPA. The precautionary principle should be applied, and the focus should be on objectively demonstrating, with supporting evidence, that there will be no adverse effects on the integrity of the European site. Where this is not the case, adverse effects must be assumed.

2.2.11. It is the policy of the government that Ramsar sites should be treated in the same way as European designations.

2.2.12. If it is considered that the proposal will not adversely affect the integrity of the designation, either alone or in combination with other projects, permission can be granted. If this cannot be ascertained, or there is uncertainty, the assessment procedure should follow on to Stage 4.

Stage 3: Derogations: allow exceptions

2.2.13. Should a proposal fail the integrity test, in certain circumstances, a project may still be able to proceed under a derogation.

2.2.14. Under Stage 3, it is necessary to assess if there are alternative solutions and whether there are imperative reasons of overriding public interest. If these tests are passed, authorisation may be granted subject to compensation measures being secured.

2.2.15. Further details on the above process can be found in Government Guidance on Habitats Regulations Assessments[3]

2.3. Case Law

2.3.1. The approach to undertaking Habitats Regulation Assessment has been informed and distilled through a number of court rulings. Accordingly, this assessment takes into account all such case law, and in particular highlights the following as being pertinent:

The need for no reasonable scientific doubt

2.3.2. It has been established that the competent authority may grant permission for a project following an appropriate assessment *"only if they have made certain that it will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects"*[4] (our emphasis). In addition, case law advises that the decision maker should be 'certain beyond reasonable scientific doubt'[5] that no adverse effects will arise on the integrity of the designation.

2.3.3. The application of this test is further clarified by case law which advises that in reaching a conclusion, what is required is 'reasonable certainty' rather than 'absolute certainty'[6] and that the risk should be 'real' (identifiable) rather than 'hypothetical' or 'fanciful'[7].

[3] Habitats regulations assessments: protecting a European site. Government Guidance. https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site
[4] C-127/02 Landjelijke Vereniging tot Behoud van de Waddenzee & Another v Staatssecretaris van Landbouw ("Waddenzee") [2005] 2 CMLR 31 at [59]
[5] T.C. Briels & others v Minister van Infrastructuur en Milieu C-521/12 [2014]
[6] WWF Uk Ltd And RSPB V SoS for Scotland
[7] Boggis V Natural England & Waveney District Council [2009] Ewca Civ 1061 and R (Morge) v Hampshire County Council (2011)

The need for no lacunae

2.3.4. It has been established that the *assessment "cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned"*[8] and that the assessment must *"unequivocally demonstrate why the protected habitat types and species are not adversely affected"*[9].

The need to take into account conservation objectives

2.3.5. It has been established that that *"where such a plan or project is likely to undermine the conservation objectives of the site concerned, it must necessarily be considered likely to have a significant effect on the site"*[10]

Any mitigation measures must be sufficiently certain

2.3.6. It has been established that where mitigation measures are proposed (under an Appropriate Assessment), *"it is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm, guaranteeing beyond all reasonable doubt that the project will not adversely affect the integrity of the area, that such a measure may be taken into consideration when the appropriate assessment is carried out."*[11]

The need to assess cumulative effects

2.3.7. It has been established that not only does the project or plan in question need to be considered, but cumulative effects from other relevant projects have to be assessed. It has been established that "*MN2000 makes clear that the phrase "in combination with other plans or projects" in Article 3 (3) refers to cumulative effects caused by the projects or plans that are currently under consideration together with the effects of any existing or proposed projects or plans. When impacts are assessed in combination in this way it can be established whether or not there may be, overall, an impact which may have significant effects on a Natura 2000 site or which may adversely affect the integrity of a site".*[12]

The Assessment should be commensurate with the stage of planning

2.3.8. Appropriate Assessments can be required at every stage of the planning process, from the allocation stage to the detailed or =Reserved Matters stage. At each planning stage very different levels of detail are available, and it has been established that *'each appropriate assessment must be commensurate to the relative precision of the plans at any particular stage and no more'*[13] (our emphasis).

2.3.9. These principles are well established. An example, is the case of Commission v UK C-6/04 (2005) and the opinion of Advocate General Kokott[14], which related to a complaint from the Commission that the United Kingdom had failed to transpose adequately various

[8] C-258/11 Sweetman v An Bord Plenala [2014] PTSR 1092 at [44]
[9] C-461/17 Holohan v An Bord Plenala [2019] Env LR 16 per AG Kokott at [30]
[10] Judgment of the Court (Grand Chamber) of 7 September 2004, Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij, Case C-127/02
[11] C-164/17 Grace & Sweetman v An Bord Plenala at [51]
[12] European Commission DG Environment (Novmber 2001) 'Assessing Projects Under the Habitats Directive: Guidance for Competent Authorities, September 2011'
[13] Feeney v Secretary of State for Transport & Ors [2013] EWHC 1238 (Admin)
[14] Opinion of Advocate General Kokott June 2005. Case C-6/04
https://curia.europa.eu/juris/liste.jsf?language=en&num=C-6/04

provisions of the Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ('the Habitats Directive'). It discusses the detail required within an Appropriate Assessment at paragraph 49:

"The United Kingdom Government is admittedly right in raising the objection that an assessment of the implications of the preceding plans cannot take account of all the effects of a measure. Many details are regularly not settled until the time of the final permission. It would hardly be proper to require a greater level of detail in preceding plans or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure".

2.3.10. In line with the judgement of R (Barker) v Secretary of State & Bromley LBC (2006-7) (European Court and House of Lords) [2007][15] 1 A.C. 470 and Wingfield, R v Canterbury City Council [2019] EWHC 1974 (Admin)[16], AA can be required at the Reserved Matters and discharge of conditions stages.

2.4. Other Relevant guidance and opinions of weight

2.4.1. In addition to the interpretation of legislation that has emerged through the above case law, relevant guidance is also available from a number of other sources, as outlined below:

The Precautionary Principle

2.4.2. The precautionary principle is a core principle of EU environmental law. The European Commission[17] sets out that "*the classic definition of 'a precautionary approach' comes from the 1992 Rio Declaration on Environment and Development, which states that: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation" (UNEP 1992).*"

2.4.3. Following on from the above definition, guidance sets out that "*Non-discrimination means that comparable situations should not be treated differently, and that different situations should not be treated in the same way, unless there are objective grounds for doing so" and "Consistency means that measures should be of comparable scope and nature to those already taken in equivalent areas in which all scientific data are available"* [18].

2.4.4. In addition, this guidance also sets out that "*Proportionality means tailoring measures to the chosen level of protection. Risk can rarely be reduced to zero".* And *"It is also necessary to clarify a misunderstanding as regards the distinction between reliance on the precautionary principle and the search for zero risk, which in reality is rarely to be found"*[19].

[15] https://publications.parliament.uk/pa/ld200607/ldjudgmt/jd061206/barker-1.htm
[16] http://www.bailii.org/ew/cases/EWHC/Admin/2019/1974.html
[17] European Commission Science for Environement Policy (September 2017) 'Future Brief: The Precautionary Princple: decision-making under uncertainty
[18] Commission of the European Communities (2.2.200) 'Communication from the Commission on the precuationary principle'
[19] Ibid footnote 13

2.4.5. Finally, this guidance also further clarifies that *"measures based on the precautionary principle must not be disproportionate to the desired level of protection and must not aim at zero risk, something which rarely exists."*[20]

[20] Ibid footnote 13

3. Information to Inform a Habitats Regulations Assessment

3.1. Stage 1 - Screening

European designations that could be affected by the proposals	The following European designations are located within 25km of the site (see Appendix 5719/1): • Ashdown Forest SAC (3.4km to north); • Ashdown Forest SPA (3.7km to north); • Lewes Down SAC (10.7km to south); • Castle Hill SAC (17.3km to south-west); and • Pevensey Levels SAC/Ramsar (17.6km to south-east); Following a review of the Habitats Regulations Assessment (HRA)[21] of Wealden Council's now withdrawn Local Plan (Wealden District Council, January 2019)[22], a number of these designations can be scoped out as they are well removed from the site and relatively non-sensitive. On that basis, the European designations to be considered in terms of potential effects are limited to: • Ashdown Forest SAC/SPA; • Lewes Down SAC; and • Pevensey Levels SAC/Ramsar; Other designations scoped into the Local Plan HRA are considered sufficiently removed from the site such that adverse effects resulting from the proposed development are considered to be negligible.
Identification of potential impact pathways	Based on a review of the Wealden Local Plan HRA, a number of potential impact pathways have been identified in relation the above designations, namely: • Habitat fragmentation and loss; • Urbanisation and recreational disturbance; • Hydrology and water quality; and • Air pollution.

On this basis, further detail is set out below in relation to Ashdown Forest SAC/SPA, Lewes Down SAC, Castle Hill SAC, and Pevensey Levels SAC/Ramsar, and whether a likely significant effect may occur as a result of the proposed development.

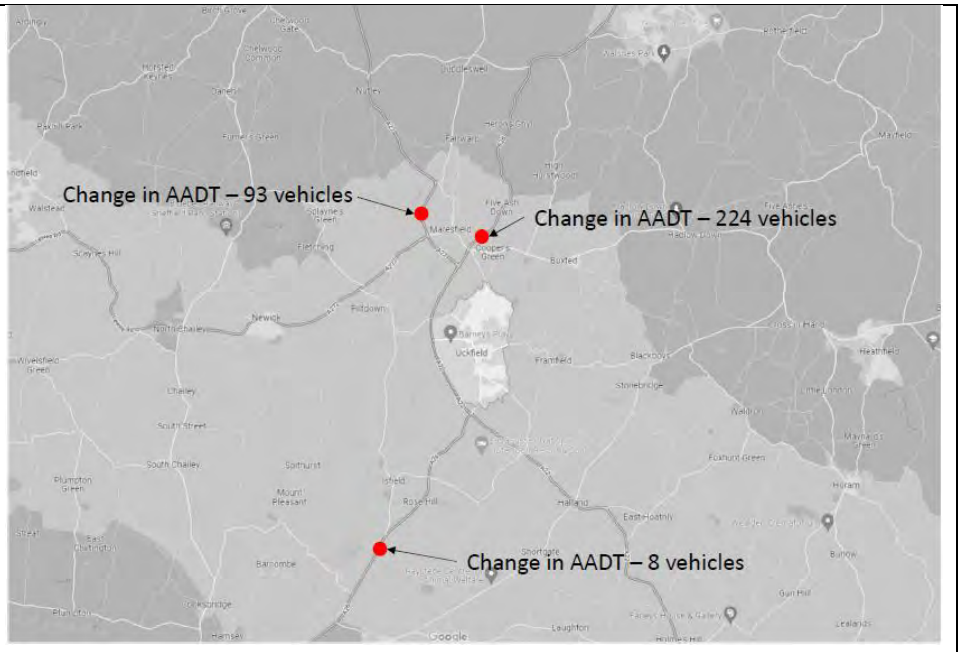
[21] Wealden Local Plan Habitats Regulations Assessment. Proposed Submission Document. Wealden District Council, August 2018.

[22] The Local Plan was found to have failed the legal compliance requirement of Duty to Co-operate, whilst the Inspector also disagreed with the reliance on a non-improving emissions scenario in terms of air quality assessment under the HRA. However, the identification of potential significant effects and overall level of growth taken into account as part of the modelling (also reflecting land use plans within surrounding local authorities) is considered to form a reasonable basis for screening of the project both alone and in-combination, whilst modelling under alternative emissions scenarios provides a detailed evidence base on which an assessment can be made. As such, despite the Local Plan being withdrawn, it is still considered appropriate for this assessment to be informed by the Local Plan HRA.

Ashdown Forest SAC/SPA

European site interest features	Ashdown Forest SAC is designated on the basis of the following features: • European dry heaths • Northern Atlantic wet heaths with *Erica tetralix* • Great Crested Newt *Triturus cristatus* (although does not form a primary reason for site selection)
Conservation objectives of the European site	The conservation objectives for the SAC are to: *"Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:* • *The extent and distribution of qualifying natural habitats and habitats of qualifying species;* • *The structure and function (including typical species) of qualifying natural habitats;* • *The structure and function of the habitats of qualifying species;* • *The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;* • *The populations of qualifying species; and* • *The distribution of qualifying species within the site."* Ashdown Forest SPA is designated as it supports breeding populations of European importance of the Annex I species Dartford warbler *Sylvia undata* and Nightjar *Caprimulgus europaeus*. The European Site Conservation Objectives for Ashdown Forest SPA are stated as: *"Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:* • *The extent and distribution of the habitats of the qualifying features;* • *The structure and function of the habitats of the qualifying features;* • *The supporting processes on which the habitats of the qualifying features rely;* • *The population of each of the qualifying feature; and* • *The distribution of the qualifying features within the site.*
Condition of European site	The most recent condition assessments for the Site of Special Scientific Interest (SSSI) which underpins the European designation states the majority of units are in unfavourable recovering condition.
Threats	A Site Improvement Plan (SIP) has been produced by Natural England in relation to Ashdown Forest SAC and SPA (dated November 2014). This identifies prioritised issues (pressures or threats) affecting the designation: 1) Change in land management (largely relating to lack of appropriate grazing) 2) Air pollution – impact of atmospheric nitrogen deposition 3) Public access/disturbance (largely in relation to breeding birds) 4) Hydrological changes

Screening of likely significant effects	
Habitat fragmentation and loss	The site is located 3.4km from the SAC designation at its nearest point (see Plan 5719/HRA1), and no functional habitat will be lost as a result of the proposals. As such it is considered that no habitat loss or fragmentation will be caused by the proposals.
Urbanisation and recreational disturbance	These effects are likely to result from disturbance to ground nesting birds which are designation features attributed to the Ashdown Forest SPA (European Nightjar and Dartford Warbler). The site is within the identified 7km zone of influence in regard to recreational pressure at Ashdown Forest, where recreational disturbance is expected to occur. The HRA carried out for the Wealden Local Plan in this regard considers the effects of the Local Plan to be already mitigated through SANGS and to a lesser extent the SAMM Strategy. Recreational disturbance is identified as a secondary issue in regard to the SAC habitats. Visitors and recreational pressure has the potential to further exacerbate a decline in the condition of the site. The site is sufficiently separated from the Ashdown Forest SAC that urbanisation effects are not expected to occur. As such, potential for a likely significant effect as a result of urbanisation can be screened out.
Hydrology and water quality	The SAC contains features which are designated for wetland interest (Northern Atlantic wet heaths with *Erica tetralix).* However, these are distant from the site, with the drainage not expected to pass through those catchments contained within the Ashdown Forest. They would therefore not be affected by drainage proposals. In addition, the Accordingly, potential for a likely significant effect can be screened out.
Air quality	Under the Development, up to 424 residential units will be constructed on the site. A Transport Assessment (TA) for the Development has been undertaken (and submitted in support of the planning application), which includes an estimation of the number of traffic movements that are likely occur on the key routes from the site. within 200m of the SAC as a result of the Development. A number of locations have been identified where major roads pass within 200m of the SAC, including the A26, A22, A275 and B2026, which are shown on Plan 5719/HRA2. Although modelling data is not available for these specific locations (since they are outside the farthest extent of the model), the TA has been used to estimate the number of vehicle movements per day (AADT) at key points on the two main arterial roads to the north (A26 and A22), as shown below.



In summary, the TA anticipates that at all points, trips per day generated from the Development are 224 AADT and 93 AADT (for the A26 and A22 respectively).

This is far less than the typical threshold of 1,000 AADT that would typically trigger a potential significant effect resulting from the development alone. Since Ashdown Forest is more distant from the Development than these points, then the actual number of vehicles passing within 200m of Ashdown Forest SAC, would be somewhat lower.

Whilst this is below the 1,000 AADT threshold for a likely significant effect, based on the Wealden Local Plan HRA, in-combination increases in traffic above 1,000 AADT are predicted along these roads. Accordingly, potential for a likely significant effect as a result of changes to air quality cannot be screened out.

Conclusion – could the proposed development result in a likely significant effect?

Alone

Yes, in relation to recreational disturbance effects on the features of interest of the Ashdown Forest SPA (European Nightjar and Dartford Warbler).

No likely significant effects are identified as a result of habitat fragmentation and loss, urbanisation or hydrology and water quality, whilst increases in traffic from the proposed development alone are predicted to be below the 1,000 AADT threshold for a likely significant effect.

In combination with other plans or projects

Yes.

Whilst predicted traffic flows from the proposed development alone are below the 1,000 AADT threshold for a likely significant effect, in-combination increases in traffic flows (as set out in the Wealden Local Plan HRA) exceed this threshold. As such, further assessment of air quality effects is necessary and an Appropriate Assessment is required.

In the absence of appropriate mitigation, there is the potential for recreational disturbance effects to act in combination with other plans/projects. As such, further assessment of recreational disturbance to SPA bird species is necessary and an Appropriate Assessment is required.

Pevensey Levels SAC/Ramsar

European site interest features	Pevensey Levels SAC is designated on the basis of the following features: • Ramshorn Snail *Anisus vorticulus* Pevensey Levels Ramsar qualifies on the basis of the following criteria: • Criterion 2: supports an outstanding assemblage of wetland plants and invertebrates, including many British Red Data Book species; • Criterion 3: supports 68% of vascular plant species in Great Britain that can be described as aquatic. It is probably the best site in Britain for freshwater molluscs, one of the five best sites for aquatic beetles and supports an outstanding assemblage of dragonflies.
Conservation objectives of the European site	The conservation objectives for the SAC are to: *"Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:* • *The extent and distribution of the habitats of the qualifying features;* • *The structure and function of the habitats of the qualifying features;* • *The supporting processes on which the habitats of the qualifying features rely;* • *The population of each of the qualifying features; and* • *The distribution of the qualifying features within the site."*
Condition of European site	The most recent condition assessments for the Site of Special Scientific Interest (SSSI) which underpins the European designation states the majority of units are in unfavourable recovering condition.
Threats	A Site Improvement Plan (SIP) has been produced by Natural England in relation to Pevensey Levels SAC (dated October 2014). This identifies prioritised issues (pressures or threats) affecting the designation: 1) Inappropriate water levels 2) Invasive species (notably existing presence of Floating Pennywort *Hydrocotyle ranunculoides* and New Zealand Pigmyweed *Crassula helmsii*) 3) Water pollution (principally discharge from sewage treatment plants)
Screening of likely significant effects	
Habitat fragmentation and loss	The site is located 17km from this designation at its nearest point (see Plan 5719/HRA1), and no functional habitat will be lost as a result of the proposals. As such it is considered that no habitat loss or fragmentation will be caused by the proposals.
Urbanisation and recreational disturbance	The site is well separated from the SAC/Ramsar such that no urbanisation effects are anticipated. Recreational pressure is not identified as a threat to the SAC/Ramsar under the Wealden Local Plan HRA or SIP such that a likely significant effect can be screened out.
Hydrology and water quality	The site is not located within the catchment of the SAC/Ramsar, with no ditches within the wider locality forming part of the drainage network associated with Pevensey Levels. As such, potential for a likely significant effect as a result of changes to hydrology or run-off of pollutants can be screened out.
Air quality	The site's qualifying features are not sensitive to air quality effects. Since the SAC/Ramsar is significantly removed from the Development, the increase of traffic flows at the designation will be lower still, and at a level where it would be considered to be negligible.

Conclusion – could the proposed development result in a likely significant effect?
Alone No. The site is not located within the drainage catchment of Pevensey Levels SAC/Ramsar, such that changes to run-off or release of pollutants are not likely to result in effects on hydrology and water quality at the SAC/Ramsar. As such, it is considered that these effects can be screened out and an Appropriate Assessment is not required.
In combination with other plans or projects No In the light of the above conclusion, no residual effects would remain from the proposals which could combine with other proposals.

Lewes Downs SAC

European site interest features	Lewes Downs SAC is designated on the basis of the following features: • Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites).
Conservation objectives of the European site	The conservation objectives for the SAC are to: *"Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;* • *The extent and distribution of qualifying natural habitats and habitats of qualifying species;* • *The structure and function (including typical species) of qualifying natural habitats;* • *The structure and function of the habitats of qualifying species;* • *The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;* • *The populations of qualifying species; and* • *The distribution of qualifying species within the site."*
Condition of European site	The most recent condition assessments for the Site of Special Scientific Interest (SSSI) which underpins the European designation states the majority of units are in favourable condition.
Threats	A Site Improvement Plan (SIP) has been produced by Natural England in relation to Lewes Downs SAC (dated May 2015). This identifies prioritised issues (pressures or threats) affecting the designation: 1) Game management: pheasant rearing (with inappropriate management of grassland areas used for 'driving' birds) 2) Undergrazing 3) Public access/disturbance (causing trampling) 4) Air pollution: impact of atmospheric nitrogen deposition
Screening of likely significant effects	
Habitat fragmentation and loss	The site is located 10.7km from this designation at its nearest point, and no functional habitat will be lost as a result of the proposals. As such it is considered that no habitat loss or fragmentation will be caused by the proposals.
Urbanisation and recreational disturbance	The site is located a substantial distance from the SAC, such that no urbanisation effects would occur and few residents of the proposed development would be likely to make regular use of the designation for recreational activity. Accordingly, potential for a likely significant effect can be screened out. This is confirmed by the Wealden Local Plan HRA which does not identify recreational pressure as a potential issue resulting from development within the District.

Hydrology and water quality	The SAC is not designated for its wetland interest and would not be affected by drainage at the site. Accordingly, potential for a likely significant effect can be screened out.
Air quality	The A26 passes within 200m of the designation. The proposed development is considered to result in an increase in traffic flows of <8AADT along the A26 which runs adjacent to the SAC. This is below the 1,000 AADT threshold for a likely significant effect, based on the Wealden Local Plan HRA, in-combination increases in traffic above 1,000 AADT are predicted along these roads. Accordingly, potential for a likely significant effect as a result of changes to air quality cannot be screened out. The proposed development is considered to result in a negligible increase in traffic flows along the A26 adjacent to the SAC. Accordingly, potential for a likely significant effect as a result of changes to air quality alone can be screened out. However, based on the Wealden Local Plan HRA, in-combination increases in traffic above 1,000 AADT are predicted along the A26. Accordingly, potential for a likely significant effect as a result of changes to air quality in-combination with other plans cannot be screened out.
Conclusion – could the proposed development result in a likely significant effect?	
Alone No. No likely significant effects are identified as a result of habitat fragmentation and loss, urbanisation and recreational disturbance or hydrology and water quality, whilst increases in traffic from the proposed development are considered to be negligible.	
In combination with other plans or projects Yes. Whilst predicted traffic flows from the proposed development alone are considered to be negligible, in-combination increases in traffic flows (as set out in the Wealden Local Plan HRA) have the potential to result in changes to air quality. As such, further assessment of air quality is necessary and an Appropriate Assessment is required.	

Conclusion

Conclusion – in the absence of mitigation, do the proposals have potential to result in a likely significant effect on a European designation?
Yes, in relation to recreational disturbance in respect of Ashdown Forest SPA and in relation to in-combination increases in traffic and associated air quality in regard to Ashdown Forest SAC and Lewes Downs SAC. An Appropriate Assessment is therefore required.

3.2. Stage 2 – Appropriate Assessment

Ashdown Forest SAC/SPA

Do the proposals, in-combination with other relevant plans and projects have the potential to affect the integrity of the European designation, given the sites' conservation objectives?

Recreational Disturbance

New development in the vicinity of the Ashdown Forest SPA is likely to result in an increase in overall visitor numbers and could therefore result in an increase in recreational pressure / disturbance on the protected bird species without mitigation in place.

Studies carried out between 2008 and 2010 concluded that the current level of visitor pressure (at that time) was not affecting the distribution of Annex I birds, but that there will be point at which levels of visitor pressure are so great that birds will abandon suitable breeding habitat, with subsequent effects on the spatial distribution of birds, and the ability of the SPA to support the given density of birds. The overall conclusion of the studies were that "*without data on breeding success and without understanding why bird densities are low, it cannot be concluded on the basis of scientific evidence that the ecological integrity of nightjar and Dartford warbler populations is not being adversely affected by a combination of existing pressure and/or habitat management*" and as a consequence, the precautionary approach which is advocated has been adopted by Wealden Borough Council as the competent authority.

Results from the visitor surveys carried out in 2008, together with further surveys in 2016 have been used to identify an appropriate mitigation zone. Based on the work undertaken and following consultation with Natural England, a two zone approach has been identified:

- A 400m zone where it is unlikely that additional residential development can take place due to the inability to avoid or mitigate disturbance or urbanisation impacts; and
- A 400m -7km zone where avoidance mitigation is required

Avoidance Mitigation

The proposed avoidance mitigation takes the form of Suitable Alternative Natural Green Spaces (SANG) and contributions to Strategic Access Management and Monitoring (SAMM). The aim of SANG is to ensure that visit rates do not increase as a result of new development with new or enhanced green space is provided to draw potential users away from the Ashdown Forest SPA. SANGs are being dealt with individually by each Local Authority. Together with the provision of strategic access management (SAMM), this is considered to be an essential and effective avoidance package.

Background to SANG

The use of SANGs formed a key element of the mitigation strategy originally adopted at Thames Basin Heaths SPA and Dorset Heathlands SPA from 2005, and was developed on the basis of various studies which provided evidence supporting the principle of alternative open space provision. SANG is thus, a very well established and long proven mitigation avoidance measure, with a track history of some 17 years of implementation. Following the success of the mitigation and these SPAs, Natural England and other Competent Authorities have implemented the use of SANG as a standard method of mitigation across various other European Habitats sites (SACs and SPAs) around the country, including in regard to Ashdown Forest SPA. Most latterly in 2022, SANG has been identified for avoidance mitigation to be deployed in respect of Chiltern Beechwoods SAC, confirming the appropriateness of the measure remains current with Natural England continuing to role this out across the country.

The effectiveness of SANG, is regularly reviewed by Natural England as part of its standard SANG monitoring programme and hence SANG is actively monitored to ensure it is achieving the required avoidance function in the present day. For example, Natural England maintains a programme of visitor surveys at European designations (SAC/SPA/Ramsar) as required, with relevant Thames Basin Heaths SPA and SANG visitor monitoring work. Examples of its reporting are as follows:

- NECR136 'Results of the 2012/13 visitor survey on the Thames Basin Heaths Special Protection Area (SPA)' (NE, 2014);
- Thames Basin Heaths SANG Visitor Survey Analysis (Footprint, 2018, commissioned by Natural England);
- Visitor Access Patterns on the Thames Basin Heaths SPA (EPR, 2018, commissioned by Natural England).

In analysing the data available the 2018 work concludes that:

"the 2018 visitor survey recorded a statistically significant drop in visitor numbers across the 24 access points surveyed in both 2005 and 2018, in spite of a concurrent 12.9% increase in housing numbers within 5km of the SPA. There was also a decrease in visitor footfall compared to 2012/13, although this was not statistically significant, suggesting that the trend towards lower visitation levels is taking place gradually over time….The overall visitor profile recorded in 2018 supports the continued targeting of SANG and SAMM measures at local dog walkers….in the absence of clear and/or consistent site-specific factors, it is most likely that the implementation of SANG and SAMM measures since 2005 have had the greatest influence on visitor patterns and behaviour".

SANG guidance issued by Natural England was most recently updated in August 2021 to reflect emerging initiatives such as Biodiversity Net Gain and incorporate learnings from the operation of SANG over the last 17 years. Accordingly, Natural England continue to view the use of SANG as an effective avoidance measure.

Further evidence of the effectiveness of SANG assigned specifically to Ashdown Forest SPA is available from Wealden Council who commissioned surveys of SANGs and the Ashdown Forest SPA in 2021:

- Ashdown Forest Visitor Survey 2021 (Footprint Ecology, 2022). The findings of this 2021 study, compared to analogous 2016 survey data, records an increase in visitor numbers (7% based on tallies, 20% based on vehicle counts), although this was following the Covid pandemic when restrictions lifted but were still influencing visitor behaviour. Surveys showed a decrease in people walking dogs (from 69% to 60%) and decrease in the proportion visiting primarily as 'close to home' (from 37% to 27%), indicating SANGs are working to deflect use by the key visitor groups (local dog walkers) away from the SPA.

- Ashdown Forest SANGs Surveys 2021 (Footprint Ecology, 2022). This report sets out that *"The results show that the four SANGs are busy sites, popular with visitors and particularly working well to draw dog walkers (a target audience). The SANGs clearly attract a good proportion of people who would otherwise visit Ashdown Forest."* The survey locations were generally busier than those surveyed at Ashdown Forest – for example the tally data for the main entrances at both Horsted Green and Walshes Park had more groups entering than any of the Ashdown Forest survey points.

Background to SAMM

Similarly, Strategic Access Management and Monitoring (SAMM) is in widespread use and comprises access management measures to reduce the impact of people and dogs visiting the SPA, together with bird and visitor monitoring to assess the effectiveness of mitigation measures. Measures include development of a code of conduct, signage and interpretation, dog ownership training events and recruitment of rangers and access management officers.

The use of SAMM addresses residual increases in visitor pressure that may arise following SANG mitigation, given that this is unlikely to avoid all visits to the SPA.

As with SANGs, SAMM formed a key element of the mitigation strategy adopted at Thames Basin Heaths SPA and Dorset Heathlands SPA, and is a very well established and long proven mitigation avoidance measure dating back to 2005, with a track history of some 17 years of implementation. Natural England and Competent Authorities continue to roll out its use as a standard method and from its start point on

Thames Basin and Dorset Heaths SPAs it has now been implemented as a mitigation measure to serve various other European designations. Indeed, SAMM is even more widely adopted than SANG as it is appropriate also for use at coastal sites where SANG may not be as effective due to unique nature of the visitor draw to the coast. Within Wealden, the SAMM approach and calculation of tariff is set out within 'Ashdown Forest SPA SAMM Tariff Guidance' (October 2019). The sustained ground nesting bird interest at SPAs is testament to its effectiveness as a mitigation measure.

SPA/SAC Mitigation Measures in Wealden

Policy setting out avoidance and mitigation measures (in the form of provision of SANG and SAMM payments) is provided within the Wealdon District Council Core Strategy[23]. The Council has developed a SANG Strategy by which SANG can be delivered on a strategic level (with a tariff to be applied to each new net increase residential dwelling within the 7km zone). As an alternative, individual developments are able to provide bespoke SANG to absorb recreational pressure generated by residents within that development. The Habitats Regulations Assessment carried out for the Core Strategy, concludes that subject to the successful adoption and implementation of avoidance and mitigation measures - primarily those relating to provision of SANG for residential development within Zone B (the 400m to 7km zone), and provision of SAMM, that *"effects connected with increasing recreational pressure can be satisfactorily avoided and reduced."*

The Wealdon Local Plan HRA (2019) sets out similar policy to the Core Strategy and also concludes that *"On the basis that mitigation is implemented within Wealden District along with the other five surrounding districts or boroughs then it is considered that there will not be any adverse effect resulting from development. Such mitigation once in place will also ensure that impacts from the limited number of visitors or tourists that may arrive from further afield will be captured by the mitigation that will be in place."*

SANG proposed at Downlands

Alongside the Downlands development, in addition to SAMM, a bespoke SANG is proposed, which will occupy an area of existing grassland and woodland to the north-east of the residential development, and which is defined within the SANG and Woodland Management Plan (Revised 2023 Aspect Ecology) submitted with the application. The principles set out in Natural England's Standing Advice 'Guidelines for the creation of Suitable Accessible Natural Green Space (SANGS)[24]' have been followed to ensure the proposed SANG is compliant with these requirements. A copy of Natural England's SANG criteria is provided at Appendix 5719/2. The proposed SANG will offer a range of high quality new habitats including woodland, scrub and orchard.

Existing high quality habitats (notably the Ancient Woodland) will be protected by a combination of visitor management measures such as signage, interpretation board and dog bin provision alongside targeted protective fencing. In addition, at the request of Natural England (in their correspondence of 13 July 2023 - see Appendix 5719/3) boardwalks are also proposed along the entire length of SANG paths within Ancient Woodland. This measure will serve to improve the current condition of pathways which are presently muddy in places and to ensure that increased footfall within the SANG can be readily accommodated without risk to deterioration of ground conditions.

Regarding SANG capacity, Natural England's guidelines set out that these are to be provided on a basis of at least 8ha per 1000 population, based on an average occupancy rate of 2.4 persons per dwelling. Sufficient SANG should be provided in advance of dwelling completion to ensure that no adverse effect arises on the integrity of the SPA.

Based on the 8ha per 1000 population standard as set out by Natural England's SANG guidelines, the required SANG provision for the proposed development would be a minimum of 8.14ha (given an

[23] Wealden District Council. Wealden District (Incorporating Part of the South Downs National Park). Core Strategy Local Plan. Adopted February 2013.
[24] Natural England. Guidelines for the creation of Suitable Accessible Natural Greenspace (SANGS). Version dated August 2021.

estimated population of 1,018 people based on 424 dwellings at an average occupancy rate of 2.4 persons per dwelling). However, in order to provide a 2.3km circular walk within the SANG extension itself, it is intended that a larger area of open space will be established as SANG, totalling 13.2ha. Under Natural England's guidance, this would provide sufficient capacity for 1,650 residents (or 687 residential units).

There is existing informal public access available into the majority of SANG (primarily from Snatts Road to the south) but there is only a relatively low level of current use by the public. As such the capacity of the SANG is considered unaffected, but nonetheless taking a precautionary approach, it is proposed that the capacity of the SANG be discounted by 10% to account for this existing use.

Natural England has indicated agreement to the above approach and further advised that in line with SANG guidance, where SANG is located in sites of nature conservation interest, an ecological discount of the proposed SANG area may be required. In this regard Natural England advise that it would be appropriate to omit / discount the area of ancient woodland within the SANG from its capacity calculation. (Natural England correspondence 13 July 2023 - see Appendix 5719/3). Accordingly, under this approach SANG capacity is calculated as follows:

a) Omit the 3.2ha of ancient woodland within the SANG boundary to leave a net area of 10ha for capacity calculations.
b) Apply a 10% discount to this area to leave a final net area of 9ha for SANG capacity calculations.

Following this approach, the calculated SANG capacity equates to 1,125 residents (468 dwellings).

Accordingly the capacity of the SANG, subsequent to discounting, is of a sufficient size to accommodate the 424 proposed dwellings, with a small surplus of capacity available.

Air quality

Background information on air quality in relation to Ashdown Forest SAC is available on the APIS website (www.apis.ac.uk). This indicates that ammonia and nitrogen deposition levels are above the established critical levels/loads. Detailed modelling of air quality to inform the Wealden Local Plan HRA[25] also predicts an exceedance of the critical level for NOx across 4.61ha of the SAC, with a maximum concentration of 89.6µg/m^3.

Increases in traffic flows of up to 3,774 AADT and 4,123 AADT are predicted along the A22 and A26 respectively as a result of in-combination development up to 2028 (as set out in the Wealden Local Plan HRA). This would result in an increase in NOx, ammonia and associated nitrogen deposition relative to the comparative 'no development' scenario. Given that nitrogen deposition currently exceeds the critical load for this habitat and additional deposition could further impact on vegetation, the Wealden Local Plan HRA concludes that it cannot be ruled out that in-combination growth would not result in an adverse effect on the integrity of the site.

However, this conclusion is based on the non-improving emissions scenario A, under which there would be an overall increase in nitrogen deposition. Detailed consideration was given to the varying emissions scenarios during the Wealden Local Plan Examination, and the Inspector concluded that *"it would be unreasonable and lacking in scientific credibility to conclude that Emissions model A should be used as the basis on which to model future emissions and to assess impacts on the integrity of the SAC"* given that this makes no allowance for emissions improvements which is contrary to what is already known[26]. The Inspector states that Emissions model B *"is consistent with the precautionary principle established in relation to HRA",* and that the findings of the Dutch judgements (CJEU C-293/17 and C-294/17) *"do not preclude an approach which takes into account anticipated improvements in air quality when establishing the future baseline of emissions over the Plan period".* Accordingly, the conclusion of Natural England, based on the improving emissions trend (scenario B) is considered to be robust and is confirmed by the conclusions of the Inspector from the Local Plan Examination.

[25] UE Associates. Wealden District (Incorporating part of the South Downs National Park) Local Development Framework: Assessment of the Core Strategy under the Habitats Regulations. Submission Stage. August 2011.
[26] Letter from Inspector (Louise Nurser) on Wealden District Council Local Plan Examination dated 20 December 2019

Under the more realistic emissions scenario B, the Local Plan HRA modelling indicates that there will be substantial improvements in terms of air quality compared to the current baseline situation, even taking into account in-combination development from surrounding districts.

Notably, effectively the full area of qualifying habitats will be removed from an exceedance of the critical load for NOx, whilst there will be an overall reduction in nitrogen deposition, averaging 1.6kg N/ha/yr within areas of qualifying habitat. Whilst there will be a marginal increase in nitrogen deposition relative to a 'no development' scenario, this is not considered to result in any measurable effect in terms of vegetation.

Further details are set out in Natural England's Regulation 19 Consultation Response to the Local Plan (dated 5 October 2018) which states that *"Natural England is satisfied that it can be ascertained that the plan or project will not adversely affect the integrity of Ashdown Forest SAC […] from air quality impacts. Natural England's advice regarding air quality is that this conclusion can be reached without mitigation measures being needed under the specific requirements of the Habitats Regulations."* Further confirmation is provided by the subsequent European Site Conservation Objectives Supplementary Advice[27] which sets out that *"assessment of improvements in vehicular technology and in particular Euro6/VI standards that all vehicles are currently being manufactured to, will outweigh impacts from new development. The improvements will be marginally retarded by additional development but future nitrogen deposition and concentration will continue to decline with the existing trend."* The Supplementary Advice continues by stating that the *"Natural England Commissioned Report 210 identifies that expected increase in Nitrogen levels from additional transport would fall below the level that would reduce species richness on the site even if the expected declining trend in Nitrogen failed to materialise."*

Accordingly, it is evident that the proposed development, alone and in-combination with other plans and projects, would not result in further deterioration in terms of air quality and would not represent a real risk to the ability of other national or local measures to otherwise reduce background pollution levels, thereby undermining the restoration aims of the conservation objectives for the SAC. Accordingly, the proposed development, alone or in-combination with other plans or projects is not considered to result in an adverse effect on integrity at Ashdown Forest SAC and there is no requirement for mitigation or avoidance measures.

Conclusion – with the implementation of mitigation, will the proposals in-combination with other plans or projects avoid an adverse effect on integrity of a European designation?

Yes.

The proposed development is not considered to result in an adverse effect on integrity as a result of changes to air quality, or recreational disturbance (following the implementation of the proposed SANG and SAMM mitigation measures). Accordingly, it is evident that the proposed development, alone and in-combination with other plans and projects, would not result in an adverse effect on integrity at Ashdown Forest SAC/SPA in view of the designations' conservation objectives.

Therefore it is considered that no further assessment is required and proceeding to Stage 3 is not necessary.

Lewes Downs SAC

Do the proposals, in-combination with other relevant plans and projects have the potential to affect the integrity of the European designation, given the sites' conservation objectives?

Air quality

Background information on air quality in relation to Lewes Downs SAC is available on the APIS website (www.apis.ac.uk). This indicates that ammonia and nitrogen deposition levels are above the established

[27] Natural England (February 2019) *European Site Conservation Objectives: Supplementary advice on conserving and restoring site features – Ashdown Forest Special Area of Conservation (SAC) Site Code UK0030080*

critical levels/loads. Detailed modelling of air quality to inform the Wealden Local Plan HRA also predicts an exceedance of the critical level for NOx up to 20m from the A26, with a maximum concentration of 39.4µg/m^3.

Increases in traffic flows of 5,886 AADT are predicted along the A26 as a result of in-combination development up to 2028 (as set out in the Wealden Local Plan HRA). Based on emissions scenario A, which assumes no improvement in background emissions, the Wealden Local Plan HRA concludes that there would be a significant increase in NOx, ammonia and associated nitrogen deposition relative to the comparative 'no development' scenario, with areas of grassland up to 75m from the A26 (forming the designated interest feature) subject to increases in nitrogen deposition exceeding 1% of the lower critical load. Given that nitrogen deposition currently exceeds the critical load for this habitat and additional deposition could further impact on vegetation, the Wealden Local Plan HRA concludes that it cannot be ruled out that in-combination growth would not result in an adverse effect on the integrity of the site.

However, Natural England disagrees with this conclusion, with the Regulation 19 Consultation Response to the Local Plan (dated 5 October 2018) stating that *"Natural England is satisfied that it can be ascertained that the plan or project will not adversely affect the integrity of […] Lewes Downs SAC […] from air quality impacts. Natural England's advice regarding air quality is that this conclusion can be reached without mitigation measures being needed under the specific requirements of the Habitats Regulations."* This conclusion is based on the more likely improving emissions trend (scenario B) under which the designated grassland habitats would be unaffected by an increase in nitrogen deposition above the 1% critical load threshold.

Detailed consideration was given to the varying emissions scenarios during the Wealden Local Plan Examination, and the Inspector concluded that *"it would be unreasonable and lacking in scientific credibility to conclude that Emissions model A should be used as the basis on which to model future emissions and to assess impacts on the integrity of the SAC"* given that this makes no allowance for emissions improvements which is contrary to what is already known[28]. The Inspector states that Emissions model B *"is consistent with the precautionary principle established in relation to HRA",* and that the findings of the Dutch judgements (CJEU C-293/17 and C-294/17) *"do not preclude an approach which takes into account anticipated improvements in air quality when establishing the future baseline of emissions over the Plan period".* Accordingly, the conclusion of Natural England, based on the improving emissions trend (scenario B) is considered to be robust and is confirmed by the conclusions of the Inspector from the Local Plan Examination.

Accordingly, it is evident that the proposed development, alone and in-combination with other plans and projects, would not result in an adverse effect on integrity at Lewes Downs SAC as a result of air quality in view of the site's conservation objectives. Accordingly, there is no requirement for mitigation or avoidance measures.

Conclusion – with the implementation of mitigation, will the proposals in-combination with other plans or projects avoid an adverse effect on integrity of a European designation?

Yes.

The proposed development is not considered to result in an adverse effect on integrity as a result of changes to air quality. Accordingly, it is evident that the proposed development, alone and in-combination with other plans and projects, would not result in an adverse effect on integrity at Lewes Downs SAC in view of the site's conservation objectives.

Therefore it is considered that no further assessment is required and proceeding to Stage 3 is not necessary.

[28] Letter from Inspector (Louise Nurser) on Wealden District Council Local Plan Examination dated 20 December 2019

4. Summary

4.1. This document provides information to inform a Habitats Regulations Assessment of the proposed development, given the presence of a number of European designations within the site surrounds.

4.2. An initial assessment determined that the proposals do not relate to the management of the designations. A screening exercise has been undertaken to identify whether the proposed development could result in a likely significant effect on European designations, both alone and in-combination with other plans and projects (Stage 1).

4.3. The screening exercise has concluded that in the absence of mitigation, potential for a likely significant effect is predicted in relation to in-combination increases in traffic and associated air quality at Lewes Downs SAC and Ashdown Forest SAC, and that there is the potential for a likely significant effect to arise on Ashdown Forest SPA in relation to recreational disturbance. Therefore, an Appropriate Assessment is required.

4.4. The Appropriate Assessment (Stage 2) has concluded that, in view of the designations' conservation objectives, following the implementation of mitigation measures the proposed development would have no effect on the integrity of the surrounding European designations either alone or in-combination with other plans and projects.

Plan 5719/HRA1:

Site Location and European Designations within 25km



Key:

- Site Location
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar Site
- 25km Buffer

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Aspect Ecology Limited · West Court · Hardwick Business Park
Noral Way · Banbury · Oxfordshire · OX16 2AF
01295 279721 · info@aspect-ecology.com · www.aspect-ecology.com

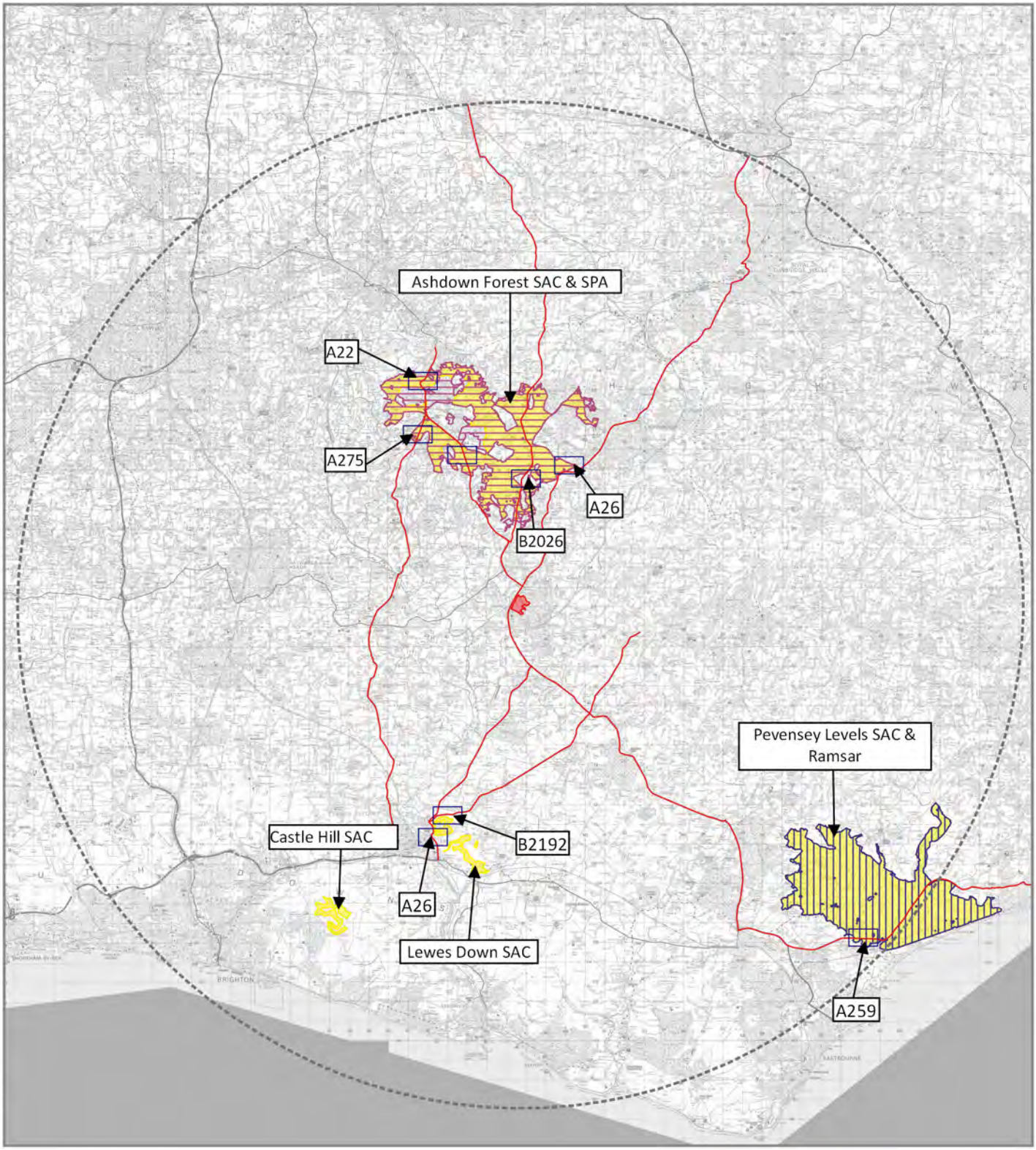
Land at Downlands Farm, Uckfield	PROJECT
Site Location & European Designations	TITLE
5719/HRA1	DRAWING NO.
B/AM	REV
May 2022	DATE

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Plan 5719/HRA2:

Main Roads Located within 200m of a European Designation



Key:

- Site Location
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar Site
- Major Roads
- 25km Buffer
- Sensitive Road Location

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Noral Way · Banbury · Oxfordshire · OX16 2AF
01295 279721 · info@aspect-ecology.com · www.aspect-ecology.com

Land at Downlands Farm, Uckfield	PROJECT
Road Locations within 200m a Sensitive European Designation	TITLE
5719/HRA2	DRAWING NO.
B/AM	REV
May 2022	DATE

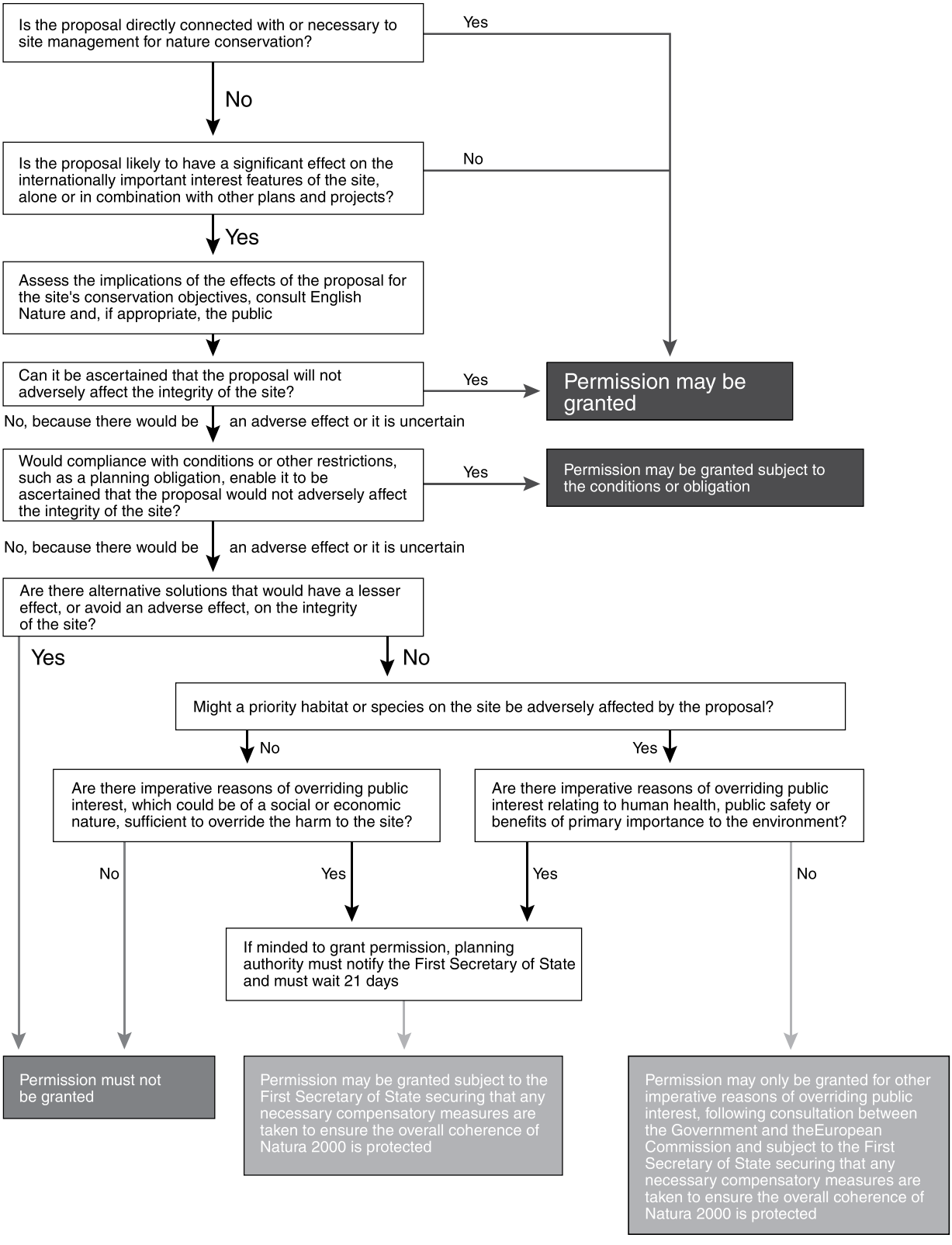
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Appendix 5719/1:

(Figure 1) within ODPM circular 06/2005

Figure 1: **Consideration of development proposals affecting Internationally Designated Nature Conservation Sites**



Appendix 5719/2:

Natural England SANG Criteria

Guidelines for Creation of Suitable Alternative Natural Greenspace (SANG) – August 2021

Introduction

'Suitable Alternative Natural Greenspace' (SANG) is the name given to green space that is of a quality and type suitable to be used as avoidance within the Thames Basin Heaths Planning Zone.

Its role is to provide alternative green space to divert visitors from visiting the Thames Basin Heaths Special Protection Area (SPA). SANG are intended to provide avoidance measures for the potential impact of residential development on the SPA by preventing an increase in visitor pressure on the SPA. The effectiveness of SANG as mitigation will depend upon the location and design. These must be such that the SANG is more attractive than the SPA to users of the kind that currently visit the SPA.

This document describes the features which have been found to draw visitors to the SPA, which should be replicated in SANG. It provides guidelines on

- the type of site which should be identified as SANG
- measures which can be taken to enhance sites so that they may be used as SANG

It also covers the outputs of the recent Thames Basin Heaths Project 2021.

These guidelines relate specifically to the means to provide mitigation for significant impact arising from new housing within the Thames Basin Heaths Zone of influence. They do not address nor preclude the other functions of green space. Other functions may be provided within SANG, as long as this does not conflict with the specific function of mitigating visitor impacts on the SPA.

SANG may be created from:

- existing open space of SANG quality with no existing public access or limited public access, which for the purposes of mitigation could be made fully accessible to the public
- existing open space, which is already accessible, but which could be changed in character so that it is more attractive to the specific group of visitors who might otherwise visit the SPA
- land in other uses which could be converted into SANG

The identification of SANG should seek to avoid sites of high nature conservation value which are likely to be damaged by increased visitor numbers. Such damage may arise, for example, from increased disturbance, erosion, input of nutrients from dog faeces, and increased incidence of fires. Where sites of high nature conservation value are considered as SANG, the impact on their nature conservation value should be assessed and considered alongside relevant policy in the development plan. These sites may require an ecological discount of their proposed SANG area.

SANG continue to need to be delivered in advance of any associated housing stock being occupied. They should also be funded for in perpetuity as is the current process.

The Character of the SPA and its Visitors

The Thames Basin Heaths SPA is made up of 13 Sites of Special Scientific Interest, and consists of a mixture of heathland, mire, and woodland habitats. They are essentially 'heathy' in character. The topography is varied, and most sites have a large component of trees and some contain streams, ponds and small lakes. Some are freely accessible to the public and most have a degree of pubic access, though in some areas this is restricted by army, forestry or other operations.

Survey effort in 2005 showed that more than 83% of visitors to the SPA arrive by car, though access points adjacent to housing estates showed a greater proportion arriving on foot (up to 100% in one case). 70% of those who visited by car had come from within 5km of the access point onto the SPA. A very large proportion of the SPA visitors are dog walkers, many of whom visit the particular site on a regular (more or less daily) basis and spend less than an hour there, walking on average about 2.5km. Almost 50% are retired or part-time workers and the majority are women. Further detailed information on visitors can be found in the reports referenced at the end of this document. These figures have been supported in further SPA wide surveys, the most recent being in 2018.

Guidelines for the Quality of SANG

The quality guidelines have been sub-divided into different aspects of site fabric and structure. They have been compiled from a variety of sources but principally from visitor surveys carried out at heathland sites within the Thames Basin Heaths area or within the Dorset heathlands. These are listed as references at the end of this document.

The principle criteria contained in the Guidelines have also been put into a checklist format which are contained in Appendix 1.

Accessibility

Most visitors come by car and want the site to be fairly close to home. Unless SANG are provided for the sole use of a local population living within a 400-metre catchment around the site, then **the availability of adequate car parking at sites larger than 4 ha is essential**. The amount and nature of parking provision should reflect the anticipated use of the site by visitors and the catchment size of the SANG. It should provide an attractive alternative to parking by the part of SPA for which it is mitigation. **Car parks should be clearly signposted and easily accessed**.

New parking provision for SANG should be advertised as necessary to ensure that it is known of by potential visitors.

Target groups of Visitors

This should be viewed from two perspectives, the local use of a site where it is accessed on foot from the visitor's place of residence, and a wider catchment use where it is accessed by car. **Most of the visitors to the SPA come by car and therefore should be considered as a pool of users from beyond the immediate vicinity of the site.** All but the smallest SANG should therefore target this type of visitor.

It is apparent from access surveys that a significant proportion of those people who visit the sites on foot, also visit alternative sites on foot and so this smaller but significant group look for local sites. **Where large populations are close to the SPA, the provision of SANG should be attractive to visitors on foot.**

Networks of sites

The provision of longer routes within larger SANG is important in determining the effectiveness of the authorities' network of SANG as mitigation. The design of routes within sites will be critical to providing routes of sufficient length and attractiveness for mitigation purposes.

Though networks of SANG may accommodate long visitor routes and this is desirable, they should not be solely relied upon to provide long routes.

Paths, Roads and Tracks

The findings suggest **that SANG should aim to supply a choice of routes of around 2.3 - 2.5km in length** with both shorter and longer routes of at least 5km as part of the choice, where space permits.

Paths have to be of a width acceptable to visitors.

Paths should be routed so that they are perceived as safe by the users, with some routes being through relatively open (visible) terrain (with no trees or scrub, or well spaced mature trees, or wide rides with vegetation back from the path), especially those routes which are 1-3 km long.

The routing of tracks along hill tops and ridges where there are views is valued by the majority of visitors.

Artificial Infrastructure

Little or no artificial infrastructure is found within the SPA at present apart from the provision of some surfaced tracks and car parks. Generally, an urban influence is not what people are looking for when they visit the SPA and some people undoubtedly visit the SPA because it has a naturalness about it that would be marred by such features.

However, **SANG would be expected to have adequate car parking with good information about the site and the routes** available. Some subtle waymarking would also be expected for those visitors not acquainted with the layout of the site.

Other infrastructure would not be expected and should generally be restricted to the vicinity of car parking areas where good information and signs of welcome should be the norm, though discretely placed benches or information boards along some routes would be acceptable.

Landscape and Vegetation

SANG do not have to contain heathland or heathy vegetation to provide an effective alternative to the SPA.

Surveys clearly show that **woodland or a semi-wooded landscape is a key feature** that people appreciate in the sites they visit, particularly those who use the SPA. This is more attractive than open landscapes or parkland with scattered trees.

A **semi-natural looking landscape with plenty of variation** was regarded as most desirable by visitors and some paths through quite enclosed woodland scored highly. There is clearly a balance to be struck between what is regarded as an exciting landscape and a safe one and so some element of choice between the two would be highly desirable. The semi-wooded and undulating nature of most of the SPA sites gives them an air of relative wildness, even when there are significant numbers of visitors on site. SANG should aim to reproduce this quality.

Hills do not put people off visiting a site, particularly where these are associated with good views, but steep hills are not appreciated. **An undulating landscape is preferred to a flat one.**

Water features, particularly ponds and lakes, act as a focus for visitors for their visit, but are not essential.

Restrictions on usage

The bulk of visitors to the SPA came to exercise their dogs and so it is imperative that **SANG allow for pet owners to let dogs run freely over a significant part of the walk**. **Access on SANG should be largely unrestricted, with both people and their pets being able to freely roam**

along the majority of routes. This means that sites where freely roaming dogs will cause a nuisance or where they might be in danger (from traffic or such like) should not be considered for SANG.

Assessment of site enhancement as mitigation

SANG may be provided by the enhancement of existing sites, including those already accessible to the public that have a low level of use and could be enhanced to attract more visitors. The extent of enhancement and the number of extra visitors to be attracted would vary from site to site. Those sites which are enhanced only slightly would be expected to provide less of a mitigation effect than those enhanced greatly, in terms of the number of people they would divert away from the SPA. In order to assess the contribution of enhancement sites in relation to the hectare standards of the Delivery Plan, it is necessary to distinguish between slight and great enhancement.

Methods of enhancement for the purposes of this guidance could include enhanced access through guaranteed long-term availability of the land, creation of a car park or a network of paths.

SANG which have not previously been open to the public count in full to the standard of providing 8ha of SANG per 1000 people in new development. SANG which have an appreciable but clearly low level of public use and can be substantially enhanced to greatly increase the number of visitors also count in full. The identification of these sites should arise from evidence of low current use. This could be in a variety of forms, for example:

- Experience of managing the site, which gives a clear qualitative picture that few visitors are present
- Quantitative surveys of visitor numbers
- Identified constraints on access, such as lack of gateways at convenient points and lack of parking
- Lack of easily usable routes through the site
- Evidence that the available routes through the site are little used (paths may show little wear, be narrow and encroached on by vegetation)

Practicality of enhancement works

The selection of sites for enhancement to be SANG should take into account the variety of stakeholder interests in each site. Consideration should be given to whether any existing use of the site which may continue is compatible with the function of SANG in attracting recreational use that would otherwise take place on the SPA. The enhancement should not result in moving current users off the SANG and onto the SPA. The specific enhancement works proposed should also be considered in relation not only to their effects on the SANG mitigation function but also in relation to their effects on other user groups.

TBH SPA Mitigation Project – January 2021

The Hart, Rushmoor and Surrey Heath Councils worked together with Natural England to complete a project reviewing the approach to mitigation within the Thames Basin Heaths. The work analysed eleven potential alternative options when it comes to delivering SPA mitigation. The report concluded that the role and design of SANG could be clarified further.

To be made very clear from the outset. There remains a hierarchy of SANG provision. Great weight will be given to those SANGS meeting all the existing quality criteria (shown in Appendix 1) which should be delivered in the first instance. Only if this is **not possible**, **for clearly established reasons**, should the delivery of the options outlined in the section below be considered. If any proposed SANGS do not meet all of the Appendix 1 quality criteria, then these SANGS will continue to be assessed on a case by case basis and should be **agreed** with both the competent authority and Natural England. The proposal will need to demonstrate equivalent effectiveness of mitigation being provided to ensure a robust, consistent approach continues. Any shortfall in SANG criteria should be offset by other complementary means, such as an elevated provision rate, size or high-quality features.

The evidence shows that the use of SANG networks, linear orientated sites and small sites of no smaller than two hectares have potential to provide effective mitigation where traditional SANG is unavailable. These SANG areas will be linked and/or in proximity to an already established SANG. If effectiveness can be demonstrated of small or linear SANGs working alone, then we will assess this on a case by case basis, taking in to account the site's context amongst the wider greenspace network.

Historically Natural England have apportioned significant weight to the requirement for a 2.3 – 2.5km circular walk, which is less likely to be achievable in a small or linear SANG. These guidelines do not remove weight from the requirement but do accept that in specific circumstances the walk doesn't have to be included within every single SANG unit. It is however desirable to provide the full Appendix 1 criteria across a local SANG network or on another SANG.

Natural England would urge all Local Planning Authorities to take note, that this approach **could** enable sites previously deemed unacceptable to Natural England, to now qualify as valid avoidance measure. Please come and speak to us if you feel that is the case.

Appendix 1: Site Quality Checklist – for a SANG

This guidance is designed as an Appendix to the full guidance on Suitable Alternative Natural Greenspaces (SANG) to be used as mitigation (or avoidance) land to reduce recreational use of the Thames Basin Heaths SPA.

Must haves

- For all sites larger than 4ha there must be adequate parking for visitors, unless the site is intended for local use, i.e. within easy walking distance (400m) of the developments linked to it. The amount of car parking space should be determined by the anticipated use of the site and reflect the visitor catchment of both the SANG and the SPA.
- Possible to complete a circular walk of 2.3-2.5km around the SANG.
- Car parks must be easily and safely accessible by car and should be clearly sign posted.
- The accessibility of the site must include access points appropriate for the visitor use the SANG is intended to cater for.
- The SANG must have a safe route of access on foot from the nearest car park and/or footpath/s
- All SANG with car parks must have a circular walk which starts and finishes at the car park.
- SANG must be designed so that they are perceived to be safe by users; they must not have tree and scrub cover along parts of the walking routes.
- Paths must be easily used and well maintained but most should remain unsurfaced to avoid the site becoming to urban in feel.
- SANG must be perceived as semi-natural spaces with little intrusion of artificial structures, except in the immediate vicinity of car parks. Visually sensitive way-markers and some benches are acceptable.
- All SANG larger than 12 ha must aim to provide a variety of habitats for users to experience.
- Access within the SANG must be largely unrestricted with plenty of space provided where it is possible for dogs to exercise freely and safely off lead.
- SANG must be free from unpleasant intrusions (e.g. sewage treatment works smells etc).

Should haves

- SANG should be clearly sign-posted or advertised in some way.
- SANG should have leaflets and/or websites advertising their location to potential users. It would be desirable for social media to be used as well, with the goal of reducing paper use. Although a leaflet for a new home is desirable. It could advertise the TBH Partnership website at https://www.tbhpartnership.org.uk/greenspace/

Desirable

- It would be desirable for an owner to be able to take dogs from the car park to the SANG safely off the lead.

- Where possible it is desirable to choose sites with a gently undulating topography for SANG

- It is desirable for access points to have signage outlining the layout of the SANG and the routes available to visitors.

- It is desirable that SANG provide a naturalistic space with areas of open (non-wooded) countryside and areas of dense and scattered trees and shrubs. The provision of open water is encouraged and desirable on sites. However large areas of open water cannot count towards capacity.

- Where possible it is desirable to have a focal point such as a viewpoint, monument etc within the SANG.

Appendix 2: Further clarification on the TBH Project 2021

Reliance on the length of circular walk could be given less weight in specific circumstances on individual SANG sites. A circular route is still required. This will be agreed on a case by case basis by Natural England and the relevant Local Planning (Competent) Authority and only where equivalence can be effectively demonstrated. Sites will also only be accepted where most of the other criteria from Appendix 1 are met, either individually or as part of a group of sites.

Small SANG – This will be no smaller than 2 hectares in size. Where possible all other Appendix 1 criteria should be met, and the site will be adjacent to, linked in an accessible manner to, or close to a SANG or network which can deliver the required circular walk. Small SANG should be available to residents on their doorsteps.

Linear SANG – This approach allows for the width of a SANG to be reduced, where the walk incorporates an attractive linear feature or links to other open sites. For example, alongside waterways or disused railway lines. Linear SANG should include sites with wider areas, creating irregular shapes and opportunities for dogs to exercise freely off lead. In exceptional cases a there and back walk could qualify. It would require strong evidence and visitor surveys to show that it will provide an avoidance experience like that of a traditional SANG. It would also be preferable for linear SANG to link with wider routes and/or other SANGs to provide opportunities for a variety of walks.

SANG Network – Where several SANGs are in proximity or adjacent, they can be used and visited as one single entity. This approach allows for the use of links between SANG units to deliver a circular walk and meet all the Guidelines in combination. The default position is that the SANG links would not count as having capacity or catchments but would need to be secured in perpetuity. If they happen to be a substantial unit of green space themselves then they could be included within the SANG calculation. The size of an individual SANG catchment can be increased depending on the area afforded by an overall SANG network (excluding links), in line with the quanta figures in the TBH Delivery Framework.

Equivalence – This will be required on all SANG sites not meeting the guidelines in Appendix 1. There will have to be an over provision of something else to offset the lack of the full circular walk. This would be likely to incorporate an increased provision rate, for example providing 12 hectares of SANG per thousand head of population. A significant high quality SANG in terms of amenities and habitats could also demonstrate this requirement. We are happy to discuss this matter further on a case by case basis, either through our DAS Service for developers or our Local Plan Service for Local Planning Authorities.

Appendix 3: Suitable Alternative Natural Greenspace: A best practice guide

Natural England would urge that these recommendations are followed unless there is valid justification for a deviation.

A SANG can be greatly improved for visitors and wildlife by implementing some of the suggestions in this guide. They are based on Natural England's Strategic Access Management and Monitoring teams' findings from visiting SANG and undertaking visitor number and questionnaire surveys.

This guide has been produced to provide more advice to Local Planning Authorities and developers up front. These are features found throughout the current SANG suite that we feel have tangible positive impacts on the draw to a SANG. We understand that it may not be possible to adopt them all, especially in a smaller SANG. There are a lot of quick fixes in this list which will generate a substantial uplift in SANG attractiveness. Natural England are likely to raise fewer concerns through the formal planning process on a SANG which provides the majority of the following.

It is essential that Natural England visits and agrees a SANG, before any housing development can be attributed towards it. This is in line with Policy NRM6 of the South East Plan. For SANG development advice please contact Natural England's Discretionary Advice Service:

https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals

It is advisable to contact your local planning authority at the first instance of SANG development.

Naming of SANG:

1. Use a name which highlights any attractive features within the site. E.g. meadow, copse, lake etc.
2. Avoid the use of the word 'SANG' in the name of the site.
3. Keep the name relevant to the location but dissimilar to nearby SANG's.
4. The name is different to any associated development.

Location of SANG:

1. Where possible, provision of connectivity to wider greenspace/other SANG is recommended but should ensure a SANG does not result in new and additional access and visits to sensitive sites.
2. Seek to protect and enhance any existing local wildlife site designations (e.g. SSSI/SINC/SNCI) within or adjacent to the SANG boundary.

Biodiversity:

1. Ensure habitat of SANG complements adjacent habitats. e.g by extending similar landscape or something complementary such as grassland for foraging woodland birds.
2. Ensure appropriate connectivity of landscape scale habitat features. e.g. hedgerows, tree belts etc.
3. Include features such as; dead wood, sand banks, wildflower meadows etc.
4. Where open water is included, separate dog ponds and wildlife ponds. (Case study 4)
5. Avoid frequent mowing as a tool to manage grasslands, it is an expensive technique which produces little biodiversity benefit.
6. Grazing is a good management tool. It is not suitable for all SANG, but if it possible on your SANG, a route must be provided which avoids the grazing area for the benefit of those nervous of cattle.
7. Good practice monitoring of SANG use should be built into in perpetuity management of the site, and work consistently with the SAMM Project.

Biodiversity Net Gain (BNG) is an approach to land management and/or development that aims to leave biodiversity in a measurably better state than before. BNG does not change existing protections to protected sites, irreplaceable habitats or protected species.

Through appropriate design and implementation BNG can complement the purpose of SANGS. These are designed to provide more natural and diverse green space for communities to benefit from and, consequently, delivering more effective mitigation to alleviate pressure on SPAs. SANG is not an automatic delivery mechanism for BNG but the two can exist on the same site. BNG on SANG is only attributable to such habitat creation or enhancement that proves measurable additionality over and above the minimum requirements of the SANG, demonstrated through use of the Biodiversity Metric stipulated by the consenting body.

For BNG to be delivered on SANG, the SANG should achieve nature conservation outcomes that demonstrably exceed existing obligations under the SANG guidance, as quantified through the metric. It is encouraged that, where applicable, additional or enhanced features at SANGs are informed by local nature or wildlife strategies and priorities, such as Local Nature Recovery Strategies (LNRS). It is recommended that the BNG calculations for the SANG are done separately from the rest of the project calculations, in order to ensure a clear audit trail and allow for simple demonstration of the additional biodiversity unit uplift beyond the minimum SANG requirements. Any additional features provided for BNG purposes should not conflict with the principle purpose of the SANG. Consideration should be given for other ecosystem services provided by the SANG and design should ensure BNG does not compete with these but delivers alongside them. For example, a wildflower rich grassland area created for biodiversity benefits would provide additional ecosystem services but could potentially also conflict with recreational services provided by the SANG. Careful consideration should be given to the design of any additional biodiversity features introduced into the SANG to ensure they did not conflict with the SANGs principle purpose.

For the purposes of the BNG calculation, the baseline value of the SANG is the site with the Habitat Regulation key required habitat features incorporated. Enhancements should be additional to count towards BNG, in that the enhancements would not have taken place in the absence of the BNG funding (or commitment of funding) and the biodiversity benefit (as measured through the metric) should not also be claimed to compensate for another project's biodiversity impact. Further information on BNG is set out in the following guidance and standards

1. The CIEEM, CIRIA, IEMA Good practice principles for development should be followed: https://cieem.net/wp-content/uploads/2019/02/C776a-Biodiversity-net-gain.-Good-practice-principles-for-development.-A-practical-guide-web.pdf

2. The British Standard for Biodiversity Net Gain (BS 8683) is a process standard that describes the implementation of BNG by a project (to be released in 2021).

Equality Act 2010 Compliance:

1. This does not fall under the remit of Natural England and we will not be giving bespoke advice about it during our pre application discussions. However, we urge developers and Local Planning Authorities alike to consider the requirements of it, when designing their SANG solutions.

Paths:

1. We are concerned about sections of the circular route that seasonally are wet, muddy or flooded, and could put visitors off from visiting. In these cases, we recommend boardwalk or paths are built up, for them to remain as compliant SANG. Relating to this, if applying grip to surfaces, avoid wire netting as it can trap dog claws.
2. Path surfacing needs to remain semi natural. The highest specification surface we would accept is resin bound hoggin.

3. Avoid convoluted paths and pinch points in SANG design. By maintaining a minimum width between paths of 100 m in open ground and 50 m in dense woodland.
   If necessary, look to extend the area of the SANG, or look at a local SANG Network.
4. Avoid paths running through areas adjacent to major infrastructure with prolonged loud noise. For example, adjacent dual carriageways or motorways. Natural England look at a maximum decibel limit of 60, before requiring discounting of SANG area.

Way-marking and signage:

1. Provide a map at the entrances with an easy to follow circular walk.
2. Gates, fencing and planting following natural land features can help distinguish routes.
3. Highlight points of interest and site history.
4. Car parks well sign posted using highways specification. Where possible through use of the brown sign initiative.
5. Provide contact details for site manager at main entrance.

Bins and dog fouling:

1. Dog bins should be in convenient sections of site and near the entrances.

Car park standard:

1. Provide a minimum of 1 parking space per ha.

Safety and security:

1. Where required for health and safety purposes, the SANG should have suitable access for emergency vehicles.
2. Car parks should be designed to reduce risk of anti-social behaviour, break in or feelings of vulnerability for site users.
3. Perimeter fencing secure to prevent dogs getting out.

Amenities:
These are **not a requirement** but have proved an attractive feature in those SANG with the space available.

1. A play area is a feature that attracts those with children to visit the site, as these are not present on the SPA. If a play area is included, it should be made from sustainable natural sources and not be full of bright plastics.
2. A café or food/drink provisions often attracts more visitors to the site. (Case study 4)

To conclude
We sometimes lose track of the basic requirement for a SANG, which is to attract people away from the SPA. When designing all SANG, the visitor experience needs to be put first. Costings and even habitat creation should all fall from a strong Visitor Strategy, which should form part of the SANG Management Strategy. Sites and their information should be created in a positive manner to interest visitors and have them coming back time and time again. Though biodiversity and landscape planning are obviously important, we urge you to start by considering the local populous and what they want and how they want to interact with your site, when creating a new SANG.

Case Studies

1. Edenbrook Country Park – Hart District Council - Well surfaced paths, and provisions for wildlife.

Edenbrook is a 24-hectare country park, delivered by Berkeley in partnership with Natural England and Hart District Council.
The paths are sufficiently wide for a combination of site users (Figure 1). There is also a good network of surfaced paths which are not convoluted and avoids pinch points. This was historically agricultural fields, but through innovative design, they have delivered a site that delivers both for visitors but also for biodiversity. Hart District Council have recognised the SANG network approach here and are bolting on extra area to the SANG and linking to other SANG in the vicinity.



Figure 1: The surfaced paths at Edenbrook are located sufficiently far from one another, and from wildlife rich-areas. They are wide enough for the whole combination of site visitors to use.

2. Farnham Park – Waverley Borough Council - Provisions for dogs and wildlife.

Several of the ponds in Farnham Park are designated as wildlife ponds. These are rich in wildlife, hosting many amphibian and invertebrate species. Dead hedges were built around three of the ponds, using materials cut from Farnham Park. To provide water and an opportunity to swim, 'Friends Pond' has been kept fully accessible to dogs. It is located nearest the main entrance and is easily accessible to all visitors. The wildlife ponds are further away from the main entrance, where visitor density is expected to be lower.



Figure 2: 'Friends Pond' a dog pond on Farnham Park which allows dogs to swim and drink from, whilst other ponds are fenced to protect wildlife.

3. Bucklers Forest – Bracknell Forest Council Comprehensive and engaging interpretation.

At the entrance to the site, Buckler's Forest includes a map that shows 3 options for circular routes (measuring 3.6 km, 2.4 km and 1.3 km). It also includes information on the wildlife that visitors can expect to see on site. As well as this, it highlights the site history. The inclusion of such comprehensive signage encourages users to care more about the site.
Buckler's Forest has showcased its site history by incorporating green electrical boxes, retained from the transport laboratory, into the site design. These have been transformed into benches, bug hotels, and even mini 'museum' exhibitions. The integration of the site's history is beloved by many site visitors and it creates a distinctly 'country park' feel.



Figure 3: A mini 'museum' exhibition including some archaeological samples found on site. Located within a green electrical box present when the site was a transport laboratory.



Figure 4: A bug hotel also within a repurposed green electrical box.

4. Heather Farm – Delivered by Horsell Common Preservation Society in partnership with Woking Borough Council - Provision of amenities.

Heather Farm has proved to be a very popular SANG, particularly for of its amenities, including a café and a large car park. Whilst it is not possible, or advisable, to include a café on every SANG, at Heather Farm, it has attracted a lot of visitors, many of whom would otherwise visit the SPA. After identifying a need for additional parking provisions, Horsell Common Preservation Society added 57 new spaces to the car park. There are currently 109 car parking spaces for visitors. Heather Farm provides 4 spaces per hectare, significantly more than the suggested minimum of 1 space per hectare.



Figure 5: A view of some of the habitat creation at Heather Farm

5. Wellesley Woodlands – Rushmoor Borough Council - Waymarking and signposting.

Wellesley Woodlands has incorporated non-intrusive way-markers to clearly signpost users around the 8 trails included in the SANG. These are easy to follow for site users whilst remaining unobtrusive. Where multiple trails intersect, signposting is clear to ensure that trails can be followed with ease. Both the map and associated markers clearly identify those trails that are suitable ground for wheelchairs and those with restricted mobility.



Figure 6: A signpost clearly defining two all-ability trails, the Birch Trail and the Holly Trail.



Figure 7: A way-marker to signpost users along the Wellesley Willow Trail.

6. Biodiversity Net Gain

Examples of Biodiversity Net Gain delivered within a SANG:

A. If an extra hedgerow was put into a SANG, not for screening purposes, this could count. If it is put in for screening reasons, this is a key SANG feature and therefore cannot count towards BNG unless the hedgerow was of higher distinctives than that needed for screening purposes or maintained in better ecological condition, in which case it could count.
B. Planting wildflower bulbs on appropriately sited amenity grassland within a SANG and in turn converting it to species rich meadow could be counted towards BNG.
C. If the SANG has structures such as a toilet block or café, then BNG could be delivered through the introduction of green/vegetated roofs and/or walls on such structures.

Potential Opportunities for Biodiversity Net Gain



Appendix 4: SANG Information Form

This form is designed to help you gather information about any potential SANG. For more guidance on the creation of SANG, please also refer to the relevant Borough Council's Thames Basin Heaths SPA Interim Avoidance Plan.

Natural England, Local Planning Authorities, and other organisations will then be able to consider the potential suitability of the proposed SANG based on this initial information.

Background information

Name and location of proposed SANG	**Name:** **Address:** **Grid reference:** **(Please attach a map of the site with the boundaries clearly marked)**
Size of the proposed SANG (hectares), excluding water features	**hectares**
Any current designations on land - e.g. LNR / SNCI	
Current owners name and address. (If there is more than one owner then please attach a map)	
Who manages the land?	
Legal arrangements for the land – e.g. how long is the lease?	
Is there a management plan for the site? (if so, please attach)	

Current visitor arrangements

Is the site currently accessible to the public?	
Does the site have open access?	
Has there been a visitor survey of the site? (If so, please attach)	
If there has been no visitor survey, please give and indication of the current visitor levels on site	
Does the site have existing car parking?	**How many car parks?** **How may car parking spaces?** **(Please mark car parks and numbers of car parking spaces on the site map)**
Are there any existing routes or paths on the site?	**(Please mark these on the map)**
Are there signs to direct people to the site? (Please indicate where and what type of sign)	

Site quality checklist

Must/should haves – these criteria are essential for all SANG			
	Criteria	**Current**	**Future**
1	Parking on all sites larger than 4ha (unless the site is intended for use within 400m only)		
2	Circular walk of 2.3-2.5km		
3	Car parks easily and safely accessible by car and clearly sign posted		
4	Access points appropriate for particular visitor use the SANG is intended to cater for		
5	Safe access route on foot from nearest car park and/or footpath		
6	Circular walk which starts and finishes at the car park		
7	Perceived as safe – no tree and scrub cover along part of walking routes		
8	Paths easily used and well maintained but mostly unsurfaced		

9	Perceived as semi-natural with little intrusion of artificial structures		
10	If larger than 12 ha then a range of habitats should be present		
11	Access unrestricted – plenty of space for dogs to exercise freely and safely off the lead		
12	No unpleasant intrusions (e.g. sewage treatment smells etc)		
13	Clearly sign posted or advertised in some way		
14	Leaflets or website advertising their location to potential users		
15	Can dog owners take dogs from the car park to the SANG safely off the lead		
16	Gently undulating topography		
17	Access points with signage outlining the layout of the SANG and routes available to visitors		
18	Naturalistic space with areas of open countryside and dense and scattered trees and shrubs. Provision of open water is desirable		
19	Focal point such as a viewpoint or monument within the SANG		

Appendix 5719/3:

Correspondence from Natural England; dated 13 July 2023

Date: 13 July 2023
Our ref: 438677
Your ref: APP/C1435/W/23/3321978

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

The Secretary
The Planning Inspectorate
Room 3J Kite Wing
Temple Quay House
2 The Square
Temple Quay
Bristol
BS1 6PN

tim.salter@planninginspectorate.gov.uk

BY EMAIL ONLY

Dear Tim Salter

Town and Country Planning Act 1990
Appeal by: Gleeson Land and John Alison Land & Research Ltd
Site: LAND AT DOWNLANDS FARM, UCKFIELD
Proposal: HYBRID PLANNING APPLICATION COMPRISING: OUTLINE APPLICATION (WITH ALL MATTERS RESERVED EXCEPT FOR ACCESS) FOR THE ERECTION OF UP TO 424 NO. RESIDENTIAL DWELLINGS INCLUDING AFFORDABLE HOUSING, THE PROVISION OF VEHICULAR, PEDESTRIAN AND CYCLE ACCESS AND SEPARATE EMERGENCY ACCESS FROM THE UCKFIELD BYPASS (A22), PEDESTRIAN AND CYCLE ACCESS FROM SNATTS ROAD, OPEN SPACES INCLUDING CHILDREN'S PLAY SPACE, SUSTAINABLE URBAN DRAINAGE SYSTEMS, ASSOCIATED LANDSCAPING, INFRASTRUCTURE AND EARTHWORKS; AND FULL APPLICATION COMPRISING CREATION OF A STRATEGIC SANG, ASSOCIATED LANDSCAPING AND CAR PARKING, AND DEMOLITION OF EXISTING RESIDENTIAL PROPERTY AND OTHER BUILDINGS AND PROVISION OF PEDESTRIAN AND CYCLE ACCESS FROM ROCKS ROAD, ASSOCIATED LANDSCAPING, INFRASTRUCTURE AND EARTHWORKS.
Planning Inspectorate Reference: APP/C1435/W/23/3321978

This letter constitutes Natural England's formal Appeal Statement with respect to the above planning proposal.

If you have any queries relating to the advice contained herein please contact me at heather.twizell@naturalengland.org.uk

Yours sincerely

Heather Twizell
Senior Adviser
Sussex and Kent Area Team

Cc. Wealden District Council
Aspect Ecology

1. Summary of Natural England's advice as of 13th July 2023

Natural England's advice on this application is focused on its impact on designated nature conservation sites. The absence of detailed advice on other natural environment matters should not be taken to mean that impacts are acceptable, simply that these are matters for Wealden District Council (and now the Inspector) to determine.

In the absence of mitigation the proposal is likely to have an adverse effect on the integrity of the Ashdown Forest Special Protection Area (SPA) and Special Area of Conservation (SAC) through the pathway of increased recreational pressure. Wealden District Council is part of an agreed strategic planning solution to manage this impact which requires all net increases in housing within a 7km Zone of Influence (ZOI) around the SPA / SAC to provide a financial contribution to the Strategic Access Management and Monitoring (SAMM) Strategy AND to either provide a financial contribution to secure capacity at a previously agreed Suitable Alternative Natural Greenspace (SANG) or to provide bespoke SANGs as part of individual development proposals. The Downlands Farm application has chosen to bring forward its own SANG.

This Appeal Statement provides Natural England's updated advice on the proposed Downlands Farm SANG. We are advising that through the appeal process the Inspector should consider three outstanding matters in relation to the SANG (summarised below and covered in more detail in Section 4):

- SANG design to be amended to provide boardwalk along the entirety of the circular route where it runs through ancient woodland.
- Discounting of SANG capacity on ecological grounds.
- Confirmation and securing of the long-term ownership and management of the SANG.

Provided these matters can be suitably addressed through the appeal process then Natural England has no objection to the proposal.

2. Case History

To date Natural England has provided a single, formal advice letter in relation to this application dated 22nd September 2022 (Our Ref: 401475). This response was a Further Information Request raising a number of questions and concerns relating to the original SANG design (Downlands Woodland Park – SANG and Woodland Management Plan, Aspect Ecology, June 2022). We advised that until these matters (as summarised below) were suitably addressed the SANG could not be considered as effective mitigation for recreational pressure impacts on the Ashdown Forest SPA / SAC. Matters raised in this response were:

- Concern around the significant use which the SANG made of ancient woodland, including the provision of new paths through it and a request for further consideration of the impact that considerably increased public access (from promoted use by the proposed adjacent development of 424 dwellings vs current, informal access) could have on sensitive woodland habitats.
- A request for more detailed consideration of the potential impacts of the SANG on other (non-ancient woodland) priority habitats and protected species on site.
- Concern that the circular walk was somewhat contrived and not reflective of how visitors would actually use the site and a recommendation that inclusion of more focal points could help address this.
- Reiteration that SANG footpaths need to remain easily useable all year round and that while unsurfaced footpaths are preferable this may require some areas of surfacing or boardwalks in any seasonally wet areas.
- A recommendation that for the community orchard to qualify as part of the SANG area it would need to have a 'wild' feel which could be achieved through non-linear planting and combining it with areas of wildflower meadow.

- A request for justification of the 10% discounting applied to the SANG capacity (on the basis of current, informal public access).

Since then, Natural England has received two further, formal consultations from Wealden District Council on updated application information dated 1st December 2022 and 1st March 2023 but due to internal issues we have unfortunately been unable to respond to either.

Natural England did provide a brief, informal response direct to the appellant's ecological and SANG consultant Aspect Ecology dated 20th February 2023 (As reproduced at Appendix 5 of the letter from Aspect Ecology to Wealden District Council dated 21 February 2023). This was in response to an email from Aspect Ecology seeking Natural England's opinion on 3 potential SANG options making differing levels of use of the ancient woodland on site. Our response acknowledged the adjustments that had been made to the SANG design following our original advice and stated our preference for the option which limited new paths within the ancient woodland (provided that this was not likely to have any unintended consequences such as increasing unmanaged access elsewhere).

Since this informal response in February Natural England has provided no further verbal or written advice on this application until the provision of this Appeal Statement.

3. New information not yet commented on by Natural England

The further comments in this Appeal Statement are based on the following information submitted as part of the application (before appeal proceedings began):

- Letter from Aspect Ecology to Wealden District Council dated 21 February 2023 (which contains the key updated SANG design);
- Updated SANG and Woodland Management Plan by Aspect Ecology, February 2023 (to capture the SANG design updates) and
- Updated Report to Inform a Habitats Regulations Assessment (HRA) by Aspect Ecology, February 2023 (to capture the SANG design update). Otherwise referred to as the Shadow HRA.

More recently we have also received via an email from Aspect Ecology dated 4th July 2023 an updated SANG Overview Plan showing the inclusion of boardwalk along lengths of the SANG circular route (following further winter survey work and to address our earlier concern around seasonally wet ground reducing desirability of the SANG circular route).

4. SANG

In preparing this Appeal Statement Natural England has now fully reviewed the documents outlined above in Section 4. We appreciate the changes to the SANG design that have been made since we provided our original response in September 2022. These changes resolve a number of the concerns previously raised but we consider that the following matters remain outstanding and will need to be addressed through the appeal process:

- The SANG design should be amended to provide boardwalk along the full extent of the circular route where it passes through ancient woodland (not just through the wetter areas as currently proposed in the SANG Overview Plan (July 2023). This will help to manage the extent of visitor access within the ancient woodland.

- At present the SANG is currently proposed to offer capacity for 848 units (given a size of 13.2 ha discounted by 10% to account for existing, informal access). Given that the SANG makes use of ancient woodland (a sensitive and irreplaceable habitat) Natural England would recommend that the Inspector considers discounting its capacity further on ecological grounds. This is set out in Natural England's SANG Guidelines (August 2021) as one of the ways to allow sites of high nature conservation value to be brought forward as SANGs. There is no specific guidance on the appropriate level of discounting but one possibly would

be to effectively remove the 3.2ha of ancient woodland still within the SANG boundary from the SANG capacity calculations and then apply the 10% discount to the remaining area to take account of existing levels of use. This would still provide sufficient capacity for the Downlands development as currently proposed but with very little extra to attribute to other developments.

- Paragraphs 3.51-3.52 of the updated SANG Management Plan (Feb 2023) relate to long-term ownership and management of the SANG but do not confirm what this will be. Instead, several possible options are proposed including the future developer, Town Council, District Council or another organisation. Given the importance of the SANG being suitably managed and maintained in perpetuity in order to constitute effective mitigation for the recreational pressure impacts of the development on the Ashdown Forest SPA / SAC (for the lifetime of that development) Natural England advises that clarity on this matter must be secured as part of the appeal process. If the SANG is not to pass to a public body or well-established charity such as The Land Trust then the provision of 'step in rights' must also be secured to allow the District Council to take the SANG into their control if there is evidence that it is not being maintained as per the Management Plan.

5. Ancient Woodland

Beyond the proposed creation of the SANG Natural England is aware that the development as a whole has the potential for other direct and indirect impacts on ancient woodland. Natural England has fully supported Wealden District Council (and now the Inspector through this appeal process) in using both our standing advice for ancient woodland and ancient and veteran trees along with advice from other environmental consultees to form a view on whether the overall impact of the development on the woodland complex as whole is acceptable when considered against paragraph 180(c) of the National Planning Policy Framework (NPPF, 2021) which states:

development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;

Natural England only provides bespoke advice on ancient woodland, ancient and veteran trees where they form part of a Site of Special Scientific Interest or in exceptional circumstances (e.g. significant direct loss), neither of which criteria applies here. Our standing advice is a material consideration when determining planning applications and carries the same weight as a bespoke response.

6. Habitats Regulations Assessment

Natural England agrees with the following conclusions within the applicant's HRA.

That the proposal is not likely to have a significant effect on the following sites which can therefore be screened out from further assessment:

- Castle Hill SAC – 17.3km distant.
- Pevensey Levels SAC and Ramsar site. It should be noted that the HRA contains several inaccuracies in relation to the Pevensey sites. On page 11 it states that the application site lies 1.3km from Pevensey Levels when the correct distance is some 17km. On the same page in relation to 'Hydrology and water quality' it states that a likely significant effect cannot be screened out but then goes on to conclude on page 12 that there will be no likely significant effect either alone or in-combination. A final error comes at the bottom of page 13 where Pevensey is incorrectly screened in for potential air quality impacts.

We agree with the HRA taking the following sites and pathways of impact through to Appropriate

Assessment:

- Ashdown Forest SPA / SAC for both recreational disturbance and air quality.
- Lewes Downs SAC for air quality.

Appropriate Assessment – Recreational Disturbance

Natural England does not currently concur with the conclusion of no adverse effect on integrity (AEOI) through the impact pathway of recreational disturbance on the Ashdown Forest SPA / SAC. This is on the basis that through this Appeal Statement we have recommended further modifications to the SANG design, capacity and long-term management from what has currently been assessed in the Shadow HRA.

It will be for the Inspector (as the 'competent authority' under the Habitats Regulations) to carry out their own Appropriate Assessment of the project (to include any changes that may result from this appeal process). Provided that our further recommendations regarding the SANG are taken forward we are satisfied that this Appropriate Assessment will be able to conclude no AEOI.

Appropriate Assessment – Air Quality

Natural England concurs with the conclusion of no adverse effect on integrity (AEOI) through the impact pathway of reduced air quality through increased traffic flows for both the Ashdown Forest SPA / SAC and the Lewes Downs SAC.

ecology • landscape planning • arboriculture

aspect

Aspect Ecology Ltd
West Court
Hardwick Business Park
Noral Way
Banbury
Oxfordshire OX16 2AF

T: 01295 279721
E: info@aspect-ecology.com
W: www.aspect-ecology.com

ENCLOSURE 4

Land at Downlands Farm, Uckfield

Baseline Ecological Appraisal

(Updated September 2023)

Planning Ref: WD/2022/1637/MEA, Appeal Ref: APP/C1435/W/23/33219)

September 2023

Quality Management	
Client:	Gleeson Land
Project:	Downlands Farm, Uckfield
Report Title:	Baseline Ecological Appraisal (Updated September 2023)
Project Number:	ECO-5719
File Reference:	5719 EcoAp vf6 /EG/MRD/AB
Date:	08/09/2023

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Legal Guidance

The information set out within this report in no way constitutes a legal opinion on the relevant legislation (refer to the relevant Annex for the main provisions of the legislation). The opinion of a legal professional should be sought if further advice is required.

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Contact Details

Aspect Ecology Ltd
Hardwick Business Park I Noral Way I Banbury I Oxfordshire OX16 2AF
t 01295 279721 e info@aspect-ecology.com
w www.aspect-ecology.com

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Annex 5719/1	Evaluation Methodology
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Annex 5719/3	Desktop Study Data
Annex 5719/4	Woodland Botanical Survey 2020 - Compartment Descriptions and DAFOR Botanical Species Lists.
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Annex 5719/6	Grassland Botanical Survey (Snatt's Road) – Detailed Results and Species lists
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Annex 5719/8	Building Descriptions
Annex 5719/9	Breeding Bird Survey – Detailed Survey Results 2019
Annex 5719/10	Breeding Bird Survey – Detailed Survey Results 2023

1 Introduction

1.1 Background and Proposals

1.1.1 Aspect Ecology has been commissioned by Gleeson Land to undertake a Baseline Ecological Appraisal in respect of proposed development of land at Downlands Farm, Uckfield, centred at grid reference TQ 4661 2223 (see Plan 5719/ECO1). This report builds on the previously submitted Baseline Ecological Appraisal for the site (Aspect Ecology Ref: 5719 EcoAp vf4 /MRD/AB, dated June 2022) by detailing the results of the updated survey work that has been undertaken to date throughout the site during 2023.

1.1.2 Residential development is proposed within one large agricultural fields, with a further agricultural field being used for the creation of the SANG, whilst a new vehicular access and secondary emergency access will created from the A22. A planning application was submitted in June 2022 (Planning ref: WD/2022/1637/MEA), which is now subject to a planning appeal (Appeal Ref: APP/C1435/W/23/33219).

1.2 Site Overview

1.2.1 The site occupies land between Snatt's Road, Uckfield, in the east, and the A22 Uckfield bypass to the west and comprises a mixture of grassland and broad swathes of deciduous woodland. Several minor tributaries of the Shortbridge Stream run through the site. There are also several linear features in the form of mature tree lines and a number of ponds within a woodland setting.

1.2.2 The site is bounded to the north by areas of woodland forming part of Budletts Wood and Paygate Wood, beyond which are further areas of woodland, farmland and scattered rural dwellings. To the east, the site is bound by Snatt's Road, with residential areas forming the urban fringe of Uckfield beyond this. Lake Wood (an area of woodland and a lake managed by the Woodland Trust) abuts the site to the south, and Fir Tree Grove is immediately adjacent to the south-east corner of the site, beyond which is Rock's Road.

1.2.3 In general terms, the land surrounding the site to the north, west and south of the site largely comprises a mixture of agricultural land interspersed with areas of Ancient and Semi-Natural Woodland and Ancient Replanted Woodland. Beyond this lies development at the western edge of Uckfield along London Road, to the north-east, and beyond Rocks Road, to the south. The wider area to the north of the Site includes the villages of Maresfield, Cooper's Green and Five Ash Down.

1.3 Purpose of the Report

1.3.1 This report documents the methods and findings of the baseline ecology surveys and desktop study carried out in order to establish the existing ecological interest of the site, and subsequently provides an appraisal of the likely ecological effects of the proposals. The importance of the habitats and species present is evaluated. Where necessary, avoidance, mitigation and compensation measures are proposed so as to safeguard any significant existing ecological interest within the site and where appropriate, opportunities for ecological enhancement are identified with reference to national conservation priorities and local Biodiversity Action Plans (BAPs).

2 Methodology

2.1 Desktop Study

2.1.1 In order to compile background information on the site and its immediate Sussex Biological Records Centre (SxBRC) were contacted in January 2021 and May 2023, with data requested on the basis of a search radius of 2km.

2.1.2 Where information has been received from the above organisation(s) this is reproduced at Annex 5719/3 and on Plan 5719/ECO2, where appropriate.

2.1.3 Information on statutory designations was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database, which utilises data provided by Natural England, with an extended search radius (25km). In addition, the MAGIC database was searched to identify the known presence of any Priority Habitats within or adjacent the site. Relevant information is reproduced at Annex 5719/3 and on Plan 5719/ECO2, where appropriate.

2.1.4 In addition, the Woodland Trust database was searched for any records of ancient, veteran or notable trees within or adjacent to the site.

2.2 Habitat Survey

Phase 1 Habitat Survey

2.2.1 The site was surveyed in August 2019 in order to ascertain the general ecological value of the land contained within the boundaries of the site and to identify the main habitats and ecological features present, with a further update of the Fir Tree Grove area (in the south-east of the site) taking place during April 2022.

2.2.2 The site was surveyed based on standard Phase 1 Habitat Survey methodology[1], whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail through Phase 2 surveys. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal[2] to record details on the actual or potential presence of any notable or protected species or habitats.

2.2.3 Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified. The nomenclature used for plant species is based on the Botanical Society for the British Isles (BSBI) Checklist.

2.2.4 During April 2023 an updated walkover survey was completed of the site to ascertain whether there had been any significant changes to the ecological baseline.

1 Joint Nature Conservation Committee (2010, as amended) *'Handbook for Phase 1 habitat survey: A technique for environmental audit.'*

2 Chartered Institute for Ecology and Environmental Management (CIEEM) (2013) '*Guidelines for Preliminary Ecological Appraisal.*'

Woodland Surveys

2.2.5 All woodland areas were subject to detailed botanical survey during May and June 2020. For each woodland compartment a species list was compiled of vascular plants, with particular reference being made to the presence of ancient woodland indicator species (AWI) including ancient woodland vascular plants (AWVPs). The diversity of AWVPs is a recognised approach to determining woodland quality, as well as providing secondary evidence in terms of an indication of the likely 'ancientness' of woodland. The survey technique was informed by a range of guidance methodologies including Glaves et. al. 2009[3].

2.2.6 A separate woodland botanical survey was carried out of Fir Tree Grove during April 2022, and the results of this are presented in a separate Technical Note (Sylvan Technical Note TN05 – Fir Tree Grove – Botanical Survey of Woodland and Proposed Boardwalk Alignment), which is presented as Appendix 7.1 of the Environmental Statement.

2.2.7 Updated woodland botanical surveys were carried out of all those woodland areas now within the current red line, including Fir Tree Grove, in April and June 2023, using the same methodology. This comprised woodland compartments W4d, W4e, W5a, W5b, W6a, W6b, W7, W8a, W8b, W8c, W8d and W9. A new compartment (W5b) was also created to provide separate survey results for the non-ancient woodland component to the northeast of Shermanreed Wood.

Phase 2 Botanical Surveys

2.2.8 Areas of likely elevated botanical interest identified during the Phase 1 Habitat survey were subject to further targeted botanical survey. One such area of grassland, in the eastern part of the site, adjacent to Snatts Road, was identified as having a moderately species-rich sward was subject to detailed botanical survey using the National Vegetation Classification (NVC) methodology[4] alongside survey methodologies provided in the Higher Level Stewardship (HLS) Farm Environment Plan Handbook[5].

Lower Plants – Sandstone Outcrops

2.2.9 Sandstone outcrops occur in the vicinity of Fir Tree Grove which support communities of bryophytes and lichens. Similar outcrops in the vicinity of the site (such as those at Lake Woods and elsewhere) are known to support nationally important communities of lower plants, and as such a specialist survey and assessment of the lower plant communities at Fir Tree Grove was carried out. The site was visited by a specialist on 26th April 2022.

2.3 Faunal Surveys

2.3.1 General faunal activity, such as mammals or birds observed visually or by call during the course of the surveys was recorded. Specific attention was also paid to the potential presence of any protected, rare or notable species, and specific consideration was given to bats, Badger, Dormouse, reptiles and Great Crested Newt as described below.

[3] Glaves et al. (2009). Field Surveys for Ancient Woodlands: Issues and Approaches. A report to the Woodland Trust.
[4] Rodwell, J.S. (2006) *NVC Users' Handbook*, JNCC, Peterborough.
[5] Natural England. *Higher Level Stewardship Farm Environment Plan (FEP) Manual Technical guidance on the completion of the FEP and identification, condition assessment and recording of HLS FEP features Third Edition – March 2010*

Bats[6]

Visual Inspection Surveys

2.3.2 **Buildings**. Buildings within the site were subject to specific internal and external inspection surveys using ladders, torches and binoculars where necessary in May 2019.

2.3.3 During the external inspections, particular attention was given to any potential roost features or access points, such as broken or lifted roof tiles, lifted lead flashing, soffit boxes, weatherboarding, hanging tiles, etc. and for any external signs of use by bats such as accumulations of bat droppings or staining. Binoculars were used to inspect any inaccessible areas more closely where appropriate.

2.3.4 During the internal inspections, evidence for the presence of bats was searched for with particular attention paid to any loft voids and relevant potential roost features and locations, such as ridge boards, rafters, purlins, gable walls, and mortise joints. Specific searches were made for bat droppings that can indicate present or past use and extent of use, whilst other signs that can indicate the possible presence of bats were also searched for, e.g. presence of stained areas, feeding remains, corpses, etc. Any droppings collected during the course of the surveys were visually assessed and attributed to a species where possible on the basis of size/shape/texture[7]. Where appropriate, samples of similar droppings were collected with gloved hands and put into labelled eppendorfs, and forwarded to the University of Warwick for DNA analysis.

2.3.5 **Trees**. Trees were assessed for their suitability to support roosting bats based on the presence of features such as holes, cracks, splits or loose bark. Suitability for roosting bats was rated based on relevant guidance[8] as:

- Negligible;
- Low;
- Moderate; or
- High.

2.3.6 Any potential roost features identified were also inspected for any signs indicating possible use by bats, e.g. staining, scratch marks, bat droppings, etc.

Dusk Emergence/ Dawn Re-entry Survey

2.3.7 Dusk emergence and dawn re-entry surveys were carried out on 5th and 13th June 2022 to identify any bats roosting in buildings highlighted to have potential to support roosting bats.

2.3.8 Surveyors employed Anabat Scout handheld bat detectors. Infrared (IR) camera set-ups, comprising a Canon AX11 IR sensitive camera and two Evolva T38 IR lights, which was deployed on the southern elevation of Building B1. IR cameras were utilised to aid in the identification of precise roosting locations and confirm the number of any emerging / re-entering bats recorded. At dusk, surveyors were in position 15-30 minutes prior to sunset, remaining in place for approximately 2 hours. At dawn, surveyors were in place approximately 1 hour 30 minutes to 2 hours before sunrise and remained in place until 15

[6] Surveys based on: English Nature (2004) '*Bat Mitigation Guidelines'* and Collins, J. (ed.) (2016) '*Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn).' Bat Conservation Trust

[7] Stebbings, RE, Yalden DW and Herman, JS (2007). '*Which bat is it? A guide to bat identification in Great Britain and Ireland.'* The Mammal Society

[8] Collins, J. (ed.) (2016) '*Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn).' Bat Conservation Trust

minutes after sunrise. This survey method aims to identify any roosting bats emerging from or returning to potential roost sites.

2.3.9 This survey work was carried out during suitable weather conditions, as set out in Tables 2.1 and 2.2 below.

Table 2.1. Dusk survey details.

Date	Start & end times & time of sunset	Structure reference / location	Equipment used	Weather
05/05/2022	Start time: 20:12 End time: 22:27 Sunset: 20:27	B1	Anabat Scout. Infra-red Camera (Cannon AX11)	Dry, 90% cloud, BF1, 15°C
Comments: The survey was undertaken by 4 surveyors under direction of licence holder CLS00307.				

BF0 = calm, BF12 = hurricane force.

Table 2.2. Dawn survey details.

Date	Start & end times & time of sunrise	Structure reference / location	Equipment used	Weather
13/05/2022	Start time: 03:13 End time: 05:28 Sunrise: 03:22	B1	Anabat Scout. Infra-red Camera (Cannon AX11)	Dry, 10% cloud, BF2, 10°C
Comments: The survey was undertaken by 4 surveyors under direction of licence holder CLS00307.				

BF0 = calm, BF12 = hurricane force.

Activity Surveys

2.3.10 Walked transect surveys were undertaken during September and October 2019, between April and August 2020, and on a monthly basis from May to October 2023 in order to ascertain the level of usage of the site by foraging or commuting bats. This survey method involves walking planned transect routes with key listening points, specifically covering habitats/features with particular potential for commuting or foraging bats. Echometer EM3 or Anabat Scout handheld bat detectors were employed to aid identification of any bats observed. Each transect was walked from approximately 15 minutes prior to sunset, for 2-3 hours, with a minimum 3 minute stop at each listening point. This methodology was repeated for 1.5 - 2 hours prior to sunrise to complete the dawn survey.

2.3.11 This survey work was carried out during suitable weather conditions, as set out in Table 2.3 below.

Table 2.3. Walked transect survey details.

Date	Start & end times & time of sunset/sunrise	Transect / location	Equipment used	Weather
03/09/2019	Start time: 19.27 End time: 21.30 Sunset: 19.42	Transects A, B and C	Echo Meter EM3.	Dry, 10% cloud, BF1, 18°C
09/10/2019	Start time: 18.22 End time: 20.22 Sunset: 18.22	Transects A, B and C	Echo Meter EM3.	Dry, 20% cloud, BF1, 13°C
14/04/2020	Start time: 19.23 End time: 21.53 Sunset: 19.53	Transects A, B and C	Echo Meter EM3.	Dry, 0% cloud, BF2, 11°C
26/05/2020	Start time: 20.28 End time: 22.58 Sunset: 20.58	Transects A, B and C	Echo Meter EM3.	Dry, 30% cloud, BF2, 16°C

08/06/2020	Start time: 20.42 End time: 23.12 Sunset: 21.12	Transects A, B and C	Anabat Scout.	Dry, 10% cloud, BF1, 13°C
06/07/2020	Start time: 20.45 End time: 23.15 Sunset: 21.15	Transects A, B and C	Anabat Scout.	Dry, 20% cloud, BF1, 16°C
03/08/2020	Start time: 20.11 End time: 22.41 Sunset: 20.41	Transects A, B and C	Anabat Scout.	Dry, 40% cloud, BF1, 17°C
04/08/2020	Start time: 03.29 End time: 05.59 Sunrise: 05.29	Transects A, B and C	Anabat Scout.	Dry, 0% cloud, BF1, 12°C
03/05/2023	Start time: 20:24 End time: 22:24 Sunset: 20:24	Transect C	Anabat Scout	Dry, 40% cloud, BF4, 9-11°C
10/05/2023	Start time: 20:27 End time: 22:37 Sunset: 20:35	Transect B	Anabat Scout	Dry, 20% cloud, BF3, 11-13°C
06/06/2023	Start time: 21:10 End time: 23:10 Sunset: 21:10	Transects B and C	Anabat Scout	Dry, 5% cloud, BF2, 14°C
10/07/2023	Start time: 21:12 End time: 23:12 Sunset: 21:12	Transects B and C	Anabat Scout	Dry, 50% cloud, BF1, 18-20°C
08/08/2023	Start time: 20:34 End time: 22:43 Sunset: 20:34	Transects B and C	Anabat Scout	Light shower 20:45-20:52, 100% cloud, BF1, 16-17°C

BF0 = calm, BF12 = hurricane force

2.3.12 Automated static detector surveys were also carried out during which Song Meter 4 (SM4) detectors were positioned at four locations within the site for a minimum of five days each during September and October 2019, between April and August 2020, and between May and October 2023, to record any bat activity. All four static detectors were deployed during the same dates each month except for during September 2019 and July 2020. During September statics in locations 1 and 2 were deployed between 3rd-9th September whereas a static was deployed in location SD4 between 25th-29th September. Static detectors were deployed at locations SD1, SD2 and SD5 in July between 6th-12th with a single static detector in location SD1 being deployed separately during 16th-21st July because of microphone errors during the initial July deployment. The detector locations are shown on Plan 5719/ECO5 and 5719/ECO7. The detectors were set to switch on 30 minutes before sunset and switch off 30 minutes after sunrise. The weather conditions during the static detector surveys carried out in 2023 are provided below.

Table 2.4. Automated detector survey details.

Survey Date	Weather Conditions			
	Wind (BF)	Temp(ᶜ)	Cloud Cover (%)	Precipitation (mm)
03/05/2023	4	9	20-100	0
04/05/2023	2	10-11	80-100	1.3
05/05/2023	1-2	10-11	10-40	0
06/05/2023	2-3	12	100	2.9
07/05/2023	2	10-12	5-10	0
08/05/2023	3	12	100	2.7
09/05/2023	2	12	100	7.9
10/05/2023	3	10	30	7.0
06/06/2023	3-4	9-10	15-40	0
07/06/2023	3	10-12	0-20	0
08/06/2023	3-4	12-13	40-75	0
09/06/2023	2	14	20-80	0.3
10/06/2023	1	15-18	20-85	0.3
11/06/2023	2	15-16	70-85	0.3
12/06/2023	2	15-16	5-20	0
10/07/2023	2-3	16-18	30-85	0
11/07/2023	3-4	14-16	50-75	0.2
12/07/2023	3	13-15	20-85	0.1
13/07/2023	2	14-16	10-60	0
14/07/2023	3-4	15-17	40-100	2.6
15/07/2023	4-6	14-16	85-100	0.8
16/07/2023	3	13-14	10-20	0

Analysis of Bat Survey Recordings

2.3.13 All bat calls were analysed using Analook W v4.4a and Anabat Insight to verify the species recorded during the survey work. Where recordings could not be reliably attributed to species (such as for *Myotis* species) or where overlaps between otherwise distinguishable species occur (such as in Pipistrelle bat calls around 40kHz or 50kHz) calls were identified to genus level; in the case of calls which could not be distinguished between *Nyctalus* sp. and Serotine, these have been labelled as 'unidentified big bat' species.

Badger (*Meles meles*)[9]

2.3.14 A detailed Badger survey was carried out in August 2019, with a further update survey carried out in April 2022. The survey comprised two main elements. The first element involved searching for evidence of Badger setts. For any setts that were encountered, each sett entrance was noted and mapped. The following information was recorded:

- Number and location of well used / active entrances; these are clear from any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently;
- Number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance; and

[9] Based on: Mammal Society (1989) '*Occasional Publication No. 9 – Surveying Badgers*'

- Number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.

2.3.15 The second element involved searching for signs of Badger activity such as well-worn paths and push-throughs, snagged hair, footprints, latrines and foraging signs, so as to build up a picture of any use of the site by Badger.

Dormouse *(Muscardinus avellanarius)*[10]

2.3.16 Surveys were undertaken to establish the presence/absence of Dormouse within the site between October 2019 and August 2020. Survey work followed the methodology set out within best practice guidance[10], whereby nesting tubes are attached to branches of trees and shrubs and checked on a regular basis for signs of use by Dormouse.

2.3.17 The guidance employs an indexation system to define survey effort, based on the number of tubes deployed and months over which these are in place and are checked for signs of use. Months in which use of nest tubes by Dormouse is more likely afford a higher number of points than months when there is a lower likelihood of use. The guidance recommends that determination of absence of Dormouse from a site should be based on a survey effort score of at least 20 points.

2.3.18 Accordingly, a total of 175 Dormouse nest tubes were deployed within the site, distributed evenly throughout the hedgerows and woodland edges within the site (see Plan 5719/ECO8). Nest tubes were checked monthly between October 2019 and November 2019 and again from May 2020 to August 2020, giving a total survey effort score of 20 points across the entire survey area.

Otter (*Lutra lutra)*[11]

2.3.19 The watercourses within the site were thoroughly searched for signs of Otter in August 2019. Such signs include holts (underground chambers used for lying up), spraints, prints, paths and slides. The banks of the watercourse were examined thoroughly from both sides (where accessible) and from the watercourse itself where scrub and water depth allowed.

Water Vole (*Arvicola amphibious)*[12]

2.3.20 The watercourses within the site were thoroughly searched for signs of Water Vole in August 2019. Such signs include latrines, tunnels, lawns (small areas of vegetation grazed by Water Vole) and footprints. The banks of the watercourse were examined thoroughly from both sides (where accessible) and from the watercourse itself where scrub and water depth allowed.

[10] Based on: English Nature (2003) '*Surveying dormice using nest tubes: Results and experiences from the South West Dormouse Project',* English Nature (2006) '*The Dormouse Conservation Handbook'*, 2nd Edition;, English Nature Research Report No. 524; and Natural England (2011) '*Interim Natural England Advice Note – Dormouse surveys for mitigation licensing – best practice and common misconceptions'*, WML-537 (12/11)

[11] Surveys based on: Life in UK Rivers (2003) *'Monitoring the Otter - Conserving Natura 2000 Rivers*'. Monitoring Series No. 10

[12] Surveys based on: Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) '*Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.*

Reptiles[13]

2.3.21 Given the presence of potentially suitable reptile habitat within the site, specific surveys were undertaken to establish the presence/absence of common reptile species between June and July 2020, and between April and May 2023.

2.3.22 A total of 140 50x50cm sheets of thick roofing felt were placed within suitable areas across the site to act as artificial refugia, which represents a density of ~46 refugia per hectare of suitable reptile habitat. The refugia, or 'tins', provide shelter and heat up more quickly than their surroundings in the morning and can remain warmer than their surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles use them to bask under and raise their body temperature, which allows them to forage earlier and later in the day. Therefore, checking the refugia at appropriate times of the day (morning and evening) enables the presence/absence of common reptiles to be determined.

2.3.23 The refugia remained undisturbed for approximately 1-2 weeks to allow reptiles to find and start using them. Following this initial bedding-in period, refugia were checked at appropriate times of the day on seven occasions during suitable weather conditions, as set out below in Table 2.5.

Table 2.5. Reptile survey dates and weather conditions.

Survey Date	Weather Conditions			
	Wind (BF)	Temp(c)	Cloud Cover (%)	Precipitation
22/06/2020	2	17	10	Dry
24/06/2020	1	19	0	Dry
27/06/2020	3	15	100	Heavy Rain
29/06/2020	1	15	80	Dry
01/07/2020	2	16	50	Dry
03/07/2020	3	14	60	Dry
05/07/2020	4	16	100	Light Rain
07/07/2020	1	19	95	Dry
13/04/2023	4	11	5	Dry
19/04/2023	2	14	50	Dry
26/04/2023	2	14	10	Dry
04/05/2023	3	17	90	Dry
10/05/2023	2	17	5	Dry
17/05/2023	1	15	10	Dry
25/05/2023	2	16	40	Dry

BF0 = calm, BF12 = hurricane force

2.3.24 In addition, reptiles basking in the open or partial cover were actively searched for in suitable locations across the site through direct observation. Existing natural objects (e.g. logs and rocks) and artificial refugia (e.g. debris, tyres, etc.) were also searched, where present, for reptiles or evidence of reptiles (e.g. sloughed skin).

Great Crested Newt (*Triturus cristatus)*

Habitat Suitability Index (HSI)

2.3.25 As a first step in identifying the potential presence of Great Crested Newt at the site, a Habitat Suitability Index (HSI) study was undertaken of all relevant water bodies within

[13] Surveys based on: Froglife Advice Sheet 10 (1999) '*Reptile Survey - an introduction to planning, conducting and interpreting surveys for snake and lizard conservation.*'

250m[14] of the site boundary (based on a review of Ordnance Survey mapping and satellite imagery). Guidance set out within Natural England's Method Statement template, to be used when applying for a Great Crested Newt development licence, states that surveys of ponds within 500m of the site boundary are only required when '(a) data indicates that the pond(s) has potential to support a large Great Crested Newt population, (b) the footprint contains particularly favourable habitat, (c) the development would have a substantial negative effect on that habitat and (d) there is an absence of dispersal barriers.' Given that in this instance, none of the four points listed above are applicable to the site, it is considered that survey of ponds within 500m of the site boundary is not required, and that survey of ponds within 250m represents adequate survey effort.

2.3.26 An HSI study is used to assess the potential of water bodies to support Great Crested Newt. It is undertaken by attributing a score to a number of factors that can affect the presence or absence of this species. Ten factors are utilised in an HSI assessment, as described below:

- *SI1 Location.* The location of the water body within Great Britain;
- *SI2 Pond area.* The size of the water body;
- *SI3 Permanence.* How often the water body dries out;
- *SI4 Water Quality.* The water quality, based primarily on invertebrate diversity;
- *SI5 Shade.* The percentage of the perimeter of the water body that is shaded;
- *SI6 Fowl.* The presence or absence of water fowl;
- *SI7 Fish.* The presence or absence of fish;
- *SI8 Pond Count.* The number of water bodies within 1km of the surveyed water body (not counting those on the far side of major barriers such as roads);
- *SI9 Terrestrial.* The quality of terrestrial habitat surrounding the water body; and
- *SI10 Macrophytes.* The percentage cover of the surface area of the water body covered by macrophytes (aquatic plants).

2.3.27 The overall suitability of the water body is then determined by entering these figures into an equation devised by Oldham *et al*. (2000)[15]. The suitability of water bodies is classed into one of five categories, either 'poor', 'below average', 'average', 'good' or 'excellent'.

2.3.28 This HSI study was undertaken in line with the guidelines developed by Oldham *et al.* and subsequently adapted by ARG UK (2010)[16]. A suitably experienced ecologist undertook the assessment in line with these guidelines, with the study also supplemented by desktop research where appropriate.

Environmental DNA (eDNA)

2.3.29 An eDNA survey was carried out on 29th June 2019 to determine the presence/absence of Great Crested Newt within five on-site ponds, **P2-P6** and one off-site pond, **P8** (see Plan 5719/ECO9). An updated eDNA survey was carried out on 20th April 2023. Water samples were collected following the procedure outlined in the methods manual prepared for

[14] 250m is the typical maximum migratory range of this species, see English Nature (2004) '*An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt* Triturus cristatus'. English Nature Research Report 576

[15] Oldham RS, Keeble J, Swan MJS & Jeffcote M (2000) '*Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*'. Herpetological Journal 10 (4), 143-155

[16] Amphibian & Reptile Groups of the UK (2010) '*ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index*'

DEFRA by Biggs *et al*. (2014)[17]. The survey fell within the acceptable seasonal window set out by Natural England (15th April to 30th June)[18]. Samples were collected by suitably licensed Aspect Ecology staff. The water samples were sent for laboratory analysis which was conducted by 'Fera' in 2019 and by 'Cellmark' in 2023, and also followed the procedure set out by Biggs *et al.* (2014)[14].

Detailed presence / absence survey

2.3.30 Two on-site ponds (**P1** and **P6**) and one off-site pond (**P20**) (see Plan 5719/ECO9) were subject to further specific Great Crested Newt survey between March and June 2020, having been identified through the HSI assessment as having 'good' potential to support Great Crested Newt, or having tested positive using the eDNA technique.

2.3.31 Seven on-site ponds (**P1**-**P6**, **P21**) and one off-site pond (**P20**) (see Plan 5719/ECO9) were subject to further specific Great Crested Newt survey between April and June 2023.

2.3.32 Surveys were undertaken in suitable weather conditions, using at least three methods per visit (where possible) in accordance with the 'Great Crested Newt Mitigation Guidelines'[19] to determine the presence or absence of Great Crested Newt. Suitable weather conditions are those nights when the night-time air temperature is 5°C or warmer. All surveys were conducted during such conditions.

2.3.33 Torch surveys involved the use of high-powered torches (min. 50,000 candlepower) to count the number of each amphibian species present. As recommended by the guidance, the entire margin of each water body was walked once, slowly searching for Great Crested Newt.

2.3.34 Bottle-trapping involved setting traps made from 2-litre plastic bottles around the pond margins, and leaving the traps in place overnight before checking them the following morning. A density of one trap every two metres of shoreline was employed, where possible, as recommended by the guidance.

2.3.35 In theory, netting involves sampling for a period dictated by the size of the water body, and the guidance recommends 15 minutes of search time for every 50 metres of shoreline. In practice, where undertaken, the search time significantly exceeded this value.

2.3.36 Where suitable vegetation was present within the waterbody, egg searching took place. This involved searching for newt eggs amongst vegetation and unfolding leaves where necessary to confirm species identification. As recommended by the guidance, once a Great Crested Newt egg had been identified no further egg searching was carried out.

2.3.37 Terrestrial habitats were also searched for Great Crested Newts. This involved searching under logs, rocks and debris, which are favoured resting places.

[17] Biggs J., Ewald N., Valentini A., Gaboriaud C., Griffiths R.A., Foster J., Wilkinson J., Arnett A., Williams P. and Dunn F. (2014). '*Analytical and methodological development for improved surveillance of the Great Crested Newt. Annex 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA*'. Freshwater Habitats Trust, Oxford.

[18] Natural England (2015) '*Great crested newts: surveys and mitigation for development projects. Standing advice for local planning authorities who need to assess the impacts of development on great crested newts*'. Last updated at www.gov.uk on 24/12/2015.

[19] Surveys based on: English Nature (2001) *'Great Crested Newt Mitigation Guidelines'*

Breeding Birds[20]

2.3.38 The use of the site by breeding birds was assessed over three survey visits, (on separate days) in April, May and June 2020, and also in April, May and June 2023. Birds present within the site were recorded using a method modified from the British Trust for Ornithology's (BTO's) Common Bird Census technique.

2.3.39 This involved walking a route over the site and recording all 'registrations' of birds either seen or heard. The sightings or 'registrations' were recorded on a site plan using standard BTO codes for each bird species and appropriate abbreviations.

2.3.40 This survey methodology has the advantage over other survey methods of mapping each registration to a specific point within the site and this therefore illustrates those areas containing the highest density and diversity of bird species. The dates of each survey, together with a summary of the weather conditions are given in Table 2.6 below.

Table 2.6. Breeding bird survey dates and weather conditions.

Survey Date	Weather Conditions			
	Wind (BF)	Temp(ᶜ)	Cloud Cover (%)	Precipitation (0-5)
26/04/2020	1	10	80	1
23/05/2020	2	12	80	3
20/06/2020	1	11	80	6
25/04/2023	3	10	40	0
30/05/2023	3	10	50	0
25/06/2023	3	21	0	0

2.4 Survey Constraints and Limitations

2.4.1 All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent during different seasons. The Phase 1 habitat survey was undertaken within the optimal season therefore allowing a robust assessment of habitats and botanical interest across the site.

2.4.2 Attention was paid to the presence of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, the detectability of such species varies due to a number of factors, e.g. time of year, site management, etc., and hence the absence of invasive species should not be assumed even if no such species were detected during the Phase 1 survey.

2.4.3 A recognised limitation of the bat activity surveys is that bat detectors can only provide an index of activity rather than absolute numbers of bats. Therefore, the results of the bat activity surveys should only be considered indicative of the amount of use bats make of an area rather than the abundance of bats. In addition, some bat species, e.g. Brown Long-eared Bat, are difficult to detect due to their quiet echolocation calls.

2.4.4 Densely vegetated habitats within the site have the potential to reduce the detectability of field signs for faunal species such as Badger. A detailed survey was able to be completed and, whilst dense scrub vegetation is present within the site, it is considered that the survey

[20] Surveys based on methodology within: Baille *et al*. RA (2010) '*Breeding Birds in the Wider Countryside: their conservation status*', BTO Research Report No. 385, BTO, Thetford.

results do provide an accurate baseline to assess the potential for impacts on Badger under the development proposals.

2.5 Ecological Evaluation Methodology

2.5.1 The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2019)[21], which involves identifying 'important ecological features' within a defined geographical context (i.e. international, national, regional, county, district, local or site importance). For full details refer to Annex 5719/1.

[21] CIEEM (2019) '*Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*', Chartered Institute of Ecology and Environmental Management, Winchester

3 Ecological Designations

3.1 Statutory Designations

3.1.1 The statutory designations of ecological importance that occur within the local area are shown on Plan 5719/ECO2. The nearest statutory designation is West Park, Uckfield Local Nature Reserve (LNR) located approximately 100m to the south of the site. The LNR is designated on the basis of a variety of habitats, including woodland, sandstone outcrops, marshland and open grassland (see Annex 5719/3 for citation). The next nearest statutory designation is Buxted Park Site of Special Scientific Interest (SSSI) located approximately 800m to the east of the site. Buxted SSSI is designated for its range of unimproved grassland communities with parkland trees and areas of woodland.

3.1.2 The nearest European statutory designation is Ashdown Forest Special Protection Area (SPA), located approximately 3.4km to the north of the site. The SPA is designated on the basis of regularly supporting nationally important breeding populations of Nightjar *Caprimulgus europaeus* and Dartford Warbler *Sylvia undata*. A broadly equivalent area, located 3.7km to the north of the site, is designated as Ashdown Forest Special Area of Conservation (SAC). The primary reason for designation is based on large continuous blocks of wet and dry heaths lowland, whilst populations of Great Crested Newt are a secondary qualifying feature.

3.1.3 Natural England has developed Impact Risk Zones (IRZs) as an initial tool to help assess the risk of developments adversely affecting SSSIs, taking into account the type and scale of developments. The site sits within an IRZ in relation to Ashdown Forest, which affects any residential developments within a 7km buffer zone.

3.1.4 The updated Desk study completed in 2023 did not identify any changes to the Statutory Sites detailed above.

3.2 Non-statutory Designations

3.2.1 The non-statutory designations of nature conservation interest that occur within the local area are shown on Plan 5719/ECO2. The next nearest non-statutory designation is Lake Woods LWS, located immediately to the south of the site. The LWS is designated on the basis of ancient woodland surrounding a large man-made lake with sandstone outcrops supporting important populations of bryophytes (see Annex 5719/3 for citation). It is managed by the Woodland Trust.

3.2.2 The nearest non-statutory designation is Butcher's Wood Local Wildlife Site (LWS) located 30m to the west of the site. The LWS is designated on the basis of its ancient woodland, together with a large population of Wild Daffodil *Narcissus pseudonarcissus*, and significant sandstone outcrops of rich and interesting bryophytes (see Annex 5719/3 for citation).

3.2.3 The updated Desk study completed in 2023 did not identify any changes to the Statutory Sites detailed above.

3.3 Priority Habitats, Ancient Woodland and Notable Trees

3.3.1 No records of ancient or veteran trees were returned from the data search, which included a check of the Woodland Trust Ancient Tree Inventory.

3.3.2 However, arboricultural surveys of the site identified a number of veteran trees within the site, a summary of which is provided below:

- A group of old Ash coppice stools, and a veteran Cherry Located on historic ditch and wood-bank feature on the east side of Shermanreed Wood (Woodland compartment **W5a**).
- A Veteran free-standing Beech within field SI1.
- Within Fir Tree Grove (W9), there are a further two veteran trees (a veteran Pedunculate Oak and a Beech).

3.3.3 In addition, there are several notable trees located within Lake Woods to the south of the site, and there is a single notable tree to the north of the site, on London Road, Budlett's Common.

3.3.4 A large proportion of the woodland within and surrounding the site is identified in MAGIC as being included within the provisional Ancient Woodland Inventory as Ancient and Semi-natural Woodland (ASNW), including Shermanreed Wood, Budlett's Wood, Longwood Gill and a part of Thirty Acre Wood. Information returned from the SxBRC also identifies Longwood Gill as being 'Ghyll Woodland'. The majority of woodlands on the west side of the site, adjacent to the A22 are not shown as ASNW.

3.3.5 The large majority of woodland within the site is shown as the Priority Habitat 'Deciduous Woodland'. There are no other Priority Habitats identified on MAGIC within the site, although an area within the north of the site is identified as 'Good quality semi-improved grassland (non-priority)'.

3.3.6 The updated Desk study completed in 2023 did not identify any changes to the distribution of Priority Habitats, Ancient Woodland and Notable trees previously reported.

3.4 Biodiversity Opportunity Areas

3.4.1 A number of Biodiversity Opportunity Areas (BOAs) are also identified by the Sussex Local Nature Partnership, and which details have been made available from the Local Records Centre and are intended to define priority areas for habitat restoration and enhancement. Details of the extent of these BOAs are provided in Appendix 5719/3, together with the relevant BOA statements. The site is located within the Western Ouse Streams and Ashdown Forest BOA. The River Uck and its Headwaters BOA also is located 2.3km to the south and south-east of the site.

3.4.2 The Western Ouse Streams and Ashdown Forest BOA is dominated in the north by protected heathland forming part of the European designation, which supports a number of habitats comprising open heath, ancient woodland, ghyll woodland and wetlands. Ephemeral streams within the site form part of the upper headwaters of the Ouse River, together with associated woodland corridors, and associated ponds. Some of the targets of the Western Ouse Streams and Ashdown Forest BOA are relevant to the site. The inclusion of SANG within the proposed development, provide an opportunity to contribute to these targets, and indeed a number of features, such as the establishment of woody buffer zones, and restoration of wet grassland fall into this category. The River Uck and its Headwaters BOA is not considered to be relevant to the current proposals.

3.5 Summary

3.5.1 The designations are summarised in Table 3.1 below. In summary, the site itself is not subject to any statutory ecological designations. Lake Woods LWS is not directly affected but is located immediately to the south of the site.

3.5.2 Almost all woodland within the site is Large parts of the southern parcel of land is shown as the Priority Habitat 'Deciduous Woodland in MAGIC. Large sections of the woodland in the southern parcel are shown on MAGIC as Ancient Semi-Natural Woodland.

Table 3.1. Ecological designations within the zone of influence

Name	Designation	Brief Description	Distance from Site	Level of Value
Statutory Designations				
International Designations (within 25km search radius)				
Ashdown Forest	Special Protection Area (SPA)	The designation is based on large continuous blocks of wet and dry heaths lowland, together with populations of Great Crested Newt.	3.4km to N	International
Ashdown Forest	Special Area of Conservation (SAC)	The SPA is designated on the basis of regularly supporting nationally important breeding populations of Nightjar Caprimulgus europaeus and Dartford Warbler Sylvia undata.	3.7km to N	International
Lewes Down	SAC	Semi-natural dry grasslands and scrubland facies established on calcareous substrates, including important orchid sites.	10.7km to S	International
Castle Hill	SAC	Semi-natural dry grasslands and scrubland facies established on calcareous substrates, including important orchid sites.	17.3km to SW	International
Pevensey	SAC and Ramsar	Little whirlpool ram's-horn snail Anisus vorticulus	17.6km to SE	International
National Designations (within 2km search radius)				
West Park, Uckfield	Uckfield Local Nature Reserve (LNR) and Local Wildlife Site (LWS)	The LNR is designated on the basis of a variety of habitats, including woodland, sandstone outcrops, marshland and open grassland.	100m to S	County
Buxted Park	Site of Special Scientific Interest (SSSI)	Unimproved grassland communities with parkland trees and areas of woodland.	800m to E	National
Hempstead Meadows	LNR	The area supports a variety of wildlife typical of undeveloped river corridors; including birds such as snipe and kingfisher and plants such as primrose, bluebell, tussock sedge and ferns. The meadow also forms a valuable foraging area for the bats that have been recorded from neighbouring properties.	1km to E	County
Non-statutory Designations (within 2km search radius)				
Lake Woods	LWS and Local Geological Site (LGS)	Ancient woodland, managed by the Woodland Trust, surrounding a large man-made lake with sandstone outcrops supporting important populations of bryophytes.	Adjacent to S boundary	District

Butcher's Wood, Uckfield	LWS	Ancient woodland, together with a large population of Wild Daffodil Narcissus pseudonarcissus, and significant sandstone outcrops of rich and interesting bryophytes.	35m to W	District
Uckfield Cemetery	LWS	The site contains neutral species-rich grassland comprising species-rich low acidic grassland sward and populations of Green-winged Orchids (Orchis morio).	250m to E	District
Shortbridge Stream Meadow	LWS (and Designated Main River)	A series of fields along Shortbridge Stream, and an extensive area of marshy grassland, tall herb and swamp-type vegetation. The habitats support a diverse range of invertebrates and sedge species.	250m to W	District
Budlett's Common Rocks	LWS	This site consists of extensive rocks which are situated in three large gardens. The site supports a number of rare and uncommon liverworts and mosses, including a number of characteristic sandrock species.	800m to NE	District
Maresfield Churchyard LWS	LWS	The site contains neutral grassland fields which contain species-rich areas of the lawn whislt supporting a rich mix of CHEG fungi species.	1.4km to NW	District
Piltdown Common	LWS	The site is a well-managed golf course with a complex mosaic of habitats comprising heathland, acid grassland, scrub, woodland and a large pond.	2km to W	District

4 Habitats and Ecological Features

4.1 Background Records

4.1.1 The updated desktop study carried out in May 2023 returned a number of specific records of Protected or notable plant species from within the site including Heath Speedwell *Veronica officinalis*, Devil's-bit Scabious *Succisa pratensis*, Common Cow-Wheat *Melampyrum pratense*, Tormentil *Potentilla erecta*, Bluebell *Hyacinthoides non-scripta* and Wild Strawberry *Fragaria vesca*. A number of these were recorded during the survey work undertaken.

4.1.2 A number of records of Priority Species were returned from SxBRC from a 2km radius of the site, including Chamomile *Chamamelum nobile* Eyebright *Euphrasia pseudokerneri,* Small-flowered Sticky Eyebright *Eurphrasia officinalis* and Greater Water Parsnip *Slum latifolium*, dating between 1989 and 2005, none of which were recorded within or adjacent to the site. No evidence for the presence of any of these species within the site was recorded during the survey work undertaken.

4.2 Overview

4.2.1 The habitats and ecological features present within the site are described below and evaluated in terms of whether they constitute an important ecological feature and their level of importance, taking into account the status of habitat types and the presence of rare plant communities or individual plant species of elevated interest. The likely effects of the proposals on the habitats and ecological features are then assessed. The value of habitats for the fauna they may support is considered separately in Chapter 5 below.

4.2.2 The following habitats/ecological features were identified within/adjacent to the site:

- Semi-improved Grassland (species poor);
- Semi-improved Grassland (moderately species-rich);
- Sandstone Outcrops – Lower Plant Communities
- Hedgerows and Tree Lines;
- Ponds;
- Watercourses; and
- Invasive Species.

4.2.3 The locations of these habitat types and features are illustrated on Plan 5719/ECO3 and described in detail below.

4.3 Priority Habitats

4.3.1 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions. In particular, Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats which are of principal importance for conservation in England. This list is largely derived from the 'Priority Habitats' listed under the former UK Biodiversity Action Plan (BAP), which continue to be regarded as priority habitats under the subsequent country-level biodiversity strategies.

4.3.2 Of the habitats within the site, deciduous woodland, wood pasture, hedgerows and ponds are considered to qualify as Priority Habitats and therefore constitute important ecological features. This is discussed further in the relevant habitat sections below. One field (**SI4**) is also described on MAGIC as being 'Good Quality Semi-improved grassland (Non-Priority).

4.4 Deciduous Woodland

Description

4.4.1 Several areas of deciduous woodland are present within the site, forming a series of broad interconnected swathes, much if which is listed on the provisional inventory of Ancient Woodland. The overall distribution of Ancient Woodland is shown within Annex 5719/3, whilst its distribution is also indicated on the Ecological Features Plan 5719/ECO3.

4.4.2 It should be noted that the inclusion of woodland on the Ancient Woodland inventory does not necessarily mean that it is in fact ancient – i.e. *An area that has been wooded continuously since at least 1600 AD,* although it has been treated as such for the purposes of the current assessment.

4.4.3 Descriptions of the various woodland areas within the Study Area are given below, divided into the main woods appearing on the OS Base Map, each of which has been allocated a woodland compartment number. A plan of the compartments is shown at Plan 5719/ECO3.

4.4.4 All woodland areas within the study area have been subject to detailed woodland botanical surveys, according to the methodology described in Section 2 above, and with the full results set out in Annex 5719/4. As well as describing their tree and understory composition and their condition, particular focus has been given to the presence of Ancient Woodland Indicators (AWIs). These include Ancient Woodland Vascular Plants (AWVPs) together with woody species recognised as being indicators of ancientness. It should be noted that the presence of ancient woodland indicators species only provides an indication of the ancientness of the woodland, and is not definitive, with AWI frequently found growing in non-ancient woodland. Nevertheless, the presences of AWIs is used to assess the quality of ground flora plant communities in the context of the assessment of the botanical interest of the woodland.

4.4.5 In this addendum report we only report those results from the red line area submitted with the application which is a sub-set of those originally surveyed in 2020.

Budletts's Wood – North (W4) – Mostly Ancient Woodland

4.4.6 Budlett's Wood is a large, wooded area defined broadly by a path to the east, by Budlett's Cottage and the Old Keeper's House to the north, and by open grassland areas to the south. The woodland comprises a wide range of deciduous stand types and is dissected by a watercourse which runs in an east-west orientation. The majority of the woodland is designated as Ancient Semi-Natural Woodland.

4.4.7 A diverse range of woodland types occur within the woodland as a whole, including areas of climax oak woodland in the west (**4e**), together with an area of wet Alder woodland (**4d**), stands of Chestnut coppice (**4b**), and areas of more mixed woodland. There is a large heathy clearing in the west part of the woodland (**4c**).

4.4.8 Woodland sub-compartments **W4d** and **W4e,** are within the red line boundary, and these sub-compartments and were subject to updated botanical surveys in 2023. All are described below.

4.4.9 Area **4a** is a former clearing which has now become partly colonised by young Oak, Cherry and Alder trees and Bramble scrub. The northern part of the clearing has Bluebell carpets, although elsewhere the cover of AWVPs is limited to occasional Three-nerved Sandwort, Red Currant and Wood Speedwell. A relatively low number of AWIs (5 in total) were recorded during the 2020 botanical survey. It is not designated as Ancient Semi-Natural Woodland.

4.4.10 Area **4b** is a stand of outgrown Chestnut coppice which has not been recently maintained, and a number of trees have fallen. Ground flora here is limited, and there are extensive thickets of Rhododendron. Towards the south of the area, around the stream, the woodland grades into Oak/Alder, with more varied woodland and hazel understory and there are thick carpets of Bluebells, which occur together with Greater Stitchwort and Wood Sorrel. Areas of invasive species are present near the boundary of Old Keeper's House, including Japanese Knotweed together with Shallon, and patches of a variegated Yellow Archangel. A moderate number of AWIs are present during the 2020 survey (10 in total).

4.4.11 Area **4c** is a heathy clearing covered in Bracken, although around the margins the presence of acid-loving species such as Devil's-bit Scabious and occasional Ling suggest its status as former heathland. There are a number of Sandstone rock outcrops, together extensive stands of Rhododendron. Dense areas of Birch woodland occur around the edges of the clearing. A small number of AWIs are present, with four in total recorded during the 2020 survey.

4.4.12 Area **4d** is an area of flushed wet woodland being dominated by semi-mature Willow and Birch, grading into Blackthorn thickets towards the southern edge of the woodland. Ground flora is sparse, reflecting the fact that it is frequently inundated, but includes a moderate number of AWIs including Thin-spiked Wood Sedge *Carex strigosa*, Wood Sedge *Carex sylvatica*, Early Dog Violet *Viola reichenbachiana*, Hard Fern *Blechnum spicante* and Pendulous Sedge *Carex pendula*. During the 2023 surveys the woodland remaining relatively unchanged in terms of structure and management and had a similar assemblage of plants.

4.4.13 Area **4e** is a stand of open high-canopy oak woodland, with a sparse understory, limited to occasional Holly and Honeysuckle. Ground flora is generally absent, although there extensive patches of Common Cow-wheat *Melampyrum pratense* in some places. A moderate number of AWIs are present (eight were during the 2020 survey, and 11 in the 2023 survey).

4.4.14 Area **4f** is a stand of young dry Birch woodland, forming a dense understory in places, together with some Holly, Oak, Rowan, Beech and Alder Buckthorn. Ground flora here is sparse with AWVPs largely absent, with the exception of occasional Wood Anemone and Wood Spurge. A moderate number of AWIs were recorded during the 2020 survey (10 in total).

4.4.15 Area **4g** is an area of mixed deciduous woodland occupying the higher ground between Old Keeper's House and the A22, and grading into heathland to the north. It contains some mature Oak, Birch and Sycamore together with a Hazel understory. In places, particularly towards the west, the woodland supports moderate numbers of AWVPs, including Bluebell *Hyacinthoides non-scripta*, Narrow Buckler Fern *Dryopteris carthusiana*, Hard Fern, Wood Sorrel *Oxalis acetosella* and Red Currant *Ribes rubrum* – nine AWIs were present during the 2020 surveys. Dense stands of the invasive species Shallon *Gaulteria shallon* have grown up around the path to the east of Keeper's Cottage and stands of *Rhododendron* are also present in places.

4.4.16 Budletts Wood is assessed as being of **District** level importance.

Shermanreed Wood (W5) – Ancient Woodland

4.4.17 Shermanreed Wood (**Area 5**) is a diverse woodland forming a broad linear corridor between fields **F1** and **F2**, which includes stands of Oak and Birch woodland, with areas of Alder dominating along a central watercourse and some groups of Larch. It is designated as Ancient Semi-Natural Woodland.

4.4.18 Recently planted stands occupy a large part of the woodland, In the south of the woodland there are several borrow pits which have been identified by historical map analysis as originating from iron-ore extraction activities. Here there is some regrowth of self-seeded Sycamore, alongside Oak, Cherry Chestnut and Elder. At the southern end of the woodland, adjacent to the site boundary, there is evidence of eutrophication, with Bramble *Rubus fruticosa* agg. and nettle *Urtica dioica* prevailing, together with limited stands of non-native invasive species including Japanese Knotweed *Reynoutria japonica*, and Giant Rhubarb *Gunera* sp.

4.4.19 In many places, most of the large trees appear to have been removed from the woodland, although there are occasional Oak standards, together with some semi-mature to mature Ash, Cherry, Birch and Alder. On the east side of the woodland is a historic ditch and wood-bank feature (noted as Target Note **TN01** on Plan 5719/ECO3) which has a number of old Ash coppice stools associated with it, including three veteran specimens. This notable tree is also discussed in the relevant section below.

4.4.20 A large part of the woodland has been replanted (with evidence of tree shelters remaining). However, the soils appear have remained intact and a diverse range of AWIs are present (28 in total were recorded during 2020 and 33 in 2023), including extensive carpets of Bluebell and abundant Wood Anemone *Anemone nemorosa*. Opposite-leaved Golden Saxifrage *Chrysospenium oppositifolium* is locally present on the banks of the watercourse, whilst Goldilocks Buttercup *Ranunculus auricormus*, is found on the southern edge of the wood.

4.4.21 A small area of non-ancient woodland (**5b**) on the at the west end of the woodland has been recently planted, which contains semi-mature Oak, together with a grassy understory, including Creeping Sweet Grass *Holcus mollis* and occasional Early Dog Violet and Wood Sedge. A relatively low number of AWIs are present (six in total in 2020 and seven in 2023). There is a further area of non-ancient woodland included within the red line to the south of Shermanreed Wood which comprises Oak with a bramble understory.

4.4.22 Shermanreed Wood is assessed as being of **District-County** level importance.

Longwood Gill (W6a) – Ancient Woodland

4.4.23 Longwood Gill is a narrow steep-sided wooded valley or ghyll, forming a linear feature along an ephemeral/dry stream bed. Steeply sloping banks are present on both sides, and sandstone outcrops are present at the head of the valley where there is evidence of erosion from flash flooding. Tree cover is mainly semi-mature to mature Oak, with Beech and Cherry also present, whilst an understory of hazel coppice occurs throughout.

4.4.24 Apart from some bare earth and eroded sections of bank, the ground flora is generally very rich, comprising extensive carpets of Bluebells, often co-dominant with Wood Anemone. Other AWVPs present include Hartstongue Fern *Asplenium scolopendrium*, Three-nerved Sandwort *Moehringia trinervia*, Primrose *Primula vulgaris*, Early Dog Violet, Yellow Archangel *Lamium galeobdolon*, Yellow Pimpernel *Lysimachia nemorum*, Wood Sedge,

Hairy Woodrush *Luzula acuminata* and Pignut *Conopodium majus.* A total of 18 AWIs were recorded during the 2020 survey, while 19 were recorded during the 2023 survey.

4.4.25 Longwood Gill is assessed as being of **District-County** level importance.

Copse Surrounding Pond P6 (W6b) – Non-Ancient Woodland

4.4.26 A separate wooded copse exists to the south of Longwood Gill, connected by hedgerow **H2**. The copse surrounds pond **P6** (a former iron extraction pit) which has steep wooded banks with trees comprising Oak, Beech, and Cherry, with an understory of Blackthorn, Hawthorn and Grey Willow. A small number of AWIs are present.

4.4.27 Woodland compartment **W6b** is assessed as being of **Local** level importance.

Woodland Along East side of A22 - North (W7) – Ancient Woodland

4.4.28 A strip of woodland alongside the A22 (**W7**), contains wet woodland with frequent Alder and Birch located around a series of silted damp hollows which are fed by from two minor tributaries to the south and possibly taking road run-off. The largest (Pond **P1**) forms a boomerang-shaped pond with a brick control structure. None of the features contained standing water at the time of survey, but supported Stinging Nettle, Common Mint *Mentha aquatica* and Enchanter's Nightshade *Circaea lutetiana*, together with occasional Hard Fern.

4.4.29 The woodland becomes dryer to the south, and contains some semi-mature oak, together with Birch and an understory comprising Holly and Hazel. There is a series of old trackways, with associated bank features. In places towards the south there are extensive carpets of Bluebell, occurring together with frequent Wood Anemone. A large number of AWIs are present (22 were recorded in 2020 and 25 in 2023).

4.4.30 Woodland within compartment **W7** is assessed as being of **District** level importance.

Woodland Along East side of A22 (W8) – Some Ancient and some Non-Ancient Woodland

4.4.31 Woodland compartment **W8** is a continuation of **W7**, being a linear woodland located between the A22 and Field **F2** contains. It contains mainly secondary deciduous woodland with a number of distinct woodland blocks, with a variety of stand types, and with differing species composition and age class. These are divided into compartments **W8a** to **W8d**.

4.4.32 Woodland compartment **8a** is mainly recently planted woodland with Birch, Field Maple, Hawthorn, Ash, Hazel and Oak, with an element of self-sown Willow and Alder, with disturbance possibly resulting from the construction of the A22. The ground flora here is very poor, mainly limited to Ground Ivy and Enchanter's Nightshade with some Wood Anemone which has crept in from adjacent areas. A relatively low number of AWIs were recorded during both surveys (a maximum of 11 being recorded in 2023).

4.4.33 Further south, in Area **8b**, which is designated as Ancient Semi-Natural Woodland, the woodland contains more frequent early mature Oak, Ash and Sycamore, together with Hornbeam, Sweet Chestnut and Horse Chestnut. There is frequent fallen deadwood comprising mainly collapsed Hornbeam and Birch. The ground flora contains frequent Bluebell, together with Wood Anemone and Dog's Mercury. A moderate number of AWIs are present (11 were recorded in 2020 and 15 in 2023).

4.4.34 There is further abrupt change to Area **8c**, where the northern part of the woodland has grassy glades, with Bracken.). Further south, in Area **8d** are further areas of young woodland containing a range of species which appear to have been relatively recently planted.

Towards the far south of the area woodland grades into hazel-dominated scrub with Sweet Chestnut, Horse Chestnut and Sycamore. Only one AWI (Field Maple) is present, although this is likely to have been recently planted.

4.4.35 Woodland within compartment **W8** is assessed as being of **District** level importance.

Fir Tree Grove (W9) – Ancient Woodland

4.4.36 Woodland compartment W9, known as Fir Tree Grove. The woodland forms part of the garden associated with Chicory Cottage, with the garden influence extending into the parts of the woodland closest to the house and along Rocks Road. Large sandstone rock outcrops are present in part along the boundary with Rocks Road and around the house while a large pond is present along part of the northern boundary, which extends offsite.

4.4.37 Fir Tree Grove comprises a mature canopy with a variable structure, dominated by Ash (experiencing Ash dieback) with frequent Scots Pine, especially in the west. A number of mature Pedunculate Oaks are present in the vicinity of the house as is Sycamore alongside a veteran Beech and a substantial Monterey Pine.

4.4.38 The understorey of Fir Tree Grove is sparse to very sparse across the majority of the woodland, although the density of the understorey increases locally, especially at the margins. The most prominent species comprise Hawthorn, Hazel, and Spindle, while small, localised Holly thickets are present. In addition, Sycamore is frequent within the understorey, forming a dense sub-canopy in places. The south-western boundary of the woodland, adjacent to Rocks Road, is heavily dominated by Cherry Laurel and Rhododendron.

4.4.39 Much of the ground flora is dominated by a dense carpet of Bluebell, frequently accompanied by Wood Speedwell, Wood Anemone, and Three-nerved Sandwort, particularly towards the east. Wood Meadow-grass is dominant towards the north-west, interspersed with patches of bare ground. A large number of AWIs are present (20 in total were recorded during the 2020 surveys, while 24 were recorded during 2023).

4.4.40 Elsewhere, the ground flora is locally suppressed by needle drop from Pines, especially along the western margin, while localised dense stands of Bramble, Holly, Rhododendron and Cherry Laurel similarly suppress the ground flora. Bracken is colonising locally in the vicinity of the house, while a patch of the invasive species Himalayan Balsam was recorded in the eastern extreme of the ancient woodland, extending offsite to the north, with isolated specimens also recorded elsewhere along the south-eastern margin of the ancient woodland.

4.5 Semi-improved Grassland (Species-Poor)

Description

4.5.1 Two large fields of former pasture grassland are present within the development area. The northernmost (labelled **SI1** on Plan 5719/ECO3), located between Budlett's Wood and Shermanreed Wood, is approximately 9ha in size. The grassland sward in this field is relatively species-poor, with a limited range of grass species are present including Cocksfoot, Yorkshire Fog, Timothy and Red Fescue together with infrequent herb species such as Knapweed, Common Sorrell, Creeping Buttercup, Ribwort Plantain, Common Bird's-foot Trefoil, Lesser Stitchwort, Curled Dock, and occasional Ragwort.

4.5.2 Field **SI2** is located in the west of the site, and has a similar species composition to **SI1** above, but appearing to be regularly cut. The grass sward is dominated by Cock's-foot, together some finer grasses such as Red Fescue. There are frequent patches of Knapweed and Common Sorrell, together with Creeping Buttercup, Ribwort Plantain, Common Bird's-foot Trefoil, Lesser Stitchwort, Curled Dock, Ragwort which are occasional to locally frequent.

4.5.3 A further large field, being approximately 19ha in size, occupies the majority of the development area (**SI3**) and contains species-poor grassland, dominated by Yorkshire Fog, with some Perennial Ryegrass, Cock's-foot, Common Bent, Creeping Bent and Rough-stalked Meadowgrass. Herbaceous plant species are limited to frequent patches of White Clover and Broad-leaved Dock.

4.5.4 During the 2023 walkover survey the grassland sward and species composition did not appear to have changed significantly.

4.5.5 These grassland areas are not considered to constitute a feature of ecological importance.

4.6 Semi-improved Grassland (Moderately Species-Rich)

4.6.1 Area **SI4** is an area of moderately species-rich tall-sward neutral grassland, parts of which appear to be flushed with spring water, and which also contains well-spaced mature Oak specimens (typically with 60-80cm diameter stems), each surrounded by frequent scrub.

4.6.2 The area has been subject to a specific Phase 2 botanical survey during July 2020, which assessed the grassland against Priority Habitat criteria using a series of walked transects and aimed to classify it using the National Vegetation Classification (NVC) system[22]. Priority habitat status was assessed using the criteria provided within the Higher Level Stewardship Farm Environment Plan Handbook[23] as a guide.

4.6.3 Detailed botanical survey results including species lists for the grassland survey are given in Annex 5719/5 and summarized below.

4.6.4 The sward within Area **SI4** supports a range of rushes, sedges and other species, such as Marsh Thistle *Cirsium palustre*, which are indicative of damp conditions. Although the ground was dry at the time of survey it is likely that the area is seasonally damp. The herbaceous vegetation appears to be being invaded by scrub, notably Oak, Bramble and Grey Willow *Salix cinerea*.

4.6.5 The sward is moderately species rich (11.1 species/m2 compared with a threshold of more than 15 species/m2 given in the FEP Handbook). However, the cover of wildflowers and sedges is considered to meet the 30% threshold identified. This confirms the area as supporting species-rich grassland does not meet Priority Habitat but may be restorable to, good quality.

4.6.6 Taking into account the local soil type (slightly acid with impeded drainage) and the species recorded, it is considered that the vegetation most broadly corresponds to Purple Moor-grass and Rush Pasture BAP priority habitat, although Purple Moor Grass is notably absent. Within the survey quadrats, four indicator species for this habitat were recorded, namely Greater Bird's-foot Trefoil *Lotus pedunculatus*, Glaucous Sedge *Carex flacca*, Devil's-bit Scabious *Succisa pratensis* and Bugle *Ajuga repens*. The presence of four indicator species, but below the threshold frequency (at least two frequent and two occasional in the sward),

[22] Rodwell, J.S. (2006) NVC Users' Handbook, JNCC, Peterborough, ISBN 978 1 86107 574 1

[23] Higher Level Stewardship Farm Environment Plan (FEP) Manual Technical guidance on the completion of the FEP and identification, condition assessment and recording of HLS FEP features Third Edition – March 2010

identifies the vegetation as species-rich grassland corresponding to a BAP/priority habitat, albeit not a particularly representative example, and of only moderate quality.

4.6.7 The condition assessment for Purple moor-grass and rush pasture (**G07**) considers a number of factors, including the cover of undesirable species. In this respect the BAP habitat fails in terms of the cover of invasive trees and shrubs (being >5%), whilst meeting the other cover criteria relating to undesirable species, large sedge species, and non-jointed rushes. Therefore, although qualifying, it is below the 'good condition' threshold. It is considered to be in poor and declining condition.

4.6.8 The grassland was a very poor match for any recognised NVC community and should not be ascribed to any particular community on the basis of the analysis undertaken.

4.6.9 In summary, the although the botanical survey results do not show a good fit with any particular BAP/priority habitat types of any particular NVC community the habitat nonetheless meets some criteria for Purple Moor-grass and Rush Pasture Priority Habitat type (type G07 under the HLS FEP) and is considered to be of ecological value on a local level on account of its botanical diversity. The condition of the habitat is assessed as being poor and declining. However, there is significant scope for enhancement of this area through removal of invasive scrub, principally Bramble and Oak but also Willow Salix scrub and, ideally through the reintroduction of regular management, such as an annual mowing or grazing regime. Without such intervention, it is considered likely that the botanical interest will be lost in a relatively short timeframe.

4.6.10 The grassland is considered to be an important ecological feature at the **local** level.

4.7 Sandstone Outcrops – Lower Plant Communities

4.7.1 Lower plant surveys (covering bryophytes and lichens) were carried out of sandstone outcrops which occur within the Fir Tree Grove. Detailed results are presented in Annex 5719/6. These comprise a number of low sandrock outcrops now in the garden of a house (Building **B1** – Chicory Cottage).

4.7.2 A total of 21 species of bryopytes and one additional variety, were recorded, all of them associated with sandstone. A total of 15 species of lichen were recorded (six associated with sandstone, with a further 9 associated with trees).

4.7.3 Shaded and relatively humid steep faces are dominated by bryophytes including *Tetraphis pellucida*, *Dicranella heteromalla*, *Cephalozia lunulifolia* and locally *Orthodontium lineare*. More local species include *Calypogeia muellerana*, *Lophocolea heterophylla*, *Odontoschisma denudatum* and *Pseudotaxiphyllum elegans*. Stands perhaps representing later successional stages have some *Mnium hornum*. One well-lit face was dominated by *Aulacomnium androgynum*. Steep, dry faces are dominated by the lichens *Lepraria incana* or *L. finkii*. Sunny, exposed, sloping surfaces have bryophytes including *Hypnum cupressiforme*, a little *Ceratodon purpureus*, local *Polytrichum juniperinum* where there is a very slight soil accumulation, the lichen *Cladonia polydactyla*, and the lichen *Trapelia involuta* where there is a little flushing in wet weather. Some exposed sunny faces comprise bare rock with a few poorly developed crustose lichens, including pale, pinkish patches of sterile *Trapelia coarctata/elacista* and unidentifiable grey patches. The dominant species on shaded, gently sloping surfaces that are not very humid are *Hypnum cupressiforme* and especially *Isothecium myosuroides*.

4.7.4 Most of the woodland is young-growth and poor in lichens. A large oak northeast of the house had the old-forest lichen *Cresponea premnea* frequent on the trunk and an old oak

NW of the house supported *Chaenotheca trichialis* and *Inoderma subabietinum*. An old pine supported the Nationally Scarce *Micarea doliiformis*.

4.7.5 All species recorded were relatively common, and none were considered Nationally Scarce, nor scarce in Sussex. Lichens on rock were very limited (again with no notable species recorded), but some notable species were recorded on several large trees near Chicory Cottage.

4.8 Hedgerows and Tree Lines

Description

4.8.1 Two hedgerows are present within the site, one located in the east (a spur from Shermanreed Wood within between fields **SI1** and **SI2**), and one in the west within Field **F2**, connecting to Longwood Gill. The hedgerow and tree line are described in more detail in Table 4.1 below.

Table 4.1. Hedgerow descriptions.

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify#
TL1	3-4m	5-7m	Oak (m), Hornbeam, Sweet Chestnut, Birch (m), Broom, Grey Willow.	≥5	Bramble, Bracken	<10% gaps, standard trees ditch, connects with woodland.	Line of mature oak trees with dense dense, unmanaged hedge at base.	**Y**
H1	5-6m	5-7m	Blackthorn, Oak (m), Grey Willow, Hawthorn, Ash (m) Cherry, Bramble.	≥5	Creeping Thistle, Meadow Vetchling, Agrimony.	Bank, <10% gaps, standard trees, connects with woodland	Dense, unmanaged shaw with freq. mature trees on bank to west side. 1x10m gap for gate at east end.	**Y**

Woody species (as listed under Schedule 3 of the Hedgerows Regulations 1997) and woodland ground flora species (as listed under Schedule 2 of the Hedgerows Regulations 1997) underlined, y = young, sm = semi-mature, m = mature, pv = possible veteran, B = bank, W = wall, br = bridleway, f/p = footpath, b/w = byway, (D) = dominant species

* estimated average number of woody species (as listed under Schedule 3 of the Hedgerows Regulations 1997) in any one 30m stretch

likely to qualify – as 'important' under the wildlife and landscape criteria of the Hedgerows Regulations 1997

Evaluation

4.8.2 The two linear features (a hedgerow and a tree line) recorded within the site are both relatively substantial and outgrown in nature, containing frequent standard trees and both form a spur from adjacent woodland areas. From a preliminary appraisal, **TL1** and **H1** are considered to be species-rich[24] and are likely to qualify as ecologically 'important' under the Hedgerows Regulations 1997, based on the number of woody species and associated features.

4.8.3 Both hedgerows within the site are likely to qualify as a Priority Habitat based on the standard definition[25], which includes all hedgerows (>20m long and <5m wide) consisting predominantly (≥80%) of at least one native woody species. It has been estimated that approximately 84% of countryside hedgerows in GB qualify as a Priority Habitat under this definition.[25]

[24] i.e. five or more native woody species within a 30m length (or four or more in Northern England) – FEP Manual

[25] Based on: Biodiversity Reporting and Information Group (2011) '*UK Biodiversity Action Plan (BAP) Priority Habitat Descriptions'*, ed. Ant Maddock

4.8.4 On this basis, the hedgerows within the site constitute important ecological features, although given the relatively limited network present, are only of importance at the **local** level.

4.9 Trees (including Veteran Trees)

Description

4.9.1 A number of notable trees, and groups of trees, were recorded within the site. These are described in further detail below and labelled accordingly on Plan 5719/ECO3, with labels provided according to the Arboricultural Assessment[26] which has been carried out. A number have been classified as Veteran Trees using the methods and qualifying criteria described in the arboricultural report. The location of all veteran trees is indicated on Plan 5719/ECO3, with the reference numbers provided corresponding to the Arboricultural Assessment.

4.9.2 Trees **T3001, 3003 and 3004-6** are a group of substantial Veteran Ash coppice stools located on a woodbank on the east side of Shermanreed Wood (**W5**). The stools are of large diameter with their boles being typically of between 1 and 2m across and having substantial basal cavities and deadwood.

4.9.3 Tree **T3007** is a Veteran Cherry located close to the group of Ash described above. It has a very stout upright stem, has bark loss on the lower stem and dry habitat spaces present on the stem, as well as major deadwood.

4.9.4 Tree **T7041** is a Veteran free-standing Beech within field **SI1**. The main stem has extensive decay from base to top where historic storm damage has removed the main leader above c.8.5m with a diameter of approximately 800-900mm, and showing major storm damage, a lightning strike and having extensive rot.

4.9.5 Within Fir Tree Grove (**W9**), there are a further two veteran trees, **T8036** (a veteran Pedunculate Oak), and **T8039** (a Beech).

4.9.6 In addition to these individual veteran trees there are many specimens within woodland, and elsewhere (e.g. within grassland area **SI4** and within tree line **TL1)**, many of which are mature in nature, some of which are approaching veteran age class.

4.9.7 The assemblage of veteran trees is assessed as being of importance at a **District** level.

4.10 Scrub

4.10.1 An area of scrub exists to the east of the site, which is marked as **SC1** on the attached plan 5719/ECO3. The scrub area comprises clusters of immature scrub and young trees including Sycamore, Goat Willow, Ash and Hazel, with a ground flora comprising dense nettle and bramble, and with a local areas with a grassy sward occurring.

4.10.2 Further scrub, marked as **SC2** is located to the far south-west of the site, at the southern end of woodland area **W8d**. The scrub is composed of hawthorn, blackthorn and bramble, with some pockets of grassy understory including Bugle, Ground Ivy, Enchanters-nightshade, Ragwort, Germander Speedwell and Common Mouse-ear.

[26] Downlands – Baseline Tree Survey to BS5837:2012 – Veteran Tree Identification. FLAC October 2020

4.10.3 During the 2023 walkover survey there had been no significant changes to the composition of these scrub areas, which are assessed as being of relatively low ecological value, being of no greater than **Site** level importance.

4.11 Ponds

Description

4.11.1 Six ponds are located within the site, along with a total of five ponds located within 250m of the site boundary, labelled **P1** to **P6** on Plan 5719/ECO3. The ponds present within the site (**P1-P6**) are described in Table 4.2 below:

Table 4.2. Pond descriptions.

Pond no.	Brief description	Approx. size	Shading	Aquatic/ emergent & marginal vegetation	Comments
P1	Woodland pond	10x80m	Heavily overshaded by surrounding woodland	Stinging nettle, corn mint	Heavily silted woodland pond. No water at time of survey but may be seasonal. Takes flows from 2no. watercourses from south, and road run-off from adj. A22. Other shallow depressions to north-east.
P2	Woodland pond	10x30m (reduced to 5x5m)	75% shaded by surrounding woodland.	None	Triangular pond on dry watercourse. Largely dry with mud substrate.
P3	Woodland pond	15x15m	80-90% shaded by surrounding Alder	None	Circular woodland pond, with poor water quality and copious leaf litter. Alder trunk fallen across pond.
P4	Woodland pond	5x5m	80-90% shaded by surrounding Chestnut, Ash and Elder	None	Small pond linked to stream-course, with poor water quality and copious leaf litter.
P5	Woodland pond	10x10m	80-90% shaded by surrounding woodland	None	Small woodland pond in cluster with P3 and P4 and copious leaf litter. Poor water quality.
P6	Woodland pond	20x40m	75% shading from surrounding woodland	None	Pond in centre of wooded copse with steep banks on all sides in former iron extraction pit.

4.11.2 The ponds recorded within the site are generally located within woodland, many of them located on minor tributaries, which are very susceptible to drying. All are shaded by the surrounding woodland are likely to be very seasonal and are heavily silted and clogged with leaf litter. Most do not contain any aquatic vegetation and represent very low-quality examples of this habitat type. Overall, the ponds are considered not to form important ecological features in their current form, although there is significant scope for their improvement, and they are considered to be of value at the **local** level. Recommendations for their retention and enhancement are detailed at Chapter 6.

4.11.3 Potential for the ponds to support faunal species such as amphibians is discussed below in Chapter 5.

4.12 Watercourses

4.12.1 A series of small ephemeral watercourses flow through the woodland areas of the site, which are shown as WC1, WC2 and WC3 on Plan 5719/ECO3. Some of these are associated with ghyll woodland (particularly those in Shermanreed Wood (**W5**) and Longwood Gill (**W6**). Together with other minor tributaries originating from Budletts Wood to the north, these pass through two culverts under the A22 before joining the Shortbridge Stream to the west. The stream channels have mostly shallow banks, becoming steeper sided within the woodland gyhll sections.

4.13 Habitat Evaluation Summary

4.13.1 On the basis of the above, the following habitats within and adjacent to the site are considered to form important ecological features:

Table 4.3. Evaluation summary of habitats forming important ecological features.

Habitat	Level of Importance
Ancient Woodland (Longwood Gill and Shermanreed Wood)	**District-County**
Ancient Woodland (Other Areas)	**District**
Other Woodland (Priority Habitat)	**Local**
Veteran Trees	**District**
Moderately Species-Rich Grassland (off Snatts Road)	**Local**
Hedgerows and Tree Lines	**Local**
Ponds	**Local**
Watercourses	**Local**

4.13.2 Other habitats present within the site include semi-improved species-poor grassland, scrub and tall ruderal plant communities. However, these habitats do not form important ecological features.

5 Faunal Use of the Site

5.1 Overview

5.1.1 During the survey work, general observations were made of any faunal use of the site with specific attention paid to the potential presence of protected or notable species. Specific survey work was undertaken in respect of Badgers, bats, Dormouse, Water Vole, Otter, reptiles and Great Crested Newt, with the results described below.

5.2 Priority Species

5.2.1 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions. In particular, Section 41 of the NERC Act requires the Secretary of State to publish a list of species which are of principal importance for conservation in England. This list is largely derived from the 'Priority Species' listed under the former UK Biodiversity Action Plan (BAP), which continue to be regarded as priority species under the subsequent country-level biodiversity strategies.

5.2.2 During the survey work undertaken, the Priority Species, Barbastelle Bat *Barbastella barbastellus,* Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus,* Common Lizard *Zootoca vivipara,* Grass Snake *Natrix natrix*, Slow Worm *Anguis fragilis* and Great Crested Newt, were recorded within the site. This is discussed further below.

5.3 Bats

5.3.1 **Legislation.** All British bats are classed as European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended) and are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). As such, both bats and their roosts (breeding sites and resting places) receive full protection under the legislation (see Annex 5719/2 for detailed provisions). If proposed development work is likely to result in an offence a licence may need to be obtained from Natural England which would be subject to appropriate measures to safeguard bats. Given all bats are protected species, they are considered to represent important ecological features. A number of bat species are also considered S41 Priority Species.

5.3.2 **Background Records.** No specific records of bats from within or adjacent to the site were returned from the desktop study. Information received from the LRC returned records of Brown Long-eared Bat*,* Noctule*,* Serotine *Eptesicus serotinus*, Daubenton's Bat *Myotis* daubentonii, Whiskered Bat *Myotis mystacinus*, Natterers's Bat *Myotis nattereri*, Common Pippistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle and Pipistrelle bat species *Pipistrelle* sp. within 3km of the site. The closest record is for two adult Common Pipistrelle bats, recorded in June 2020, in a residential garden situated within 0.8km of the site boundary.

5.3.3 The Biodiversity Opportunity Area Statement for the Western Ouse Streams and Ashdown Forest Biodiversity Opportunity Area (see Annex 5719/2) refers to a cave within the Lake Wood LWS which is used as a bat hibernaculum, although no further details were found during the data search.

5.3.4 A previous ecological survey of the site (carried out in 2003) identified two bat roosts within trees, including a small Noctule roost within a veteran Beech tree within the site. The tree's location is indicated as tree **T7041/BT2** on Plan 5719/ECO3 (reference number **T7041**

corresponding to the Arboricultural Assessment. A small Natterer's Bat roost was identified in an Oak, located to the west end of Shermanreed Wood, and indicated by **BT3** on plan 5719/ECO3.

5.3.5 **Survey Results**

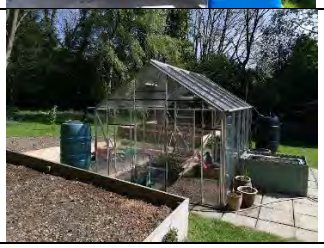
Visual Inspection Surveys

Buildings

5.3.6 A detailed visual inspection was undertaken of all the buildings within the site, which are all located in the curtilage of Chicory Cottage in the SE corner of the site. The results of the inspections are detailed at Annex 5719/7, and summarised below.

5.3.7 In summary, buildings **B1** (Chicory Cottage) is the only substantial building within the site, located within a considerable garden much of which is comprised of woodland. It is a large detached private property of brick construction, with two stories and pitched roof, with clay tiles. Buildings **B2-B6** are outbuildings of one kind or another (two sheds, a garage, a summerhouse and a greenhouse). These buildings and structures offer negligible roosting opportunities for bats and no evidence of roosting bats was recorded. Buildings **B1** exhibited a low number of potential roosting opportunities for bats and overall are assessed as providing low suitability for bats. No evidence of bat occupation, e.g. droppings, staining, feeding remains, etc., were recorded during the inspection surveys. Brief details of the buildings is included in Table 5.1 below, with detailed survey sheets provided at Annex 5719/7.

Table 5.1. Summary of Building Inspection Results.

Building No.	Picture	Potential Roost Features	Suitability
B1		Some lifted tiles on the south side of the hipped roof, next to the central chimney . Otherwise the building is in good condition with few external opportunities for roosting bats.	Low
B2		None	Negligible
B3		None	Negligible
B4		None	Negligible
B5		None	Negligible
B6		None	Negligible

Trees

5.3.8 A number of semi-mature and mature trees are present on site both although the vast majority are located within a woodland setting with free-standing trees being limited to those within field **SI4**, and with a number occurring within hedgerows and tree lines. Due to the large numbers of trees within the woodland areas as a whole, only those trees were examined where it is anticipated that tree removal may be required. This is primarily within

woodland area **W5b** and the trees along the alignment of both proposed access roads (located in woodland areas **W7** and **W8** respectively). Veteran tree **T7041** (**BT1**) is also included due to the roost previously recorded at this location. Trees **BT1** and **BT2** were inspected as part of the current survey work.

5.3.9 Further detailed inspections, of all trees requiring removal will be carried out once the detail of tree clearance has been established. This will take the form of a series of tree climbing surveys to inspect Potential Roost Features (PRFs) using an endoscope and/or a series of emergence/re-entry bat surveys.

5.3.10 The results of the tree assessment work undertaken at the site are illustrated on Plan 5719/ECO3 and summarised in Table 5.2 below:

Table 5.2. Tree inspection results.

Tree No.	Species	Age	Potential Roost Features	Suitability
BT1 (tree **T7041**)	Beech	Veteran	Major storm damage (lightning strike), and rot features. Free standing tree within field SI1.	High
BT2	Oak	Semi-mature	Cavity at base of main stem with internal rot. Located on alignment of proposed main access road.	Medium

Dusk and Dawn Surveys

Emergence / re-entry surveys (buildings)

5.3.11 Building **B1** exhibits low suitability for roosting bats and is therefore subject to further survey work in the form of dusk emergence and dawn re-entry surveys. The results of the dusk emergence and dawn re-entry surveys are summarised in Table 5.3 below.

Table 5.3. Emergence / re-entry survey results.

Building	Date	Sunset/ sunrise	Emergence/ re-entry	Summary of other activity
B1	05 May 2022 (dusk)	Sunset: 20:27	None	Very frequent passes by Soprano Pipistrelle with occasional Common Pipistrelle and *Nyctalus/serotine* passes. Bats passing and circling mainly to the rear/north of the building, concentrated during the dusk survey period. Circling activity at eastern gable end of the building.
	13 May 2022 (dawn)	Sunrise: 03:22	None	Occasional passes by Common Pipistrelle mainly to the front/ south of the building, predominantly during the dawn survey period. Very occasional passes by *Nyctalus/serotine*, Myotis and Soprano Pipistrelle.

Activity surveys (foraging /commuting)

5.3.12 The woodland throughout the site, and especially the woodland edges, offers potential opportunities for foraging bats as they are likely to support a reasonable biomass of invertebrate prey. In addition, tree-lines, hedgerows and watercourses form linear corridors that could act as navigational aids for commuting bats and provide connectivity to similar off-site habitats in the surrounding area. As such, bat activity surveys were undertaken at

the site between September to October 2019 and April to August 2020, and updated in the months between May and October 2023.

5.3.13 **Manual walked transect surveys.** The bat activity survey results are illustrated on Plan 5719/ECO4 and Plan 5719/ECO7, with summary tables provided below.

5.3.14 A total of five species/species groups were recorded during the walked activity transects carried out in 2019-2020, namely Common Pipistrelle, Soprano Pipistrelle, Pipistrelle sp., Big Bat sp., *Myotis* sp. and Long-eared bat sp., as set out below in Table 5.4.

Table 5.4. Total number of bat registrations per species and % species composition recorded during manual activity surveys (2019/2020 surveys).

Species	Number of Registrations Recorded	Approximate % of Total Registrations Recorded
Common Pipistrelle	301	56.3
Soprano Pipistrelle	185	34.6
Pipistrelle sp.	8	1.5
Big Bat sp.	12	2.2
Myotis	25	4.7
Long-eared sp.	4	0.7

5.3.15 The results from the bat activity surveys carried out in 2023 are illustrated on Plan 5719/ECO6, with summary tables provided below.

Table 5.5 Results of the dusk walked transect (Transect C) on 3rd May 2023.

Species	Number of Passes Recorded	Approximate % of Total Passes Recorded
Soprano Pipistrelle	6	100
Total	**6**	**100**

Table 5.6. Results of the dusk walked transect (Transect B) on 10th May 2023.

Species	Number of Passes Recorded	Approximate % of Total Passes Recorded
Common Pipistrelle	6	33
Soprano Pipistrelle	10	56
Big Bat sp.	1	6
Myotis sp.	1	6
Total	**18**	**100**

Table 5.7. Results of the dusk walked transects on 6th June 2023.

Species	Number of Passes Recorded (Transect B)	Approximate % of Total Passes Recorded (Transect B)	Number of Passes Recorded (Transect C)	Approximate % of Total Passes Recorded (Transect C)
Common Pipistrelle	26	50	1	25
Soprano Pipistrelle	22	42	3	75
Big Bat sp.	1	2	0	0
Myotis sp.	2	4	0	0
Long-eared sp.	1	2	0	0
Total	**52**	**100**	**4**	**100**

Table 5.8. Results of the dusk walked transects on 10th July 2023.

Species	Number of Passes Recorded (Transect B)	Approximate % of Total Passes Recorded (Transect B)	Number of Passes Recorded (Transect C)	Approximate % of Total Passes Recorded (Transect C)
Common Pipistrelle	28	74	20	30
Soprano Pipistrelle	9	24	44	66
Big Bat sp.	0	0	2	3
Myotis sp.	0	0	1	1
Long-eared sp.	1	3	0	0
Total	**38**	**100**	**67**	**100**

Table 5.9. Results of the dusk walked transects on 8th August 2023.

Species	Number of Passes Recorded (Transect B)	Approximate % of Total Passes Recorded (Transect B)	Number of Passes Recorded (Transect C)	Approximate % of Total Passes Recorded (Transect C)
Common Pipistrelle	50	81	8	62
Soprano Pipistrelle	8	13	4	31
Myotis sp.	3	5	1	8
Long-eared sp.	1	2	0	0
Total	**62**	**100**	**13**	**100**

5.3.16 A discussion of activity levels for each transect is set out below.

Transect B

5.3.17 During the 2019-2020 survey work, low to moderate levels of bat activity were recorded along transect B, with a total of 238 bat registrations recorded during the course of the surveys. Activity was dominated by Common Pipistrelle, which accounted for a total of 139 passes or 58.4%. Soprano Pipistrelle accounted for 34.9% of the registrations, whilst the remaining percentage was attributed to *Pipistrelle* species, Big Bat species, Long-eared bat species and *Myotis* species.

5.3.18 Activity within this transect was highest during the May and September dusk surveys, with a total of 52 and 63 bat passes recorded, respectively (which equates to approximately 0.43 and 0.42 registrations per minute). The highest level of activity in this transect was recorded at listening point 8 which is situated on the edge of woodland **W4a**, whilst activity was elevated along much of the eastern areas of the site (within grassland Area **SI4**) and surrounding treeline **TL1** (see Plan 5719/ECO4).

5.3.19 The updated 2023 survey work at the site returned similar results, with Common Pipistrelle accounting for 65% of all registrations along Transect B, followed by Soprano Pipistrelle (29%) and *Myotis* sp., 'Big Bat' sp. and Long-eared Bat each accounting for <5% of registrations (see Plan 5719/ECO6). Activity levels were generally low to moderate, with the highest levels of activity recorded along the northern edge of **W5a** around listening point 4.

Transect C

5.3.20 During the 2019-2020 survey work, low to moderate levels of bat activity were recorded along transect C, with a total of 297 bat registrations recorded during the course of the surveys. Activity was dominated by Common Pipistrelle, which accounted for a total of 162 passes or 54.6%. Soprano Pipistrelle accounted for 34.3% of the registrations, whilst *Myotis* species accounted for a further 6.4%. The remaining percentage was attributed to Pipistrelle species, Long-eared bat species and Big Bat species.

5.3.21 Activity within this transect peaked during the May dusk survey, with a total of 122 bat passes recorded (which equates to approximately 0.75 registrations per minute). The highest level of activity was recorded at listening point 7 in the south-west of the transect adjacent to woodland **W8**.

5.3.22 The updated 2023 survey work at the site returned similar results, with Common Pipistrelle accounting for 51% of all registrations along Transect B, followed by Soprano Pipistrelle (44%) and *Myotis* sp., 'Big Bat' sp. and Long-eared Bat each accounting for <5% of registrations (see Plan 5719/ECO6). Activity levels were generally low, with a single stretch of higher activity recorded along edge of woodland **W8** and **W6a.**

5.3.23 **Remote Detector Surveys.** A total of eight bat species (or species groups[27]) were recorded over the course of all the static detector surveys, namely Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, *Pipistrelle* sp., Big Bat sp., *Myotis* sp., Long-eared bat species and Barbastelle, as set out below.

5.3.24 Table 5.10 details the results of the activity surveys carried out in 2019-2020. Activity during this time was dominated by Common Pipistrelle, accounting for approximately 72% of all registrations, with other species present in only low numbers (see Plan 5719/ECO5).

Table 5.10. Total number of bat registrations per species and % species composition recorded during static detector surveys carried out in 2019-2020.

Species	Number of Registrations Recorded	Approximate % of Total Registrations Recorded
Common Pipistrelle	5,402	72.59
Soprano Pipistrelle	1,271	17.08
Nathusius' Pipistrelle	7	0.09
Barbastelle	2	0.03
Myotis sp.	164	2.20
Big Bat sp.	309	4.15
Long-eared bat sp.	15	0.20
Unidentified Pipistrelle sp.	272	3.65

5.3.25 Results from updated activity surveys carried out in 2023 are summarised in Tables 5.11-5.14 below, and illustrated on Plan 5719/ECO7.

Table 5.11. Automated static bat survey summary for Location 1 (SD1, within woodland W6b).

Survey Date	Detector Location 1					
	Number of registrations by species#					
	Pip 45	Pip 55	Pip Nath	'Big Bat'	Myotis	BLE
04/05/2023	7	2	-	2	5	-
05/05/2023	2	5	-	-	2	-
06/05/2023	6	4	-	-	-	1
07/05/2023	6	1	-	1	2	1
08/05/2023	16	5	-	2	-	-
09/05/2023	8	5	-	2	3	-
10/05/2023	3	3	-	3	5	2
06/06/2023	-	-	-	-	-	1
07/06/2023	-	-	-	-	-	-

[27] *Myotis* sp. bats are difficult to separate based on analysis of calls alone, and have therefore been identified to species group level only. It is likely several different species within each group are present at the site. Similarly, some Pipistrelle and *Nyctalus/Eptesicus* (or 'big bat') sp. calls were not possible to identify to species level and are assigned to a species group.

08/06/2023	1	-	-	-	-	1
09/06/2023	4	3	-	-	13	-
10/06/2023	11	10	-	1	1	-
11/06/2023	41	6	-	-	1	-
12/06/2023	24	2	-	-	1	-
10/07/2023	22	14	-	-	-	-
11/07/2023	217	21	-	-	1	1
12/07/2023	104	11	-	2	-	1
13/07/2023	24	7	-	-	-	-
14/07/2023	16	4	-	-	3	-
15/07/2023	46	17	-	-	-	-
16/07/2023	42	27	-	5	-	2
Total registrations	**600**	**147**	**-**	**18**	**37**	**10**
Approximate % of total registrations	**73.9**	**18.1**	**-**	**2.2**	**4.6**	**1.2**

Key:

Pip 45- Common Pipistrelle

Pip 55- Soprano Pipistrelle

Pip Nath – Nathusius' Pipistrelle

'Big Bat' - Noctule, Leislers or Serotine

Myotis – *Myotis* sp.

BLE - Brown Long-eared bat

- Figures shown are the total no. of registrations recorded during the dusk to the proceeding dawn period for each date shown, i.e. a recording 'night' for the 20th June will be registrations recorded from ~18.00 on the 20/06 till 07.00 on the morning of the 21/06.

Table 5.12. Automated static bat survey summary for Location 2 (SD2, within scrub SC3 near northern site boundary).

Survey Date	Detector Location 2					
	Number of registrations by species#					
	Pip 45	Pip 55	Pip Nath	'Big Bat'	Myotis	BLE
04/05/2023	5	1	-	-	5	-
05/05/2023	5	-	-	-	1	-
06/05/2023	13	1	-	1	1	-
07/05/2023	5	-	-	-	1	-
08/05/2023	11	1	-	-	-	-
09/05/2023	6	-	-	-	1	-
10/05/2023	1	-	-	-	1	-
06/06/2023	11	1	-	4	4	15
07/06/2023	25	1	-	3	2	17
08/06/2023	33	4	-	1	4	5
09/06/2023	43	15	-	2	6	1
10/06/2023	19	7	-	3	3	6
11/06/2023	15	8	-	1	3	1
12/06/2023	22	2	-	-	4	5
10/07/2023	83	2	-	2	1	-
11/07/2023	72	3	-	1	2	-
12/07/2023	80	5	-	-	-	-
13/07/2023	215	2	-	-	-	-
14/07/2023	79	-	-	2	9	-
15/07/2023	3	2	-	1	6	-
16/07/2023	33	1	-	-	1	-
Total registrations	**779**	**56**	**-**	**21**	**55**	**50**

Approximate % of total registrations	**81.1**	**5.8**	**-**	**2.2**	**5.7**	**5.2**

Key:
Pip 45- Common Pipistrelle
Pip 55- Soprano Pipistrelle
Pip Nath – Nathusius' Pipistrelle
'Big Bat' - Noctule, Leislers or Serotine
Myotis – *Myotis* sp.
BLE - Brown Long-eared bat
- Figures shown are the total no. of registrations recorded during the dusk to the proceeding dawn period for each date shown, i.e. a recording 'night' for the 20th June will be registrations recorded from ~18.00 on the 20/06 till 07.00 on the morning of the 21/06.

Table 5.13. Automated static bat survey summary for Location 3 (SD4, within scattered trees and woodland W3 edge).

Survey Date	**Detector Location 3**					
	Number of registrations by species#					
	Pip 45	**Pip 55**	**Pip Nath**	**'Big Bat'**	**Myotis**	**BLE**
04/05/2023	5	5	-	1	-	-
05/05/2023	3	3	-	-	-	1
06/05/2023	15	4	-	-	-	-
07/05/2023	1	-	-	-	1	-
08/05/2023	18	22	-	1	-	-
09/05/2023	3	7	-	-	-	-
10/05/2023	-	2	-	-	-	-
06/06/2023	-	-	-	2	-	-
07/06/2023	-	-	-	4	-	-
08/06/2023	3	1	-	1	-	-
09/06/2023	7	10	-	2	-	-
10/06/2023	20	7	-	5	-	-
11/06/2023	18	8	-	2	-	-
12/06/2023	6	2	-	2	-	-
10/07/2023	52	16	-	9	2	-
11/07/2023	55	20	-	1	2	-
12/07/2023	13	4	-	-	-	-
13/07/2023	12	4	-	2	1	-
14/07/2023	123	17	1	2	3	-
15/07/2023	73	13	-	2	5	-
16/07/2023	30	30	-	2	1	1
Total registrations	**457**	**175**	**1**	**38**	**15**	**2**
Approximate % of total registrations	**66.4**	**25.4**	**0.1**	**5.5**	**2.2**	**0.3**

Key:
Pip 45- Common Pipistrelle
Pip 55- Soprano Pipistrelle
Pip Nath – Nathusius' Pipistrelle
'Big Bat' - Noctule, Leislers or Serotine
Myotis – *Myotis* sp.
BLE - Brown Long-eared bat
- Figures shown are the total no. of registrations recorded during the dusk to the proceeding dawn period for each date shown, i.e. a recording 'night' for the 20th June will be registrations recorded from ~18.00 on the 20/06 till 07.00 on the morning of the 21/06.

Table 5.14. Automated static bat survey summary for Location 4 (SD5, at northern edge of woodland W6a).

Survey Date	Detector Location 4					
	Number of registrations by species#					
	Pip 45	Pip 55	Pip Nath	'Big Bat'	Myotis	BLE
03/05/2023	16	4	-	-	-	-
04/05/2023	4	451	-	-	1	-
05/05/2023	6	478	-	17	2	-
06/05/2023	1	50	-	4	-	-
07/05/2023	22	30	-	7	1	-
08/05/2023	2	-	-	3	-	-
09/05/2023	2	2	-	3	-	-
10/05/2023	10	1	-	5	-	-
06/06/2023	40	102	-	2	-	-
07/06/2023	52	131	-	2	-	-
08/06/2023	171	121	-	6	-	-
09/06/2023	114	78	-	51	-	-
10/06/2023	25	4	-	1	-	-
11/06/2023	8	-	-	2	-	-
12/06/2023	247	4	-	1	-	-
10/07/2023	46	4	-	1	2	-
11/07/2023	82	2	-	5	-	-
12/07/2023	180	24	1	2	4	-
13/07/2023	161	140	-	1	2	-
14/07/2023	26	20	-	-	-	-
15/07/2023	1	-	-	-	-	-
16/07/2023	57	14	-	1	-	-
Total registrations	**1273**	**1660**	**1**	**114**	**12**	**-**
Approximate % of total registrations	**41.6**	**54.2**	**0.1**	**3.7**	**0.4**	**-**

Key:

Pip 45- Common Pipistrelle

Pip 55- Soprano Pipistrelle

Pip Nath – Nathusius' Pipistrelle

'Big Bat' - Noctule, Leislers or Serotine

Myotis – *Myotis* sp.

BLE - Brown Long-eared bat

- Figures shown are the total no. of registrations recorded during the dusk to the proceeding dawn period for each date shown, i.e. a recording 'night' for the 20th June will be registrations recorded from ~18.00 on the 20/06 till 07.00 on the morning of the 21/06.

5.3.26 A discussion of activity levels for each static detector location is set out below.

Static detector location 1 (SD1)

5.3.27 During the 2019-2020 survey work, generally low levels of activity were recorded at this static location, with a total of 989 passes recorded throughout the course of the surveys. Of these, Common Pipistrelle accounted for 66.6% of all registrations, with Soprano Pipistrelle accounting for 19.8%, with other species recorded in very low numbers, including 8 registrations of Long-eared bat species. Activity peaked during June to August with 4.16, 4.56 and 3.54 bat registrations per hour, respectively. Activity was notably low during October, accounting for just 1.4% of all registrations.

5.3.28 The updated 2023 survey work returned similar results. Common Pipistrelle was the most commonly recorded species in all months, accounting for 74% of all registrations (812 total registrations). Soprano Pipistrelle was the next most commonly recorded species with 18% of all registrations, followed by approximately 5% for *Myotis* species, 2% for 'Big Bats', and the remainder attributed to low numbers of Long-eared Bat.

Static detector location 2 (SD2)

5.3.29 During the 2019-2020 survey work, low to moderate levels of activity were recorded at this static location, with a total of 1,637 registrations recorded. Common Pipistrelle dominated activity, accounting for 74.6% of all registrations, with Soprano Pipistrelle accounting for 12.3%, with other species recorded in very low numbers, including 7 registrations of Long-eared bat species and a single registration for Barbastelle during July. Activity peaked during June, July and September with 7.54, 7.03 and 8.00 bat registrations per hour, respectively. Activity was notably low during August and October, accounting for just 0.73% and 0.86% of the total registrations, respectively. Other species were recorded in low numbers, with notable peaks in big bat activity in September with a total of 100 registrations recorded, accounting for 63.7% of total registrations for this species group.

5.3.30 The updated 2023 survey work returned similar results. Of the 961 total registrations recorded, Common Pipistrelle accounted for 81% of these. Soprano Pipistrelle and *Myotis* sp. were the next most commonly recorded species/species group, each accounting for approximately 6% of all registrations, followed by approximately 5% for Long-eared Bat and 2% for 'Big Bats'.

Static detector location 3 (SD4)

5.3.31 During the 2019-2020 survey work, moderate levels were recorded at this static location, with a total of 2,950 registrations recorded. Again, Common Pipistrelle dominated, accounting for 83.3% of all registrations, with other species recorded in low numbers, including a single registration for Barbastelle during October. Activity peaked during June (36.5 registrations per hour), with lower levels of activity during July (0.2 registrations per hour). Other species were recorded in very low numbers, with a notable peak in Soprano Pipistrelle activity in June with a total of 288 registrations recorded, accounting for 72% of registrations for this species.

5.3.32 The updated 2023 survey work returned slightly lower levels of activity in this location. Of the 688 total registrations, Common Pipistrelle accounted for 66% of all registrations, followed by approximately 5% for 'Big Bat' species, 2% for *Myotis* sp., and the rest attributed to a low number of Long-eared Bat and a single pass of Nathusius' Pipistrelle in July.

Static detector location 4 (SD5)

5.3.33 Low to moderate levels were recorded at this static location over the course of the surveys, with a total of 1,866 registrations recorded. Common Pipistrelle accounted for 57.1% of registrations, whilst Soprano Pipistrelle accounted for 25.3% of registrations. Activity was highest at this location during September, accounting for 62.0% of all registrations and with a total average of 19.1 registrations per hour. Other species were recorded in very low numbers, representing passes by a single or very small number of bats, including 2 registrations of Nathusius' Pipistrelle.

5.3.34 Moderate activity levels were recorded at this location during the updated 2023 survey work. A total of 3060 registrations were recorded, with consistently high numbers of Common and Soprano Pipistrelle recorded May–July. Soprano Pipistrelle accounted for 54%

of all registrations, followed by 41% for Common Pipistrelle, 4% for 'Big Bat' species, and <1% each for *Myotis* sp. and Nathusius' Pipistrelle.

5.3.35 **Evaluation**

Roosting

Buildings

5.3.1 Building **B1** was assessed as having low potential, and no evidence of roosting bats was recorded during the survey work undertaken. Building **B2** to **B5** provide negligible suitability for roosting bats.

5.3.2 Following the additional survey it is confirmed that it is reasonably likely that there are no bats roosting within the buildings within the site.

Trees

5.3.3 The vast majority of trees within the site are located within woodland, and will be retained under the proposals, such that in the event that bats are present within the trees they will remain unaffected.

5.3.4 Only those trees which may require removal, or where previous roosts had been recorded were assessed in terms of their bat roosting potential. Veteran tree **T7041** (**BT1**) - which was the site of a previously recorded roost - will be retained within the proposed SANG area.

5.3.5 Tree BT2 is likely to be lost to the proposals and it is recommended that a further detailed inspection is carried out of this tree (in addition to any others) once the detail of tree clearance has been established. An initial inspection is possible of the tree from ground level using an endoscope, following which the need for additional emergence/re-entry surveys can be assessed.

Foraging / Commuting

5.3.6 Overall, low to moderate levels of activity were recorded within the site, with at least eight species (or species groups[28]) recorded during the surveys including Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Pipistrelle sp., Big Bat sp., *Myotis* sp., Long-eared bat sp. and Barbastelle. A summary of the automated activity survey and an evaluation of the importance of the site for each bat species are set out below.

5.3.7 *Common Pipistrelle* was the most frequently recorded species during the survey work undertaken in both 2019-2020 and 2023. Activity in 2019-2020 was recorded to be highest at static location SD4 along treeline TL1 where a total of 2,457 registrations were recorded, with activity highest during the June survey. In 2023, the highest level of activity was at static location SD5, with a total of 1,273 registrations recorded.

5.3.8 *Soprano Pipistrelle* was the next most frequently recorded species, with a total of 1,271 registrations over the course of the 2019-2020 surveys, accounting for 17.1% of all registrations. Activity was recorded to be highest at static location SD5 associated with woodland W6 where a total of 473 registrations were recorded, the majority of which were

[28] *Myotis* sp. and *Nyctalus/Eptesicus* sp. bats are difficult to separate based on analysis of calls alone, and have therefore been identified to species group level only. It is likely several different species within each group are present at the site.

recorded during the September survey. In 2023, the highest level of activity was at static location SD5, with a total of 1,660 registrations recorded.

5.3.9 *Pipistrelle sp.* has been recorded within the site where the peak frequencies of echolocation calls were recorded to be at 50kHz and could therefore not be confirmed as either Common or Soprano Pipistrelle. Pipistrelle calls accounted for approximately 3.7% of registrations in 2019-2020, with activity highest at static location SD5 where a total of 254 registrations were recorded.

5.3.10 *Nathusius' Pipistrelle* was identified within the site from two registrations at static location SD5 within woodland W6 and five registrations at static location SD2 within an area of dense scrub/bracken. In 2023, a single registration each was recorded at static locations SD4 and SD5.

5.3.11 *Big bat* sp. was recorded occasionally within the site, with a total of 309 registrations over the course of the 2019-2020 surveys, accounting for 4.2% of all registrations. Activity was recorded to be highest at static location SD2, situated within dense scrub/bracken, where a total of 157 registrations were recorded, the majority of which were recorded during the September survey. Similar levels of 'Big Bat' sp. activity were recorded in 2023, with the species group generally accounting for 2-5% of all registrations.

5.3.12 *Myotis* sp. was recorded infrequently at all four static locations, with a total of 164 registrations over the course of the surveys, accounting for 2.2% of all registrations. Activity was recorded to be highest at static location SD4 along treeline TL1 where a total of 54 registrations were recorded. Similar levels of *Myotis* sp. activity were recorded in 2023, with the species group generally accounting for 1-5% of all registrations.

5.3.13 *Long-eared Bat* species were recorded infrequently, with activity recorded at static location SD1 and SD2 only during 2019-2020 surveys. Just 15 registrations were recorded, all of which were recorded during the September survey for SD1 with 6 registrations recorded during the October survey and a single registration during the May survey for SD2. A total of 62 registrations of Long-eared Bat were recorded during the 2023 survey work.

5.3.14 *Barbastelle* was also recorded infrequently and only during the 2019-2020 survey work, with activity recorded at static location SD2 and SD4 only. Only two registrations were recorded across all the surveys, with one recorded during the July survey for SD2 and one during the October survey for SD4.

5.3.15 In summary, Common Pipistrelle was most frequently recorded, with sustained foraging activity by moderate numbers of bats throughout the site, particularly along the woodland areas. Frequent records of foraging and commuting Soprano Pipistrelle were also recorded, particularly associated with Woodland W6, along with sporadic Big Bat sp. and *Myotis* sp. passes. Long-eared bat species and Nathusius' Pipistrelle were recorded infrequently, indicating that the site is unlikely to be of high importance for these species.

5.3.16 Two Barbastelle bat passes were recorded within the site, during the 2019-2020 survey work only, at static locations SD2 and SD4, which are both situated within or close to woodland. This species is known to be a woodland roosting species, and it is likely that the number of registrations recorded at this location is attributable to a single or small number of bats.

5.3.17 Guidance on evaluation of the overall assemblage of bats at a site (Wray et al., 2010)[29] sets out a scoring system based on the rarity of species recorded, number of individuals, proximity to roosts and habitat character. The results of this scoring exercise are set out below for the bat species recorded within the site:

Table 5.15. Evaluation of bat species recorded at the site

Species	Rarity	Number of bats	Roosts/potential roosts nearby	Linear habitat characteristics	Total score
Common Pipistrelle	Common (2)	Small number of bats (10)	Not known (4)	Isolated outgrown hedgerows and moderately sized fields (3)	18
Soprano Pipistrelle	Common (2)	Small number of bats (10)	Not known (4)	Isolated outgrown hedgerows and moderately sized fields (3)	19
Barbastelle	Rarest (20)	Individual bats (5)	Not known (4)	Isolated outgrown hedgerows and moderately sized fields (3)	29
Other species	Rare (5)	Individual bats (5)	Not known (4)	Isolated outgrown hedgerows and moderately sized fields (3)	17

5.3.18 Based on this scoring system, the site generally scores between 17 and 19 points, which equates to a district, local or parish level of value for the majority of species.

5.3.19 The presence of Barbastelle results in a score of 29, which relates to county level importance, but as set out above, the occurrence of this species within the site is likely attributable to a single or small number of bats, and at any rate this species has not been recorded during the 2023 update survey work carried out to date. This species is now known to be widely distributed across the rural landscape of southern Britain (although never common)[30], and therefore the valuation of county value for this species appears an over-estimation.

5.3.20 Accordingly, it is considered that overall, the population of bats associated with the site is considered to be important at the **District** level.

5.4 Badger

5.4.1 **Legislation.** Badger receive legislative protection under the Protection of Badgers Act 1992 (see Annex 5719/2 for detailed provisions), and as such should be assessed as an important ecological feature. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain. It is the duty of planning authorities to consider the conservation and welfare impacts of development upon Badger and issue permissions accordingly.

[29] S. Wray, D. Wells, E. Long & T. Mitchell-Jones (December 2010). *Valuing Bats in EcIA.* In Practice, IEEM.

[30] Mathews F, Kubasiewicz LM, Gurnell J, Harrower CA, McDonald RA, Shore RF. (2018) *A Review of the Population and Conservation Status of British Mammals. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage.* Natural England, Peterborough.

5.4.2 Licences can be obtained from Natural England for development activities that would otherwise be unlawful under the legislation. Guidance on the types of activity that should be licensed is laid out in the relevant best practice guidance. [31, 32]

5.4.3 **Survey Results and Evaluation.** No specific records of Badger were returned from the desktop study (SxBRC does not provide records of Badger as part of its data search). A number of Badger setts have been identified within the site during the 2019/2020 surveys, as set out in Table 5.16 below and shown on Plan 5719/ECO6.

5.4.4 Badger setts can be classified according to their usage by Badgers[33]: a 'main sett' is usually in continuous use with a large number of entrances; an 'annex sett' located close to the main sett with several entrances but not usually in continuous use; a 'subsidiary sett' is located some distance from the main sett (e.g. over 50m[34]) comprising a small number of entrances and not usually in continuous use; and an 'outlier sett' is located some distance from the main setts, usually comprising one or two entrances and subject to sporadic use.

5.4.5 The specific locations of badger setts and other field signs are confidential, but are available on request to authorised parties.

5.4.6 In terms of foraging habitat, habitats across the site are likely to provide good foraging opportunities for Badger in the form of scrub, woodland and grassland, whilst similar opportunities are also present in the immediate vicinity of the site.

5.4.7 During the 2023 updated walkover survey, no significant changes were observed.

5.4.8 **Evaluation:** The site provides suitable foraging habitat which is likely to form part of the territory of badger setts located within the proximity. As such, the site is considered to be of importance at the **local** level for Badger.

5.5 Dormouse

5.5.1 **Legislation:** Dormouse is fully protected under the Wildlife and Countryside Act 1981 (as amended) and is a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). Such legislation affords protection to individuals of the species and their breeding sites and places of rest (see Annex 5719/2 for detailed provisions). Dormouse is also a S41 Priority Species. On this basis, Dormouse is considered to form an important ecological feature.

5.5.2 **Background Records:** No specific records of Dormouse were returned from the desktop study from within the site, however results were returned from the adjacent LWS Lake Wood and within the 2km search area. The data returned from SxBRC includes multiple records of Dormouse, most of which derive from dormouse box checks within the LWS Lake Wood dating from between 1990 and 2015, with the closest record located 50m south-west dated from 2001 of a feeding remain.

5.5.3 **Survey Results:** The study area provides good opportunities for Dormouse, particularly in the form of areas of woodland, hedgerows and, to a lesser extent, scrub throughout the

31 English Nature (2002) '*Badgers and Development*'
32 Natural England (2011) '*Badgers and Development: A Guide to Best Practice and Licensing*', Interim Guidance Document
33 Thornton, P.S. (1998) Density and distribution of badgers in south-west England – a predictive model. *Mammal review*, **18**, 11-23.
34 Natural England (December 2010) *Badgers and Development – A guide to best practice and licensing*.

study area. There is a large central section of the site which is dominated by open grassland fields which are unsuitable for Dormouse.

5.5.4 Given the presence of potential Dormouse habitat within the study area specific Dormouse survey work was undertaken at the site between September to November 2019 and May to August 2020. The results of this survey are shown at Plan 5719/ECO8.

5.5.5 Nest tube surveys undertaken at the site in 2019 and 2020 confirmed that Dormouse is widespread throughout the site, with evidence in the form of nests and individual Dormice. The majority of individuals animals were found along the south-western boundary within secondary woodland forming compartment **W8** and with further evidence on the boundary of Lake Wood, in woodland areas **W4c** (Budletts Wood) and in woodland areas **W6** and **W6a** (Longwood Gill). The second set of surveys undertaken in 2020 confirmed the continued presence of Dormouse, with occasional evidence in the form of nests, recorded in Hedgerow **H1**, woodland section **W4d** and in the south-western corner of the site.

5.5.6 **Evaluation:** Based on recorded occurrence, it is likely that the woodland areas along the western boundary and the tree line on the southern, which connects to the offsite woodland within the LWS Lake Wood, forms the main area of habitat for Dormouse within the site. The other existing habitats are scattered within the site, comprising scrub, singular hedgerow and woodland blocks surrounding the open grassland. Given the presence of a well-connected woodland and hedgerow network across the site, it is likely Dormouse widely present, albeit at relatively low densities throughout the site.

5.5.7 Sussex is located within the core distribution area for Dormouse, and the species is relatively widespread across the county[35], and in the context of surrounding habitats, with a well established network of hedgerows, treelines and wooded areas in the wider landscape, the loss of these specific habitats are unlikely to be of high significance for the local population.

5.5.8 As such, the population supported by the site is considered to be of importance at the **local** level.

5.6 Water Vole

5.6.1 **Legislation.** Water Vole is fully protected under the Wildlife and Countryside Act 1981 (as amended). Water Vole is also a S41 Priority Species. As such, this species is considered to represent an important ecological feature. The legislation affords protection to individuals of the species and their breeding sites and places of shelter (see Annex 5719/2 for detailed provisions). There is no provision under the Act for licensing what would otherwise be offences for the purpose of development. Such activities must be covered by the defence in the Act that permits otherwise illegal actions if they are the incidental result of a lawful operation and could not reasonably be avoided.

5.6.2 If, despite all reasonable efforts, properly authorised development will adversely affect Water Vole and there are no alternative habitats nearby, Natural England may issue a licence to trap and translocate Water Vole for the purpose of conservation. To issue such a licence, Natural England would need to be assured there is no reasonable alternative to the development and that there are no other practical solutions that would allow Water Vole to be retained at the same location. NE would also require assurance that the actions would make a positive contribution to Water Vole conservation.

[35] Mammal Watch South East (2015) *South East Mammal Atlas: covering Hampshire, Surrey, Sussex, Kent and the Isle of Wight*

5.6.3 **Background Records.** No specific records of Water Vole within the site were returned from the desktop study. However, an individual Water Vole recorded in 2001 was noted in the adjacent LWS Lake Wood, although this is somewhat dated. Three other records of Water Vole were returned from the surrounding search area, located approximately 1.5km west of the site.

5.6.4 **Survey Results and Evaluation.** The habitats within the site itself are generally unsuitable for Water Vole, mostly comprising shallow ephemeral streams within a woodland setting.

5.6.5 No evidence of Water Vole was found during the specific survey work undertaken and as such this species is unlikely to be affected by the proposals. As such, the site is not considered to be of importance for this species.

5.7 Otter

5.7.1 **Legislation.** Otter is fully protected under the Wildlife and Countryside Act 1981 (as amended) and is a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). Such legislation affords protection to individuals of the species and their breeding sites and places of rest (see Annex 5719/2 for detailed provisions). Otter is also a S41 Priority Species. On this basis, Otter is considered to represent an important ecological feature.

5.7.2 **Background Records.** No specific records of Otter were returned from the desktop study (SxBRC does not provide records of Otter as part of its data search). The desktop study states that there are no recent breeding otter records in Sussex.

5.7.3 **Survey Results and Evaluation.** The habitats within the site itself are generally unsuitable for Water Vole, mostly comprising shallow ephemeral streams within a woodland setting.

5.7.4 No evidence of Otter was found during the specific survey work undertaken and this species is unlikely to be affected by the proposals. As such, the site is not considered to be of importance for this species.

5.8 Other Mammals

5.8.1 **Legislation.** A number of other UK mammal species do not receive direct legislative protection relevant to development activities but may receive protection against acts of cruelty (e.g. under the Wild Mammals (Protection) Act 1996). In addition, a number of these mammal species are S41 Priority Species and should be assessed as important ecological features.

5.8.2 **Background Records.** No specific records of other mammals from within or adjacent to the site were returned from the desktop study. A number of records of Hedgehog *Erinaceus europaeus* (Priority Species) was returned from within the search area around the site, with the closest record noted in LWS Lake Wood, dated to 2006. In addition, two records of European Rabbit *Oryctolagus cuniculus* were recorded along the A22 in July 2020, located 0.8km north of the site boundary.

5.8.3 **Survey Results and Evaluation.** No evidence of any other protected, rare or notable mammal species was recorded within the site. Other mammal species likely to utilise the site, such as Fox *Vulpes vulpes*, remain common in both a local and national context, and as mentioned above do not receive specific legislative protection in a development context. As such, these species are not a material planning consideration and the loss of potential opportunities for these species to the proposals is of negligible significance.

5.8.4 The desktop study returned background records of Hedgehog within the surrounding area. Hedgehog is a Priority Species, albeit this species remains common and widespread in England. The site offers potential opportunities for this species, particularly in the form of areas of denser scrub, rank grassland tall herbs and around the sites field margins, although habitats are unlikely to be of importance in a local context, and Hedgehog is considered to be of importance at a site level only. The majority of these areas are retained under the proposals. In any event, abundant similar opportunities are present within the local area and there is no evidence to suggest the proposals will significantly affect local populations of this species. However, it is recommended that precautionary safeguards are put in place to minimise the risk of harm to Hedgehog in the event this species is present, as detailed in Chapter 6 below.

5.9 Amphibians

5.9.1 **Legislation.** All British amphibian species receive a degree of protection under the Wildlife and Countryside Act 1981 (as amended). Great Crested Newt is protected under the Act and is also classed as a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). As such, both Great Crested Newt and habitats utilised by this species are afforded protection (see Annex 5719/2 for detailed provisions). Great Crested Newt is also a S41 Priority Species, as are Common Toad *Bufo bufo*, Natterjack Toad *Epidalea calamita*, and Pool Frog *Pelophylax lessonae*. As such, these species should be assessed as important ecological features.

5.9.2 **Background Records.** No specific records of Great Crested Newt from within the site were returned from the desktop study. Three records of Great Crested Newt were returned from the LWS Lake Wood, adjacent to the site on the southern boundary, with the most recent record dated to 2006. The other records returned from within the 2km search area comprised Common Frog *Rana temporaria*, Common Toad, Palmate Newt *Lissotriton* helveticus and Smooth Newt *Lissotriton vulgaris*.

5.9.3 **Survey Results**

5.9.4 **Habitat Suitability Index (HSI).** As discussed at section 4.9 previously, a number of ponds have been identified on site and within close proximity to the site, three of which, ponds **P7**, **P9** and **P10**, are adjacent to Snatts Road, near to the eastern boundary of the site, whilst **P8** is south of the site located within Lake Wood LWS, and **P22** within Fir Tree Grove, outside the red line. An initial appraisal of each pond was made using the HSI system to identify potential suitability to support Great Crested Newt, see Tables 5.17 and 5.18, below.

Table 5.17. HSI survey results from 2020.

Pond	Suitability Indices										HSI Score	Suitability
	SI 1 Location	**SI 2** Pond Area	**SI 3** Pond Drying	**SI 4** Water Quality	**SI 5** Shade	**SI 6** Water Fowl	**SI 7** Fish	**SI 8** Ponds	**SI 9** Terrestrial Habitat	**SI 10** Macrophytes		
Onsite Ponds												
P1	-	-	-	-	-	-	-	-	-	-	-	*Dry at time of HSI*

P2	1	0.6	1	0.33	0.6	1	1	1	1	0.4	**0.74**	*Good*
P3	1	0.2	0.5	0.33	0.3	1	1	1	1	0.4	**0.58**	*Below Average*
P4	1	0.05	0.5	0.33	0.4	1	0.67	1	1	0.3	**0.48**	*Poor*
P5	1	0.2	0.5	0.33	0.2	1	1	1	1	0.3	**0.54**	*Below Average*
P6	1	1	0.5	0.33	0.2	1	1	1	1	0.3	**0.63**	*Average*
Offsite Ponds												
P7	-	-	-	-	-	-	-	-	-	-	-	*No Access Granted*
P8	1	0.8	0.9	1	1	0.67	0.33	1	1	0.7	**0.80**	*Excellent*
P9	-	-	-	-	-	-	-	-	-	-	-	*Dry at time of HSI*
P10	-	-	-	-	-	-	-	-	-	-	-	*No Access Granted*
P20	1	0.1	1	0.33	0.4	1	1	1	1	0.35	0.58	*Below Average*
P22	1	0.3	1	0.33	1	0.67	0.67	1	1	0.5	1	*Average*

Table 5.18. HSI survey results from 2023.

Pond	**Suitability Indices**										**HSI Score**	**Suitability**
	SI 1 Location	**SI 2** Pond Area	**SI 3** Pond Drying	**SI 4** Water Quality	**SI 5** Shade	**SI 6** Water Fowl	**SI 7** Fish	**SI 8** Ponds	**SI 9** Terrestrial Habitat	**SI 10** Macrophytes		
Onsite Ponds												
P1	1	0.92	0.5	0.33	0.8	1	1	1	1	0.7	**0.78**	*Good*
P2	1	0.2	1	0.33	1	1	1	1	1	0.4	**0.70**	*Average*
P3	1	0.01	0.1	0.01	1	1	1	1	1	0.3	**0.28**	*Poor*
P4	1	0.3	1	0.01	1	1	1	1	1	0.3	**0.50**	*Poor*
P5	1	0.01	1	0.67	1	1	1	1	1	0.4	**0.55**	*Below average*
P6	1	1	0.9	0.67	0.8	0.67	1	1	1	0.3	**0.79**	*Good*
Offsite Ponds												
P20	1	0.01	0.5	0.33	1	1	1	1	1	0.4	**0.48**	*Poor*

5.9.5 **Environmental eDNA Surveys.** Due to the potentially suitable terrestrial habitat within the site and the favourable HSI scores, specific Great Crested Newt survey work was undertaken on ponds **P2** to **P6**, **P8 and P22** (ie. those ponds within 250m of the proposed Development) in May 2020 (all ponds except **P22**), April 2022 (pond **P22**) and in April 2023 (**P1**-**P6**, **P20**).

5.9.6 The results of the surveys are summarised in Table 5.19 below.

Table 5.19. GCN eDNA survey results summary.

Pond Ref.	GCN Present	GCN eDNA score	Pond Location
P1	N	Negative	On site
P2	N	Negative	On site
P3	N	Negative	On site
P4	N	Negative	On site
P5	N	Negative	On site
P6	**Y**	**Positive (score of 5/12)**	**On site**
P8	N	Negative	Off site
P20	N	Negative	Off site
P22	N	Negative	Off site

5.9.7 **Population Size Class Assessment Surveys.** Following confirmation of the presence of GCN in Pond **P6**, further specific Great Crested Newt survey work was undertaken to determine the Population Size Class of the Population, using traditional survey techniques (bottle trapping, torch survey, egg searching . This is a proxy measure of the actual population size, and is information required for the submission of a GCN Mitigation Licence.

5.9.8 In addition, since it was not possible to take eDNA samples of Pond **P1** along with the other samples (it was dry at the time of the eDNA survey that was carried out in 2020), the opportunity was taken to complete a presence/absence surveys and population size class assessment, along with another pond (**P20**) which was overlooked during the original surveys.

5.9.9 Ponds **P1**, **P6** and **P20** were therefore subject to surveys between March and June 2022, the results of which are summarised in Table 5.20 below.

Table 5.20. GCN survey results summary (2022).

Pond Ref.	GCN Present	GCN Peak Count	GCN Population Size Class	Smooth Newt Peak Count	Palmate Newt Peak Count	Other amphibians	Fish
P1	Y	-	Absent	6	10	Common Frog	X
P6	**Y**	**12**	**Medium**	**7**	**28**	**Common Frog**	**X**
P20	N	-	Absent	-	-	Common Frog	x
Summed across ponds		**12**	**Medium**				

5.9.10 Updated population size class assessments were carried out of Ponds **P1-P6** and **P20-P21** between April and June 2023, the results of which are summarised in Table 5.21 below.

Table 5.21. GCN survey results summary (2023).

Pond Ref.	GCN Present	GCN Peak Count	GCN Population Size Class	Smooth Newt Peak Count	Palmate Newt Peak Count	Other amphibians	Fish
P1	N	-	-	-	5	Common Toad, Common Frog	-
P2	N	-	-	1	6	Common Toad, Common Frog	-
P3	N	-	-	3	-	Common Toad, Common Frog	-
P4	**Y**	**1**	**Small**	**2**	**-**	Common Toad, Common Frog	-
P5	N	-	-	-	3	Common Toad, Common Frog	-
P6	**Y**	**5**	**Small**	8	8	Common Toad, Common Frog	**-**
P20	**N**	**-**	**-**	**-**	**-**	Common Toad, Common Frog	**-**
P21	N	-	-	-	1	Common Toad, Common Frog	-
Summed across ponds		**6**	**Small**				

5.9.11 **Evaluation.** A medium population of Great Crested Newt was recorded as present in pond **P6** in 2022, although updated surveys in 2023 only revealed a small population in **P6**. A single adult individual GCN was found within **P4** during one of the surveys**,** but this was not repeated during any other survey during 2023, or during the previous season.

5.9.12 It appears that the site supports a small meta-population, centred on the one known population within the centre of the site. There are few strong habitat connection features between **P6** and **P4**, which are not connected by woodland or linear vegetated corridors, and it is possible that the individual recorded in pond **P4** was dispersing, since the pond otherwise returned a negative eDNA result earlier in the season and the individual GCN was only recorded on one occasion during population surveys. The status of each of the ponds is shown at Plan 5719/ECO13.

5.9.13 This population is considered to be of ecological importance at the **local** level.

5.10 Reptiles

5.10.1 **Legislation**. All six species of British reptile are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), which protects individuals against intentional killing or injury. Sand Lizard *Lacerta agilis* and Smooth Snake *Coronella austriaca* receive additional protection under the Conservation of Habitats and Species Regulations 2017 (as amended); refer to Annex 5719/2 for detailed provisions. All six reptile species are also S41 Priority Species. As such, all reptile species should be assessed as important ecological features.

5.10.2 **Background Records.** Information returned from the SxBRC returned records for Grass Snake, Slow Worm, Adder *Vipera berus* and Common Lizard within the surrounding 2km search area. The closest records returned from the desktop study originate from LWS Lake Wood comprising Grass Snake, Common Lizard and Adder approximately 50m south of the site, dated to 2006.

5.10.3 **Survey Results.** Specific survey work for reptiles was undertaken at the site, the results of which are summarised in Tables 5.22 and 5.23 below and illustrated on Plan 5719/ECO14 and Plan 5719/ECO15.

Table 5.22. Reptile survey results summary (2020).

Visit	Date	Common Lizard		Slow Worm		Grass Snake		Other Species
		Adult	Juv.	Adult	Juv.	Adult	Juv.	
1	22/06/2020	1	0	6	0	0	0	0
2	24/06/2020	1	0	6	0	0	0	0
3	27/06/2020	3	0	3	0	1	0	0
4	29/06/2020	1	0	5	1	0	0	0
5	01/07/2020	1	0	11	0	0	0	0
6	03/07/2020	10	0	7	1	0	1	0
7a	05/07/2020	1	0	8	0	0	4	0
7b	07/07/2020	0	0	1	0	0	7	0
Peak Count		**10**		**11**		**1**		**0**

Table 5.23. Reptile survey results summary (2023).

Visit	Date	Common Lizard		Slow Worm		Grass Snake		Other Species
		Adult	Juv.	Adult	Juv.	Adult	Juv.	
1	13/04/2023	5	0	1	0	0	0	Toad
2	19/04/2023	8	6	2	0	0	0	Glow worm
3	26/04/2023	9	0	1	0	0	0	Shrew
4	04/05/2023	9	3	1	0	0	0	Toad, shrew, glow-worm
5	10/05/2023	3	3	1	1	0	0	Toad, shrew, vole, glow-worm
6	17/05/2023	3	2	2	1	1	0	Toad, vole, glow-worm
7	25/05/2023	9	2	3	2	3	0	Wood mouse, glow-worm, frog, common toad
Peak Count		**9**		**3**		**3**		

5.10.4 **Evaluation.** Peak counts of Common Lizard *Zootoca vivipara* remained stable at 10 in 2020 and 9 in 2023 survey work at the site. A higher peak count of 11 adult Slow-worm *Anguis fragilis* was recorded in 2020 than the 3 recorded in 2023. A maximum of 3 Grass Snake were recorded across both years of surveying. Individual animals were largely scattered around the margins of grassland fields **SI1**, **SI3** and **SI4**.

5.10.5 The total area of suitable reptile habitat at the site measures c.3ha and therefore the peak count equates to a population of approximately three Slow-worm and three Common Lizard per hectare, and one Grass Snake per hectare, which in all cases would be classified as a 'low' population under the standard guidance[36]. As such, it is considered that the population of reptiles supported by the study area is of importance at the **local** level only.

5.11 Birds

5.11.1 **Legislation.** All wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended) in respect of killing and injury, and their nests, whilst being built or in use, cannot be taken, damaged or destroyed. Species included on

[36] Herpetofauna Groups of Britain and Ireland (1998) 'Evaluating local mitigation/translocation programmes: Maintaining Best Practice and lawful standards'

Schedule 1 of the Act receive greater protection and are subject to special penalties (see Annex 5719/2 for detailed provisions).

5.11.2 **Conservation Status.** The conservation importance of British bird species is categorised based on a number of criteria including the level of threat to a species' population status[37]. Species are listed as Green, Amber or Red. Red Listed species are considered to be of the highest conservation concern being either globally threatened and or experiencing a high/rapid level of population decline (>50% over the past 25 years). A number of birds are also S41 Priority Species. Red and Amber listed species and priority species should be assessed as important ecological features.

5.11.3 **Background Records.** Information from the data search included records for several bird species in the vicinity of the site, including the Red Listed species Lesser Spotted Woodpecker *Dendrocopos mino,* Wood Warbler *Phylloscopus sibilatrix*, Nightjar *Caprimulgus europaeus*, Cuckoo *Cuculus canorus,* Turtle Dove *Streptopelia turtur*, Herring Gull *Larus argentatus* and Lapwing *Vanellus vanellus.* No records of bird species were returned from within the site itself.

5.11.4 **Survey Results.** The site offers a range of opportunities for bird species, particularly in the form of hedgerows, scrub and deciduous woodland, which offer foraging areas and potential nesting areas for a range of bird species. Accordingly, three breeding bird surveys were carried out at the site between April to June 2019, and also between April and June 2023.

5.11.5 A total of 39 bird species were recorded during the 2019 surveys, of which 24 were recorded to be breeding or probably breeding within the study area, whilst a further two were possibly breeding (i.e. habitat suitable to support the species is present) adjacent to the study area. The remaining 13 species were either breeding in adjacent areas, recorded as migrants or flying over the site, or represented only by non-breeding individuals.

5.11.6 A full list of species recorded is included at Annex 5719/8, whilst birds recorded to be breeding within the site is shown on Plan 5719/ECO7, with a summary of notable species recorded given in Table 5.24 below:

Table 5.24. Notable bird species recorded during breeding bird surveys (2019).

Species	Birds of Conservation Concern listing	Priority species	No of breeding pairs recorded
Dunnock	Amber		3
Song Thrush	Red	Y	8
Bullfinch	Amber	Y	1

5.11.7 A total of 38 bird species were recorded during the 2023 surveys, of which 24 were recorded to be breeding or probably breeding within the study area, whilst a further six were possibly breeding (i.e. habitat suitable to support the species is present). The remaining 8 species were recorded either as migrants or flying over, or were represented only by non-breeding individuals.

[37] Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) *'Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man'* British Birds *108*, pp.708-746

5.11.8 A full list of species recorded during the suite of surveys in 2023 is included at Annex 5719/9, whilst birds recorded to be breeding within the site is shown on Plan 5719/ECO10, with a summary of notable species recorded given in Table 5.25 below:

Table 5.25. Notable bird species recorded during breeding bird surveys (2023).

Species	Birds of Conservation Concern listing	Priority species	No of breeding pairs recorded
Mallard	Amber		0-1
Stock Dove	Amber		0-1
Woodpigeon	Amber		12
Marsh Tit	Red	Y	1
Whitethroat	Amber		2
Firecrest	Sch1		0-1
Wren	Amber		21
Song Thrush	Amber	Y	6
Dunnock	Amber		5
Bullfinch	Amber	Y	0-1

5.11.9 **Evaluation.** The site supports a reasonably diverse assemblage of breeding birds that is entirely typical of the woodland habitats that are present. There was virtually no breeding activity associated with the extensive areas of open grassland. The most significant species recorded was Marsh Tit, including a family party in June 2023 with proved successful breeding. Marsh Tit is included on the RSPB Red List having undergone a major decline in its UK population and range.

5.11.10 Species protected under Schedule 1 of the Wildlife & Countryside Act that were recorded in June 2023 include a Hobby flying over and a juvenile Firecrest in the far south of the site. There was, however, no indication of either of these species breeding within the site boundary, with both records presumed to relate to post-breeding dispersal.

5.11.11 Other species breeding at the site include small numbers of Woodpigeon, Whitethroat, Wren, Song Thrush, Dunnock and possibly Stock Dove and Bullfinch, with Mallard potentially breeding at the pond. All these species are included on the RSPB Amber Lists, although they all remain very common and widespread, both locally and nationally[38], as are all the remaining species that are breeding at the site. On this basis, the assemblage of birds supported by the site is considered to be of importance at the **Site** level.

5.12 Invertebrates

5.12.1 **Legislation.** A number of invertebrate species are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). In addition, Large Blue Butterfly *Maculinea arion*, Fisher's Estuarine Moth *Gortyna borelii lunata* and Lesser Whirlpool Ram's-horn Snail *Anisus vorticulus* receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended); refer to Annex 5719/2 for detailed provisions. A number of invertebrates are also S41 Priority Species. Where such species are present, they should be assessed as important ecological features.

5.12.2 **Background Records.** One record of invertebrates was returned from within the site, namely a single record for the nationally scarce *Dolichopus virgultorum* (A True Fly), dated

[38] Population estimates of birds in Great Britain and the United Kingdom. Musgrove *et al*., British Birds, 2013

from 2006, and located within the centre of the site. Records for the Priority Species White Admiral *Limenitis camilla* were noted within the eastern part of the site in 2007 (located on the margins of grassland area **SI4** site) with further records dating to 2010 to the east and south of the site.

5.12.3 **Survey Results and Evaluation.** No evidence for the presence of any protected, rare or notable invertebrate species was recorded within the site. The areas of the site which will be affected by development are dominated by open managed grassland which are likely to support only a limited diversity of invertebrates. Other habitats which are retained under the proposals, including woodland and moderately species-rich grassland may contain a wider diversity of invertebrates.

5.12.4 The site has few micro-habitats that would typically indicate elevated potential for invertebrates[39], such as a variable topography with areas of vertical exposed soil, areas of species-rich semi-natural vegetation; variable vegetation structure with frequent patches of tussocks combined with short turf; free-draining light soils; walls with friable mortar or fibrous dung. Accordingly, given the habitat composition of the site and extent of the proposed development it is considered unlikely that the proposals will result in significant harm to any protected, rare or notable invertebrate populations, and the site is not considered to support an important invertebrate assemblage.

5.13 Summary

5.13.1 On the basis of the above, a summary of the evaluation of fauna is provided below:

Table 5.26. Evaluation summary of fauna forming important ecological features.

Species / Group	Supported by or associated with the site	Level of Importance
Bats – Roosting	Potential habitat in the form of trees and buildings	**Local**
Bats – Foraging / Commuting	Confirmed presence on site	**District**
Badger	Confirmed presence on site	**Local**
Dormouse	Confirmed presence on site	**Local**
Water Vole	Likely absent	**Negligible**
Otter	Likely absent	**Negligible**
Great Crested Newt	Confirmed presence on site	**Local**
Reptiles	Confirmed presence on site	**Local**
Birds	Confirmed presence on site	**Site**

5.13.2 Other fauna supported by the site include non-priority species of mammals, amphibians and invertebrates. However, these species are not considered to form important ecological features.

[39] Natural England (2010) 'Higher Level Stewardship – Farm Environment Plan (FEP) Manual', 3rd Edition

6 Conclusions

6.1 Aspect Ecology has been commissioned to advise in respect of ecological matters relating to the land at Downlands Farm located to the west of Uckfield in East Sussex.

6.2 A desk study has been undertaken and the site surveyed based around extended Phase 1 methodology as recommended by Natural England. A general appraisal of faunal species has also been undertaken to record the potential presence of any protected, rare or notable species, with specific surveys conducted in respect of bats, Badger, Dormouse Otter, Water Vole, Great Crested Newt, reptiles and breeding birds. Detailed botanical surveys have been carried out for all woodland areas, together with other habitats of elevated ecological value.

6.3 **Ecological Designations.** The available information confirms that no statutory or non-statutory nature conservation designations are present within or adjacent to the site, although there are a number of designations in close proximity to the site, including the statutory site West Park, Uckfield Local Nature Reserve (LNR) located approximately 100m to the south of the site, and several non-statutory designations. Lake Wood Local Wildlife Site (LWS) is located immediately south of the site, whilst and Butchers Wood LWS is located approximately 35m to the west.

6.4 There are a number of European designations within 25km, including Ashdown Forest Special Protection Area (SPA) and Special Area of Conservation (SAC) all of which are physically well separated from the site. The likelihood of indirect effects occurring to the conservation interests at these sites are subject to separate consideration in the Environmental Statement and Habitats Regulations Assessment (HRA) Screening.

6.4.1 The site is located within the Western Ouse Streams and Ashdown Forest BOA. Some of the targets of the Western Ouse Streams and Ashdown Forest BOA are relevant to the site, and the inclusion of SANG within the proposed development, provides an opportunity to contribute to targets assigned to the BOA, such as the establishment of woody buffer zones, and restoration of wet grassland.

6.5 **Habitats**. The Phase 1 habitat survey has established that the site is dominated by two large grassland fields, surrounded by an interconnected network of woodland with a significant proportion being Ancient woodland. Longwood Gill and Shermanreed Wood are recognised as gill woodlands of district to county level importance whilst other Ancient Woodland is assessed as being of district importance. One area of grassland to the west of Snatts Road was found to be moderately species-rich.

6.6 A summary of habitats considered to form important ecological features within and adjacent to the site is given in Table 6.1 below:

Table 6.1. Evaluation summary of habitats forming important ecological features.

Habitat	Level of Importance
Ancient Woodland (Longwood Gill and Shermanreed Wood)	**District-County**
Ancient Woodland (Other Areas)	**District**
Other Woodland (Priority Habitat)	**Local**
Veteran Trees	**District**
Moderately Species-Rich Grassland (off Snatts Road)	**Local**
Hedgerows and Tree Lines	**Local**
Ponds	**Local**
Watercourses	**Local**

6.7 **Faunal Species**. The habitats within the site support several protected species, including species protected under both national and European legislation including bats, Dormouse, Great Crested Newt and reptiles. A summary of species considered to form important ecological features which are supported by or associated with the site and its immediate surrounds is given in Table 6.2 below:

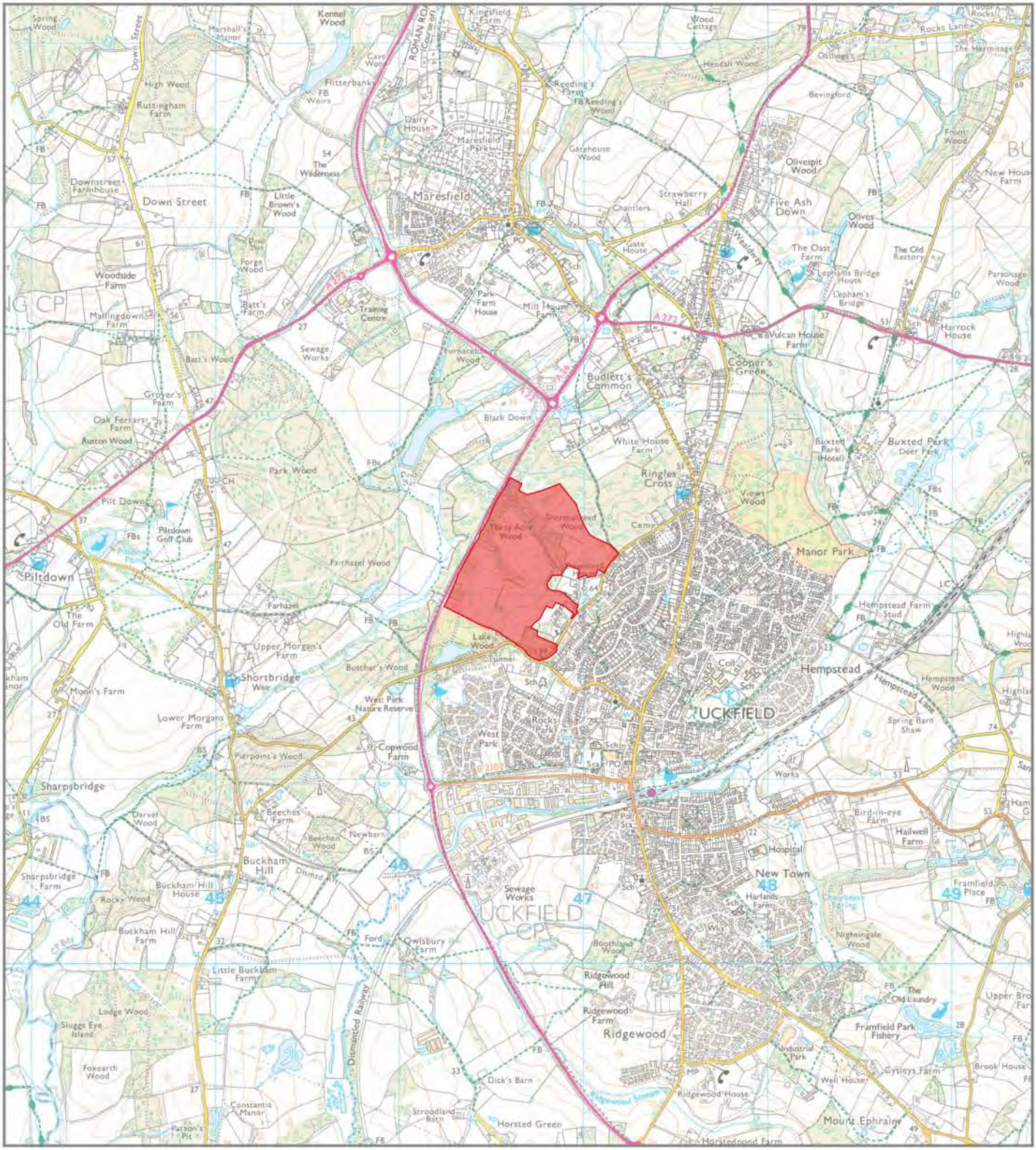
Table 6.2. Evaluation summary of fauna forming important ecological features.

Species / Group	Supported by or associated with the site	Level of Importance
Bats – Roosting	Potential habitat in the form of trees and buildings	**Local**
Bats – Foraging / Commuting	Confirmed presence on site	**District**
Badger	Confirmed presence on site	**Local**
Dormouse	Confirmed presence on site	**Local**
Great Crested Newt	Confirmed presence within **P4** and **P6**	**Local**
Reptiles	Confirmed presence on site	**Local**

6.8 **Conclusion.** The information in this report provides details of the ecological baseline position at the site, setting out the habitat types and species present and evaluating their ecological importance in the context of the site. The information in this report is considered to provide a sound ecological baseline, which can be utilised to inform any future proposals relating to the site.

Plan 5719/ECO1:

Site Location



Key:

Site Location

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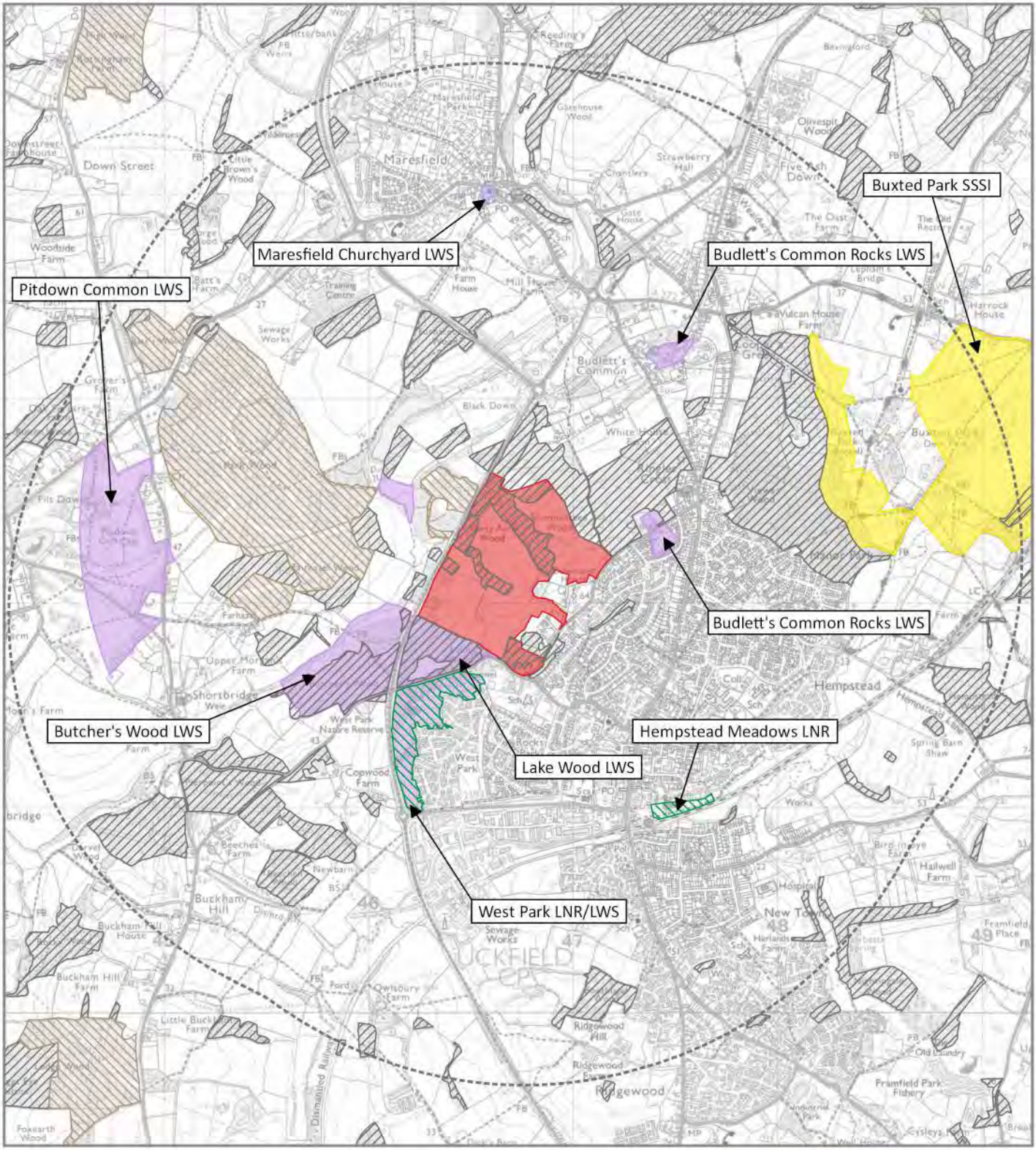
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Plan 5719/ECO2:

Ecological Designations



Key:

- Site Location
- Sites of Special Scientific Interest (SSSI)
- Local Nature Reserves (LNR)
- Local Wildlife Site (LWS)
- Ancient & Semi-natural Woodland (ASW)
- Ancient Replanted Woodland (ARW)
- Local Records Centre 2km Search Area

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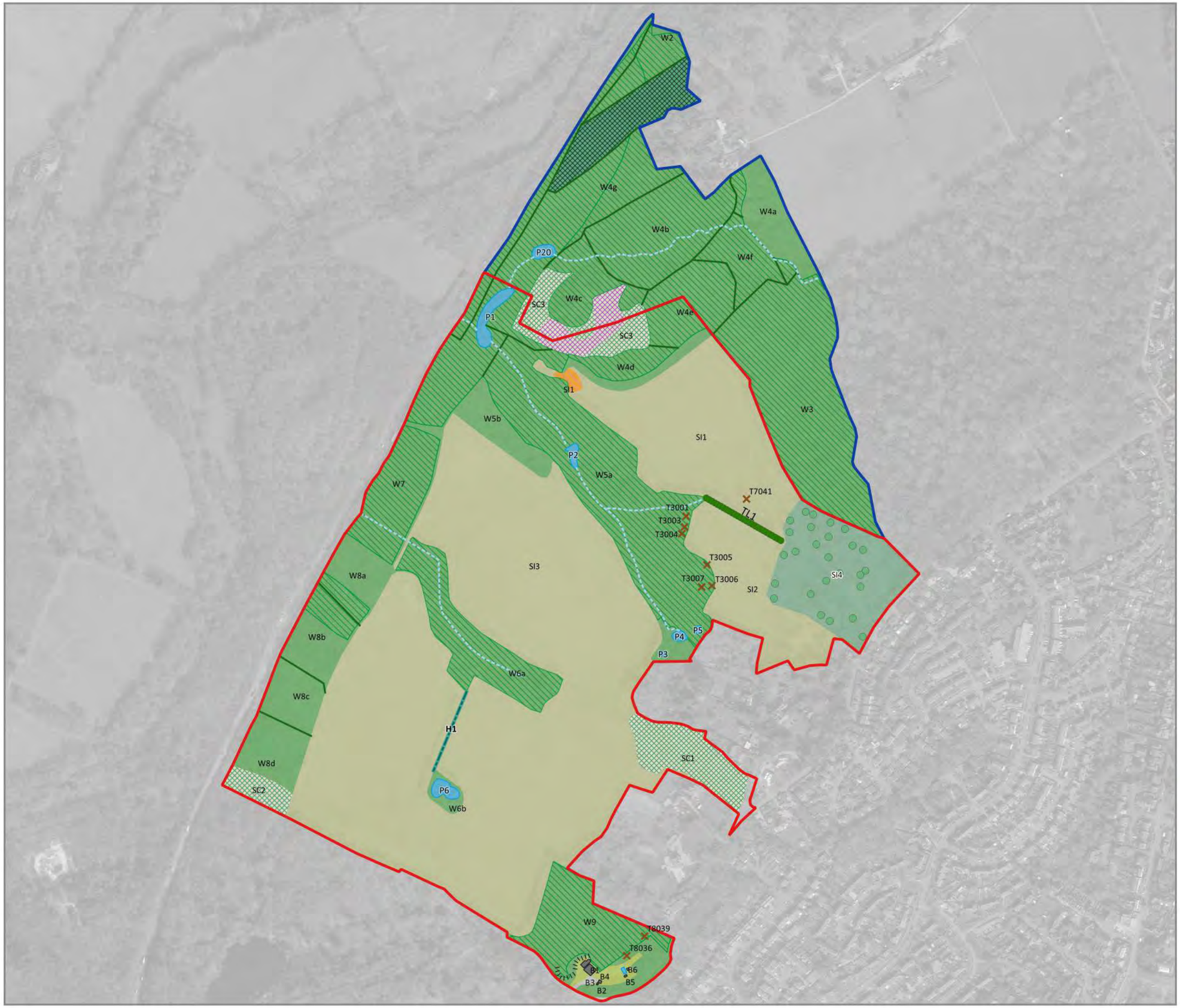
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Plan 5719/ECO3:

Habitats and Ecological Features



Key:

- Site Boundary
- Study Area
- Ancient Woodland
- Non-ancient Woodland
- Woodland Borders
- Scattered Trees
- Tree
- Veteran Tree
- Tree Line
- Hedgerow
- Semi-improved Grassland (Species-poor)
- Semi-improved Grassland (Moderately Species-rich)
- Amenity Grassland
- Tall Ruderal Vegetation
- Heathland / Woodland Mosaic
- Scrub
- Bracken
- Pond
- Dry Pond
- Ephemeral Watercourse
- Rock Exposures
- Building
- Hardstanding

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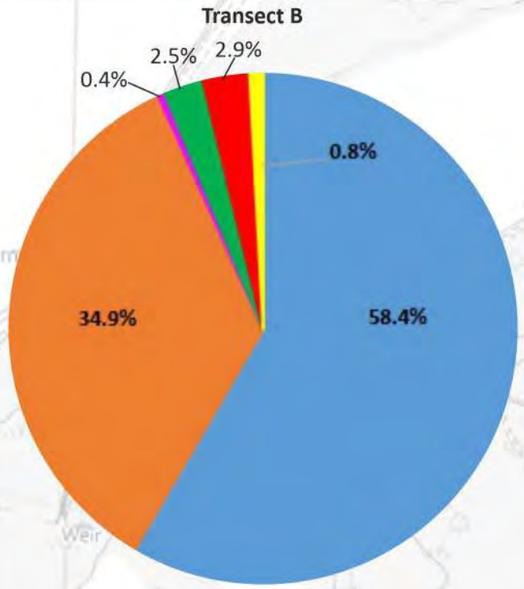
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Habitats and Ecological Features	TITLE
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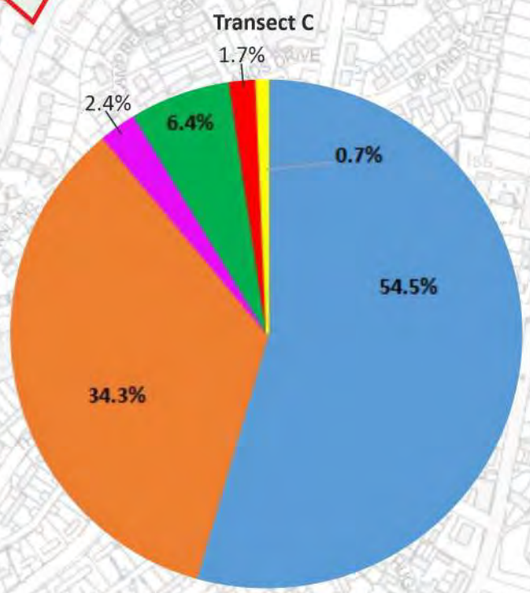
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Plan 5719/ECO4:

Bat Activity Survey Results (Walked Transect) 2019-2020





Key:

- Site Boundary
- Wider Study Area

Manual Bat Activity Survey*

- Transect Route B
- Transect Route C

Bat Activity Index**

At Listening Stops

- None (0 registrations per min)
- Lowest (0.01-0.5 registrations per min)
- Moderate (0.51-1.0 registrations per min)
- Highest (1.1+ registrations per min)

Between Listening Stops

- None (0 registrations per min)
- Lowest (0.01-0.5 registrations per min)
- Moderate (0.51-1.0 registrations per min)
- Highest (1.1+ registrations per min)

Proportion of total registrations

- Common Pipistrelle
- Soprano Pipistrelle
- Pipistrelle Species
- Long-eared Bat Species
- Big Bat Species
- Myotis Species

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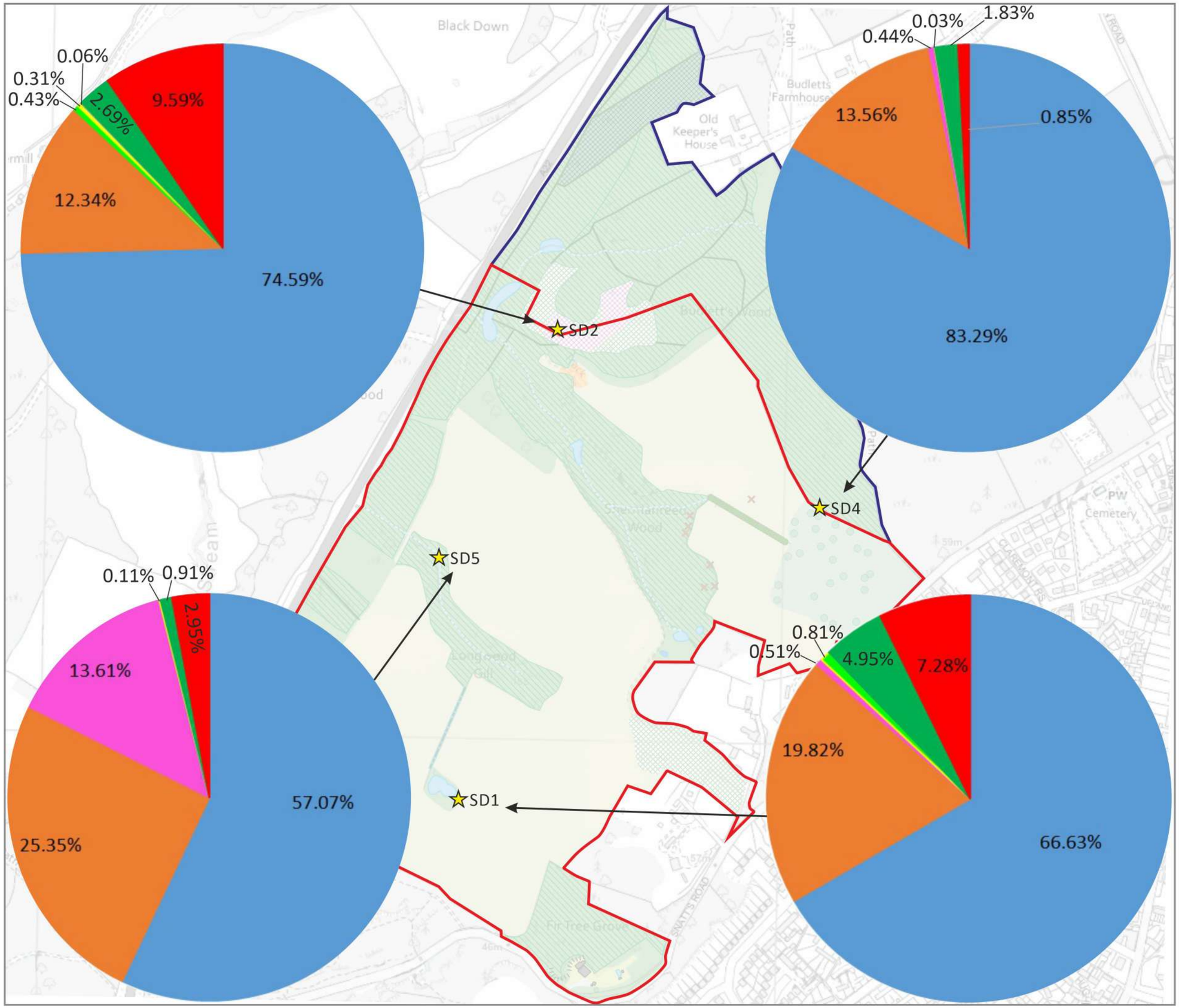
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Land at Downlands Farm, Uckfield	PROJECT
Bat Activity Survey Results - Walked Transect 2019-2020	TITLE
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Plan 5719/ECO5:

Bat Activity Survey Results (Automated Detector) 2019-2020



Key:

- Site Boundary
- Wider Study Area

Automated Bat Activity Survey

- Location of Static Detector
- Common Pipistrelle
- Soprano Pipistrelle
- Pipistrelle Species
- Nathusius's Pipistrelle
- Long-eared Bat Species
- Barbastelle
- Big Bat Species
- Myotis Species

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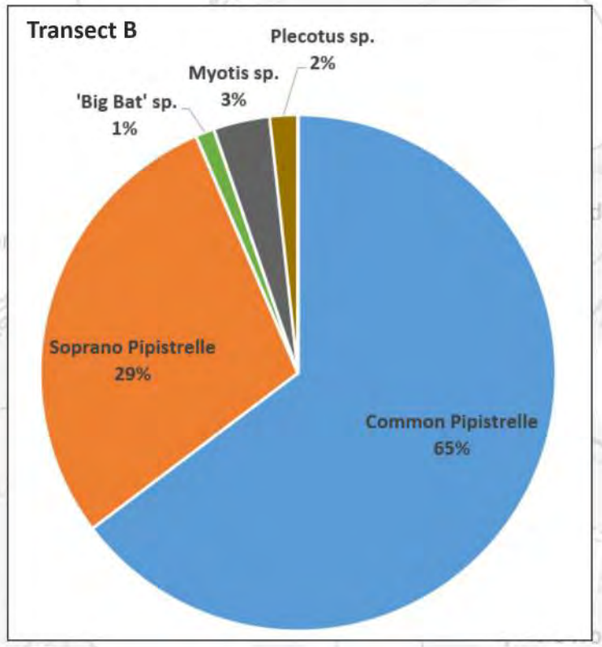
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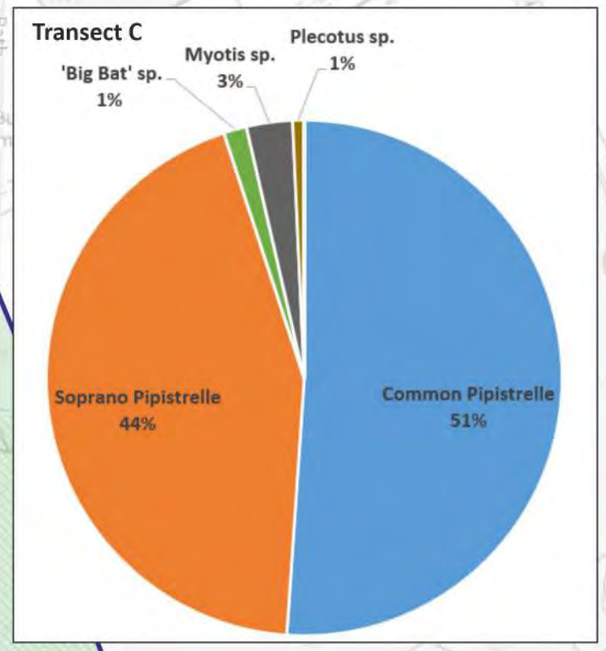
Land at Downlands Farm, Uckfield	PROJECT
Bat Static Survey Results and Locations - Automated Detector 2019-2020	TITLE
5719/ECO5	DRAWING NO.
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Plan 5719/ECO6:

Bat Activity Survey Results (Walked Transect) 2023





Key:

- Site Boundary
- Wider Study Area

Manual Bat Activity Survey*

- Transect Route B
- Transect Route C

Bat Activity Index**

At Listening Stops

- None (0 registrations per min)
- Lowest (0.01-0.5 registrations per min)
- Moderate (0.51-1.0 registrations per min)
- Highest (1.1+ registrations per min)

Between Listening Stops

- None (0 registrations per min)
- Lowest (0.01-0.5 registrations per min)
- Moderate (0.51-1.0 registrations per min)
- Highest (1.1+ registrations per min)

Proportion of total registrations

- Common Pipistrelle
- Soprano Pipistrelle
- Pipistrelle Species
- Long-eared Bat Species
- Big Bat Species
- Myotis Species

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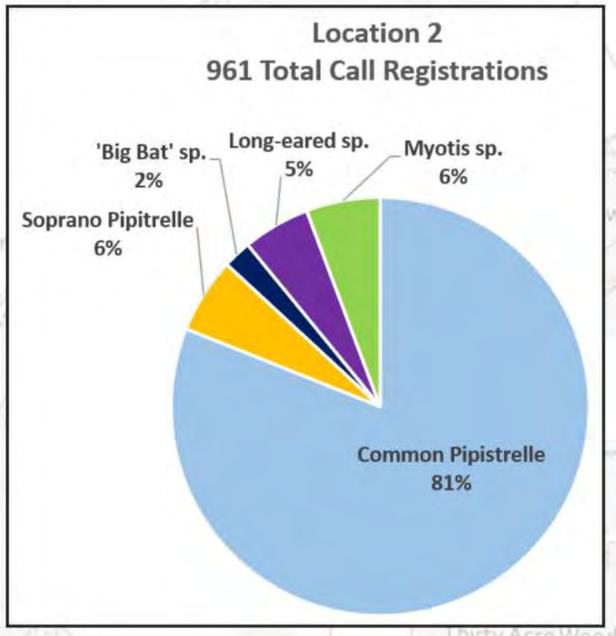
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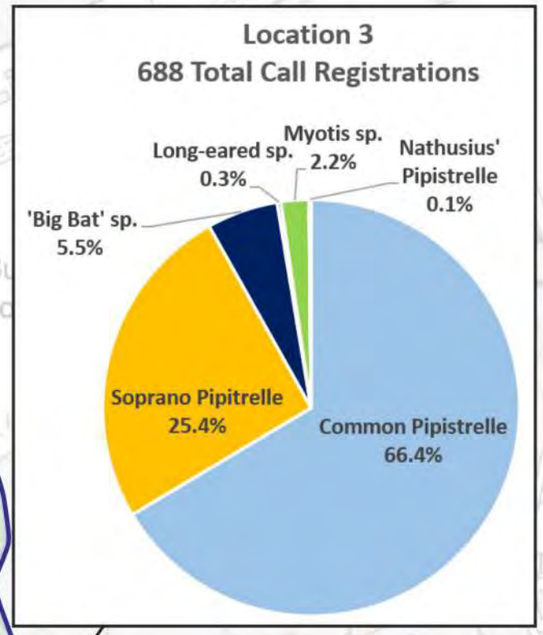
Land at Downlands Farm, Uckfield	PROJECT
Bat Activity Survey Results - Walked Transect 2023	TITLE
5719/ECO6	DRAWING NO.
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August 2023	DATE

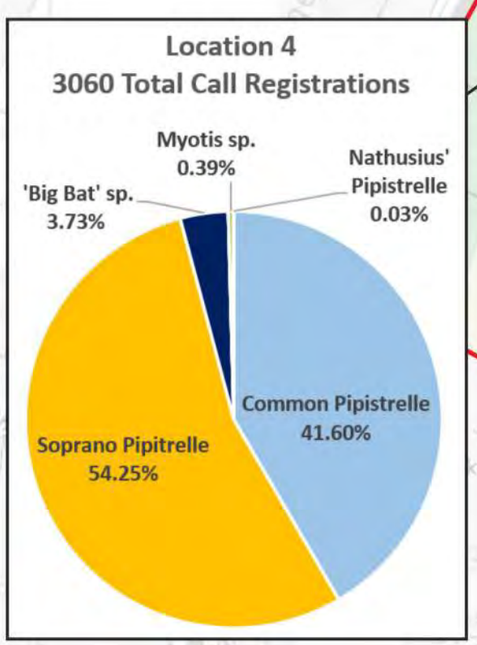
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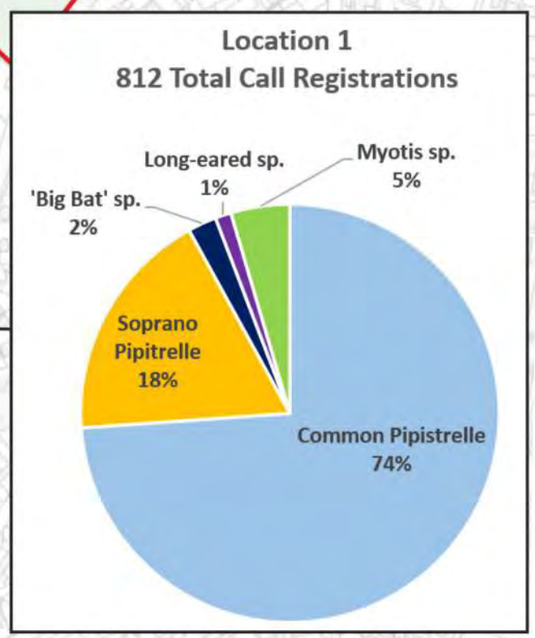
Plan 5719/ECO7:

Bat Activity Survey Results (Automated Detector) 2023









SD1

SD2

SD4

SD5

Key:

Site Boundary

Wider Study Area

Automated Bat Activity Survey

Location of Static Detector

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Bat Static Survey Results and Locations - Automated Detector 2023 — TITLE

5719/ECO7 — DRAWING NO.

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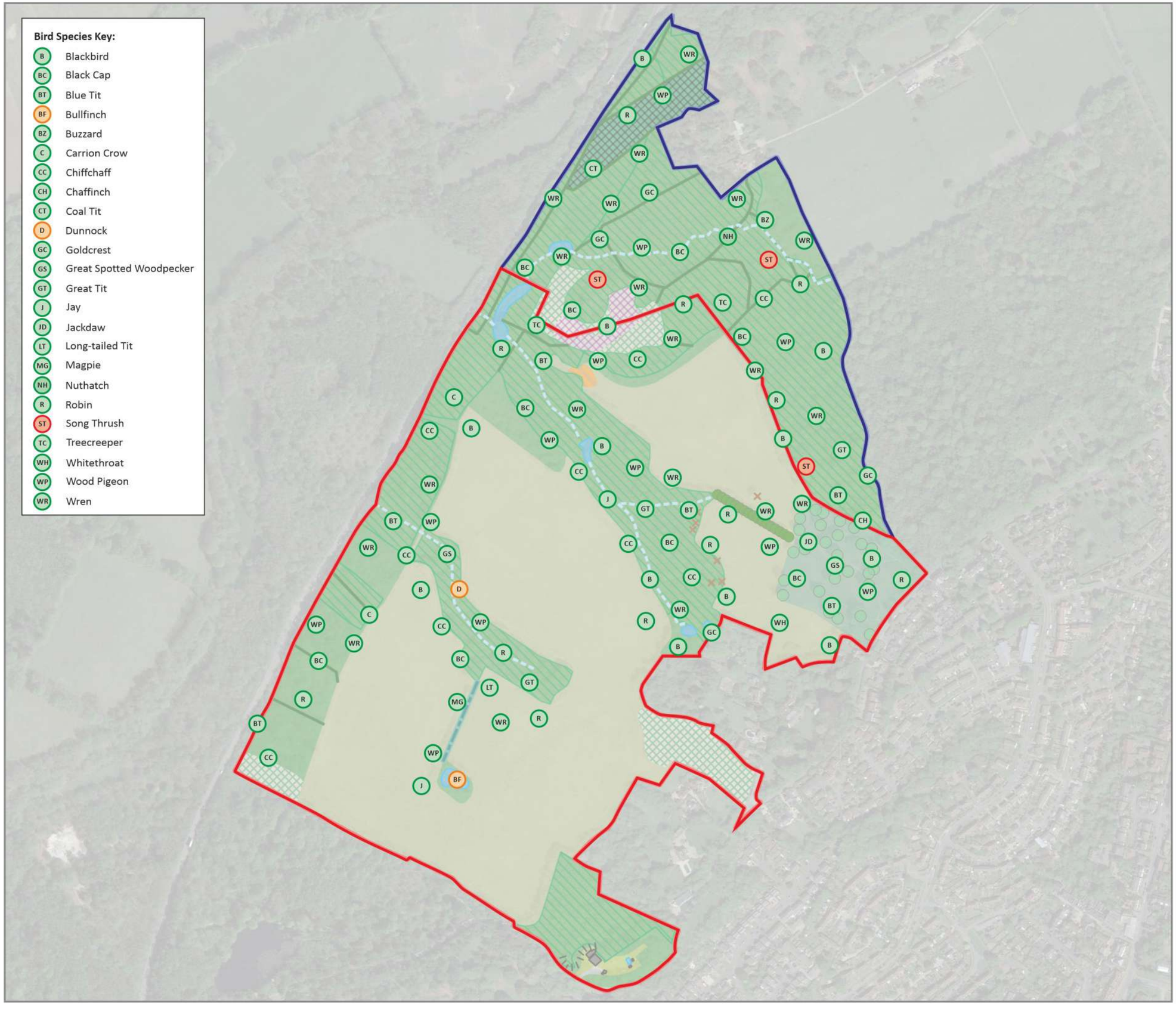
Plan 5719/ECO8:

Badger Survey Results

CONFIDENTIAL APPENDIX – AVAILABLE ON REQUEST TO AUTHORISED PARTIES

Plan 5719/ECO9:

Breeding Bird Survey Results 2019



KEY:

- Site Boundary
- Study Area
- Breeding / Probable Breeding (BOCC Red List)
- Breeding / Probable Breeding (BOCC Amber List Species)
- Breeding / Probable Breeding (BOCC Green List - Not Threatened)

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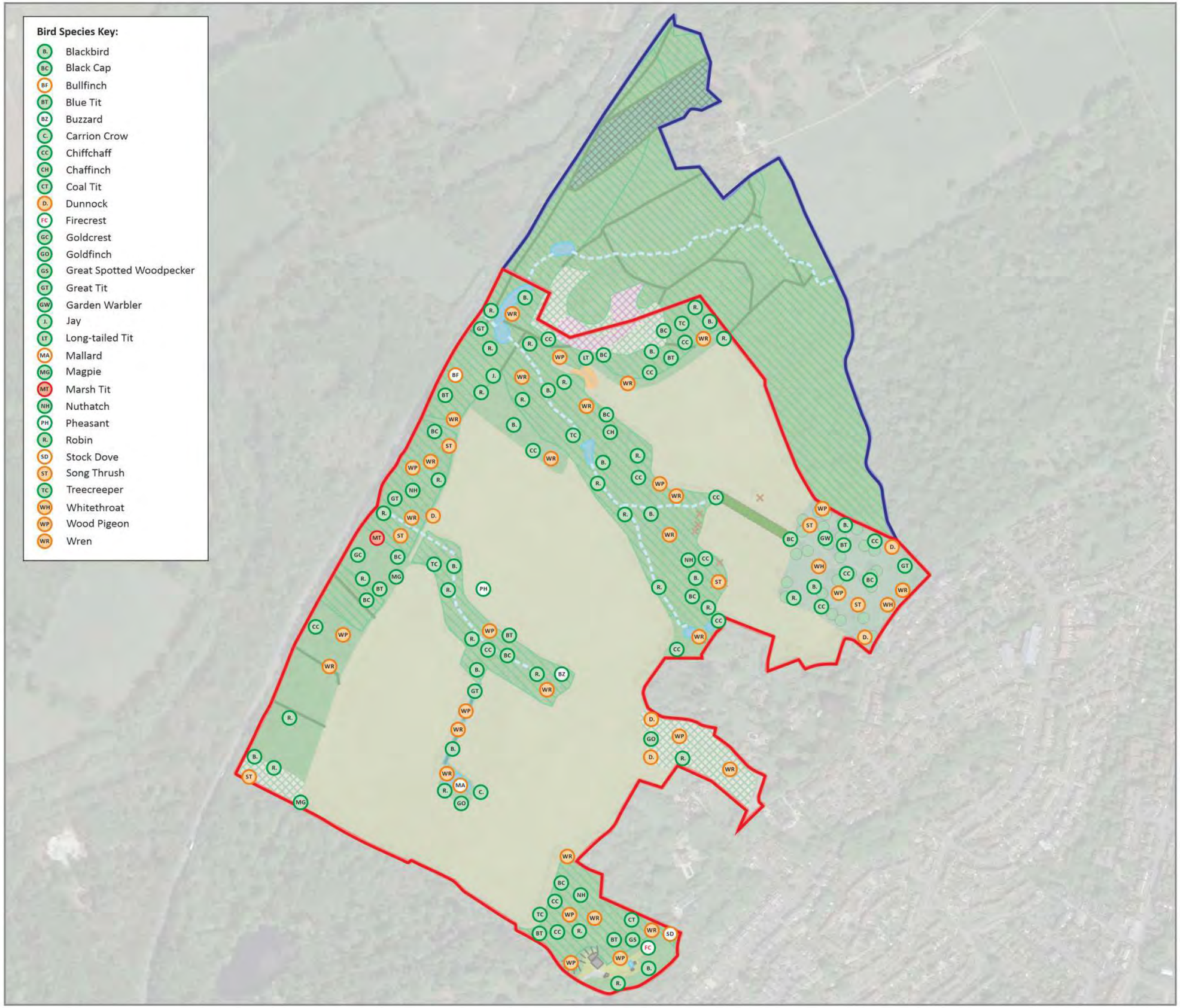
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Land at Downlands Farm, Uckfield	PROJECT
Breeding Bird Survey Results - 2019	TITLE
5719/ECO9	DRAWING NO.
A	REV.
May 2022	DATE

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Plan 5719/ECO10:

Breeding Bird Survey Results 2023



KEY:

- Site Boundary
- Study Area
- Breeding / Probable Breeding (BOCC Red List)
- Breeding / Probable Breeding (BOCC Amber List Species)
- Possible Breeding (BOCC Amber List Species)
- Breeding / Probable Breeding (BOCC Green List - Not Threatened)
- Possible Breeding (BOCC Green List - Not Threatened)
- Schedule 1 species

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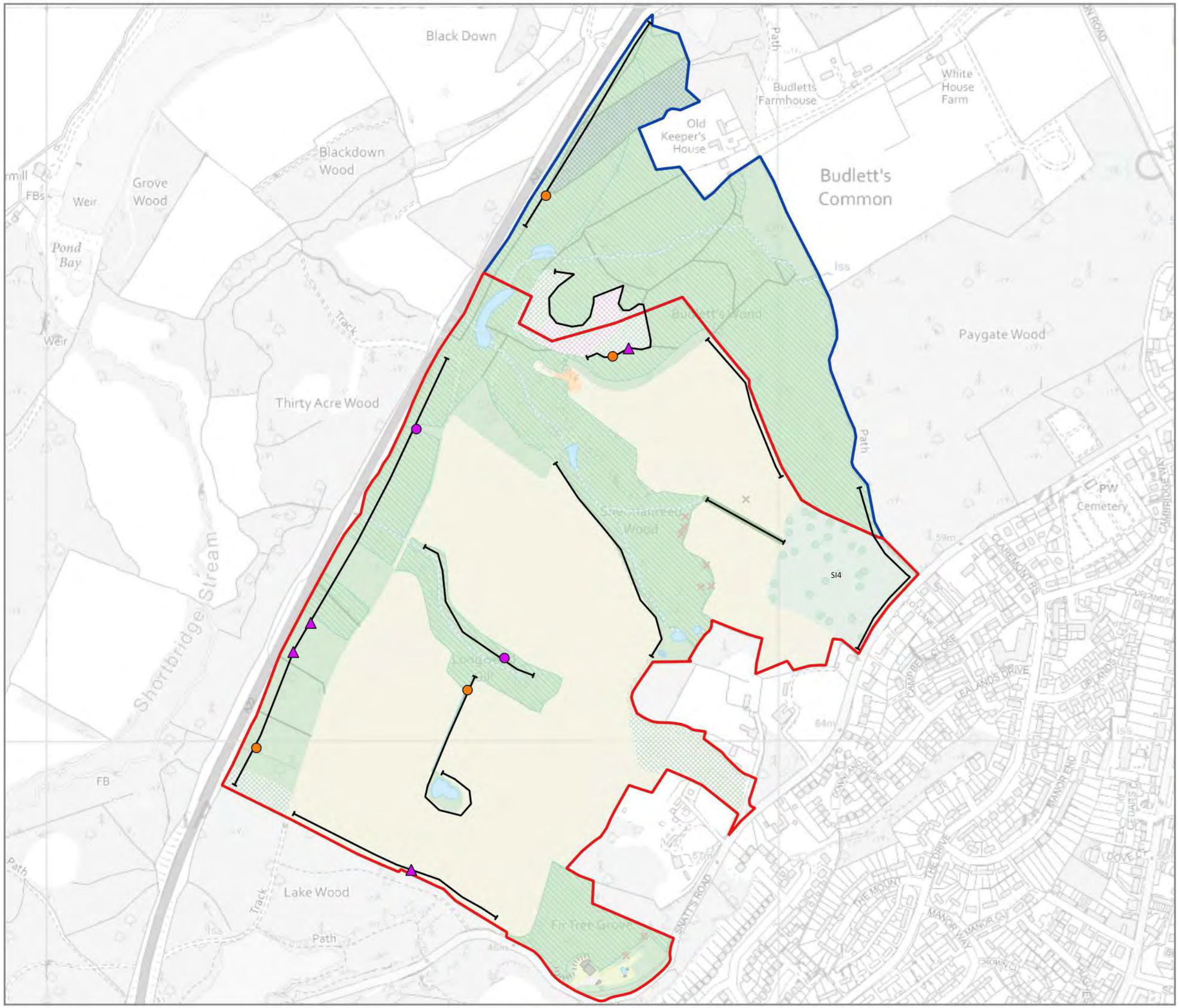
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Land at Downlands Farm, Uckfield	PROJECT
Breeding Bird Survey Results - 2023	TITLE
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Plan 5719/ECO11:

Dormouse Survey Results



Key:

- Site Boundary
- Study Area
- Dormouse Transect with Number of Tubes

Dormouse Survey Results from 2019

- Dormouse Nest 2019
- Dormouse Observed in Nest 2019

Dormouse Survey Results from 2020

- Dormouse Nest 2020

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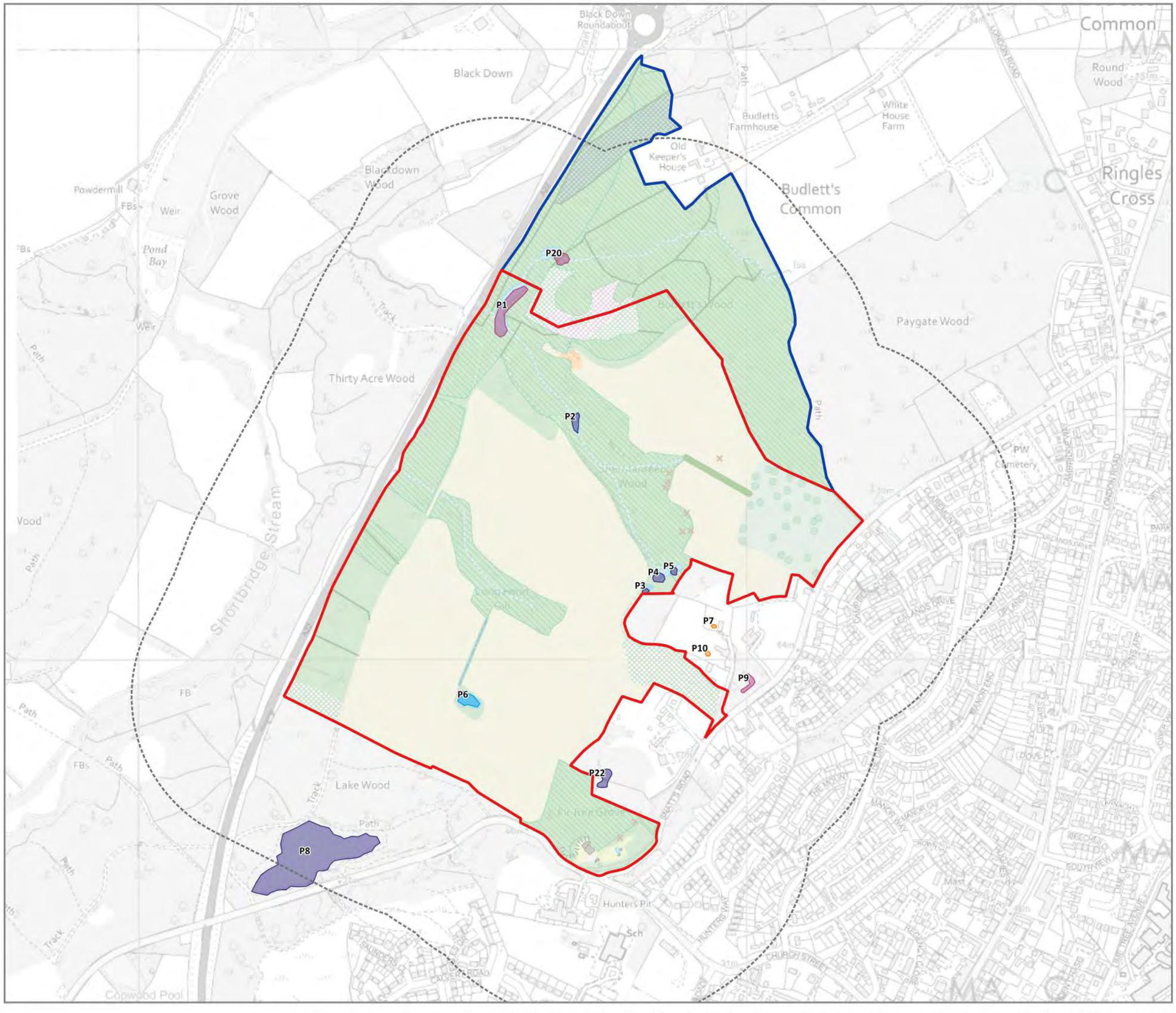
Land at Downlands Farm, Uckfield	PROJECT
Dormouse Survey Results	TITLE
5719/ECO11	DRAWING NO.
B/JP	REV
August 2023	DATE

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Plan 5719/ECO12:

Great Crested Newt Survey Results 2020-2022



Key:

- Site Boundary
- Study Area
- 250m Buffer

Great Crested Newt (GCN) Survey Results

- GCN Present in Pond
- GCN Absent from Pond
- Dry Pond
- No Access Granted for Surveys

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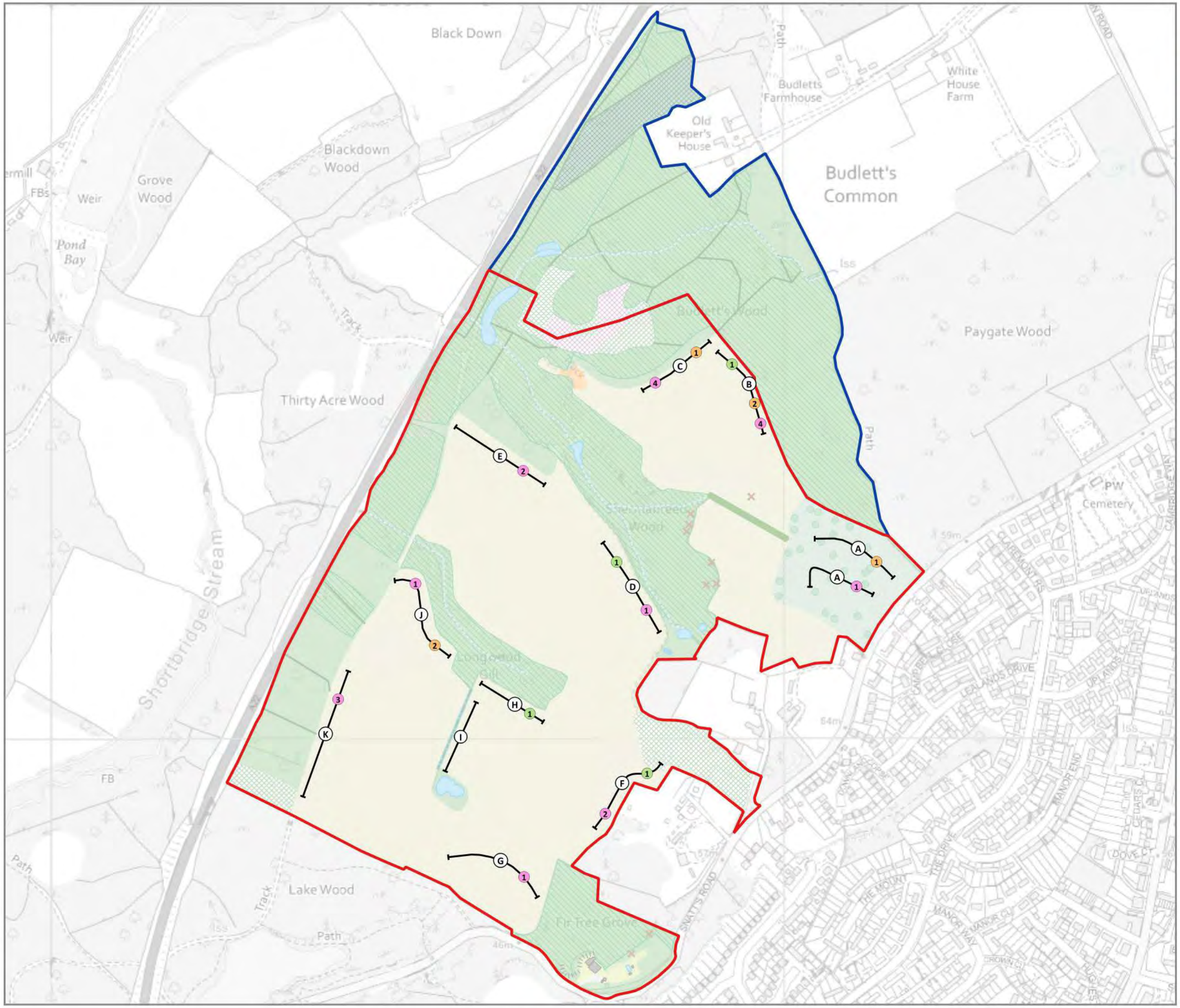
Land at Downlands Farm, Uckfield	PROJECT
Great Crested Newt Survey Results	TITLE
5719/ECO12	DRAWING NO.
B	REV
May 2022	DATE

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Plan 5719/ECO13:

Great Crested Newt Survey Results 2023



Key:

- Site Boundary
- Study Area
- Reptile Transect Reference

Peak Count of Reptiles Recorded per Transect

- 1 Adult Common Lizard
- 1 Adult Grass Snake
- 1 Adult Slow Worm

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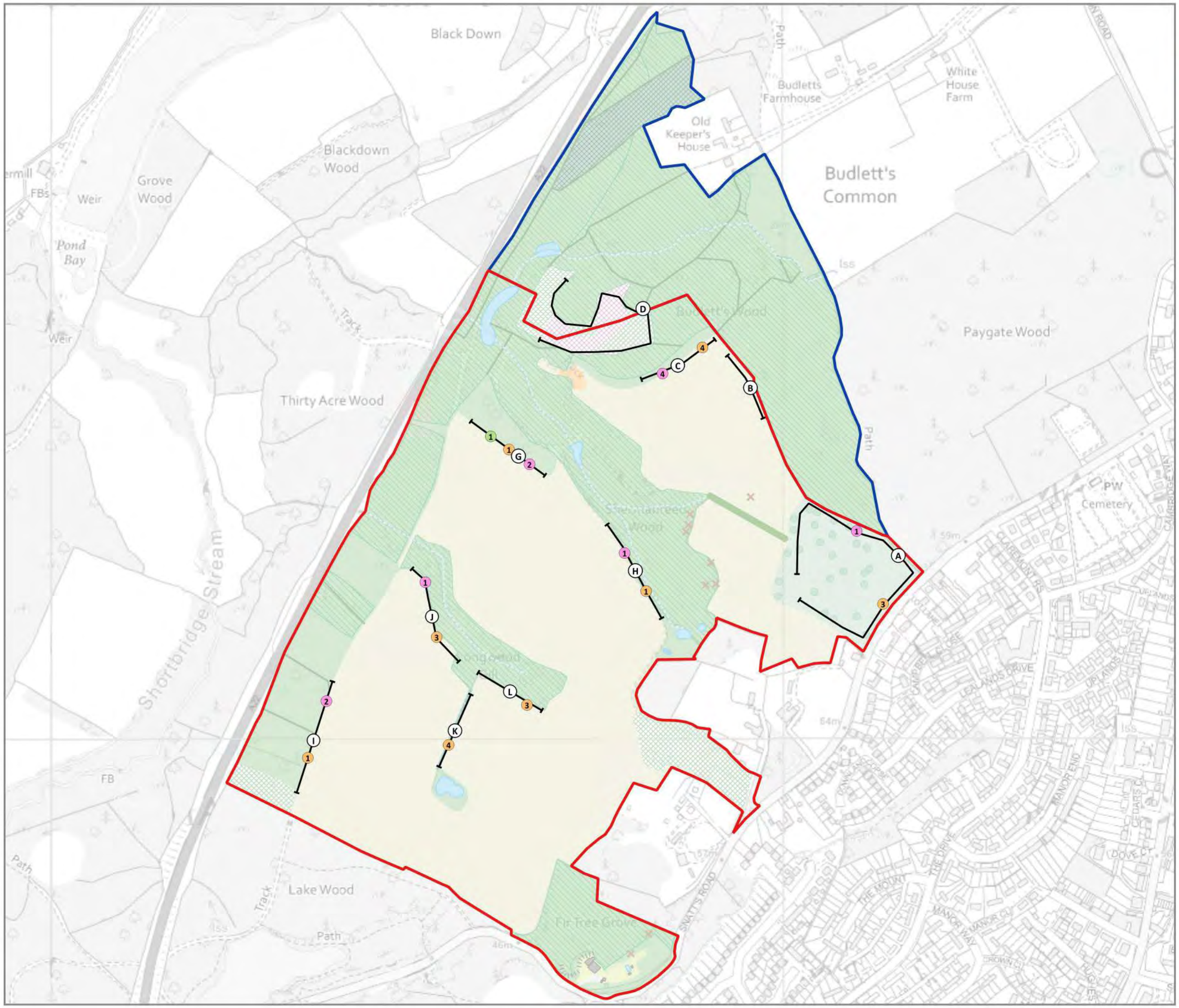
Land at Downlands Farm, Uckfield	PROJECT
Reptile Survey Results - 2023	TITLE
5719/ECO15	DRAWING NO.
A/JP	REV
August 2023	DATE

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Plan 5719/ECO14:

Reptile Survey Results 2020



Key:

- Site Boundary
- Study Area
- Reptile Transect Reference

Peak Count of Reptiles Recorded per Transect

- 1 Adult Common Lizard
- 1 Adult Grass Snake
- 1 Adult Slow Worm

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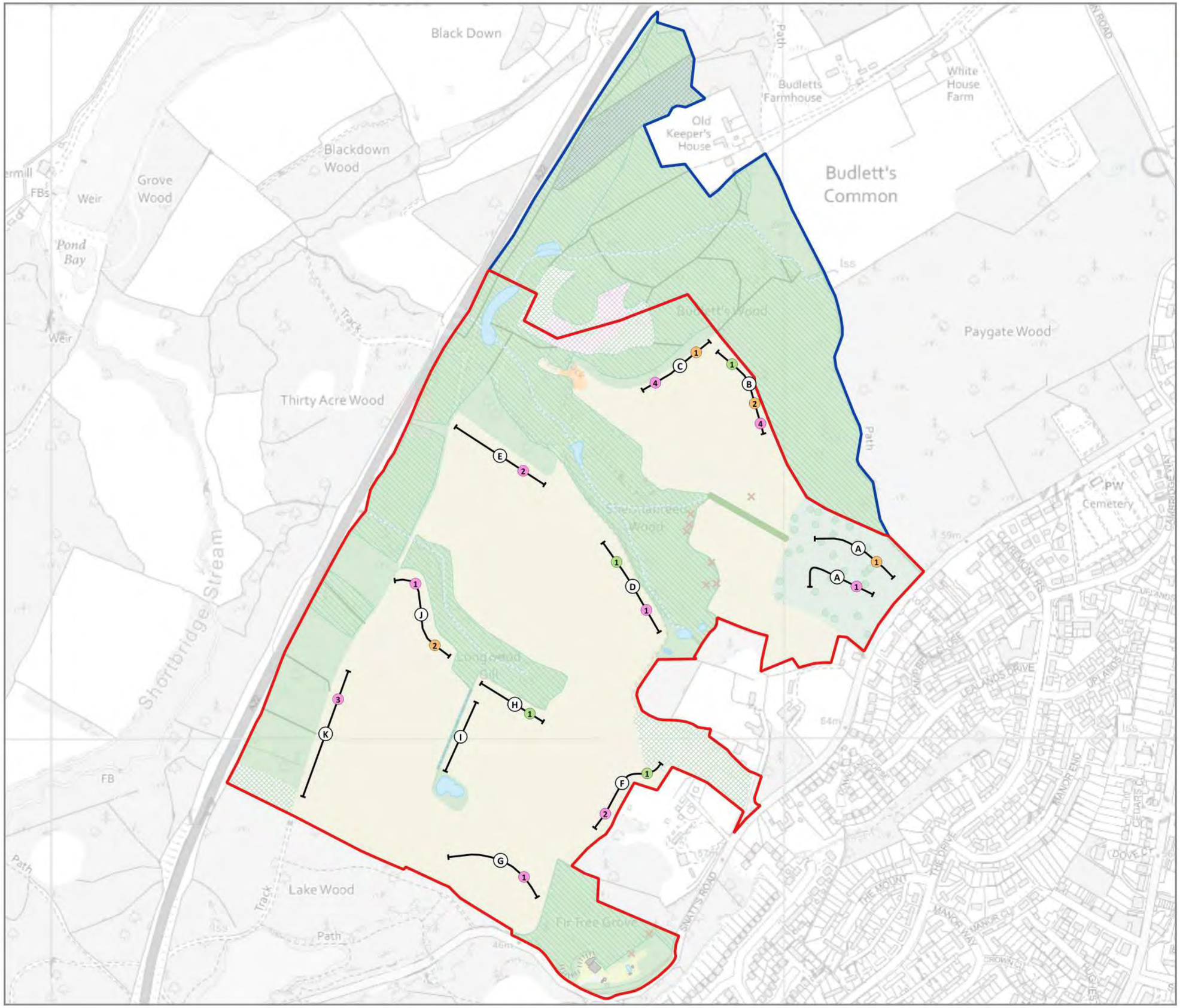
Land at Downlands Farm, Uckfield	PROJECT
Reptile Survey Results	TITLE
5719/ECO14	DRAWING NO.
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Plan 5719/ECO15:

Reptile Survey Results 2023



Key:

- Site Boundary
- Study Area
- Reptile Transect Reference

Peak Count of Reptiles Recorded per Transect

- 1 Adult Common Lizard
- 1 Adult Grass Snake
- 1 Adult Slow Worm

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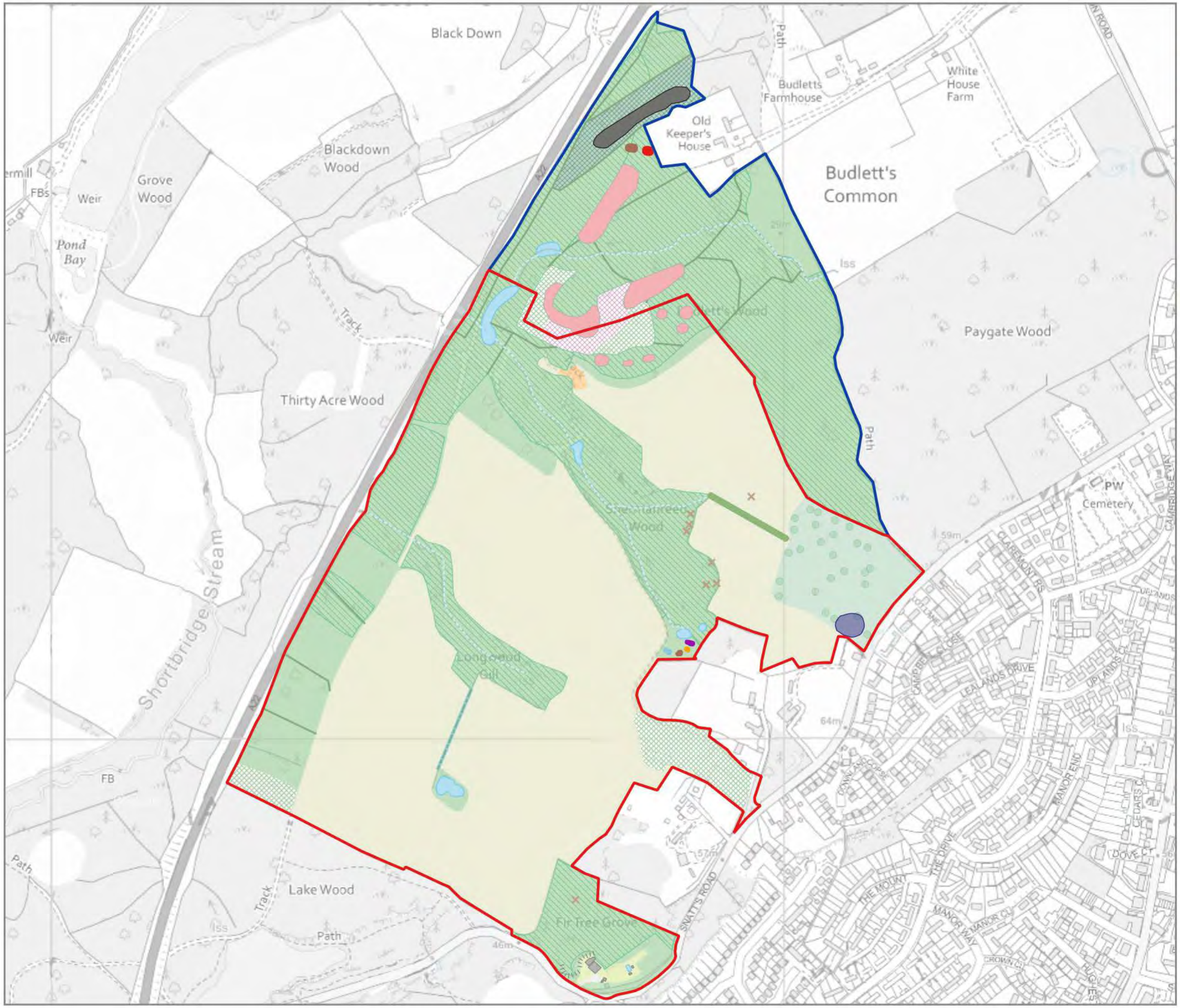
Land at Downlands Farm, Uckfield	PROJECT
Reptile Survey Results - 2023	TITLE
5719/ECO15	DRAWING NO.
A/JP	REV
August 2023	DATE

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Plan 5719/ECO16:

Invasive Plant Species Results



Key:

- Site Boundary
- Study Area

Schedule 9 Invasive Plant Species

- Rhododendron Scrub
- Shallon
- Japanese Knotweed
- Giant Rhubarb
- Variagated Yellow Archangel
- Himalayan Balsam

Other Invasive Plant Species

- Perwinkle and Wilson's Honeysuckle

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Land at Downlands Farm, Uckfield	PROJECT
Invasive Species Plan	TITLE
5719/ECO11	DRAWING NO.
B	REV
June 2022	DATE

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Plan 5719/ECO17:

Bat Emergence/Re-entry Survey Plan



Key:

- Site Boundary
- Building
- Surveyor Locations for Emergence (05/05/22) and re-entry (13/05/22) Surveys. No Bats were Recorded Emerging or Re-entering.

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Land at Downlands Farm, Uckfield	PROJECT
Bats - Building Roost Potential/Emergence Survey Results	TITLE
5719/ECO12	DRAWING NO.
A/AM	REV
May 2022	DATE

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Annex 5719/1:

Evaluation Methodology

Evaluation Methodology

1. The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018)[1].

Importance of Ecological Features

2. Ecological features within the site/study area have been evaluated in terms of whether they qualify as 'important ecological features'. In this regard, CIEEM guidance states that *"it is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable".*

3. Various characteristics contribute to the importance of ecological features, including:

- Naturalness;
- Animal or plant species, sub-species or varieties that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
- Ecosystems and their component parts, which provide the habitats required by important species, populations and/or assemblages;
- Endemic species or locally distinct sub-populations of a species;
- Habitat diversity;
- Habitat connectivity and/or synergistic associations;
- Habitats and species in decline;
- Rich assemblages of plants and animals;
- Large populations of species or concentrations of species considered uncommon or threatened in a wider context;
- Plant communities (and their associated animals) that are considered to be typical of valued natural/semi-natural vegetation types, including examples of naturally species-poor communities; and
- Species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change.

4. As an objective starting point for identifying important ecological features, European, national and local governments have identified sites, habitats and species which form a key focus for biodiversity conservation in the UK, supported by policy and legislation. These are summarised by CIEEM guidance as follows:

Designated Sites

- Statutory sites designated or classified under international conventions or European legislation, for example World Heritage Sites, Biosphere Reserves, Wetlands of International Importance (Ramsar sites), Special Areas of Conservation (SAC), Special Protection Areas (SPA);

[1] CIEEM (2018) '*Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*', Chartered Institute of Ecology and Environmental Management, Winchester

- Statutory sites designated under national legislation, for example Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR);
- Locally designated wildlife sites, e.g. Local Wildlife Sites (LWS).

Biodiversity Lists

- Habitats and species of principal importance for the conservation of biodiversity in England and Wales (largely drawn from UK BAP priority habitats and priority species), often referred to simply as Priority Habitats / Species;
- Local BAP priority species and habitats.

Red Listed, Rare, Legally Protected Species

- Species of conservation concern, Red Data Book (RDB) species;
- Birds of Conservation Concern;
- Nationally rare and nationally scarce species;
- Legally protected species.

5. In addition to this list, other features may be considered to be of importance on the basis of local rarity, where they enable effective conservation of other important features, or play a key functional role in the landscape.

<u>Assigning Level of Importance</u>

6. The importance of an ecological feature should then be considered within a defined geographical context. Based on CIEEM guidance, the following frame of reference is used:

- International (European);
- National;
- Regional;
- County;
- District;
- Local (e.g. Parish or Neighbourhood);
- Site (not of importance beyond the immediate context of the site).

7. Features of 'local' importance are those considered to be below a district level of importance, but are considered to appreciably enrich the nature conservation resource or are of elevated importance beyond the context of the site.

8. Where features are identified as 'important' based on the list of key sites, habitats and species set out above, but are very limited in extent or quality (in terms of habitat resource or species population) and do not appreciably contribute to the biodiversity interest beyond the context of the site, they are considered to be of 'site' importance.

9. In terms of assigning the level of importance, the following considerations are relevant:

Designated Sites

10. For designated sites, importance should reflect the geographical context of the designation (e.g. SAC/SPA/Ramsar sites are designated at the international level whereas SSSIs are designated at the national level). Consideration should be given to multiple designations as appropriate (where an area is subject to differing levels of nature conservation designations).

Habitats

11. In certain cases, the value of a habitat can be measured against known selection criteria, e.g. SAC selection criteria, 'Guidelines for the selection of biological SSSIs' and the Hedgerows Regulations 1997. However, for the majority of commonly encountered sites, the most relevant habitat evaluation will be at a more localised level and based on relevant factors such as antiquity, size, species-diversity, potential, naturalness, rarity, fragility and typicalness (Ratcliffe, 1977). The ability to restore or re-create the habitat is also an important consideration, for example in the case of ancient woodland.

12. Whether habitats are listed as priorities for conservation at a national level in accordance with Sections 41 and 42 of the Natural Environment and Rural Communities Act (NERC) 2006, so called 'Habitats of Principal Importance' or 'Priority Habitats', or within regional or local Biodiversity Action Plans (BAPs) is also relevant, albeit the listing of a particular habitat under a BAP does not in itself imply any specific level of importance.

13. Habitat inventories (such as habitat mapping on the MAGIC database) or information relating to the status of particular habitats within a district, county or region can also assist in determining the appropriate scale at which a habitat is of importance.

Species

14. Deciding the importance of species populations should make use of existing criteria where available. For example, there are established criteria for defining nationally and internationally important populations of waterfowl. The scale within which importance is determined could also relate to a particular population, e.g. the breeding population of common toads within a suite of ponds or an otter population within a catchment.

15. When determining the importance of a species population, contextual information about distribution and abundance is fundamental, including trends based on historical records. For example, a species could be considered particularly important if it is rare and its population is in decline. With respect to rarity, this can apply across the geographic frame of reference and particular regard is given to populations where the UK holds a large or significant proportion of the international population of a species.

16. Whether species are listed as priorities for conservation at a national level in accordance with Sections 41 and 42 of the Natural Environment and Rural Communities Act (NERC) 2006, so called 'Species of Principal Importance' or 'Priority Species', or within regional or local Biodiversity Action Plans (BAPs) is also relevant, albeit the listing of a particular species under a BAP does not in itself imply any specific level of importance.

17. Species populations should also be considered in terms of the potential zone of influence of the proposals, i.e. if the entire species population within the site and surrounding area were to be affected by the proposed development, would this be of significance at a local, district, county or wider scale? This should also consider the foraging and territory ranges of individual species (e.g. bats roosting some distance from site may forage within site whereas other species such as invertebrates may be more sedentary).

Annex 5719/2:

Legislation Summary

LEGISLATION SUMMARY

1. In England and Wales primary legislation is made by the UK Parliament, and in Scotland by the Scottish Parliament, in the form of Acts. The main piece of legislation relating to nature conservation in the UK is the Wildlife and Countryside Act 1981 (as amended).

2. Acts of Parliament confer powers on Ministers to make more detailed orders, rules or regulations by means of secondary legislation in the form of statutory instruments. Statutory instruments are used to provide the necessary detail that would be too complex to include in an Act itself[1]. The provisions of an Act of Parliament can also be enforced, amended or updated by secondary legislation.

3. In summary, the key pieces of legislation relating to nature conservation in the UK are:

    - Wildlife and Countryside Act 1981 (as amended)
    - Protection of Badgers Act 1992
    - Hedgerows Regulations 1997
    - Countryside and Rights of Way (CRoW) Act for England and Wales 2000
    - Natural Environment and Rural Communities Act 2006
    - Conservation of Habitats and Species Regulations 2017

4. A brief summary of the relevant legislation is provided below. The original Acts and instruments should be referred to for the full and most up to date text of the legislation.

5. **Wildlife and Countryside Act 1981 (as amended)**. The WCA Act provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) identified for their flora, fauna, geological or physiographical features. The Act contains strict measures for the protection and management of SSSIs.

6. The Act also refers to the treatment of UK wildlife including protected species listed under Schedules 1 (birds), 5 (mammals, herpetofauna, fish, invertebrates) and 8 (plants).

7. Under Section 1(1) of the Act, all wild birds are protected such that is an offence to intentionally:

    - Kill, injure or take any wild bird;
    - Take, damage or destroy the nest of any wild bird whilst in use* or being built;
    - Take or destroy an egg of any wild bird.

    * The nests of birds that re-use their nests as listed under Schedule ZA1, e.g. Golden Eagle, are protected against taking, damage or destruction irrespective of whether they are in use or not.

8. Offences in respect of Schedule 1 birds are subject to special, i.e. higher, penalties. Schedule 1 birds also receive greater protection such that it is an offence to intentionally or recklessly:

    - Disturb any wild bird included in Schedule 1 while it is building a nest or while it is in, on or near a nest containing eggs or young;
    - Disturb dependent young of such a bird.

[1] http://www.parliament.uk/business/bills-and-legislation/secondary-legislation/statutory-instruments/

9. Under Section 9(1) of the Act, it is an offence to:

- Intentionally kill, injure or take any wild animal included in Schedule 5.

10. In addition, under Section 9(4) it is an offence to intentionally or recklessly:

- Obstruct access to, any structure or place which any wild animal included in Schedule 5 uses for shelter or protection; or
- Disturb any wild animal included in Schedule 5 while occupying a structure or place which it uses for that purpose.

11. Under Section 13(1) it is an offence:

- To intentionally pick, uproot or destroy any wild plant listed in Schedule 8; or
- Unless the authorised person, to intentionally uproot any wild plant not included in Schedule 8.

12. The Act also contains measures (S.14) for preventing the establishment of non-native species that may be detrimental to native wildlife, prohibiting the introduction into the wild of animals (releases or allows to escape) and plants (plants or causes to grow) listed under Schedule 9.

13. **Protection of Badgers Act 1992.** The Act aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain. It should be noted that the legislation is not intended to prevent properly authorised development. Under the Act it is an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat* a Badger, or attempt to do so;
- To intentionally or recklessly interfere with a sett# (this includes disturbing Badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

* the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence

\# A sett is defined as "*any structure or place which displays signs indicating current use by a Badger*". Natural England advice (June 2009) is that a sett is protected so long as such signs remain present, which in practice could potentially be for some time after the last actual occupation by Badger. Interference with a sett includes blocking tunnels or damaging the sett in any way

14. Licences can be obtained from the Statutory Nature Conservation Organisation (SNCO) for development activities that would otherwise be unlawful under the legislation, provided there is suitable justification. The SNCO for England is Natural England.

15. **Hedgerows Regulations 1997**. 'Important' hedgerows (as defined by the Regulations) are protected from removal (up-rooting or otherwise destroying). Various criteria specified in the Regulations are employed to identify 'important' hedgerows for wildlife, landscape or historical reasons.

16. **Countryside and Rights of Way (CRoW) Act for England and Wales 2000.** The CRoW Act provides increased measures for the management and protection of SSSIs and strengthens wildlife enforcement legislation. Schedule 12 of the Act amends the species provisions of the WCA 1981, strengthening the legal protection for threatened species. The Act also introduced a duty on Government to have regard to the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

17. **Natural Environment and Rural Communities Act 2006.** Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as local planning authorities, in implementing their duty under Section 40 of the Act, to have regard to the conservation of biodiversity in England, when exercising their normal functions. 56 habitats and 943 species of principal importance are included on the S41 list. These are all the habitats and species in England that were identified as requiring action in the UK Biodiversity Action Plan (BAP).

18. **Conservation of Habitats and Species Regulations 2017 (as amended).** The Regulations enact the European Union's Habitats Directive (92/43/EEC) in the UK. The Habitats Directive was designed to contribute to the maintenance of biodiversity within member states through the conservation of sites, known in the UK as Special Areas of Conservation (SACs), containing habitats and species selected as being of EC importance (as listed in Annexes I and II of the Habitats Directive respectively). Member states are required to take measures to maintain or restore these natural and semi-natural habitats and wild species at a favourable conservation status.

19. The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs)[2] classified under Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites constitute the Natura 2000 network. The Regulations impose restrictions on planning decisions likely to significantly affect SPAs or SACs.

20. The Regulations also provide protection to European Protected Species of animals that largely overlaps with the WCA 1981, albeit the provisions are generally stricter. Under Regulation 43 it is an offence, *inter alia*, to:

- Deliberately capture, injure or kill any wild animal of a European Protected Species;
- Deliberately disturb any wild animals of any such species, including in particular any disturbance likely to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate, or which is likely to affect significantly their local distribution or abundance;
- Deliberately take or destroy the eggs of such an animal;
- Damage or destroy a breeding site or resting place of such an animal.

21. Similar protection is afforded to European Protected Species of plants, as detailed under Regulation 47.

22. The Regulations do provide a licensing system that permits otherwise illegal activities in relation to European Protected Species, subject to certain tests being fulfilled.

[2] Special Protection Areas (SPAs) are protected sites classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC) (aka the Birds Directive), which came into force in April 1979. SPAs are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

Annex 5719/3:

Desktop Study Data



Ecological data search for land at Downlands Farm, Uckfield

On behalf of Joshua Evans (Aspect Ecology ltd)

Report reference SxBRC/23/025

Prepared on 19/04/2023

Sussex Biodiversity Record Centre

Sussex Biodiversity Record Centre, c/o Sussex Wildlife Trust, Woods Mill, Henfield, West Sussex BN5 9SD
Tel: 01273 497521 Email: info@sxbrc.org.uk Website: www.sxbrc.org.uk

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Introduction & Summary of Results

An ecological data search was carried out for land at Downlands Farm, Uckfield on behalf of Joshua Evans (Aspect Ecology ltd) on 19/04/2023.

The following datasets were consulted for this report:

	Requested	Radius/buffer size
Designated sites, habitats & ownership maps	Yes	2km
Protected, designated and invasive species	Yes	2km

Summary of results

Sites and habitats

Statutory sites	1 SSSI / 2 LNRs
Non-statutory sites	8 LWS / 2 LGS / 5 Designated Road Verges
Section 41 habitats	4 habitats
Ancient and/or ghyll woodland	Present

Protected and designated species

International designations	30 species	541 records
National designations	120 species	2,520 records
Other designations	361 species	4,610 records
Total	**377 species**	**4,957 records**
Invasive non-native species	37 species	394 records

The Sussex Biodiversity Record Centre must be acknowledged whenever data is cited from this report.

Important Information

PERMISSION

This report is valid until 19/04/2024

This report is for the internal use of Joshua Evans of Aspect Ecology ltd (which includes the client where applicable) to inform understanding of the site of interest. This report must not be distributed or published for an external or public audience, for example within the appendix of a report. However, data from within this report may be referenced as long as the Sussex Biodiversity Record Centre is acknowledged.

The separate summary sheet may be published.

It must not be assumed that this report contains the definitive species and habitat information for the site concerned.

The species data held by the Sussex Biodiversity Record Centre (SxBRC) are collated from the biological recording community in Sussex. However, there are many areas of Sussex where the records held are limited, either spatially or taxonomically.

A data search from SxBRC will give the user a clear indication of what biological recording has taken place. The information provided is a useful tool for making an assessment of the site, but should be used in conjunction with site visits and appropriate surveys before further judgements on the presence or absence of key species or habitats can be made. It may be that the content of this report guides the reader as to which surveys should be carried out on the site.

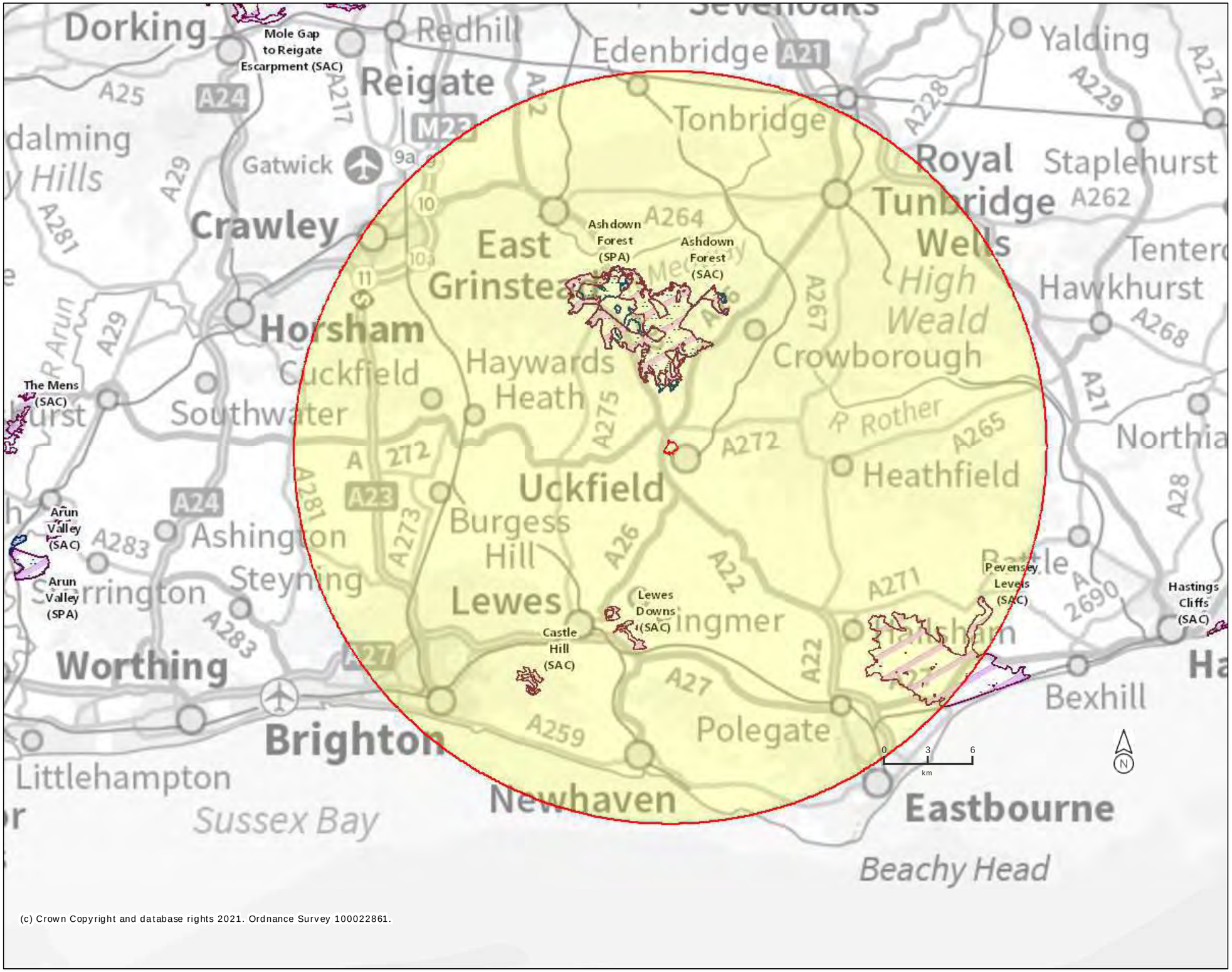
This report was compiled using data held at SxBRC at the time of production. SxBRC takes data validation very seriously, but cannot be held responsible for the accuracy of data included in this report.

SxBRC operates as agent to the individuals and groups who provide their records free of charge. The data suppliers retain copyright on their data, while SxBRC retains copyright on its data search reports.

Impartiality
SxBRC functions as custodian of biological data. Our role is to collect, manage and disseminate wildlife and habitat data. As such, we have to remain impartial and cannot offer opinions on the biodiversity value of a given site. Similarly, we cannot put forward objections to planning applications or be involved in campaigns.

MAGiC

5719 - MAGIC 25km European Statutory European Designations



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Legend

- Special Areas of Conservation (England)
- Special Protection Areas (England)

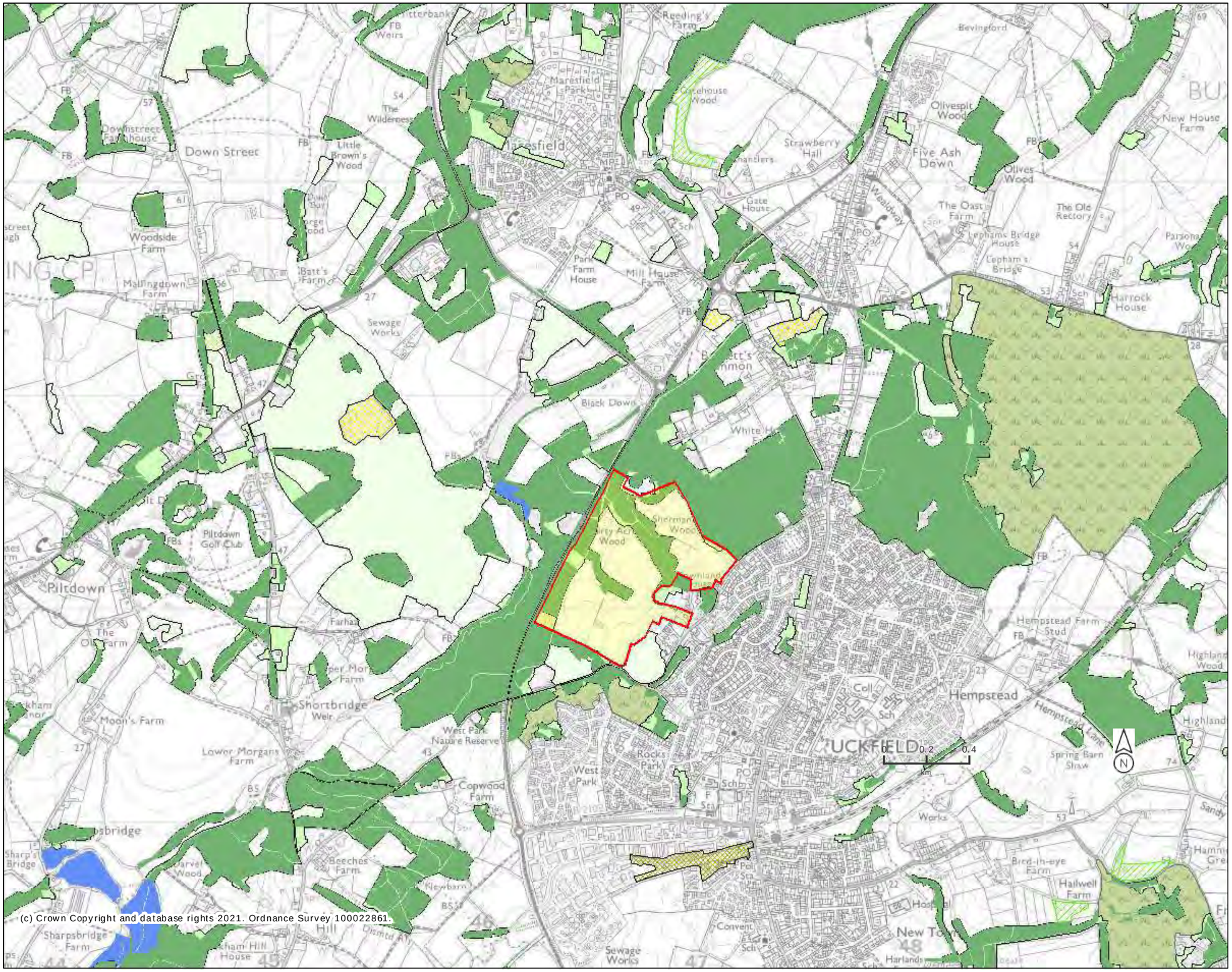
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xmin = 476900
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ymax = 149900

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km

Map produced by MAGIC on 15 January, 2021.

Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

5719 - MAGIC Priority Habitat and Other Woodland



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Legend

- Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England)
- Priority Habitat Inventory - Deciduous Woodland (England)

National Forest Inventory (GB)

- Assumed woodland
- Broadleaved
- Cloud \ shadow
- Conifer
- Coppice
- Coppice with standards
- Failed
- Felled
- Ground prep
- Low density
- Mixed mainly broadleaved
- Mixed mainly conifer
- Shrub
- Uncertain
- Windthrow
- Young trees
- Woodpasture and Parkland BAP Priority Habitat (England)

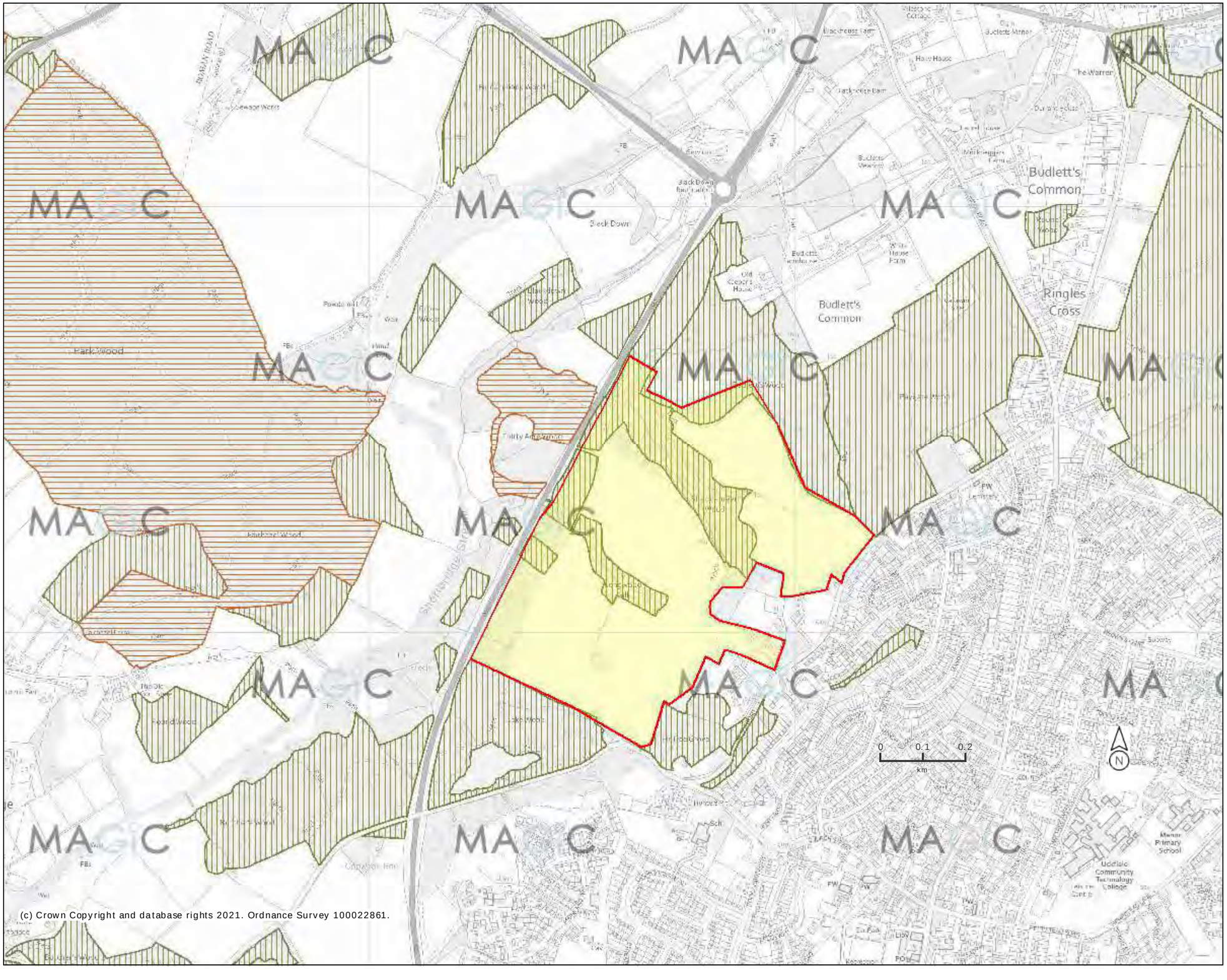
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Map produced by MAGIC on 15 January, 2021.

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5719 - MAGIC Ancient Woodland Layer



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Legend

Ancient Woodland (England)

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland

Projection = OSGB36
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km

Map produced by MAGIC on 15 January, 2021.

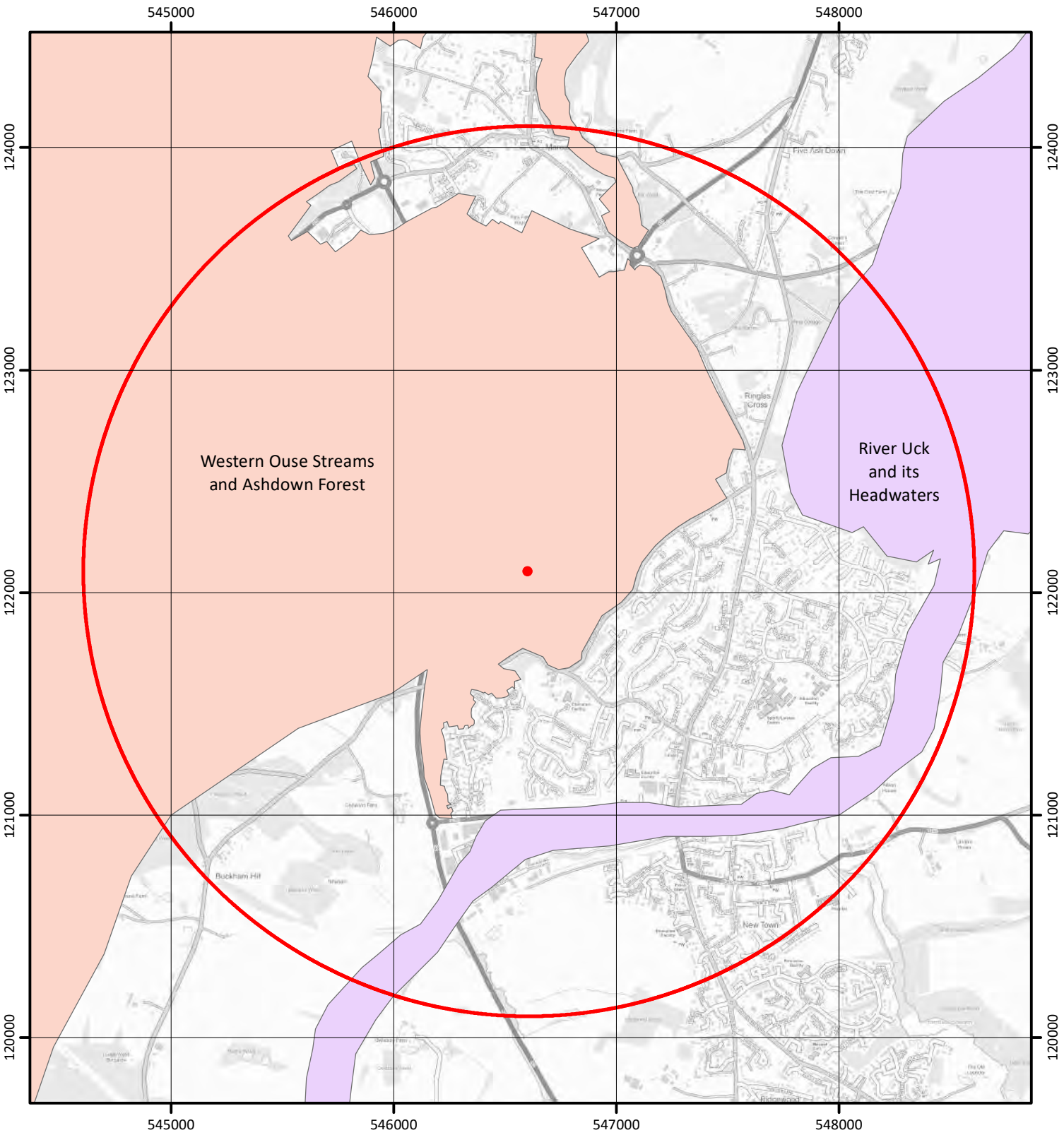
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Biodiversity Opportunity Areas

Land at Uckfield 5719

SxBRC/20/789 - 02/02/2021

Sussex Biodiversity Record Centre



Key to Map:

Search area

The Biodiversity Opportunity Areas (BOAs) map depicts the regional priority areas of opportunity for restoration and creation of Biodiversity Action Plan (BAP) habitats. This is a spatial representation of the BAP targets and the BOAs are areas of opportunity, not constraint. The BOAs shown in the map do not include all the BAP habitat in the region, nor do they include all the areas where BAP habitat could exist. In particular, more work is needed to develop approaches in urban and in marine environments. The Biodiversity Opportunity Areas Map is the property of the members of the South East England Biodiversity Forum © South East England Biodiversity Forum 2009. Reproduction of the BOA Map is subject to conditions. Contains Ordnance Survey data © Crown copyright and database rights 2021

0 0.5 1 Km

N

Site Location (Downlands, Uckfield) within the Biodiversity Opportunity Area in Wealden



08:48 Western Ouse Streams and Ashdown Forest

The north of the area is dominated by the European protected heathland, Ashdown Forest, which consists of a matrix of open heath, ancient woodland, ghyll woodland and wetlands. The southern part of the area captures the eastern Ouse and its headwaters, south towards the confluence with the River Uck. In the southern area smaller patches of heathland exist alongside many ponds and modern wood pasture. The area is an important watershed between the Medway and Ouse systems and is likely to be important for the migration of key species between catchments.

Joint Character Area: High Weald and Low Weald.

Geology: Western Ouse Streams and Ashdown Forest BTA lies on interbedded sandstone and siltstone.

Biodiversity:

- Much of the BTA lies within High Weald AONB and the site contains Forest Way Country Park; a linear park which forms an important green lane, and Old Lodge LNR.
- The BTA includes the Ashdown Forest, designated as an SAC, SPA and SSSI. Ashdown Forest is one of the largest single continuous blocks of heathland, semi-natural woodland and valley bog in the region. Alongside typical heathland species are less common species such as Petty Whin and Ivy-leaved Bell Flower, and aquatic habitats on the site provide habitat for a range of invertebrates including many uncommon beetles, moths and butterflies. There are also large populations of reptiles and heath nesting birds including Curlew and Nightjar.
- There are 13 SNCIs within this BTA: Brown Knoll Farm Meadow is unimproved acid grassland at the edge of Ashdown Forest, supporting a rich plant community; Courtland Wood is an ancient woodland dominated by Oak over Hazel. The canopy is reasonably dense resulting in a less rich ground flora, however there are numerous bryophytes along a small stream that bisects the site; Piltdown Common is a mosaic of heathland, grassland, scrub and woodland. There is also a large pond which is good for water beetles and Common Toad; Butchers Wood is an ancient woodland consisting of Hazel coppice and Oak, with a large population of Wild Daffodil. Along the stream boundary, sandstone outcrops have a good bryophyte assemblage including several rare species; Hugget's Wood and The Toll is a small woodland on either side of a shallow valley, consisting mainly of Hornbeam and Hazel coppice. Wetter areas contain Alder and Opposite-leaved Golden Saxifrage; the land at Isfield Church consists of rush pasture crossed by several shallow drains. There is an area of wet woodland containing Marsh Marigold and Black Poplar, and the whole site is rich in fungi; Lake Wood is an ancient woodland site surrounding a large boating lake. The site is typical Wealden woodland, and supports a diverse bird population and Dormouse. The lake is bordered by sandstone outcrops and several rare lichens and bryophytes can be found. There is also a small cave which is used as a bat hibernaculum; Pound and Furzefield Wood consists of Furzefield Wood, primarily a Pine plantation, and Pound Wood, believed to be ancient in origin. Pound Wood in particular supports less common species including Adder's Tongue and Silver-washed Fritillary; Sheffield Forest Complex is a large woodland managed for commercial forestry. The site does however contain specialised Atlantic bryophytes and ferns, as well as a number of ghylls cut into the sandstone; Sheffield

Park Garden contains a mosaic of habitats and retains many features of ancient pasture-woodland. There are many ancient Oak, Ash, Sweet Chestnuts and Beech (including pollards), and these support important communities of lichens, bryophytes and invertebrates; Shortbridge Stream Meadow is part of a series of fields along Shortbridge Stream. The site consists of an area of marshy grassland and swamp with species such as Sneezewort and Gypsywort; Stephens Farm Meadow is an unimproved damp grassland site containing species such as Sneezewort and Devil's-bit Scabious. There is a small pond in the meadow and a stream-fed lake with diverse vegetation and a large number of frogs; Wapsbourne Wood is an area of ancient woodland predominantly containing over-grown Sweet Chestnut. The ground flora is quite sparse however there is a patch of the uncommon Solomon's-seal and a number of ancient woodland indicators.

Archaeology:
There are numerous Scheduled Ancient Monuments in the Ashdown Forest part of this area. Brown Knoll Farm Meadow has ridge and furrow across the upper slopes, which remains from traditional ploughing in the middle ages. The land at Isfield Church was the original location of Isfield and the earthworks of an 11th Century motte and bailey are still visible. Sheffield Park Garden was landscaped by "Capability" Brown during the 18th Century.

Targets:
There are opportunities within this area for large scale floodplain woodland, floodplain meadow and river restoration. The water quality of headstreams and tributaries could also benefit from stream restoration and increased woody cover. Heathland maintenance and restoration, and wetland creation against a backdrop of high visitor pressure are also options. Enhancement of habitat for key heathland species and expansion of hedgerow networks is also important.

BAP Species: 103 BAP Species have been recorded in this Biodiversity Target Area

08:49 River Uck and its Headwaters

Uckfield is a town that has suffered extreme flood-events in recent years, and this area is considered important for flood-alleviation. The area itself whilst containing many tributaries of the River Uck and has a scattering of ancient woodland, ghyll woodlands and lowland meadows. The River Uck passes through the urban area of Uckfield and through the agricultural land of the Low Weald until the confluence with the River Ouse north of Lewes.

Joint Character Area: High weald and low weald.

Geology: River Uck and its Headwaters lie on siltstone, mudstone and sandstone. There are various superficial deposits of clay, silt, sand and gravel in the river valley.

Biodiversity:

- The eastern side of the BTA is within High Weald AONB.
- There are two SSSIs within the BTA: Buxted Park is an old deer park consisting of a variety of unimproved communities with parkland trees and areas of woodland. The grassland is of an acidic nature with species such as Heath Bedstraw and Hairy Sedge. In addition there are areas of marshy grassland, fen communities, and neutral grassland. The park is found to be exceptional for invertebrates especially beetles and flies which thrive on the marshlands, riverbanks and deadwood; Stockland Farm Meadows consists of two grazed meadows and a hay field on Wadhurst clay. Over 80 plant species have been recorded including Pepper-saxifrage and Cowslip, and a small pond provides additional interest with five amphibian species present.
- There are five SNCIs within the BTA: Cantersand Meadows includes two meadows with a typical neutral community including Oxeye Daisy and Sweet Vernal-grass moving to a more acidic area with Tormentil and Devil's-bit Scabious. There is also an area of species-rich gill woodland with abundant bryophyte interest; Hadlow Down Churchyard supports species-rich grassland including large patches of acid grassland and heather. The churchyard also has several Yews which appear to be of considerable age; Popeswood Marsh is probably a unique example of this habitat type within the county. The site consists of the flushed central slopes with species such as Common Yellow Sedge (*C. Demissa*), Marsh Pennywort and high bryophyte cover. The presence of Bog Pimpernel is also of interest; the Southern Part of Hadlow Deep Wood is predominated by old Hornbeam coppice, with areas of Ash and Oak. A stream crosses through the woodland, and the sides are botanically rich with species such as Wood Sorrel and Yellow Archangel. The presence of a heronry adds to the interest of this site; Wildings and Scolcus Wood Complex is a large area of ancient woodland with Sweet Chestnut, Birch and Oak amongst the dominant species. There are numerous streams crossing the site, which have a rich bryophyte and lichen flora, and patches of Opposite-leaved Golden-saxifrage.

Archaeology: Buxted Park SSSI has evidence of ridge and furrow from cultivation. There a few Scheduled Ancient Monuments in the area, mostly related to Medieval features and there is evidence of iron working in more recent centuries.

EU Directive 79/409 on the Conservation of Wild Birds:
Special Protection Area

ASHDOWN FOREST (EAST SUSSEX)

The Ashdown Forest proposed Special Protection Area (pSPA) is an extensive area of common land on mainly sandy soils between East Grinstead and Crowborough in East Sussex. It comprises a mosaic of wet and dry heath, valley bog and woodland, and supports several uncommon plants, a rich invertebrate fauna and nationally important numbers of breeding nightjar and Dartford warbler. The boundary of the pSPA is coincident with that of the Ashdown Forest Site of Special Scientific Interest.

The site qualifies for designation under Article 4.1 of the EU Birds Directive by regularly supporting nationally important breeding populations of two Annex 1 species. The site supports 35 pairs of nightjar *Caprimulgus europaeus* (1991-92 survey), representing 1.1% of the British population, and 20 pairs of Dartford warbler *Sylvia undata* (1994 survey), representing 2.1% of the British population. Other regularly occurring Annex 1 species include woodlark *Lullula arborea*, hen harrier *Circus cyaneus* and great grey shrike *Lanius excubitor*.

The diverse range of heathland and woodland habitats on the site supports an important assemblage of breeding species, some of which have declined in England over recent years. Notable species regularly breeding on the site include hobby *Falco subbuteo*, tree pipit *Anthus trivialis*, redstart *Phoenicurus phoenicurus*, stonechat *Saxicola torquata* and wood warbler *Phylloscopus sibilatrix*, in addition to nightjar and Dartford warbler.

SPA Citation
ICC
May 1994

This citation / map relates to a site entered in the Register of European sites for Great Britain
Register reference number UK9012181
Date of registration 25 AUG 1999
Signed .....
on behalf of the Secretary of State for the Environment

Ashdown Forest

Designated Special Area of Conservation (SAC)

Country	England
Unitary Authority	Surrey, East and West Sussex
Centroid*	TQ451306
Latitude	51.05583333
Longitude	0.070555556
SAC EU Code	UK0030080
Status	Designated Special Area of Conservation (SAC)
Area (ha)	2715.88

* This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.



Location of Ashdown Forest SAC

General site character

- Heath, Scrub, Maquis and Garrigue, Phygrana (60%)
- Mixed woodland (40%)

Download the Standard Data Form for this site as submitted to Europe (PDF <100kb)

Note When undertaking an appropriate assessment of impacts at a site, all features of European importance (both primary and non-primary) need to be considered.

Annex I habitats that are a primary reason for selection of this site

- **4010 Northern Atlantic wet heaths with Erica tetralix**
  Ashdown Forest contains one of the largest single continuous blocks of lowland heath in south-east England, with both **4030 European dry heaths** and, in a larger proportion, wet heath. The M16 *Erica tetralix – Sphagnum compactum* wet heath element provides suitable conditions for several species of bog-mosses *Sphagnum* spp., bog asphodel *Narthecium ossifragum*, deergrass *Trichophorum cespitosum*, common cotton-grass *Eriophorum angustifolium*, marsh gentian *Gentiana pneumonanthe* and marsh clubmoss *Lycopodiella inundata*. The site supports important assemblages of beetles, dragonflies, damselflies and butterflies, including the nationally rare silver-studded blue *Plebejus argus*, and birds of European importance, such as European nightjar *Caprimulgus europaeus*, Dartford warbler *Sylvia undata* and Eurasian hobby *Falco subbuteo*.

COUNTY: EAST SUSSEX SITE NAME: BUXTED PARK

DISTRICT: WEALDEN

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authority: WEALDEN DISTRICT COUNCIL

National Grid Ref: TQ 488225 Area: 83.43 (ha.) 206.16 (ac.)

Ordnance Survey Sheets 1:50,000: 198, 199 1:10,000: TQ 42 SE

Date Notified (Under 1981 Act): 1989 Date of Last Revision: –

Other Information:
New site.

Reasons for Notification:
Buxted Park is an old deer park consisting of a variety of unimproved grassland communities with parkland trees and areas of woodland which as a whole support a large invertebrate population. It lies on neutral-acidic soils over Tunbridge Wells Sandstone, Wadhurst Clay and various superficial deposits in the valley of the River Uck.

The acidic grassland east of the River Uck is of a type very scarce in south east England. The sward is dominated by the grasses red fescue *Festuca rubra* and common bent *Agrostis capillaris* with numerous herbs including creeping cinquefoil *Potentilla reptans* and white clover *Trifolium repens*. Ant-hills occur throughout, upon

- **4030 European dry heaths**
  The dry heath in Ashdown Forest is an extensive example of the south-eastern H2 *Calluna vulgaris – Ulex minor* community. This vegetation type is dominated by heather *Calluna vulgaris*, bell heather *Erica cinerea* and dwarf gorse *Ulex minor*, with transitions to other habitats. It supports important lichen assemblages, including species such as *Pycnothelia papillaria*. This site supports the most inland remaining population of hairy greenweed *Genista pilosa* in Britain.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

- Not Applicable

Annex II species that are a primary reason for selection of this site

- Not Applicable

Annex II species present as a qualifying feature, but not a primary reason for site selection

- **1166 Great crested newt** *Triturus cristatus*

Many designated sites are on private land: the listing of a site in these pages does not imply any right of public access.

COUNTY: EAST SUSSEX SITE NAME: ASHDOWN FOREST

DISTRICT: WEALDEN

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981. Part of the site is a Local Nature Reserve (LNR) managed by the Sussex Trust for Nature Conservation

Local Planning Authority: WEALDEN DISTRICT COUNCIL

National Grid Reference: TQ 450300 Area: 3144.6 (ha.) 7770.3 (ac.)

Ordnance Survey Sheet 1:50,000: 187, 188 1:10,000: TQ 33 SE, TQ 43 SW, TQ 43 SE, TQ 42 NW, TQ 43 NE, TQ 53 SW

Date Notified (Under 1949 Act): 1953 Date of Last Revision1972

Date Notified (Under 1981 Act): 1986 Date of Last Revision: –

Other Information:
The site is mentioned in 'A Nature Conservation Review'*, and is common land, managed by the Ashdown Forest Conservators.

Reasons for Notification:
Ashdown Forest is an extensive area of common land lying between East Grinstead and Crowborough. The soils are derived from the predominantly sandy Hastings Beds. It is one of the largest single continuous blocks of heath, semi-natural woodland and valley bog in south-east England, and it supports several uncommon plants, a rich invertebrate fauna, and important populations of heath and woodland birds.

Although the area of heathland has declined in recent years due to cessation of grazing and frequent fires, there remain extensive areas of dry heath dominated by ling *Calluna vulgaris* with bell heather *Erica cinerea* and dwarf gorse *Ulex minor*. This heathland supports important lichen communities including species such as *Pycnothelia papillaria*. Bracken *Pteridium aquilinum* is now dominant over large areas. On the damper heath, cross-leaved heath *Erica tetralix* becomes dominant with deer-grass *Trichophorum cespitosum*. The heath and bracken communities form a mosaic with acid grassland dominated by purple moor-grass *Molinia caerulea* with species such as the local petty whin *Genista anglica*. Wet areas provide suitable conditions for several species of sphagnum moss, together with which are found bog asphodel *Narthecium ossifragum*, common cotton-grass *Eriophorum angustifolium* and specialities such as marsh gentian *Gentiana pneumonanthe*, ivy-leaved bell flower *Wahlenbergia hederacea*, white-beaked sedge *Rhynchospora alba* and the marsh clubmoss *Lycopodiella indundata*.

Gorse *Ulex europaeus*, silver birch *Betula pendula*, pedunculate oak *Quercus robur* and Scots pine *Pinus sylvestris* are scattered across the heath, and in some areas form extensive secondary woodland and scrub. The older woodlands consist of beech *Fagus*

sylvatica and sweet chestnut *Castanea sativa*. These contain bluebell *Hyacinthoides non-scripta*, bilberry *Vaccinium myrtillus*, the hard fern *Blechnum spicant*, and honeysuckle *Lonicera periclymenum* with birds-nest orchid *Neottia nidus-avis* and violet helleborine *Epipactis purpurata* found particularly under beech.

There are some conifer and sweet chestnut coppice plantations scattered throughout the forest, with rides of particular importance for heathland plants, and various woodland birds such as sparrowhawk.

Forest streams are often lined by alders *Alnus glutinosa* with grey sallow *Salix cinerea*, birch and oak. These streams cut through the soft sandstone in places, forming steep sided valleys (ghylls) which are sheltered from winter frosts and remain humid in summer. Uncommon bryophytes such as the liverwort *Nardia compressa* and a range of ferns including the mountain fern *Oreopteris limbosperma* and the hay-scented buckler fern *Dryopteris aemula* thrive in this 'atlantic' microclimate.

The damming of streams, digging for marl, and quarrying have produced several large ponds in a number of areas of the forest. Although often largely free of aquatic vegetation there may be localised rafts of broadleaved pondweed *Potamogeton natans*, beds of reedmace *Typha latifolia* and water horsetail *Equisetum fluviatile*. These species are particularly abundant in the marl pits.

The aquatic habitats support a diverse fauna, including a range of water beetles (Coleoptera) a rare midge *Dixella filiformis*, a diversity of dragonfly and damselfly species (Odonata) and the locally uncommon snail *Vertigo substriata*. Some of the ponds also have large amphibian populations, including the great-crested newt *Triturus cristatus*. The heathlands and woods support many uncommon beetles, moths and butterflies. There are still several populations of the rare silver-studded blue *Plebejus argus* on the open heath. The bog bush cricket *Metrioptera brachyptera* is particularly abundant in the forest also. Large populations of reptiles, including the viviparous lizard *Lacerta vivipara* and the adder *Vipera berus* occur on the open habitats. Notable heath nesting birds include curlew, nightjar and hobby. Scrub, woodlands and coppice together support a wide range of breeding woodland birds, and a refuge for the dormouse *Muscardinus avellanarius*, which has become scarce over large areas of the country in recent years.

* A Nature Conservation Review, 1977; ed D R Ratcliffe; published by Cambridge University Press.

which yarrow *Achillea millefolium* and heath bedstraw *Galium saxatile* occur. Drier areas support bird's-foot trefoil *Lotus corniculatus* and large thyme *Thymus pulegoides*, whilst hairy sedge *Carex hirta* and jointed rush *Juncus articulatus* are common in damp patches.

Marshy grassland, often dominated by tufted hair grass *Deschampsia caespitosa*, and fen communities occupy land close to the river and in one area a fine greater tussock sedge *Carex paniculata* swamp has developed. Species-rich neutral grassland is also represented supporting quaking grass *Briza media*, common spotted orchid *Dactylorhiza fuchsii* and black knapweed *Centaurea nigra*. One small area of grassland has a ridge and furrow topography resulting from temporary cultivation in the 19th Century or before.

Bracken *Pteridium aquilinum* is well established in places and parkland trees are scattered throughout the site. The ancient Culver Wood consists largely of hornbeam *Carpinus betulus* coppice with hazel *Corylus avellana* and alder *Alnus glutinosa* in wet areas. The ground flora is sparse in places, due to deer grazing, though wood sorrel *Oxalis acetosella* occurs.

The park has been found to be of exceptional importance for conservation of invertebrates, especially beetles and flies which are found on the marshlands and riverbanks, but more importantly, found in association with over mature trees and dead wood. Rot holes, sap runs and fungi growing on trees are of particular significance. Three nationally rare species of beetle; *Ptenidium gressneri*, which is an extremely small brown-black beetle, *Aderus brevicornis* and *Prionocyphon serricornis* are associated with rotten wood of large, old trees, the latter species with water-filled holes. One other nationally rare beetle, *Aleochara sanguinea* has been found in putrid fungi. Over fifty nationally scarce beetles have been recorded, along with several nationally scarce flies, including the hoverfly of fen and marshes, *Orthonevra*

brevicornis and the large-headed fly of woodland in southern England, *Nephrocerus flavicornis*.

SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)

East Sussex

Site Name:	**Lake Wood**		
Site Ref(s):	CW44	**Owner(s):**	
District(s):	Wealden	**Size (ha):**	8.2
Parish(es):	Uckfield	**Date(s):**	Identified Summer 1990 Last Revised Jul 2016
Grid Ref:	TQ463218	**Surveyor(s):**	Ben Rainbow

Summary

Lake Wood is a complex site that was once part of a large estate. It consists of ancient woodland - which has been much modified by landscaping - surrounding a large man-made lake with lush emergent vegetation. Large sandrock outcrops occur around the lake, which support acidic flora, bats and bryophytes including Meylan's Pouchwort *(Calypogeia integristipula)*. The lake and rich mosaic of surrounding habitats supports a diverse invertebrate fauna including the Downy Emerald *(Cordulia aenea)* dragonfly.

The site is open to and enjoyed by the public.

Site Description

The woodland in the northern part of the site is typical of Wealden woodland standing on clay and sandstone based soils. It is comprised of mixed coppice of Hazel *(Corylus avellana)*, Downy Birch *(Betula pubescens)* and Hornbeam *(Carpinus betulus)*, with Oak *(Quercus sp.)* standards, and scattered Beech *(Fagus sylvatica)* and Holly *(Ilex aquifolium)*. The ground flora is species-rich and variable, but large areas are typically carpeted in Bluebell *(Hyacinthoides non-scripta)* and Wood Anemone *(Anemone nemorosa)* with occasional Wood Speedwell *(Veronica montana)*, Three-nerved Sandwort *(Moehringia trinervia)* and fern species. Other areas of woodland consist of Sweet Chestnut *(Castanea sativa)* with Sycamore *(Acer pseudoplatanus)*, Bracken *(Pteridium aquilinum)* and Bramble *(Rubus fruticosus agg.)*. Wet acidic woodland to the southwest of the site supports locally occasional Common Dog-violet, *(Viola riviniana)* and Primrose *(Primula vulgaris)* under a low canopy of Willow *(Salix sp.)*. Solomon's-seal *(Polygonatum multiflorum)* and Tutsan *(Hypericum androsaemum)* are present. Hazel Dormice *(Muscardinus avellanarius)* are recorded on the site.

The area downstream of the lake dam supports marshy flora and provides a sheltered glade of value for invertebrates. Marsh Thistle *(Cirsium palustre)*, Water Figwort *(Scrophularia auriculata)* and Bittersweet *(Solanum dulcamara)* are present and bordered by banks covered with Hard Fern *(Blechnum spicant)*, Lady Fern *(Athyrium filix-femina)* and Yellow Pimpernel *(Lysimachia nemorum)*.

To the south of the wood, there is a large, landscaped boating lake, built in the nineteenth century. The lake is now edged by luxurious emergent vegetation that consists of patches of Bulrush *(Typha latifolia)*, Branched Bur-reed *(Sparganium erectum)*, Yellow Flag *(Iris pseudacorus)*, Pendulous Sedge *(Carex pendula)* and Gypsywort *(Lycopus europaeus)* with occasional Alder *(Alnus glutinosa)* and Willow trees over-hanging the water's edge. Royal Fern *(Osmunda regalis)* is also found growing on the lake margins, which was likely part of historic planting.

The lake and adjoining habitats are of local importance for invertebrates, notably dragonfly. It supports breeding Downy Emerald *(Cordulia aenea)*, Four-spotted Chaser *(Libellula quadrimaculata)* with abundant Azure Damselfly *(Coenagrion puella)* and Large Red Damselfly *(Pyrrhosoma nymphula)*.

The lake is bounded on a number of sides by large sandstone outcrops. These are of importance for bryophytes and support Meylan's Pouchwort *(Calypogeia integristipula)*; a scarce species that grows on sandstone outcrops in The Weald. Other acidic species historically recorded include Common Pouchwort *(Calypogeia fissa)* and Tumid Notchwort *(Lophozia ventricosa)*. The tops of the sandrock support a very localised acidic grassland flora including Ling *(Calluna vulgaris)*, Gorse *(Ulex europaeus)*, Sheep's Sorrel *(Rumex acetosella)*, Early Hair-grass *(Aira praecox)* and Sticky Mouse-ear *(Cerastium glomeratum)*.

There is a small cave north of the lake, where hibernating bats have been previously recorded during the winter months. Natterer's bat *(Myotis nattereri)* and occasionally Daubenton's *(Myotis daubentonii)* have been recorded.

To the south of the lake former exotic planting is still evident and there is Rhododendron species *(Rhododendron sp.)*, Horse Chestnut *(Aesculus hippocastanum)*, Common Lime *(Tilia x europaea)* and False Acacia *(Robinia pseudoacacia)* trees as well as Rowan *(Sorbus aucuparia)*, Sycamore *(Acer pseudoplatanus)* and Bramble scrub. Bracken and young Birch saplings are locally frequent in areas of former Rhododendron clearance.

Management Recommendations

Lake Wood is managed and being restored by The Woodland Trust. It is recommended the site is managed to a long-term management plan, to cater for the varying habitats and substantial nature conservation features of the site. Rhododendron ponticum control should continue and ideally this species should be eradicated from the site. Other exotic trees and shrubs should be prevented from spreading. Expert bryophyte advice should be south to inform management of the sandstone outcrop areas. Rides and glades management should continue to keep them open, sunny and diverse.

LOCAL WILDLIFE SITE

East Sussex

Site Name:	**West Park**		
Site Ref(s):	CW56	**Owner(s):**	
District(s):	Wealden	**Size (ha):**	11
Parish(es):	Uckfield	**Date(s):**	Identified Oct 1991 Last Revised Jul 2016
Grid Ref:	TQ462215	**Surveyor(s):**	Ben Rainbow

Summary

This site is situated on the western edge of Uckfield and is bordered by roads and housing. The site comprises a mosaic of habitats including semi-improved grassland, localised acidic grassland, developing broadleaved woodland, exposed rocky outcrops, and a marshy area. This is a rich assemblage in such a small site and is particularly important due to its proximity to an urban area. The sandstone outcrops support the rare and localised Meylan's Pouchwort *(Calypogeia integristipula)*. West Park is also of archaeological value, as it includes a Mesolithic rock shelter.

The site is managed as a Nature Reserve, by Uckfield Town Council and has open access to the public.

Site Description

Occasional mature Oak *(Quercus sp.)* and Beech *(Fagus sylvatica)* trees are scattered throughout this site and other areas are comprised of earlier successional native woodland.

Much of the site consists of neutral semi-improved grassland. Species-richer areas support occasional Oxeye Daisy *(Leucanthemum vulgare)*, Meadow Buttercup *(Ranunculus acris)*, Common Sorrel *(Rumex acetosa)*, Meadow Vetchling *(Lathyrus pratensis)* and Sweet Vernal-grass *(Anthoxanthum odoratum)*. The wider grassland supports a good diversity of common invertebrates including Meadow Grasshopper *(Chorthippus parallelus)*, Swollen-thighed Beetle *(Oedemera nobilis)* and Dark Bush-cricket *(Pholidoptera griseoaptera)*.

Centrally, there is an interesting marshy area that supports a diverse flora including Marsh-Bedstraw *(Galium palustre)*, Creeping-Jenny *(Lysimachia nummularia)*, Marsh Thistle *(Cirsium palustre)*, Lesser Spearwort *(Ranunculus flammula)*, Water Mint *(Mentha aquatica)*, Square-stalked St John's-wort *(Hypericum tetrapterum)*, Hairy Sedge *(Carex hirta)*, Rushes *(Juncus sp.)* and Ragged-Robin *(Silene flos-cuculi)*. Drier areas locally support Common Eyebright *(Euphrasia nemorosa)* and Tormentil *(Potentilla erecta)*. Common Spotted-orchid *(Dactylorhiza fuchsii)*, or a hybrid of it, are scattered across this area.

There is a meandering exposure of sandstone outcrops on the northern side of the site, surrounded by Bracken, Bramble and occasional Birch. These rocks provide habitat for a variety of lichens, mosses and liverworts including recently recorded Meylan's Pouchwort *(Calypogeia integristipula)*. Historic records include the liverworts Barbilophozia attenuata and Reboulia hemisphaerica.

Grassland bordering the sandstone outcrops is acidic and species-rich, supporting occasional Sheep's Sorrel *(Rumex acetosella)*, Sweet Vernal-grass *(Anthoxanthum odoratum)* and fine leaved Fescues *(Festuca sp.)*. Oval Sedge *(Carex leporina)* and Shining Crane's-bill *(Geranium lucidum)* are present. The footpaths and their locality have exposed sand and are important for invertebrates, supporting solitary mining bees, Common Spiny Digger Wasp *(Oxybelus uniglumis)* and Spider Hunting Wasp species *(Pompilidae)*.

Management Recommendations

All the areas of grassland and the marshy area of the site require management in order to maintain and enhance their botanical interest. Ideally they would be grazed, but if this is not possible then they should be cut in late summer and possibly also in early spring, with the cuttings removed. Scrub control should continue. Fencing has

been installed around the marsh area to prevent dog's disturbing nesting birds during the breeding season and it is recommended this continues.

Control may be required on Creeping Thistle *(Cirsium arvense)*, Common Ragwort *(Senecio jacobaea)* and Bracken to prevent it from dominating the open areas. Rhododendron control and eradication should continue, where present.

LOCAL WILDLIFE SITE

East Sussex

Site Name:	**Butcher's Wood**		
Site Ref(s):	CW55	**Owner(s):**	
District(s):	Wealden	**Size (ha):**	18.4
Parish(es):	Fletching	**Date(s):**	Identified 1995 Last Revised Jun 2016
Grid Ref:	TQ460217	**Surveyor(s):**	Ben Rainbow

Summary

This is an ancient woodland which once was contiguous with Lake Wood, now situated on the other side of the Uckfield by-pass. Much of it consists of Hazel *(Corylus avellana)* coppice with Oak *(Quercus sp.)* standards and some dense Sweet Chestnut *(Castanea sativa)* coppice. The ground flora is generally carpeted by Bluebell *(Hyacinthoides non-scripta)* and of particular note is a large population of Wild Daffodil *(Narcissus pseudonarcissus)*. Along the stream boundary and close to the by-pass, there are lines of significant sandstone outcrops which support rich and interesting bryophytes including the rare and localised Meylan's Pouchwort *(Calypogeia integristipula)*, Slender Bristle-moss *(Orthotrichum tenellum)* and Slender Thread-moss *(Orthotrichum gracile)*.

Site Description

Much of this woodland is dominated by Hazel coppice with Oak standards. The ground flora is typified by carpets of Bluebell *(Hyacinthoides non-scripta)* with Wood Anemone *(Anemone nemorosa)*, Wood Spurge *(Euphorbia amygdaloides)* and occasional Pignut *(Conopodium majus)*. Of particular note is the abundance of Wild Daffodil *(Narcissus pseudonarcissus)* which occurs in one large area. The Hazel Leaf-roller *(Poderus coryli)* beetle has been previously recorded in the woodland.

Sweet Chestnut coppice is frequent in localised areas with occasional Downy Birch *(Betula pubescens)*, Honeysuckle *(Lonicera periclymenum)*, Wood Sage *(Teucrium scorodonia)*, Bracken *(Pteridium aquilinum)* and Bramble *(Rubus fruticosus agg.)*.

Near the stream, there is a line of sandstone outcrops with deeply recessed underhangs, many of which are overshaded by Holly *(Ilex aquifolium)*. Historically the very rare

Small Four-tooth Moss *(Tetradontium Repandum)*, Nut-moss *(Diphyscium foliosum)* and rare liverwort Notched Rustwort *(Marsupella emarginata)* were recorded here in 1985.

In the centre of the site there is a large open, sandy area surrounded by low lying sandstone outcrops. This was once a heathy clearing, but, in recent years it has been frequently used for motorbike scrambling and 4-wheel driving, and now has expanses of bare sand substate with sparse vegetation comprising of Bird's-foot *(Ornithopus perpusillus)*, Sheep's Sorrel *(Rumex acetosella)*, Hair-grass species *(Aira sp.)*, Heath Rush *(Juncus squarrosus)*, Little Mouse-ear *(Cerastium semidecandrum)*, Common Mouse-ear *(Cerastium fontanum)*, and Cat's Ear *(Hypochaeris radicata)*. On the sheltered sandrock exposures in limited locations Meylan's Pouchwort *(Calypogeia integristipula)* is present with other bryophytes. Slender Bristle-moss *(Orthotrichum tenellum)* has been recorded on the periphery of this area. These rocks were the location of an exceptionally rare liverwort Tritomaria excectiformis. Slender Thread-moss *(Orthotrichum gracile)* has also been recently recorded on the site, as has the scarce lichen species Cladonia caespiticia in the past.

Management Recommendations

To conserve and restore the bryophyte interest of the rock outcrops, it is recommended dense stands of Holly are removed or heavily thinned to provide only light shade to these areas; currently the heavy shade in these areas is supressing lower plants. It is recommended further specialist bryophyte advice is sought to inform management.

A woodland management plan is recommended for long-term management and if possible the woodland should be brought back into rotational coppicing management with protection of regrowth from deer browsing. The

woodland alongside the stream may benefit from being as a non-intervention zone.

It is recommended vehicular use of the wood is restricted and fuel/oil contamination avoided to protect the site's nature conservation features.

Annex 5719/4:

Woodland Botanical Survey Results 2020 – Compartment Descriptions and DAFOR Lists

Downland Farm (5719). Woodland Compartment Descriptions. Following Survey May 2020.

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W3 (Budletts Wood - East)	
General Description	
The eastern parts of Budletts Wood, abutting and continuous with Paygate Wood, comprising a mixed deciduous woodland. A shallow ephemeral stream runs throughout its length. Dry deciduous Oak/Birch woodland exists on either side of a moist central valley, which is dominated by Alder, and supporting carpets of Bluebell*. Elsewhere ground flora lacking and bare ground/leaf litter dominates. Western edge forms well-structured ecotone of scrub/herb-rich grassland.	
Tree Canopy Composition, Age Class etc.	
In dryer woodland, a range of species including Oak, Ash, Birch, Sycamore, Hornbeam*, and Sweet Chestnut. Some larger mature Oak (>50cm diameter), and mature Birch and Cherry* are present. Stands of Birch are present in patches throughout. Damp woodland in central valley dominated by semi-mature to mature Alder. Elsewhere Oak overtop canopy and function as open-grown trees (some 750-800mm diameter).	
Understory	
Frequently an understory of Hazel. Becoming scrubby and thicketed towards the southern boundary in places (Holly*, Hawthorn, Blackthorn). Hornbeam* is present. Patches of Rhododendron are invading.	
Ground Flora	
Ground flora is variable in quality, with many dryer areas of woodland floor supporting few AWVPs due to heavy shade cast. However, along the moist central valley, where Alder is dominant, there are dense carpets of Bluebells*, together with abundant Wood Anemone*, frequent Male Fern, Broad Buckler Fern, and Early Dog Violet*. Elsewhere there is very little ground flora due to heavy shade. Occasional patches of Bluebell*, mostly associated with high light from Sweet Chestnut deadfalls.	
Deadwood	
There is copious deadwood throughout the wetter parts including deadfalls of Sweet Chestnut together with stumps, and smaller branches. Some windthrown Oak.	
Management	
None apparent.	
Evidence of Damage/Deterioration	
Occasional Rhododendron invading. Some areas have been degraded by the construction of a BMX track. Some squirrel damage to young Sycamore.	

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W4c (**Budletts Wood - South**). Clearing	
General Description	
A heathy clearing which is covered in Bracken and surrounded by dense stands of Rhododendron and young Birch Woodland. Part has sandstone outcrops. Western boundary formed by a shallow dry stream.	
Tree Canopy Composition, Age Class etc.	
Dense stands of immature Birch woodland around edges. Several induvial trees, including a very old Birch on the sandstone outcrops. By western boundary the woodland canopy is dominated by Sweet Chestnut	
Understory	
N/a Young woodland means that the understory is mostly absent. Towards western edge Hazel and Holly* dominate the understory and Rhododendron is invading.	
Ground Flora	
Some Bluebell* carpets under Birch canopy. Within the clearing itself, dominated by Bracken, although around the margins the presence of the acid-loving species Devil's-bit Scabious and Ling heather suggests its status as former heathland. By the stream there are locally abundant Bluebell*, together with Enchanter's-nightshade, Water Figwort, Wood Sorrel*, Lesser Skullcap*, and Ground Ivy.	
Deadwood	
By the stream, to the north of the compartment there are frequent windthrown Sweet Chestnut.	
Management	
Some bracken clearance in western part of clearing.	
Evidence of Damage/Deterioration	
There are extensive stands of Rhododendron.	

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W4d (**Budletts Wood - South**). Wet Woodland	
General Description	
Wet Willow/Birch woodland apparently flushed with spring water. Large areas of bare wet ground. Forming a thick layer of young dense Birch and scrub on the margins towards the open field.	
Tree Canopy Composition, Age Class etc.	
Semi-mature Willow and Birch. Occasional Holly* and Rowan. Scrub on southern boundary including Blackthorn and Hawthorn.	
Understory	
Moderately dense willow and birch.	
Ground Flora	
Sparse, but including several AWVP species: Thin-Spiked Wood Sedge*, Wood Sedge*, Wild Strawberry, Male Fern, Early Dog Violet*, Hard Fern* and Pendulous Sedge*. Skullcap, Honeysuckle, Marsh Thistle, Dandelion, Bracken, Soft Rush, Compact Rush, Broad Buckler Fern, Cleavers and Creeping Cinquefoil are also present.	
Deadwood	
Frequent tree fall.	
Management	
None	
Evidence of Damage/Deterioration	
Occasional Rhododendron invading	

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W4e (**Budletts Wood - South**). Climax Oak Woodland	
General Description	
A stand of open high-canopy oak woodland bound to north by a shallow stream bed. Here local Bluebell* carpets present together with Wood Anemone*.	
Tree Canopy Composition, Age Class etc.	
Mature Oak (trees generally 30-40cm diameter). Birch by stream.	
Understory	
Very sparse, limited to occasional Holly* and Honeysuckle. Some Hazel, Sweet Chestnut, Rowan and Sycamore by stream.	
Ground Flora	
Ground flora is generally limited, although there are extensive patches of Common Cow-wheat* in some places, and occasional Creeping Soft Grass*. Local Bluebell* carpets in the north by the stream, together with Wood Sorrell* and Spleenwort (*Asplenium*). Hard Fern is Occasional.	
Deadwood	
Occasional standing deadwood with woodpecker holes.	
Management	
None	
Evidence of Damage/Deterioration	
Some stands of Rhododendron.	

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W4f (**Budletts Wood – South**). Birch Woodland	
General Description	
A stand of young woodland dominated forming a dense understory in places.	
Tree Canopy Composition, Age Class etc.	
Frequent young to semi-mature Birch, together with young Oak, Rowan, Hornbeam, Beech, Holly* and Alder Buckthorn*. Occasional mature Oak (30-40cm diameter).	
Understory	
Very sparse, limited to occasional Holly* and Honeysuckle.	
Ground Flora	
Ground flora is generally absent. Occasional Wood Anemone* and Wood Spurge*.	
Deadwood	
Some	
Management	
None	
Evidence of Damage/Deterioration	
None apparent.	

Project Number: 5719	**Project Name**: Downlands Farm

Woodland Compartment Ref: W5a (**Shermanreed Wood**).

General Description

A diverse woodland over steep ground of the valley of the gill forming a broad linear corridor, which includes stands of Oak and Birch woodland, with areas of Alder dominating along a central watercourse. Recently planted stands occupy a large part of the woodland. In the south of the woodland there are one or more borrow pits or small quarry surrounded by a man-made bank.

Tree Canopy Composition, Age Class etc.

Large trees appear to have been removed from the majority of the woodland, although there are occasional oak standards, together with some semi-mature to mature Ash, Cherry*, Birch and Alder.

On the east side of the woodland is a historic ditch and wood-bank feature which has a number of old coppice stools, including one veteran Ash specimen with a large hollow bole (girth 4.2mm) and another large Ash coppice (girth 4.5m) . There is also a veteran Wild Cherry* just on the downslope.

Some areas with frequent larger Oaks remain, both in the far south of the woodland, and a stand in the far north. There are some areas of Ash woodland and some groups of Larch. Around the former quarry area in the south there is some regrowth of self-seeded Sycamore, alongside Oak, Cherry*, Chestnut and Elder.

Understory

Hazel understory is present in some places, particularly to the north. In far south, the understory is formed by bramble. Honeysuckle is frequent.

An area of Field Maple* coppice is present in the south.

Ground Flora

Soils appear have remained intact (save perhaps for around the area of quarrying) and a diverse range of AWVPs are present, including extensive carpets of Bluebell* and abundant Wood Anemone*. Opposite-leaved Golden Saxifrage* is present on the banks of the watercourse, and elsewhere there are good numbers of Yellow Archangel*, Wood Speedwell*, Wood Sedge*, Primrose*, Three-nerved Sandwort*, as well as occasional Hart's-tongue Fern*, Barren Strawberry* and Soft Shield Fern*.

Goldilocks Buttercup* is found on the southern edge of the woodland and Wood Mellick* and Wood Spurge* occur on the banks on this side.

Other species present, include Dog's Mercury, Broad Buckler Fern, Lady's Smock, Germander Speedwell, Herb-Robert, Nettle, Lords-and-Ladies, Enchanters-nightshade, Lesser Celandine, Bracken, Bugle, Meadowsweet, Cleavers, Ground Ivy, Wood Avens, Garlic Mustard, Common Chickweed and Creeping Cinquefoil. Common Twayblade is occasionally present.

Deadwood

Frequent, but generally small. More frequent to the north. Some windthrown conifers with woodpecker holes (with breeding Gt. Spotted Woodpecker).

Management

Extensive replanting throughout many areas. There is a small abandoned pheasant earing pen and feeders to the north.
Evidence of Damage/Deterioration
Himalayan Balsam and *Gunnera* are present towards the southern end of the wood around the ponds and stream, and a small stand of Japanese Knotweed is also present on the south-eastern margin. Small patched of Rhododendron to the north of the wood.

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W5b (**Shermanreed Wood**).	
General Description	
Area of young replanted woodland, with a grassy ground flora.	
Tree Canopy Composition, Age Class etc.	
Young to Semi-mature Oak, Field Maple* and Hazel.	
Understory	
None	
Ground Flora	
Ground flora is dominated by Rough-stalked Meadow-grass and there are also patches of Creeping Soft Grass*. Wood Sedge*, Barren Strawberry*, Primrose*, Common Dog Violet, Early Dog Violet* and Pendulous Sedge are also present.	
Deadwood	
None	
Management	
None	
Evidence of Damage/Deterioration	
None	

Project Number: 5719	**Project Name**: Downlands Farm

Woodland Compartment Ref: W6 (**Longwood Gill**).

General Description

Longwood Gill is a narrow steep-sided wooded valley or gill, forming a linear feature along an ephemeral stream bed. Steeply sloping banks are present on both sides, and sandstone outcrops are present at the head of the valley.

A separate wooded copse (Area 6a) exists to the south of Longwood Gill, connected by a wide shaw.

Tree Canopy Composition, Age Class etc.

Mainly Oak and Birch with groups of Cherry* and Ash, limited in size by stability when on steeper slopes. Some larger Oak and Ash occur, as well as Holly*, towards top of slopes, and there is one mature standard Hornbeam on the southern edge. Sycamore dominates the canopy in some eastern parts.

One large Coast Redwood is located at top of gill.

Understory

Hazel understory frequently present. Honeysuckle frequent. Spindle, Elder, Hawthorn and Blackthorn form thickets in places excluding light and preventing the establishment of ground flora.

Ground Flora

Apart from some bare earth and eroded sections of bank, the ground flora is generally very rich, comprising extensive carpets of Bluebells*, often co-dominant with Wood Anemone*. Other AWVPs present include Hartstongue Fern*, Three-nerved Sandwort*, Primrose*, Early Dog Violet*, Yellow Archangel*, Yellow Pimpernel*, Wood Speedwell*, Wood Sedge*, Hairy Woodrush* and Pignut*.

Other species present include Male Fern, Dog's Mercury, Enchanter's Nightshade, Lords and Ladies, Ground Ivy, Nettle, Cleavers, Wood Dock, Wood Avens, Lesser Celandine, Foxglove, Bracken, Red Campion, and Ground Ivy.

Deadwood

Some, particularly in lower woodland areas. Locally frequent windthrown Sweet Chestnut plus fallen Oak and Birch. Occasionally standing deadwood (Oak, Birch and Sweet Chestnut).

Management

Some coppicing but not in a structured way.

Evidence of Damage/Deterioration

None apparent.

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W6a (**Longwood Gill - Copse**).	
General Description	
A small pocket of woodland surrounding a large central pond, which is extremely shaded by the surrounding woodland.	
Tree Canopy Composition, Age Class etc.	
Canopy trees comprise Oak and Goat Willow.	
Understory	
Rowan, Goat Willow and Hawthorn are present.	
Ground Flora	
Patchy, with small patches of AWVPs, including Wood Sedge*, Bluebell*, Three-nerved Sandwort* and Primrose*.	
Deadwood	
Very little.	
Management	
None	
Evidence of Damage/Deterioration	
None apparent	

Project Number: 5719	**Project Name**: Downlands Farm

Woodland Compartment Ref: W7 (**Woodland adj. A22 - North**).

General Description

A strip of woodland alongside the A22, the northern part likely to have been part of Thirty-Acre Wood (having been bisected by the A22), and with further dry deciduous woodland to the south. There appears to be the remains of a series of old trackways forming a crossroads.

At the far north, the woodland grades into wet woodland with frequent Alder and Birch located around a series of silted damp hollows which are fed by from two minor tributaries to the south and possibly taking road run-off.

Tree Canopy Composition, Age Class etc.

Semi-mature Oak (ranging in age 20 cm to 50cm diameter), together with Birch, Beech and frequent Hazel. Scots Pine is present at lower frequencies.

Understory

Hazel, and Holly* forming dense thickets.

Ground Flora

Varied, but in places there are dense carpets of Bluebell*. Other AWVPs are occasional including Wood Anemone*, Yellow Archangel*, Primrose*, Pendulous Sedge* and Wood Sorrel*.

Deadwood

Frequent fallen deadwood, stumps and collapsed Birch and Grey Willow in places.

Management

None

Evidence of Damage/Deterioration

Possible ground disturbance of some sections in the past.

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W8a (**Woodland adj. A22 - South**).	
General Description	
Section comprising mainly recently planted woodland, commencing just to south of Longwood Gill, and forming the northern part of the series of bands of woodland of various types along the A22.	
Tree Canopy Composition, Age Class etc.	
Semi-mature Oak (ranging in age 20 cm to 50cm diameter), together with Ash, Birch and occasional Alder.	
Understory	
Sparse. Hazel, Hawthorn and Field Maple* all present. Occasional Damson.	
Ground Flora	
Varied, but AWVPs generally sparse but where present on edge adjacent woodland include some Wood Anemone*, Yellow Archangel* and Wood Speedwell*.	
Deadwood	
Frequent fallen brush. Small diameter dead branches.	
Management	
Evidence of tree shelters used for woodland planting.	
Evidence of Damage/Deterioration	

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W8b (**Woodland adj. A22 - South**).	
General Description	
Ash/Oak woodland mostly young to semi-mature with moderately dense understory and patchy ground flora.	
Tree Canopy Composition, Age Class etc.	
Frequent young-to semi-mature Oak, Ash and Sycamore, together with Hornbeam*, Sweet Chestnut and Horse Chestnut.	
Understory	
Hazel dominant with Hawthorn and occasional Sycamore*.	
Ground Flora	
The ground flora contains is patchy, containing Wood Anemone* and Yellow Archangel*. There is a small Bluebell* carpet in the south. Other species include Dog's Mercury, Male Fern, Bramble, Lords and Ladies, Ground Ivy, Lesser Celandine and Cleavers.	
Deadwood	
There is frequent fallen deadwood comprising mainly collapsed Birch and Sweet Chestnut.	
Management	
None	
Evidence of Damage/Deterioration	
Ash dieback (*Chalara*) evident.	

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W8c (**Woodland adj. A22 - South**).	
General Description	
Mainly replanted woodland.	
Tree Canopy Composition, Age Class etc.	
Canopy trees comprising Ash, Sweet Chestnut and occasional Oak.	
Understory	
Moderately dense. Young Hazel, Field Maple*, Hawthorn, Dogwood and Oak (evidence of tree shelters).	
Ground Flora	
The ground flora is generally sparse, but a section near to the A22 contains frequent Bluebell* carpets, together with frequent Wood Anemone*. Other species include Dog's Mercury, Lords-and-Ladies, Enchanter's-nightshade and Ground Ivy,	
Deadwood	
Not Significant. Some fallen branches.	
Management	
Planting	
Evidence of Damage/Deterioration	
None apparent	

Project Number: 5719	**Project Name**: Downlands Farm
Woodland Compartment Ref: W8d (**Woodland adj. A22 - South**).	
General Description	
Young woodland.	
Tree Canopy Composition, Age Class etc.	
Canopy trees comprising dense stands where Oak is dominant, and Ash is abundant. Field Maple*, Hazel, Hawthorn and Blackthorn all occur occasionally.	
Understory	
Moderately dense. Some large gaps in planting which are dominated by Bramble and regenerating Birch.	
Ground Flora	
The ground flora is generally sparse, although Bugle, Ground Ivy, Enchanters-nightshade, Ragwort Germander Speedwell and Common Mouse-ear were recorded.	
Deadwood	
Not Significant.	
Management	
Planting	
Evidence of Damage/Deterioration	
None apparent	

Project Number: 5719	**Project Name**: Downlands Farm

Woodland Compartment Ref: W9 (**Fir Tree Grove**).

General Description

Fir Tree Grove comprises a mature canopy with a variable structure, dominated by Ash (experiencing Ash dieback) with frequent Scots Pine, especially in the west.

Tree Canopy Composition, Age Class etc.

A variety of age classes are present. A number of mature Pedunculate Oaks are present in the vicinity of the house as is Sycamore alongside a veteran Beech and a substantial Monterey Pine.

Understory

Sparse to very sparse across the majority of the woodland, although the density of the understorey increases locally, especially at the margins. The most prominent species comprise Hawthorn, Hazel, and Spindle, while small, localised Holly* thickets are present. In addition, Sycamore is frequent within the understorey, forming a dense sub-canopy in places.

Ground Flora

Much of the ground flora is dominated by a dense carpet of Bluebell*, frequently accompanied by Wood Speedwell*, Wood Anemone*, and Three-nerved Sandwort*, particularly towards the east. Wood Meadow-grass* is dominant towards the north-west, interspersed with patches of bare ground. Elsewhere, the ground flora is locally suppressed by needle drop from Pines, especially along the western margin, while localised dense stands of Bramble, Holly*, Rhododendron and Cherry Laurel similarly suppress the ground flora. Bracken is colonising locally in the vicinity of the house, while a patch of the invasive species Himalayan Balsam was recorded in the eastern extreme of the ancient woodland, extending offsite to the north, with isolated specimens also recorded elsewhere along the south-eastern margin of the ancient woodland. A total of 20 AWIs are present.

Deadwood

Limited standing or fallen deadwood present save for a small number of notable exceptions, such as that present in the veteran Beech which is largely hollow.

Management

Evidence of Damage/Deterioration

The south-western boundary of the woodland, adjacent to Rocks Road, is heavily dominated by Cherry Laurel and Rhododendron.

5719 – Downlands Farm. Botanical Species Lists and AWI Summary.

Table 1. Budletts Wood

Species (Common Name)	**Species (Scientific Name)**	Area 4c (clearing)	Area 4d (wet wood)	Area 4e (oak)
CANOPY TREES				
Hornbeam	***Carpinus betulus***			
Aspen	***Populus tremula***			☑
Wild Cherry	***Prunus avium***			
Sycamore	*Acer pseudoplatanus*			☑
Alder	*Alnus glutinosa*			
Silver Birch	*Betula pendula*	O	F	A
Downy Birch	*Betula pubescens*		☑	O
Sweet Chestnut	*Castanea sativa*	F		☑
Beech	*Fagus sylvatica*			
Ash	*Fraxinus excelsior*	D		
Scots Pine	*Pinus sylvestris*			
White Poplar	*Populus alba*			
Pedunculate Oak	*Quercus robur*		O	D
Rowan	*Sorbus aucuparia*			O
Grey Willow	*Salix cinerea*		F	
Western Red Cedar	*Thuja picata*		R	
Lime	*Tilia x Europaea*			
Eastern Hemlock	*Tsuga canadensis*			
UNDERSTORY SP.				
Alder Buckthorn	***Frangula alnus***			
Guelder Rose	***Viburnum opulus***			
Holly	***Ilex aquifolium***	**F**	☑	**F**
Wild Service	***Sorbus torminalis***			
Hazel	*Corylus avellana*		☑	
Hawthorn	*Crataegus monogyna*			
Broom	*Cytisus scoparius*	O		
Shallon	*Gaultheria shallon*			
Ivy	*Hedera helix*			
Honeysuckle	*Lonicera periclymenum*	☑	F	F
Bramble	*Rubus fruticosus agg.*			
Damson	*Prunus domestica subsp. insititia*			R
Blackthorn	*Prunus spinosa*			
Rhododendron	*Rhododendron sp.*	D	☑	O
Bramble	*Rubus fruticosus agg.*		☑	O
Elder	*Sambucus nigra*			
Yew	*Taxus baccata*			
VASCULAR PLANTS				
Wood Anemone	***Anemone nemorosa***			**LF**
Hard Fern	***Blechnum spicant***		☑	
Pendulous Sedge	***Carex paniculata***		**R**	
Thin-spiked Wood-sedge	***Carex strigosa***		**R**	
Wood-sedge	***Carex sylvatica***		**O**	
Opposite-leaved Golden Saxifrage	***Chrysosplenium oppositifolium***			
Pignut	***Conopodium majus***			

Species (Common Name)	**Species (Scientific Name)**	Area 4c (clearing)	Area 4d (wet wood)	Area 4e (oak)
Narrow Buckler Fern	***Dryopteris carthusiana***			
Wood Spurge	***Euphorbia amygdaloides***			
Creeping Soft Grass	***Holcus mollis***			**R**
Bluebell	***Hyancinthoides non-scripta***	**LA**		**LF**
Yellow Archangel	***Lamiastrum galeobdolon***			
Hairy Woodrush	***Luzula pilosa***			
Yellow Pimpernel	***Lysimachia nemorum***		☑	
Common Cow-wheat	***Melampyrum pratense***			**F-LA**
Three-nerved Sandwort	***Moehringia trinervia***			
Wood-sorrel	***Oxalis acetosella***	**O**		
Hart's-tongue Fern	***Phyllitis scolopendrium***			
Soft Shield-fern	***Polystichum setiferum***			
Barren Strawberry	***Potentilla sterilis***			
Primrose	***Primula vulgaris***		☑	
Red Currant	***Ribes rubrum***			
Black Currant	***Ribes nigram***			
Lesser Skullcap	***Scutellaria minor***	**LA**		
Wood Speedwell	***Veronica montana***		☑	
Early Dog Violet	***Viola reichenbachiana***		**O**	
Bugle	*Ajuga reptans*			
Wild Angelica	*Angelica sylvestris*			
Fool's Watercress	*Apium nodiflorum*			
Lords and Ladies	*Arum maculatum*			
False Brome	*Brachypodium sylvaticum*			
Ling Heather	*Calluna vulgaris*	O		
Cuckoo Flower	*Cardamine pratensis*			O
Wavy Bittercress	*Cardamine flexuosa*			
Enchanter-s-nightshade	*Circaea lutetiana*	O	☑	
Marsh Thistle	*Cirsium pasustre*		R	
Foxglove	*Digitalis purpurea*			
Broad Buckler-Fern	*Dryopteris dilatata*		R	O
Male-fern	*Dryopteris filix-mas*		O	
Wild Strawberry	*Fragaria vesca*		R	
Cleavers	*Galium aparine*		R	
Shallon	*Gaultheria shallon*			
Herb-Robert	*Geranium robertianum*			
Wood Avens	*Geum urbanum*		☑	
Ground-Ivy	*Glechoma hederacea*	☑		
Soft-rush	*Juncus effusus*		R	
Variegated Yellow Archangel	*Lamiastrum galeobdolon*			
Gypsywort	*Lycopus europaeus*			
Dog's Mercury	*Mercurialis perennis*			
Water Mint	*Mentha aquatica*			
Common Twayblade	*Neottia ovata*			
Hemlock Water Dropwort	*Oenanthe crocata*			

Species (Common Name)	**Species (Scientific Name)**	Area 4c (clearing)	Area 4d (wet wood)	Area 4e (oak)
Tormentil	*Potentilla erecta*	O	☑	
Creeping Cinquefoil	*Potentilla reptans*		R	
Bracken	*Pteridium aquilinum*	☑	O	F
Japanese Knotweed	*Reynoutria japonica*			
Creeping Buttercup	*Ranunculus repens*			
Common Figwort	*Scrophularia nodosa*		☑	
Skullcap	*Scutelaria galericulata*	R	R	
Devil's-bit Scabious	*Succisa pratensis*	O	☑	
Wood Sage	*Teucrium scorodonia*			
Stinging Nettle	*Urtica dioica*			
Germander Speedwell	*Veronica chamaedrys*			
Ivy-leaved Speedwell	*Veronica hederifolia*			
Common Dog-violet	*Viola riviniana*		☑	
AWVP Count		**3**	**7**	**4**
AWI Count		**4**	**8**	**6**

Table 2. Southern Woodland Areas

Species (Common Name)	**Species (Scientific Name)**	**Area 5 – Shermanreed Wood**	Area 5b (young woodland)	**Area 6a – Longwood Gill**	Area 6b - Longwood Gill – Copse	**Area 7**	**Area 8a**	**Area 8b**	**Area 8c**	**Area 8d**	**Area 9**
Canopy Trees											
Hornbeam	***Carpinus betulus***			**R**		**O**		**R**			**O**
Aspen	***Populus tremula***							**R**	**O**		
Wild Cherry	***Prunus avium***	**O**		**R**							**O**
Sycamore	*Acer pseudoplantanus*	O		LD		R		O	O		O
Horse-chestnut	*Aesculus hippocastanum*							R			R
Alder	*Alnus glutinosa*	LA					O	O			
Silver Birch	*Betula pendula*	F		A	O	A	F			LF	O
Beech	*Fagus sylvatica*	O		R	R	R		R			O
Ash	*Fraxinus excelsior*	O		O		F	F	F		A	D
European Larch	*Larix decidua*	LF									
Pedunculate Oak	*Quercus robur*	A	F	A	O	F	D	D	O	D	O
Spruce	*Picea sp.*			☑							
Monterey Pine	*Pinus radiata*										R
Scots Pine	*Pinus sylvestris*	LF				R					LF
Goat Willow	*Salix caprea*			O	F	F	A				
Grey Willow	*Salix cinereal*	O		O	O	☑					
Sweet Chestnut	*Sativa castenea*	F		O		O			F		R
Coast Redwood	*Sequoia sempervirens*			☑							
Rowan	*Sorbus aucuparia*										R
English Elm	*Ulmus procera*										O
Cypress	*Cupressus sp.*										R
Yew	*Taxus baccata*										O
UNDERSTORY SPECIES											
Field Maple	***Acer campestre***	**F**	**F**		**O**		**O**	**O**		**O**	**O**
Holly	***Ilex aquifolium***	**F**		**O**	**O**	**O**		**O**	**R**		**LA**
Guelder Rose	***Viburnum opulus***	**R**									
Wild Service	***Sorbus torminalis***										
Crab Apple	***Malus sylvestris***			**R**							
Field Rose	***Rosa arvensis***										**R**
Dogwood	*Cornus sanguinea*				O						R
Hazel	*Corylus avellana*	F	F	A		A	O	A	F	O	F
Hawthorn	*Crataegus monogyna*	R		LF		F	F	F		O	F
Spindle	*Euonymus europaeus*			O				O			O-F
Ivy	*Ilex aquifolium*	O		O		O					

Species (Common Name)	Species (Scientific Name)	Area 5 – Shermanreed Wood	Area 5b (young woodland)	Area 6a – Longwood Gill	Area 6b - Longwood Gill – Copse	Area 7	Area 8a	Area 8b	Area 8c	Area 8d	Area 9
Honeysuckle	*Lonicera periclymenum*	F		F		A		O			O
	Prunus laurocerasus										O-LA
Blackthorn	*Prunus spinosa*	R		LA	O					O	
White Poplar	*Populus alba*							LF (seedlings)			
Creeping Buttercup	*Ranunculus repens*						O				
Rhododendron	*Rhododendron sp.*	LF									O
Dog Rose	*Rosa canina*				O						R
Bramble	*Rubus fruticosus agg.*	O		O	O	O	R	O		LF	
Elder	*Sambucus nigra*	R		O							R
Vascular Plants											
Wood Anemone	***Anemone nemorosa***	**LF**		**LA (co-D with BB)**		**LA (co-D with BB)**	**R**	**A**	**F**		**O**
Hard Fern	***Blechnum spicant***					**O**					
Pendulous Sedge	***Carex paniculata***	**O**	**R**			**O**					**R**
Remote Sedge	***Carex remota***	**O**				**O**					
Thin-spiked Wood-sedge	***Carex strigosa***										
Wood-sedge	***Carex sylvatica***	**O**	**R**	**O**	**O**	**O**		**O**			**LF**
Opposite-leaved Golden Saxifrage	***Chrysosplenium oppositifolium***	**O (stream)**				**R**					
Pignut	***Conopodium majus***			**O**							
Narrow Buckler Fern	***Dryopteris carthusiana***	**R**									
Wood Spurge	***Euphorbia amygdaloides***	**O**				**R**					**R**
Creeping Soft Grass	***Holcus mollis***		**F**	**O**		**O-R**					
Bluebell	***Hyancinthoides non-scripta***	**LA-D**		**LA (co-D with WA)**	**O**	**LA (co-D with WA)**		**O**	**F**		**LD**
Tutsan	***Hypericum androsaemum***										
Yellow Archangel	***Lamiastrum galeobdolon***	**O**		**O**		**O (LA by stream)**		**O**			
Hairy Wood-rush	***Luzula pilosa***	**R**		**R**		**R**					**R**
Great Wood Rush	***Luzula sylvatica***			**O**							
Yellow Pimpernel	***Lysimachia nemorum***	**R**		**O-LF**		**O**		**LF**			
Common Cow-wheat	***Melampyrum pratense***										
Wood Mellick	***Melica uniflora***	**O**									**R**
Three-nerved Sandwort	***Moehringia trinervia***	**O/LF**		**R**	**LF**	**R**		**R**			**F**
Early Purple Orchid	***Orchis mascula***										**R**
Wood-sorrel	***Oxalis acetosella***	**O**				**R**					
Hart's-tongue Fern	***Phyllitis scolopendrium***	**R**		**O**	**O**						

Species (Common Name)	**Species (Scientific Name)**	**Area 5 – Shermanreed Wood**	Area 5b (young woodland)	**Area 6a – Longwood Gill**	Area 6b - Longwood Gill – Copse	**Area 7**	**Area 8a**	**Area 8b**	**Area 8c**	**Area 8d**	**Area 9**
Wood Meadow Grass	***Poa nemoralis***	**F**									**LA**
Soft Shield-fern	***Polystichum setiferum***	**R**				**R**					
Barren Strawberry	***Potentilla sterilis***		**R**			**R**					**R**
Primrose	***Primula vulgaris***	**O**	**R**	**F**	**O**	**O**		**R**			**O**
Goldilocks Buttercup	***Ranunculus auricomus***	**R**									
Red Currant	***Ribes rubrum***	**R**				**R**		**R**			
Black Currant	***Ribes nigram***										**R**
Black Bryony	***Tamus communis***										**R**
Wood Speedwell	***Veronica montana***	**LF**		**O**		**O**		**R**			**F**
Early Dog Violet	***Viola reichenbachiana***	**F**		**R**		**O**					
Bugle	*Ajuga reptans*	F				O		O		LF	O
Garlic Mustard	*Alliaria petiolata*	O									R
Angelica	*Angelica sylvestris*										
Cow Parsley	*Anthriscus sylvestris*			R							
Lesser Burdock	*Arctium minus agg.*										R
Lords-and-Ladies	*Arum maculatum*	O		O		R	R	O	O		O
False Wood Brome	*Brachypodium sylvaticum*	O		R	O						
Soft Brome	*Bromus hordeaceus*					R					
Hedge Bindweed	*Calystegia sepium*	O									
Cuckooflower	*Cardamine pratensis*	F		R							R
Wavy Bittercress	*Cardamine flexuosa*					R					R
Common Mousear	*Cerastium fontanum*			R						O	R
Enchanter's-nightshade	*Circaea lutetiana*	F		O		O		O	R	O	R
Creeping Thistle	*Cirsium arvense*			O							
Marsh Thistle	*Cirsium palustre*										R
Crosswort	*Cruciata laevipes*										
Common Spotted-orchid	*Dactylorhiza fuchsii*							R			
Tufted Hairgrass	*Deschampsia cespitosa*					O					
Foxglove	*Digitalis purpurea*	O		R							R
Broad Buckler-fern	*Dryopteris dilatata*	F									O
Male-fern	*Dryopteris filix-mas*	O		F		O	R	R			O
Great Willowherb	*Epilobium hirsutum*			R							
Wild Strawberry	*Fragaria vesca*										
Cleavers	*Galium aparine*	O		O		F		R			O
Herb-Robert	*Geranium robertianum*	O									R
Wood Avens	*Geum urbanum*	O		R		F					O
Ground Ivy	*Glechoma hederacea*	F		A		F		O	F	LF	O
Giant Rhubarb	*Gunnera sp.*	R									
Meadowsweet	*Filipendula ulmaria*										

Species (Common Name)	**Species (Scientific Name)**	**Area 5 – Shermanreed Wood**	Area 5b (young woodland)	**Area 6a – Longwood Gill**	Area 6b - Longwood Gill – Copse	**Area 7**	**Area 8a**	**Area 8b**	**Area 8c**	**Area 8d**	**Area 9**
Hogweed	*Heracleum sphondylium*	O		R							O
Hop	*Humulus lupulus*	R									
Square-staked St. John's Wort	*Hypericum tetrapterum*										R
Himalayan Balsam	*Impatiens glandulifera*										O
Yellow Balsam	*Impatiens sp.*			LA		☑					R
Common Ragwort	*Jacobaea vulgaris*										
Toad Rush	*Juncus bufonius*	R									
Soft Rush	*Juncus effusus*			R							
Nipplewort	*Lapsana communis*	R									
Bird's-foot Trefoil	*Lotus corniculatus*										R
Field Woodrush	*Luzula campestris*										R
Ragged-Robin	*Lychnis flos-cuculi*	R									
Gypsywort	*Lycopus europaeus*					O					
Water Mint	*Mentha aquatica*					O					
Dog's Mercury	*Mercurialis perennis*	O-R		LA		O		LF	F		
Wood Forget-me-knot	*Myosotis sylvatica*										R
Pin-sorrel	*Oxalis articulata*										R
Daffodil	*Narcissus sp.*										R
Common Twayblade	*Neottia ovata*	R									
Water-Pepper	*Persicaria hydropiper*										
Butterbur	*Petasites hybridus*	O									
Rough-stalked Meadow-grass	*Poa trivialis*		A								
Creeping Cinquefoil	*Potentilla reptans*	R									O
Bracken	*Pteridium aquilinum*	O		LA							
Lesser Celandine	*Ranunculus ficaria*	O		O		F		O			
Lesser Spearwort	*Ranunculus flammula*	R									
Creeping Buttercup	*Ranunculus repens*	O									R
Japanese Knotweed	*Reynoutria japonica*	R									
Wood Dock	*Rumex sanguineus*	O		O	O						O
Water Figwort	*Scrophularia auriculata*	O									R
Skullcap	*Scutelaria galericulata*	F									
Common Figwort	*Scrophularia nodosa*	R				R					O
Lesser Skullcap	*Scutellaria minor*										
Red Campion	*Silene dioica*	O		F							O
Hedge Woundwort	*Stachys sylvatica*	O		R							
Greater Stitchwort	*Stellaria holostea*	F				O (LF)					
Common Chickweed	*Stellaria media*	R									
Wood Sage	*Teucrium scorodonia*	F						R			
Stinging Nettle	*Urtica dioica*	O		O (L-F)							R

Species (Common Name)	**Species (Scientific Name)**	**Area 5 – Shermanreed Wood**	Area 5b (young woodland)	**Area 6a – Longwood Gill**	Area 6b - Longwood Gill – Copse	**Area 7**	**Area 8a**	**Area 8b**	**Area 8c**	**Area 8d**	**Area 9**
Brooklime	*Veronica beccabunga*					O					
Germander Speedwell	*Veronica chamaedrys*	F		F		O				O	R
Ivy-leaved Speedwell	*Veronica hederifolia*			R							R
Thyme-leaved Speedwell	*Veronica serpyllifolia*										R
Common Dog Violet	*Viola riviniana*	O	O		R	O		R			F
AWVP Count		**22**	**5**	**14**	**3**	**19**	**1**	**9**	**2**	**0**	**15**
AWI Count		**26**	**6**	**18**	**5**	**21**	**2**	**13**	**4**	**1**	**20**

Annex 5719/5:

Woodland Botanical Survey Results 2023 – WISDOM Table

Sylvan Strategy and planning for ancient woodland, veteran trees, historic landscapes www.sylvan-consulting.com

Downlands 1005719: WISDOM REPORT (Woodland Indicator Strength, Distribution & Occurrence Matrix)

19 & 20 April 2023 AB & JFL (Comps. W5a and W6)
25 & 26 April 2023 MRD (Comps. W4e,d, W7, W8a-d, W9)
2 &3 June 2023 TS (All compartments)

Process

1. Select the correct county or region AWI list for the survey area => **Sussex**

Scientific Name	Common Name	Indicator strength			Flowering Months										Cpt occurrences	Cpt.Ref.	W4e	W4d	W5a	W5b	W6a	W6b	W7	W8a	W8b	W8c	W8d	W9	Distribution									
		Strong	Moderate	Weak	January	February	March	April	May	June	July	August	September	October			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
* Caution required if specimen found within woodland edge: risk of garden escape or seed transport from outside woodland		Woodland specialist + slow colonizer	Woodland specialist but known to colonize secondary woodland	Generalist and/ or swift colonizer												S.M.W tally	0.9.2	1.12.3	6.22.5	1.5.2	3.13.3	0.6.5	3.18.4	0.7.4	2.8.5	2.8.4	1.6.4	4.15.5	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0
	Count	38	51	11																																
Acer campestre*	Field Maple			x					√	√					8				O	F		O		F	O	A	F	O								
Adoxa moschatellina	Moschatel	x						√	√						1						R															
Allium ursinum	Ramsons	x						√	√	√																										
Anagallis minima	Chaffweed		x							√	√																									
Anemone nemorosa	Wood Anemone		x				√	√							10			O	A	R	A		A	O	A	F	O	O								
Aquilegia vulgaris*	Columbine	x							√	√																										
Blechnum spicant	Hard Fern		x							√	√	√			5		R	O	R		R		R													
Bromopsis ramosa	Hairy-brome		x								√	√			1								O													
Calamagrostis epigejos	Wood Small-reed		x								√	√																								
Campanula trachelium	Nettle-leaved Bellflower	x									√	√	√																							
Cardamine amara	Large Bitter-cress	x						√	√	√					1				R																	
Cardamine bulbifera	Coralroot Bittercress	x																																		
Carex laevigata	Smooth-stalked Sedge	x									√	√			1			R																		
Carex pallescens	Pale Sedge		x							√	√																									
Carex pendula*	Pendulous Sedge		x							√	√				6			O	R	O			F	R				R								
Carex remota	Remote Sedge		x							√	√	√			5				O			R	O		R			R								
Carex strigosa	Thin Spiked Wood Sedge	x								√	√	√	√																							
Carex sylvatica	Wood-sedge			x					√	√	√	√			10			R	R	R		R	O	R	R	O	R	O								
Carpinus betulus*	Hornbeam		x					√	√						5						R		R		O	R	O									
Chrysosplenium oppositifolium	Opposite-leaved Golden-saxifrage	x						√	√						2				O				R													
Conopodium majus	Pignut		x						√	√					1				R																	
Convallaria majalis*	Lily-of-the-Valley	x							√	√																										
Crataegus laevigata	Midland Hawthorn		x					√	√						1				R																	
Daphne laureola	Spurge-laurel	x				√	√	√																												
Dipsacus pilosus	Small Teasel	x									√	√																								
Dryopteris aemula	Hay-Scented Buckler-fern	x									√	√	√																							
Dryopteris affinis	Scaly Male-fern		x								√	√			6			R	R		R		O			R		R								
Dryopteris carthusiana	Narrow Buckler-fern		x								√	√	√																							
Elymus caninus	Bearded Couch		x							√	√	√																								
Epipactis helleborine	Broad-leaved Helleborine	x									√	√																								
Epipactis purpurata	Violet Helleborine	x										√																								
Equisetum sylvaticum	Wood Horsetail			x					√	√	√	√	√	√																						
Euphorbia amygdaloides	Wood Spurge	x						√	√						7				F	R	R		O			O	R	R								
Festuca gigantea	Great Fescue		x							√	√	√																								
Frangula alnus	Alder Buckthorn		x						√	√																										
Galium odoratum	Sweet Woodruff	x							√	√					1										R											
Helleborus viridis	Green Hellebore	x					√	√																												
Holcus mollis	Creeping Soft-grass		x							√	√	√	√		6		O	O		O	R		O					R								
Hyacinthoides non-scripta	Bluebell			x				√	√						11		O	O	D		A	O	A	O	R	F	R	A								
Hypericum androsaemum	Tutsan		x							√	√	√			3		R	R	R																	
Hypericum pulchrum	Slender St John's-wort		x							√	√	√			3		R	R	R																	
Ilex aquilfolium	Holly			x					√	√	√	√			11		O	O	F		F	F	F	R	O	O	R	F								
Iris foetidissima	Stinking Iris		x						√	√					1								R													
Lamiastrum galeobdolon	Yellow Archangel	x							√	√					3				O		R		R													
Lathraea squamaria	Toothwort	x						√	√																											
Lathyrus linifolius	Bitter-vetch			x				√	√	√	√																									
Lathyrus sylvestris	Narrow-leaved Everlasting-pea		x							√	√	√																								
Luzula forsteri	Southern Wood-rush	x						√	√	√																										
Luzula pilosa	Hairy Wood-rush		x					√	√	√					6		R		R			R	R	R				R								
Luzula sylvatica	Great Wood-rush		x						√	√																										
Lysimachia nemorum	Yellow Pimpernel		x						√	√	√	√	√		7		R	R	O		R		R	R	R											
Malus sylvestris*	Crab Apple		x					√	√						2		R							R												
Melampyrum pratense	Common Cow-wheat		x						√	√	√	√	√																							

Scientific Name	Common Name	Indicator strength			Flowering Months											Cpt occurrences	Cpt.Ref.	Distribution																
		Strong	Moderate	Weak	January	February	March	April	May	June	July	August	September	October			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
* Caution required if specimen found within woodland edge: risk of garden escape or seed transport from outside woodland		Woodland specialist + slow colonizer	Woodland specialist but known to colonize secondary woodland	Generalist and/ or swift colonizer												S.M.W tally	0.9.2	1.12.3	6.22.5	1.5.2	3.13.3	0.6.5	3.18.4	0.7.4	2.8.5	2.8.4	1.6.4	4.15.5	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0
Melica uniflora	Wood Melick	x							√	√					1													R							
Milium effusum	Wood Millet		x						√	√	√																								
Moehringia trinervia	Three-nerved Sandwort		x						√	√					3				R		R							R							
Narcissus pseudonarcissus*	Wild Daffodil	x						√	√																										
Neottia nidus-avis	Bird's-nest Orchid	x							√	√	√																								
Orchis mascula	Early Purple Orchid	x						√	√	√					3				R						R			R							
Orchis purpurea	Lady Orchid		x						√	√																									
Oreopteris limbosperma	Lemon-scented Fern		x								√	√																							
Oxalis acetosella	Wood-sorrel		x					√	√						4		R		R				R					R							
Paris quadrifolia	Herb-Paris	x							√	√	√																								
Phyllitis scolopendrium*	Hart's-tongue		x								√	√			5				R		F	R				R	R								
Pimpinella major	Great Burnet-saxifrage			x						√	√																								
Platanthera chlorantha	Greater Butterfly-orchid	x								√	√																								
Poa nemoralis	Wood Meadow-grass		x							√	√				2			O					O												
Polygonatum multiflorum	Solomon's-seal	x							√	√																									
Polypodium vulgare (sensu lato)	Polypody (all species)	x																																	
Polystichum aculearum	Hard Shield-fern	x									√	√																							
Polystichum setiferum	Soft Shield-fern		x								√	√			2						R							R							
Populus tremula*	Aspen		x			√	√								6			F	O				F	R	O	O									
Potentilla sterilis	Barren Strawberry		x								√	√			9		O		R	R	R		R	R	R		R	R							
Primula vulgaris	Primrose*		x				√	√	√	√					10			O	F	R	O	R	O		R	R	O	O							
Prunus avium	Wild Cherry			x				√	√						6				F		R	R	R		R			R							
Quercus petraea*	Sessile Oak		x					√	√																										
Radiola linoides	Allseed		x								√	√																							
Ranunculus auricomus	Goldilocks Buttercup	x						√	√	√					2				R							R									
Ribes nigrum*	Black Currant		x					√	√						1				O																
Ribes rubrum*	Red Currant		x					√	√						3				O				R					R							
Rosa arvensis	Field-rose		x							√	√				6				R		R	R	R			R		R							
Ruscus aculeatus	Butcher's Broom	x			√	√	√	√																											
Sanicula europaea	Sanicle		x						√	√	√	√																							
Scirpus sylvaticus	Wood Club-rush	x								√	√																								
Scutellaria minor	Lesser Skullcap		x								√	√	√	√																					
Sedum telephium	Orpine	x								√	√																								
Serratula tinctoria	Saw-wort	x									√	√	√																						
Solidago virgaurea	Golden-rod			x							√	√	√																						
Sorbus torminalis	Wild Service Tree	x							√	√																									
Stachys officinalis	Betony		x							√	√	√	√																						
Tamus communis	Black Bryony		x						√	√	√				4				R			R					R	R							
Tilia cordata*	Small-leaved Lime	x									√																								
Vaccinium myrtillus	Bilberry		x								√	√																							
Veronica montana	Wood Speedwell		x					√	√	√	√				6			R	F		R				R	R		O							
Viburnum opulus*	Guelder Rose		x							√	√																								
Vicia sepium	Bush Vetch		x					√	√	√	√	√																							
Vicia sylvatica	Wood Vetch		x							√	√	√																							
Viola palustris	Marsh Violet			x				√	√	√	√																								
Viola reichenbachiana	Early Dog-violet	x					√	√	√						1													O							
Wahlenbergia hederacea	Ivy-leaved Bellflower			x							√	√																							
Other species																																			
Canopy Trees																																			
Acer pseudoplatanus	Sycamore														8			R	F		O		O		O	A	O	F							
Aesculus hippocastanum	Horse-chestnut														6						R	R			R	R	R	R							
Alnus glutinosa	Alder														4				O	O			O	O											
Betula pendula	Silver Birch														4		R		O	O	F														
Betula pubescens	Downy Birch														8		F	A	A				A	F		O	O	O							
Castanea sativa	Sweet Chestnut														6		O		O		O		O			F		O							
Cupressus sp.	Cypress														1						O														
Fagus sylvatica	Beech														6		O				R	O	O		R			R							
Fraxinus excelsior	Ash														9				O		R	R	R	O	A	F	O	D							
Larix decidua	European Larch																																		
Picea sp.	Spruce																																		
Pinus radiata	Monterey Pine																																		
Pinus sylvestris	Scots Pine														3				R				R					O							
Populus alba	White Poplar																																		
Quercus robur	Pedunculate Oak														12		D	O	O	D	A	F	F	A	F	O	A	R							

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		Strong	Moderate	Weak	January	February	March	April	May	June	July	August	September	October			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Salix caprea	Goat Willow														7		F	F	O	O		F					O	R								
Salix cinerea	Grey Willow														8			O	O	O	R	F	R	O				R								
Sequoia sempervirens	Coast Redwood														1						R														
Sorbus aucuparia	Rowan														4		O					R	R				R									
Taxus baccata	Yew														1													O								
Thuja picata	Western Red Cedar																																			
Tilia x Europaea	Lime																																			
Tsuga canadensis	Eastern Hemlock																																			
Ulmus glabra	Wych Elm														1													F								
Ulmus procera	English Elm														1													O								
Understory Species																																				
Buddleia davidii	Buddleia														1													R								
Cornus sanguinea	Dogwood														2											R		O								
Corylus avellana	Hazel														11		F	O	A	O	A		A	A	A	F	A	F								
Crataegus monogyna	Hawthorn														11			O	F	O	O	A	O	F	F	O	O	F								
Cytisus scoparius	Broom														1				R																	
Euonymus europaeus	Spindle														5				R		O				R	R		O								
Gaultheria shallon	Shallon																																			
Hedera helix	Ivy														5				O		O		O		F			O								
Lonicera periclymenum	Honeysuckle														10		D	A	F	O	R	R	F		O		O	O								
Prunus domestica subsp. insititia	Damson														2						R		R													
Prunus laurocerasus	Cherry Laurel														1													O								
Prunus spinosa	Blackthorn														3				F		R							R								
Rhododendron sp.	Rhododendron														4		F	F	R									O								
Rosa canina	Dog Rose														2		R					O														
Rubus fruticosus agg.	Bramble														12		O	F	A	A	O	F	A	F	F	O	F	F								
Sambucus nigra	Elder														4				O		O	O				R										
Viburnum lantana	Wayfaring-tree														1													R								
Vascular Plants																																				
Agrostis stolonifera	Creeping Bent														1			F																		
Ajuga reptans	Bugle														9		O	R	O	O	R		R			O	O	O								
Alliaria petiolata	Garlic Mustard														1				R																	
Angelica sylvestris	Wild Angelica														1					R																
Anthoxanthum odoratum	Sweet Vernal-grass														4			R	R								R	R								
Anthriscus sylvestris	Cow Parsley														1						R															
Aphanes arvensis	Parsley-piert														1													R								
Apium nodiflorum	Fool's Watercress																																			
Arctium minus agg.	Lesser Burdock																																			
Arum maculatum	Lords and Ladies														9				O		O	O	O	O	O	O	O	R								
Asplenium adiantum-nigrum	Black Spleenwort														1				R																	
Bellis perennis	Daisy														5				R		O	O	O					R								
Brachypodium sylvaticum	False Brome																																			
Brachypodium sylvaticum	False Wood Brome																																			
Bromus hordeaceus	Soft Brome																																			
Callitriche sp.	Water-starwort														1								R													
Calluna vulgaris	Ling Heather														1				R																	
Calystegia sepium	Hedge Bindweed																																			
Cardamine flexuosa	Wavy Bittercress														5			R	O		R					R	R									
Cardamine pratensis	Cuckoo Flower														1													R								
Carex pilulifera	Pill Sedge														1		R																			
Cerastium fontanum	Common Mousear														1													R								
Circaea lutetiana	Enchanter-s-nightshade														8			R	O	O	O		O			O	O	R								
Cirsium arvense	Creeping Thistle														2					R		R														
Cirsium pasustre	Marsh Thistle														3					R						R		R								
Cirsium vulgare	Spear Thistle														1													R								
Cruciata laevipes	Crosswort																																			
Dactylis glomerata	Cock's-foot														1								R													
Dactylorhiza fuchsii	Common Spotted-orchid														3										R	R	R									
Deschampsia cespitosa	Tufted Hairgrass																																			
Digitalis purpurea	Foxglove														5			R	R		R					R		R								
Dryopteris dilatata	Broad Buckler-Fern														4			R	R				R					R								
Dryopteris filix-mas	Male-fern														10		O	O	O		O		O	O	O	O	O	O								
Epilobium obscurum	Short-fruited Willowherb														2					R						R										
Epilobium parviflorum	Hoary Willowherb														3				R	R							R									

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Ficaria verna	Lesser Celandine														4					O		O		O					O							
Filipendula ulmaria	Meadowsweet														1										R											
Fragaria vesca	Wild Strawberry														2			R	O																	
Galium aparine	Cleavers														9				R	O		O	O	O		O	O	O	O							
Galium palustre	Marsh Bedstraw														1									R												
Gaultheria shallon	Shallon																																			
Geranium dissectum	Cut-leaved Cranesbill														2					R								R								
Geranium robertianum	Herb-Robert														4					O							O	O	O							
Geum urbanum	Wood Avens														12			O	O	O	O	O	O	O	O	R	O	O	O							
Glechoma hederacea	Ground-ivy														8					O		O		O	O	O	F	O	O							
Glyceria fluitans	Floating Sweet-grass														1									R												
Gunnera sp.	Giant Rhubarb														1					R																
Heracleum sphondylium	Hogweed														3							R		R					R							
Holcus lanatus	Yorkshire-fog														8			R	R	R	O	R	R		R			R								
Humulus lupulus	Hop																																			
Hypericum tetrapterum	Square-staked St. John's Wort														2												R		R							
Impatiens glandulifera	Himalayan Balsam														1										R											
Impatiens parviflora	Small Balsam														4					O		O		R					O							
Jacobaea erucifolia	Hoary Ragwort														1						R															
Jacobaea vulgaris	Common Ragwort														3												R	R	R							
Juncus articulatus	Jointed Rush														1				O																	
Juncus bufonius	Toad Rush														1				R																	
Juncus effusus	Soft-rush														7			O	F	R	O		R		R			R								
Juncus effusus	Soft Rush														1														R							
Lamiastrum galeobdolon ssp. argentatum	Variegated Yellow Archangel														1														R							
Lapsana communis	Nipplewort																																			
Lotus corniculatus	Bird's-foot Trefoil																																			
Luzula campestris	Field Woodrush																																			
Lychnis flos-cuculi	Ragged-Robin														2				R					R												
Lycopus europaeus	Gypsywort																																			
Mentha aquatica	Water Mint														2					R				R												
Mercurialis perennis	Dog's Mercury														5							F		R		F	O	O								
Myosotis arvensis	Field Forget-me-not														2													R	R							
Myosotis sylvatica	Wood Forget-me-not																																			
Myosotis sylvatica	Wood Forget-me-knot																																			
Narcissus sp.	Daffodil																																			
Neottia ovata	Common Twayblade																																			
Oenanthe crocata	Hemlock Water Dropwort																																			
Ornithogalum umbellatum	Greater Star-of-Bethlehem														1														R							
Oxalis corniculata	Procumbent Yellow-sorrel														1														R							
Oxalis articulata	Pink-sorrel														1														R							
Persicaria hydropiper	Water-Pepper																																			
Petasites hybridus	Butterbur														1					R																
Poa trivialis	Rough-stalked Meadow-grass														11				O	O	F	O	R	O	O	O	O	O	F							
Potentilla anserina	Silverweed														2					R	R															
Potentilla erecta	Tormentil														4			R	R		R							R								
Potentilla reptans	Creeping Cinquefoil														1						R															
Pteridium aquilinum	Bracken														10			D	O	O		O		F	R	O	F	R	O							
Ranunculus flammula	Lesser Spearwort														1					R																
Ranunculus repens	Creeping Buttercup														7				R	O	R	R		R				R	O							
Reynoutria japonica	Japanese Knotweed														1					R																
Rumex obtusifolius	Broad-Leaved Dock														1					R																
Rumex sanguineus	Wood Dock														8				R	O		O	O	O			O	O	O							
Scrophularia auriculata	Water Figwort														3					O							R		R							
Scrophularia nodosa	Common Figwort														6				R	R				R	R		R		O							
Scutelaria galericulata	Skullcap																																			
Scutellaria minor	Lesser Skullcap														3				O	R		R														
Silene dioica	Red Campion														8				R	R	O	O				R	O	R	O							
Solanum dulcamara	Bittersweet														1									R												
Stachys sylvatica	Hedge Woundwort														4					R				R			R	R								
Stellaria holostea	Greater Stitchwort														5			F	O	R		R		R												
Stellaria media	Common Chickweed																																			
Succisa pratensis	Devil's-bit Scabious																																			
Taraxacum sp.	Dandelion														1					R																
Teucrium scorodonia	Wood Sage														2			O		R																
Trifolium dubium	Lesser Trefoil														1														R							

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Urtica dioica	Stinging Nettle														9				F	O	O	O	O	R		O	O	R							
Veronica beccabunga	Brooklime														1				R																
Veronica chamaedrys	Germander Speedwell														8		O		O				O	F	O	O	O	O							
Veronica hederifolia	Ivy-leaved Speedwell														2						R							R							
Veronica serpyllifolia	Thyme-leaved Speedwell														4				R					R	R		R								
Vicia sativa	Common Vetch														1				R																
Viola riviniana	Common Dog-violet														10		O	O	O	O			R	O	O	O	O	O							

Annex 5719/6:

Grassland Botanical Survey (Snatt's Road) – Detailed Results and Species Lists

Downlands (5719). Grassland Botanical Surveys. Snatts Road Grassland

A detailed botanical assessment was undertaken of two areas of grassland identified during the Phase 1 survey as potentially representing Priority habitats. The surveys were undertaken on 15th and 16th July 2020.

Methodology

Area SI4 comprises an area of grassland with invading scrub adjacent to Snatts Road, identified during the Phase 1 survey as being relatively species-rich. A FEP survey was undertaken as described above. In addition, an NVC survey was undertaken, comprising the recording of plant species present within a series of quadrats located at random across the area. The cover of each species present within each quadrat was also assessed.

Prior to undertaking the NVC survey, the area was assessed to identify whether different NVC grassland communities were present within the survey since, if this were the case, each community should be subject to separate survey. However, although there was some variation in vegetation cover across the site, a number of species were consistently frequent throughout the whole area and it was concluded that the site should be considered to support a single grassland community type[1]. Accordingly, a single NVC survey, comprising recording within five 2mx2m quadrats was undertaken. Although the precise locations of quadrats were selected at random, general locations were selected to provide broad coverage of the grassland habitat within the site, while avoiding close proximity to any of the mature trees present within the site (i.e. areas that would be heavily shaded by the trees).

The results of the NVC survey were assessed using the MAVIS (Ver 1.03) computer programme to identify best matches to recognised NVC communities.

Results

The FEP transect survey for Area SI4 are shown at Table 1, with the results of the NVC survey presented in Table 2. Figures 1 to 4 show outputs from MAVIS analysis of the NVC survey data.

[1] In addition to the grassland, some areas were recorded to support dense growth of Oak *Quercus robur* saplings or dense Bracken. These were excluded from the survey.

Table 1 Area SI4 Transect Survey Results

Species*/Quadrat	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**		**No. of stops**	**Frequency**
Salix cinerea	X	-	-	-	-	-	-	-	-	-		1	Rare
Quercus robur	X	X	X	-	-	-	-	X	X	-		5	Frequent
Potentilla erecta	X	-	-	X	X	X	X	X	X	X		8	Frequent
Holcus lanatus	X	X	X	X	-	X	-	X	X	X		7	Frequent
Agrostis stolonifera	X	-	X	-	-	X	X	-	-	-		4	Occasional
Anthoxanthum odoratum	X	X	X	X	X	X	-	X	X	X		9	Frequent
Ajuga reptans	**X**	**-**	**-**	**-**	**-**	**-**	**-**	**X**	**-**	**-**		**2**	**Rare**
Juncus conglomeratus	X	X	X	X	X	X	X	X	-	-		8	Frequent
Lotus pedunculatus	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**		**10**	**Frequent**
Dactylis glomerata	X	-	-	X	-	-	-	-	X	-		3	Occasional
Arrhenatherum elatius	-	X	X	-	-	X	-	-	-	-		3	Occasional
Agrostis capillaris	-	X	-	-	-	-	-	X	X	X		4	Occasional
Potentilla anserina	-	X	-	-	-	-	-	-	-	-		1	Rare
Plantago lanceolata	-	X	-	-	-	-	X	X	X	X		5	Frequent
Cirsium palustre	-	X	-	X	X	-	-	-	-	-		3	Occasional
Rumex acetosa	-	X	X	X	X	X	-	-	-	-		5	Frequent
Vicia tetrasperma	-	X	X	-	-	-	-	-	-	-		2	Rare
Ranunculus repens	-	X	-	-	-	-	-	-	-	-		1	Rare
Juncus effusus	-	-	X	X	X	-	-	-	-	-		3	Occasional
Rubus fruticosus agg.	-	-	-	X	-	-	X	X	-	X		4	Occasional
Convolvulus arvensis	-	-	-	X	-	-	-	-	-	-		1	Rare
Pulicaria dysenterica	-	-	-	-	X	-	X	-	-	-		2	Rare
Calystegia sepium	-	-	-	-	X	X	-	-	-	-		2	Rare
Lathyrus pratensis	-	-	-	-	-	X	-	-	-	-		1	Rare
Pteridium aquilinum	-	-	-	-	-	-	X	-	-	-		1	Rare
Rosa arvensis	-	-	-	-	-	-	X	X	-	-		2	Rare
Holcus mollis	-	-	-	-	-	-	X	-	-	-		1	Rare
Veronica chamaedrys	-	-	-	-	-	-	X	-	-	X		2	Rare
Hypericum pulchrum	-	-	-	-	-	-	X	-	-	-		1	Rare
Carex sylvatica	-	-	-	-	-	-	X	-	-	X		2	Rare
Carex flacca	**-**	**-**	**-**	**-**	**-**	**-**	**X**	**-**	**-**	**-**		**1**	**Rare**
Melampyrum pratense	-	-	-	-	-	-	-	X	X	-		2	Rare
Luzula campestris	-	-	-	-	-	-		X	-	-		1	Rare
Succisa pratensis	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**X**	**-**	**-**		**1**	**Rare**
Carex pallescens	-	-	-	-	-	-	-	-	-	X		1	Rare
Centaurea nigra	-	-	-	-	-	-	-	-	-	X		1	Rare
Total species per 1m^2 quadrat	10	13	10	11	9	10	14	14	9	11			
Mean species/quadrat													**11.1**

Table 3 Area SI4 NVC Quadrat Survey Results

Species		**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Constancy**
Rubus fruticosus agg.		8	8	5	-	7	IV
Juncus conglomeratus		2	4	3	9	3	V
Anthoxanthum odoratum		3	6	8	5	6	V
Agrostis stolonifera		6	5	5	4	3	V
Plantago lanceolata		3	1	4	-	5	IV
Potentilla erecta		7	-	6	6	7	IV
Dactylis glomerata		4	2	3	-	4	IV
Festuca rubra		2	-	-	-	4	II
Holcus lanatus		1	-	-	6	3	III
Luzula campestris		1	-	-	-	1	II
Quercus robur		1	2	4	1	1	V
Lotus pedunculatus		1	2	2	-	3	IV
Pulicaria dysenterica		-	5	-	-	-	I
Melampyrum pratense		-	-	4	-	-	I
Viola riviniana		-	-	5	-	3	II
Ajuga reptans		-	-	2	-	2	II
Lotus corniculatus		-	-	-	1	-	I
Convolvulus arvensis		-	-	-	3	-	I
Vicia tetrasperma		-	-	-	1	-	I
Cirsium palustre		-	-	-	3	-	I
Arrhenatherum elatius		-	-	-	3	1	II
Rumex acetosa		-	-	-	2	-	I
Juncus acutiflorus		-	-	-	2	-	I
Agrostis canina		-	-	-	1	-	I
Hypericum pulchrum		-	-	-	-	1	I
Centaurea nigra		-	-	-	-	2	I
Primula vulgaris		-	-	-	-	2	I
Potentilla sterilis		-	-	-	-	2	I
Species per quadrat		**12**	**9**	**12**	**14**	**19**	

Fig. 1 MAVIS Analysis of Area SI4 Quadrat Data

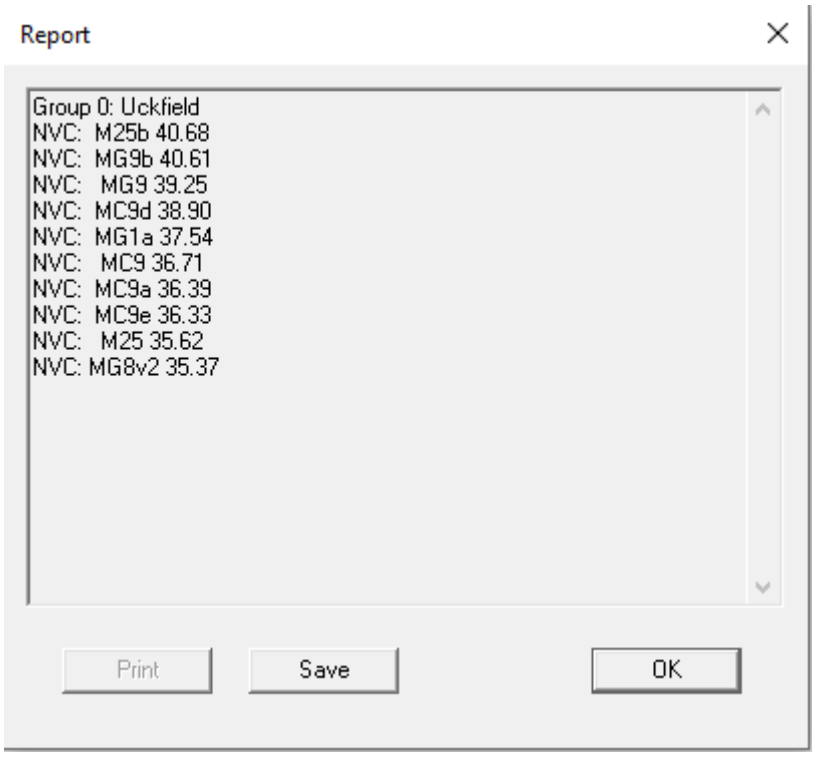


Fig. 2 MAVIS Analysis of Area SI4 Quadrats excluding Invasive Oak and Bramble

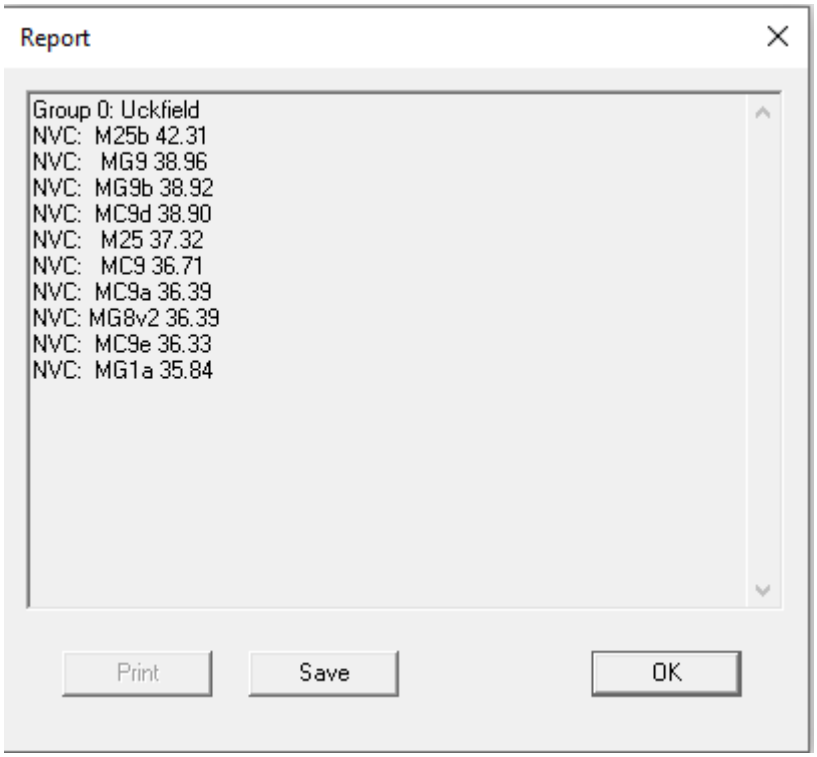
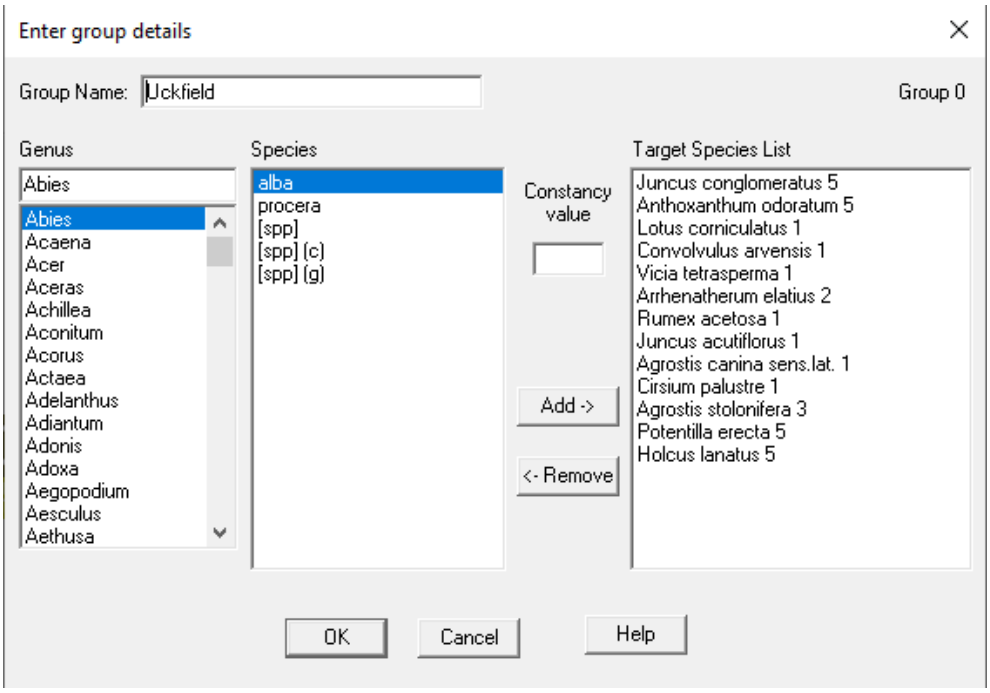
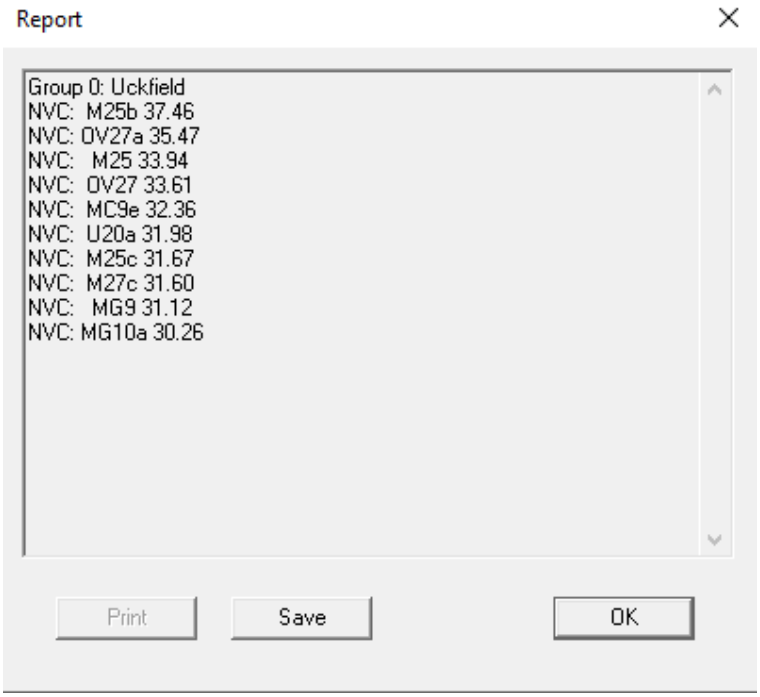


Fig. 3 Area SI4, Quadrat 4 using Dring[2] Constancy/Cover Relationship and excluding Oak and Bramble: Species and estimated constancy



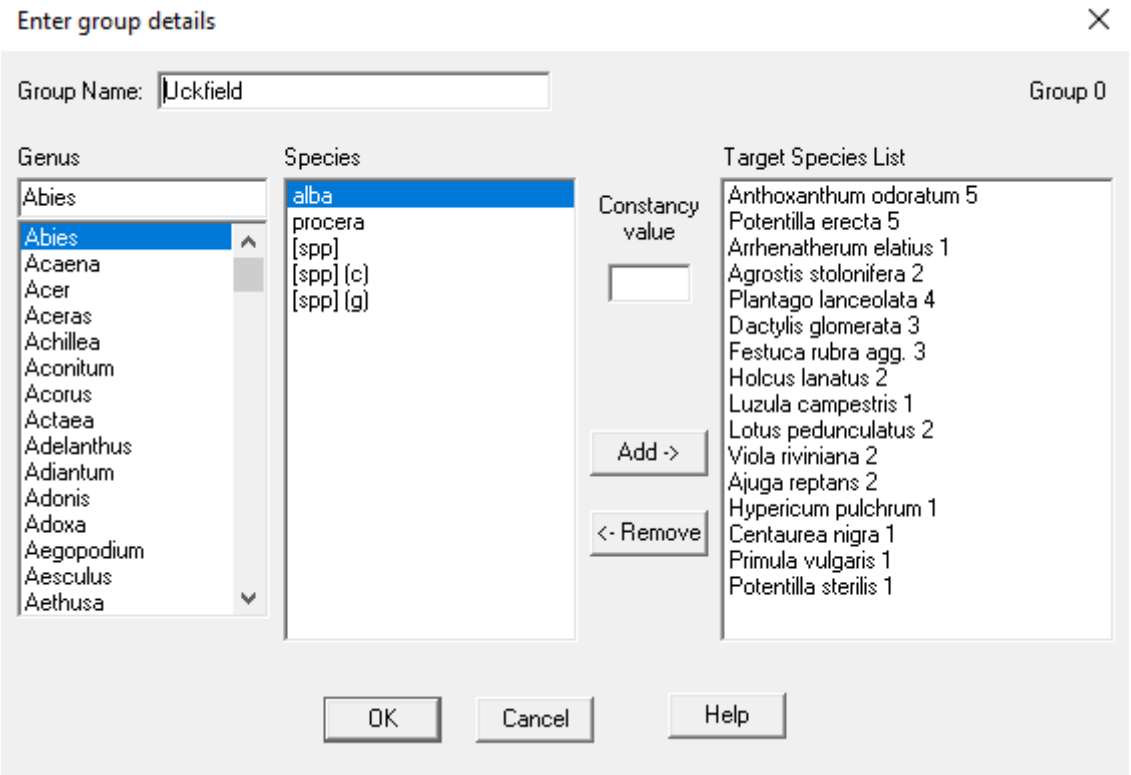
MAVIS Analysis



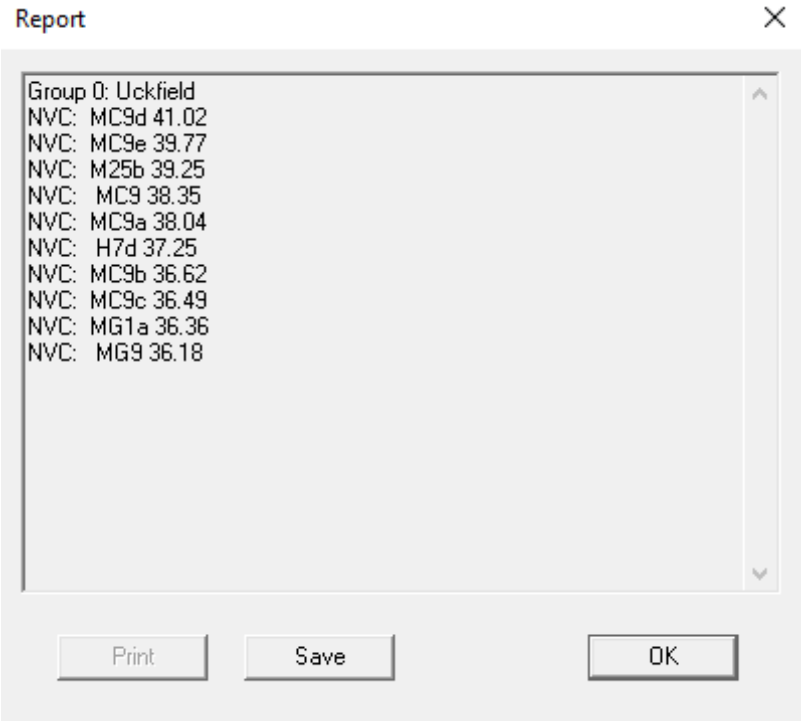
[2] Dring, J.S. (2000) SIMIL: A suite of programs for calculating the similarity between new quadrat data and the units of the National Vegetation Classification. Unit of Vegetation Science. Lancaster University.

Fig. 4 Area SI4, Quadrat 5 using Dring Constancy/Cover Relationship and excluding Oak and Bramble:

Species and estimated constancy



MAVIS Analysis



Discussion

The sward within Area SI4 supports a range of rushes, sedges and other species, such as Marsh Thistle *Cirsium palustre*, which are indicative of damp conditions. Although the ground was dry at the time of survey it is likely that the area is seasonally damp. The herbaceous vegetation appears to be being invaded by scrub, notably Oak, Bramble and Grey Willow *Salix cinerea*.

Results of the FEP transect survey are shown in Table 3 above. A total of 36 plant species were recorded within the ten quadrats, with a mean of 11.1 species per quadrat.

Following FEP Key 2a, the grassland has cover of Rye-grasses *Lolium* spp. and White Clover *Trifolium repens* at less than 10%, but the sward is not species rich (11.1 species/m^2 compared with a threshold of more than 15 species/m^2). The cover of wildflowers and sedges is considered to meet the 30% threshold identified in the key. This identifies the area as supporting species-rich grassland restorable to, good quality, although it does not match any particular Priority Habitat type and cannot be categorised as such.

Taking into account the local soil type (slightly acid with impeded drainage) and the species recorded, it is considered that the vegetation most closely corresponds to Purple Moor-grass and Rush Pasture BAP priority habitat, although Purple Moor Grass is notably absent. Within the survey quadrats, four indicator species for this habitat (as identified in FEP Key 2b, Table 5) were recorded, namely Greater Bird's-foot Trefoil *Lotus pedunculatus* (frequent) Glaucus Sedge *Carex flacca* (rare) Devil's-bit Scabious *Succisa pratensis* (rare) and Bugle *Ajuga repens* (rare). Following Key 2b, the presence of four indicator species, but below the threshold frequency (at least two frequent and two occasional in the sward), identifies the vegetation as species-rich grassland albeit not a particularly representative example, and of only moderate quality.

The condition assessment for Purple moor-grass and rush pasture (G07) considers a number of factors, including the cover of undesirable species. In this respect the BAP habitat fails in terms of the cover of invasive trees and shrubs (being >5%), whilst meeting the other cover criteria relating to undesirable species, large sedge species, and non-jointed rushes. Therefore, although qualifying, it is below the 'good condition' threshold. It is considered to be in poor and declining condition, although the decline is likely to be reversible through appropriate management.

The FEP key was designed for use in agri-environment schemes and, as such, offers a relatively simplistic approach to vegetation identification. To provide a more robust analysis of the vegetation type present within Area 2, data from the series of 2mx2m quadrats was analysed using MAVIS and also by reference to vegetation keys set out in the NVC Handbooks[3].

Results of MAVIS analysis of the quadrat data are shown at Fig. 1. The Figure lists the ten closest matching vegetation types to the quadrat data. The closest match is M25 *Molinia caerulea- Potentilla erecta* mire, *Anthoxanthum odoratum* sub-community, which is one of the NVC communities included within the UK BAP definition for Purple Moor-grass and Rush Pasture. However, the coefficient of similarity (goodness-of-fit) is just 40.68, indicating that the data is a very poor match[4] to this community. The MG9 *Holcus lanatus-Deschampsia cespitosa* grassland, *Arrhenatherum elatius* sub-

[3] British Plant Communities Volumes 2 & 3, J.S. Rodwell (Ed) 1991

[4] TABLEFIT Version 1.0, for identification of vegetation types. M.O. Hill 1996

community has an almost identical coefficient of similarity (40.61), while the resemblance to MC9 *Festuca rubra-Holcus lanatus* maritime grassland is almost as great (39.25).

The conclusion from the MAVIS analysis is that the vegetation in Area 2 bears some similarities to a number of different community types, but is a very poor match to any. With a coefficient of similarity of less than 50, it cannot be confidently matched to any one community.

The area appears to have been unmanaged for some time and, even having avoided sampling within areas of densest scrub, Oak and Bramble were both constant species within the quadrats. In case invasive scrub was obscuring a resemblance to a particular mire or grassland community, the MAVIS analysis was re-run excluding Bramble and Oak from the data. Figure 2 shows the result of this analysis: there is a marginally closer match of the data to an M25 community but it remains very poor.

Another possible reason for obtaining a poor match to any one community is that the survey may have inadvertently sampled from more than one vegetation type. For instance, the quadrats could have sampled within areas of both M25 mire and MG9 grassland. While this was not considered to be the case while surveying, nonetheless this possibility was investigated by analysis of individual quadrat data for quadrats 4 and 5. These quadrats were selected because they were the most species-rich quadrats and, therefore, the most likely to represent the highest quality habitats. To enable NVC analysis of single quadrats within MAVIS, species abundance (cover) was converted to frequency using the method described by Dring (2000), as set out in the MAVIS User Manual (2016). Again, Bramble and Oak were excluded from the analyses. However, as shown in Figures 3 and 4, both of these individual quadrats showed an even poorer match to any community and it is concluded that the lack of an overall match to a specific community is not the result of any error in survey technique.

Reviewing habitat descriptions from Rodwell (1991), the M25 community is "characterised throughout by the overwhelming abundance of *Molinia*". Since this species appears to be absent from the survey area, it is considered that the vegetation cannot represent this community. Using the Key to Mires in Volume 2 of Rodwell (1991) the habitat fails to key out. Using the Mesotrophic Grassland and Acid Grassland keys in Volume 3 of Rodwell (1991), the habitat does not key out satisfactorily, although perhaps the closest match is to MG9 *Holcus lanatus-Deschampsia cespitosa* grassland.

Conclusion

This area currently supports a species-rich, damp grassland which is a very poor match for any recognised NVC community and should not be ascribed to any particular community on the basis of the analysis undertaken. The survey results do not indicate a good fit with any particular BAP/priority habitat, and whilst the habitat meets some of the criteria for Purple Moor-grass and Rush Pasture Priority Habitat type (type G07 under the HLS FEP) it cannot be categorised as Priority Habitat. It is however, considered to be of ecological value on a local level on account of its botanical diversity. The condition of the habitat is assessed as being poor and declining. However, there is significant scope for enhancement of this area through removal of invasive scrub, principally Bramble and Oak but also Willow *Salix* scrub and, ideally through the reintroduction of regular management, such as an annual mowing or grazing regime. Without such intervention, it is considered likely that the botanical interest will be lost in a relatively short timeframe.

Annex 5719/7:

Downlands, Uckfield (Fir Tree Grove) Bryophyte and Lichen Survey

Downlands, Uckfield (Fir Tree Grove).

Bryophyte and Lichen Survey

Alan Orange M.Sc.

AO Biological Surveys

April 2022

Introduction

Aspect Ecology have been appointed to advise Gleeson Land in respect of ecological matters at the land at Downlands Farm, Uckfield, East Sussex. A planning application will be submitted for up to 424 residential dwellings at the site, together with associated parking, infrastructure, landscaping and access. Part of the of the proposals includes a proposed cyclepath/pedestrian link connecting the development to Rocks Road, passing an area known as Fir Tree Grove. As part of the ecological assessment of the site, I have been commissioned to undertake a lower plant survey, including an assessment of bryophytes and lichens occuring with the woodland and collection of sandstone outcrops.

Methods

All parts of the site are in the one-kilometre square TQ4621, in the botanical vice-county of East Sussex (V.V. 14).

The site was visited for about four hours on 26 April 2022, in dry, sunny weather. Survey was focused on the rock outcrops, with trees examined briefly. Species were regarded as 'notable' if they are Nationally Scarce, or scarce in Sussex (Briggs 2001), or (lichens) achieve a conservation grading in Sanderson *et al*. (2018), or occur on the Southern Oceanic Woodland Index of Ecological Continuity (SOWI) (Sanderson *et al*. 2018).

Results

The site comprises a number of low sandrock outcrops now in the garden of a house (Figs. 1, 2). Beyond is ancient but young-growth deciduous woodland with oak, ash, elm and others. There are three old oaks in woodland near the house.

A total of 21 species of bryophyte, and one additional variety, were recorded, all of them associated with sandrock (Table 1). Only six lichens were associated with sandrock, out of a total of 15 for the site as a whole. Species considered notable are listed in Table 2. Localities where records were made are listed in Table 3.

Shaded and relatively humid steep faces are dominated by bryophytes including *Tetraphis pellucida*, *Dicranella heteromalla*, *Cephalozia lunulifolia* and locally *Orthodontium lineare*. More local species include *Calypogeia muellerana*, *Lophocolea heterophylla*, *Odontoschisma denudatum* and *Pseudotaxiphyllum elegans*. Stands perhaps representing later successional stages have some *Mnium hornum*. One well-lit face was dominated by *Aulacomnium androgynum*. Steep, dry faces are dominated by the lichens *Lepraria incana* or *L. finkii*. Sunny, exposed, sloping surfaces have bryophytes including *Hypnum cupressiforme*, a little *Ceratodon purpureus*, local *Polytrichum juniperinum* where there is a very slight soil accumulation, the lichen *Cladonia polydactyla*, and the lichen *Trapelia involuta* where there is a little flushing in wet weather. Some exposed sunny faces comprise bare rock with a few poorly developed crustose lichens, including pale, pinkish patches of sterile *Trapelia coarctata/elacista* and unidentifiable grey patches. The dominant species on shaded, gently sloping surfaces that are not very humid are *Hypnum cupressiforme* and especially *Isothecium myosuroides*.

Most of the woodland is young-growth and poor in lichens. A large oak NE of the house had the old-forest lichen *Cresponea premnea* frequent on the trunk (Locality 12), and an old oak NW of the house supported *Chaenotheca trichialis* and *Inoderma subabietinum* (Locality 17). An old pine supported the Nationally Scarce *Micarea doliiformis* (Locality 13).

Interpretation

The bryophytes recorded do not include any that are considered Nationally Scarce, nor scarce in Sussex (Briggs 2001). The least common species is *Odontoschisma denudatum* (Locality 9), recorded from 6 hectads in the Weald (Blockeel *et al*. 2014), of which only three have records dating from 1990 or more recently. The present record seems to be new for this hectad. This species was a dominant in one of the 15 communities distinguished on sandrocks at Wakehurst and Chiddinglye Woods SSSI by Jackson & Rich (1997). At Fir Tree Grove the species occurred on a north-facing, well-lit face shortly NNE of the house, where it is sheltered from drying out by the aspect and by shrubs nearby.

Lichens on rock at Fir Tree Grove are very limited, but some notable species were recorded on several large trees near the house. Three of these are ‘old-forest’ lichens listed in the Southern Oceanic Index of Ecological Continuity (SOWI), which estimates the likelihood of age and ecological continuity of a site, ecological continuity implying the constant presence of mature trees for several hundred years. A score of three on SOWI does not indicate continuity, but the three species are still of conservation value, as old-forest species tend to be slow colonisers and to prefer old trees. Two of the species are also regarded as scarce in Sussex (Briggs 2001).

Of the 15 communities distinguished on sandrocks by Jackson & Rich (1997), the three richest for rare bryophytes were on shaded but not wet rocks, although one other community was dominated by a single rare hepatic on wet rocks. Shaded, humid conditions are ideal for most sandrock bryophytes, whereas exposed rocks have few of the more important species.

The current cycle route proposed by the developers avoids the trees with Nationally Scarce and Sussex Scarce lichens. Even when no ‘rare’ species are recorded at a site, the characteristic species and habitats still deserve protection. If the proposed development goes

ahead, then it would be ideal to allow the site to return to woodland, providing shade to rock outcrops. An open structure, avoiding excessive shade to old tree trunks would be best. Gradually, exotic shrubs should be removed. All rock outrops should ideally be protected.

References

Blockeel, T.L., Bosanquet, S.D.S., Hill, M.O. & Preston, C.D. (2014) *Atlas of British and Irish Bryophytes.* Pisces Publications.

Briggs, M. (editor) (2001) *The Sussex Rare Plant Register of Scarce and Threatened Vascular Plants, Charophytes, Bryophytes and Lichens*. Sussex Wildlife Trust.

Jackson, A. & Rich, T. C. G., (1997) *Lower plant communities of the Wealden sandrocks at Wakehurst and Chiddinglye Woods SSSI, SE England*. In: Conservation of Cryptograms in the Weald (A. J. Jackson & M. Flanagan, eds) 27–31.

Sanderson, N. A., Wilkins, T.C., Bosanquet, S.D.S and Genney, D.R. (2018) *Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 13 Lichens and associated microfungi*. Joint Nature Conservation Committee, Peterborough.

Table 1. Species recorded at Fir Tree Grove

Bryophytes	
Aulacomnium androgynum	In good quantity on one well-lit, slightly overhanging face. 6.
Bryum capillare	Locally frequent on unshaded or lightly shaded rocks. 2, 11.
Calypogeia fissa	1,
Calypogeia muellerana	Rare on shaded faces. 6.
Campylopus flexuosus	Rare. 6, 7.
Campylopus introflexus	Rare on unshaded rocks. 6, 7, 9.
Cephalozia lunulifolia	Frequent and often abundant mixed with other species, on shaded and somewhat humid faces. 1, 3, 9.
Ceratodon purpureus	Sunny rocks. 7, 11.
Dicranella heteromalla	Frequent on shaded rock faces. 1, 2, 3, 5, 6.
Hypnum cupressiforme var. cupressiforme	Locally frequent on unshaded or only lightly shaded rocks. 2, 7, 8, 9, 11.
Hypnum cupressiforme var. resupinatum	Rare on unshaded rocks, growing with var. cupressiforme. 11.
Isothecium myosuroides	Locally frequent on shaded rocks, not requiring much humidity. 2, 10.
Lophocolea heterophylla	Rare on shaded faces. 5.
Mnium hornum	Occasional on shaded faces. 4, 5, 6, 9.

Odontoschisma denudatum	One locality, on well-lit, north-facing rock face. 9.
Orthodontium lineare	Occasional on shaded faces. 3, 4, 5.
Plagiothecium nemorale	Rare. 6.
Polytrichum formosum	On thin soil associated with outcrops. 2, 6, 8.
Polytrichum juniperinum	On sunny rocks where there is a very slight soil accumulation. 9.
Pseudotaxiphyllum elegans	Occasional on shaded faces. 1, 10, 15.
Tetraphis pellucida	Frequent on shaded rock faces. 1, 2, 5, 9.
Thuidium tamariscinum	Rare. 7.
Number of taxa:	**22**

Lichens	
Arthonia spadicea	14 elm.
Chaenotheca trichialis	17 small quantity on old oak.
Chrysothrix candelaris	Steep dry rocks, rare. 3 very rare, 7.
Cladonia fimbriata	Rare on sunny gently sloping rocks. 11.
Cladonia polydactyla	Locally frequent on well-lit faces and sloping rocks. 2, 3, 7, 8, 11.
Cladonia pyxidata	Rare on unshaded rocks. 11.
Cresponea premnea	Frequent on one large pedunculate oak. 12.
Enterographa crassa	11 holly roots, 16 old oak, 17 oak.
Indoderma subabietinum	17 old oak.
Lepraria finkii	Dry faces, frequent, also on bark. 1, 2, 5, 14 elm.
Lepraria incana	Dry faces, frequent. 4, 7. This species being used as material for case construction by moth larvae at Locality 7.
Micarea doliiformis	On a large pine (*Pinus nigra*). 13.
Schismatomma decolorans	On a large peduculate oak. 12.
Trapelia coarctata/elacista	Locally conspicuous as pale pinkish patches on sunny rocks.
Trapelia involuta	On sunny rocks where there is some run-off in wet weather. 7.
Number of species:	**15**

Table 2. Species with a conservation grading

	Sussex	NR/NS	IR	Nb	SOWI
Chaenotheca trichialis	SS				SOWI
Cresponea premnea			IR	Nb	SOWI
Inoderma subabietinum	SS		IR	Nb	SOWI
Micarea doliiformis		NS		Nb	

SS = scarce in Sussex (Briggs 2001)

NR/NS =Nationally Rare/Nationally Scarce,
IR = International Responsibility, Nb = Notable,
SOWI = included on the Southern Oceanic Woodland Index of Ecological Continuity
For more details, see Sanderson *et al*. (2018).

Table 3. Localities where records were made.

locality	GIS	accuracy	x	y	lat.	long.
1	TQ46728.21675	4	546728	121675	50.975801	0.088621926
2	TQ46732.21678	5	546732	121678	50.975827	0.088680072
3	TQ46719.21683	adj	546719	121683	50.975876	0.088497047
4	TQ46715.21686	adj	546715	121686	50.975904	0.088441321
5	TQ46719.21698	5	546719	121698	50.97601	0.088503095
6	TQ46730.21708	5	546730	121708	50.976097	0.088663701
7	TQ46739.21705	adj	546739	121705	50.976068	0.088790597
8	TQ46749.21722	6	546749	121722	50.976218	0.088939793
9	TQ46750.21710	4	546750	121710	50.97611	0.088949187
10	TQ46762.21716	3	546762	121716	50.976161	0.089122415
11	TQ46774.21699	3	546774	121699	50.976005	0.089286366
12	TQ46793.21714	6	546793	121714	50.976135	0.089562862
13	TQ46805.21719	5	546805	121719	50.976177	0.089735687
14	TQ46721.21797	5	546721	121797	50.9769	0.088571482
15	TQ46697.21704	7	546697	121704	50.97607	0.088192367
16	TQ46717.21710	5	546717	121710	50.976119	0.088479466
17	TQ46713.21694	4	546713	121694	50.975976	0.088416079

adj = GIS adjusted according to map (but still approximate).

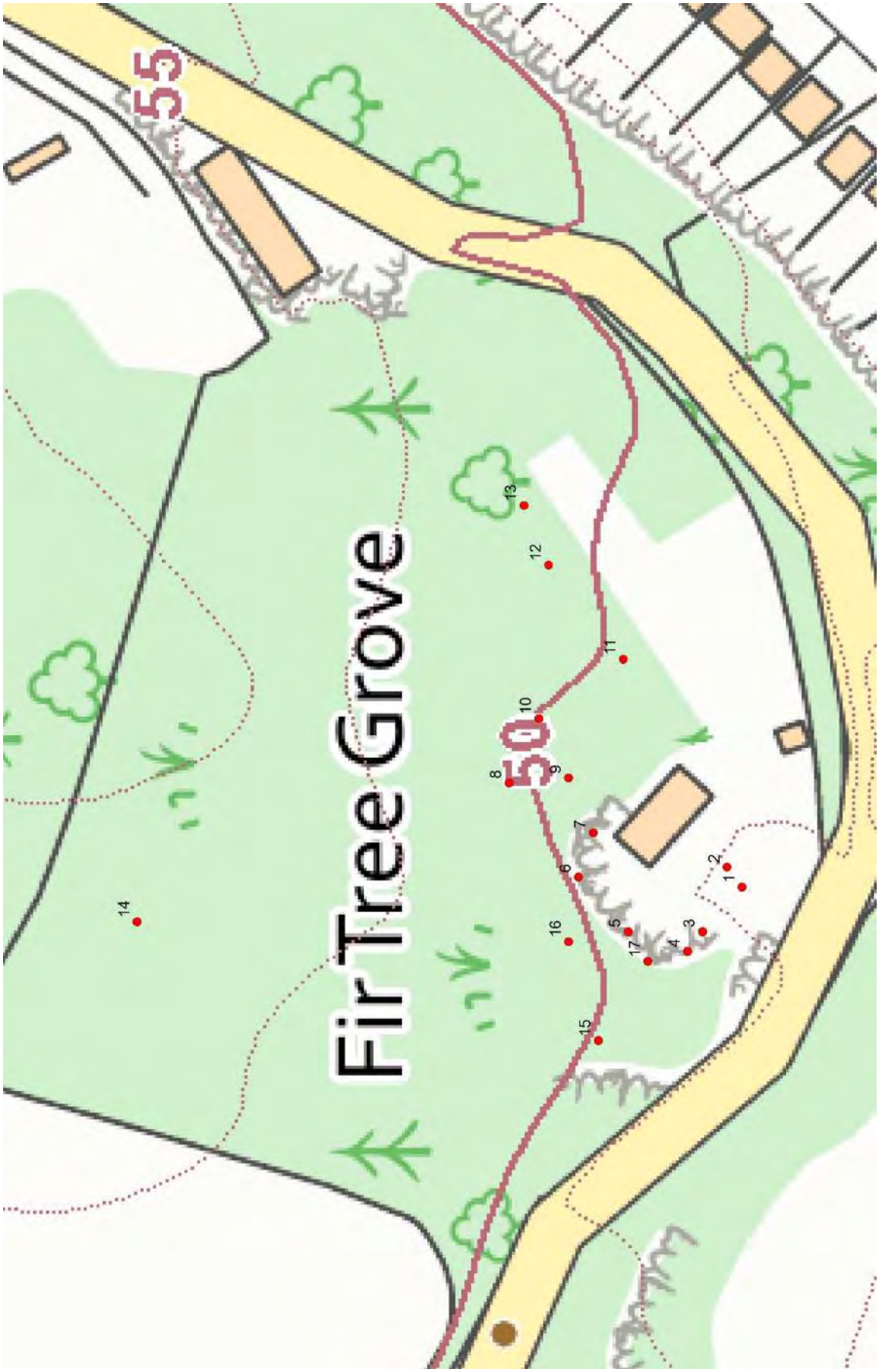


Fig. 1. Fir Tree Grove, with numbered locations where records were made.

Proposed boardwalk to accommodate pedestrian / cycle route over ancient woodland
Refer to drawing 2001061-137

Proposed ramp / steps arrangement to accommodate changes in level to the north of Rocks Road.
Refer to drawing 2001061-136

FIR TREE GROVE

SNATTS ROAD

14
8
10
13
12
16
9
6
7
15
11
5
17
4
3
2
1

Key:

- Site Boundary
- Boardwalk
- Bryophyte and Lichen Survey Locations

Earthworks Cut & Fill Volumes

- Positive Maximum & Minimum Levels
- Negative Maximum & Minimum Levels

N

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Annex 5719/8:

Building Descriptions

Building Number: B1 – Chicory Cottage

Photographic Record






External Descriptions

Description	
Number of storeys:	2 Storeys
Building construction type (brick etc.):	Mix of red brick (2/3) & older brick section (1/3)
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	Clay tiles with wooden soffits. Lead flashing on chimney. There is a section of flat roof in the mid-section, but the remaining roof is an L-shaped hipped roof.
Other notes on roof (chimneys present, skylights present etc.):	Ridge tiles present. 2 chimneys.
General state of repair:	Very good condition – recently re-roofed (2019)
Approximate age of building:	-
Use of building:	Residential

External Features of bat potential — No evidence of bats were found when re-roofing.

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
X	Very good No gaps	X	Some raised tiles on the older part of the roof on the western side of the central chimney. (see pictures)	None slipped	Yes No gaps	Light entering & gaps in soffit boxes but not big enough for bats		Bright flood light on south side.

Internal Descriptions **B1a**

Number of loft voids present within building: 4 (x2 pitched (B1a and B1d), x1 connecting void as part of the old building roof (B1b) and x1 newly constructed conservatory roof void with no access (B1c) (photos through gap from void B1a) .

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	1m x 5m x 4m
Height at apex	1m vaulted
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	Wooden rafter, vaulted/ cut-roof with boarded section
Construction type (King post, Queen post etc.)	Square strut construction within roof void
Ridge beam ***and condition***	No ridge beam, possibly above square structure not visible
Lining (felt, sarking etc.) ***and condition***	Felt lining ½ of the void in good condition. The other half breathable plastic, (new as of 2019)
Insulation ***and condition***	Fibreglass insulation present, good condition.
Exposed brick work ***and condition***	No exposed brick
Humidity (and confirm presence or absence of water tank)	No water tank with ambient humidity, No draft or breeze
Temperature	18 degrees approx
Any draughts?	No
Light levels	Very dark but switch present for light
Cobwebs?	Fair few cobwebs
In active use?	Fairly active, used to store items with established stairs and lighting in the void
Other features of note	Wasp & hornet nest previously present. Rat poison and rat droppings

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: No evidence of bats

Building Number: B1 (cont.)

Photographic Record







External Descriptions **(See sheet 1)**

Description	
Number of storeys:	
Building construction type (brick etc.):	
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	
Other notes on roof (chimneys present, skylights present etc.):	
General state of repair:	
Approximate age of building:	-
Use of building:	

External Features of bat potential

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
								-

Internal Descriptions

Number of loft voids present within building: **B1b** – most suitable section of loft void for bats

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	2.5m x 3.5m
Height at apex	0.8m
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	Gaps within tiles as they back into batons
Construction type (King post, Queen post etc.)	Single pitch, standard apex structure
Ridge beam ***and condition***	Wooden ridge beam, in good condition
Lining (felt, sarking etc.) ***and condition***	No lining, exposed tile showing
Insulation ***and condition***	Fibreglass insulation. Poor condition, broken up.
Exposed brick work ***and condition***	Breeze block opening from void 1a into 1b, brick chimney breast in good condition
Humidity (and confirm presence or absence of water tank)	Cool, no water tank
Temperature	16 degrees approx
Any draughts?	none
Light levels	Slightly lit from natural light
Cobwebs?	Highly cobwebbed
In active use?	Less active, no boarding for easy access. Nothing stored in this area
Other features of note	Chimney breast, brick in good condition. Disused wasp nest present. Far northeast corner of this void there is an opening connecting to void 1d.

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: No evidence of bats

Building Number: B1 (cont.)

Photographic Record





External Descriptions **(See sheet 1)**

Description	
Number of storeys:	
Building construction type (brick etc.):	
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	
Other notes on roof (chimneys present, skylights present etc.):	
General state of repair:	
Approximate age of building:	-
Use of building:	

External Features of bat potential

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
								-

Internal Descriptions

Number of loft voids present within building: **B1c** – no access & no storage use

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	4m x 3m
Height at apex	0.5-1m
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	Wooden rafter, vaulted, cut roof
Construction type (King post, Queen post etc.)	Square strut construction within roof void
Ridge beam ***and condition***	No ridge beam visible
Lining (felt, sarking etc.) ***and condition***	Hard to tell with limited visibility, most likely breathable plastic like B1a lining replaced in 2019 with new extension.
Insulation ***and condition***	Fibreglass insulation
Exposed brick work ***and condition***	No exposed brick
Humidity (and confirm presence or absence of water tank)	No water tank, ambient
Temperature	18 degrees approx.
Any draughts?	None
Light levels	Very dark
Cobwebs?	Hard to tell with no access
In active use?	No
Other features of note	Newly constructed in 2019

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: No evidence of bats

Building Number: B1 (Cont.)

Photographic Record






External Descriptions **(See sheet 1)**

Description	
Number of storeys:	
Building construction type (brick etc.):	
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	
Other notes on roof (chimneys present, skylights present etc.):	
General state of repair:	
Approximate age of building:	-
Use of building:	

External Features of bat potential

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
								-

Internal Descriptions

Number of loft voids present within building: B1d

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	5m x 10m
Height at apex	1.5m but concealed by vaulted structure
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	Wooden rafter and purlins with a wooden vaulted section through the centre. There was also a secondary apex in the southern section running parallel to the primary apex. Looks to be part of the old structure and connects to the older part of the building void (B1b). Connection from B1d to B1b (picture 4 above)
Construction type (King post, Queen post etc.)	Square strut structure within the void
Ridge beam ***and condition***	Concealed
Lining (felt, sarking etc.) ***and condition***	New membrane lining
Insulation ***and condition***	Silver slab Styrofoam scattered in this section. Some fiberglass in poor condition
Exposed brick work ***and condition***	No exposed brick
Humidity (and confirm presence or absence of water tank)	Ambient with no water tank
Temperature	18 degrees approx.
Any draughts?	None
Light levels	Fairly light by soffits and light switch present on a timer
Cobwebs?	Light dusting of cobwebs
In active use?	Fairly active for storage with boarding in the centre section
Other features of note	Lots of cabling, roof redone in 2019. Rat droppings present. Some slits in the soffit boards letting light in but not large enough gaps for bats.

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: No evidence of bats

Building over all = low bat potential

Building Number: B2

Photographic Record






External Descriptions

Description	
Number of storeys:	1 storey
Building construction type (brick etc.):	Wooden shed constructed of wooden panels
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	Flat, felted slanted roof
Other notes on roof (chimneys present, skylights present etc.):	
General state of repair:	Good with no gaps or damage to the wood. No decay
Approximate age of building:	3 years
Use of building:	Storage of garden tools

External Features of bat potential

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
							Well-sealed with some cobwebs present on the outside.	

Internal Descriptions

Number of loft voids present within building: N/A did not have access inside the shed

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	
Height at apex	
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	
Construction type (King post, Queen post etc.)	
Ridge beam ***and condition***	
Lining (felt, sarking etc.) ***and condition***	
Insulation ***and condition***	
Exposed brick work ***and condition***	
Humidity (and confirm presence or absence of water tank)	
Temperature	
Any draughts?	
Light levels	
Cobwebs?	
In active use?	
Other features of note	

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: Negligible

Building Number: B3

Photographic Record






External Descriptions

Description	
Number of storeys:	1 storey
Building construction type (brick etc.):	Wooden panelling with plastic windows very well lit
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	Single pitch with felt lining with moss coverage.
Other notes on roof (chimneys present, skylights present etc.):	None present
General state of repair:	very good condition
Approximate age of building:	-
Use of building:	shed further gardening storage

External Features of bat potential

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
						wood (thin) good condition		-

Internal Descriptions

Number of loft voids present within building: 11

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	2m (h) x 2.5m (w) x 3m (l)
Height at apex	2m
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	wooden panelling and rafters
Construction type (King post, Queen post etc.)	standard pitch structure
Ridge beam ***and condition***	wooden in good condition
Lining (felt, sarking etc.) ***and condition***	
Insulation ***and condition***	None
Exposed brick work ***and condition***	None
Humidity (and confirm presence or absence of water tank)	Frequently used
Temperature	20 degrees approx
Any draughts?	yes
Light levels	Very well lit
Cobwebs?	Outside and some inside on windows and shelves
In active use?	Yes, frequently for gardening
Other features of note	

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: No evidence of bats

Building Number: B4

Photographic Record









External Descriptions

Description	
Number of storeys:	1 storey
Building construction type (brick etc.):	thick wooden panels with timber internal structure.
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	single pitched roof with open rafters (No soffits) exposed felt lining in good condition). Ridge tiles in good condition and other clay tiles (however heavily moss covered)
Other notes on roof (chimneys present, skylights present etc.):	heavily moss covered
General state of repair:	fairly good state of repair
Approximate age of building:	-
Use of building:	storage for house appliances

External Features of bat potential

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
								-

Internal Descriptions

Number of loft voids present within building: 1

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	4m (h) x 3m (w) x 4.5m (l)
Height at apex	4m
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	2 wooden rafters which appears to be thick timber frame.
Construction type (King post, Queen post etc.)	half of the shed has a mezzanine level for further storage held up by timber rafter.
Ridge beam ***and condition***	Ridge beam in good condition
Lining (felt, sarking etc.) ***and condition***	felt lining
Insulation ***and condition***	no insulation
Exposed brick work ***and condition***	
Humidity (and confirm presence or absence of water tank)	Cool, no water tank
Temperature	16 degrees approx
Any draughts?	Yes
Light levels	fairly high due to openings in the door frame
Cobwebs?	very minimal
In active use?	very regularly used
Other features of note	Rat droppings

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: No evidence of bats

Building Number: B5

Photographic Record







External Descriptions

Description	
Number of storeys:	single storey
Building construction type (brick etc.):	wooden shed panelled
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	single pitched felt lined roof
Other notes on roof (chimneys present, skylights present etc.):	flood lighting present on front and small shelter structure directly east which is 0.5m height
General state of repair:	In good condition
Approximate age of building:	
Use of building:	Regularly used for storage, pool pump

External Features of bat potential

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
								-

Internal Descriptions

Number of loft voids present within building: 1

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	1.5m height x 2m w x 2m long
Height at apex	1.5m
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	Wooden rafters and purlin (very thin) lined on top with roof felt liner - all in good condition
Construction type (King post, Queen post etc.)	simple single pitch
Ridge beam ***and condition***	none
Lining (felt, sarking etc.) ***and condition***	felt lining on roof
Insulation ***and condition***	none
Exposed brick work ***and condition***	none
Humidity (and confirm presence or absence of water tank)	hot due to pump
Temperature	Hot
Any draughts?	yes
Light levels	high levels due to windows on front
Cobwebs?	none
In active use?	Yes, for storage, pool pump
Other features of note	

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: No evidence of bats

Building Number: B6

Photographic Record





External Descriptions

Description	
Number of storeys:	single storey glass
Building construction type (brick etc.):	green house - no Bat Potential see pictures
Roof Structure (flat/pitched/multi-pitched/hipped etc.), material (clay tiles etc.), and presence of ridge tiles:	
Other notes on roof (chimneys present, skylights present etc.):	
General state of repair:	
Approximate age of building:	-
Use of building:	Green house

External Features of bat potential

Building condition			**Roof condition**					
Cavity Walls?	Condition of brick work?	Condition of any hanging tiles?	Roof tiles (any missing/ slipped/raised?)	Ridge tiles (any missing/ slipped/raised?)	Lead Flashing	Barge Boards/ Soffit Boxes	Other potential access points	Other
								Green house - no Bat Potential see pictures

Internal Descriptions

Number of loft voids present within building: N/A

Loft Void Features (where relevant)	**Description (where relevant)**
Dimensions	
Height at apex	
Construction material (wooden rafters, steel rafters etc.) ***and condition (splits, gaps in joins etc.)***	
Construction type (King post, Queen post etc.)	
Ridge beam ***and condition***	
Lining (felt, sarking etc.) ***and condition***	
Insulation ***and condition***	
Exposed brick work ***and condition***	
Humidity (and confirm presence or absence of water tank)	
Temperature	
Any draughts?	
Light levels	
Cobwebs?	
In active use?	
Other features of note	

Evidence of bats

Bats			**Droppings**				**Feeding remains**		**Staining / scratch marks**	**Other**
Species	Number	Location	Number	Species	Distribution	Age	Number	Distribution		

Overall Bat potential: Negligible

Annex 5719/9:

Breeding Bird Survey – Detailed Results 2019

Downlands Farm, Uckfield

Breeding Bird Survey

Ecology Surveys

August 2020

Contents

1 Introduction and Methodology.....1

2 Results.....2

3 Summary and Conclusions.....4

1 Introduction and Methodology

1.1 Ecology Surveys was commissioned by Aspect Ecology Ltd. in April 2020 to undertake a breeding bird survey of a sizeable area of woodland and grassland located to the northwest of the town of Uckfield in East Sussex.

1.2 The site comprises an extensive area of often high-quality deciduous woodland, together with sizeable areas of semi-improved grassland. The area has a distinctly rural feel, despite a road and housing adjacent to the southeast boundary (which means the area is heavily used for walking). The A22 runs through the west side of the site, with a strip of ancient woodland and stream corridor forming the western boundary.

1.3 Three morning surveys were carried out between April and June 2020 in order to assess breeding bird activity within the site. The weather conditions during the surveys are given in table 1.

Date (2020)	Weather summary
26th April	0-1/8 cloud, wind E0-1, 10°C.
23rd May	2-6/8 cloud, wind SW2, 12°C.
20th June	6/8 cloud, wind SW0-1, 11°C.

Table 1: Weather conditions during the breeding bird surveys.

1.4 On each survey an experienced ornithologist walked a circuitous and meandering route around the site, recording the locations, numbers and activity of all bird species present in (and around) the area during this time. This methodology ensures that the vast majority of species that use the site would be recorded over the course of the three visits, although some species that may use the site as part of a larger territory may be missed, particularly nocturnal species such as owls.

1.5 To ascertain the breeding status of birds using the site, the following criteria were applied following the methodology used in the 'Atlas' surveys of 1988-1991 (Gibbons et al, 1993). This accepts the following activities as denoting breeding (including those probably breeding although definite proof was lacking):

- Bird apparently holding territory.
- Courtship and display.
- Nest-building (including excavating nest-hole).
- Distraction display or feigning injury.
- Adult carrying faecal sac or food.
- Adult entering or leaving apparently occupied nest site.
- Nest with eggs or eggshells found, or bird sitting but not disturbed.
- Nest with young; or downy young of ducks, game-birds, waders and other nidifugous species.
- Recently fledged young.

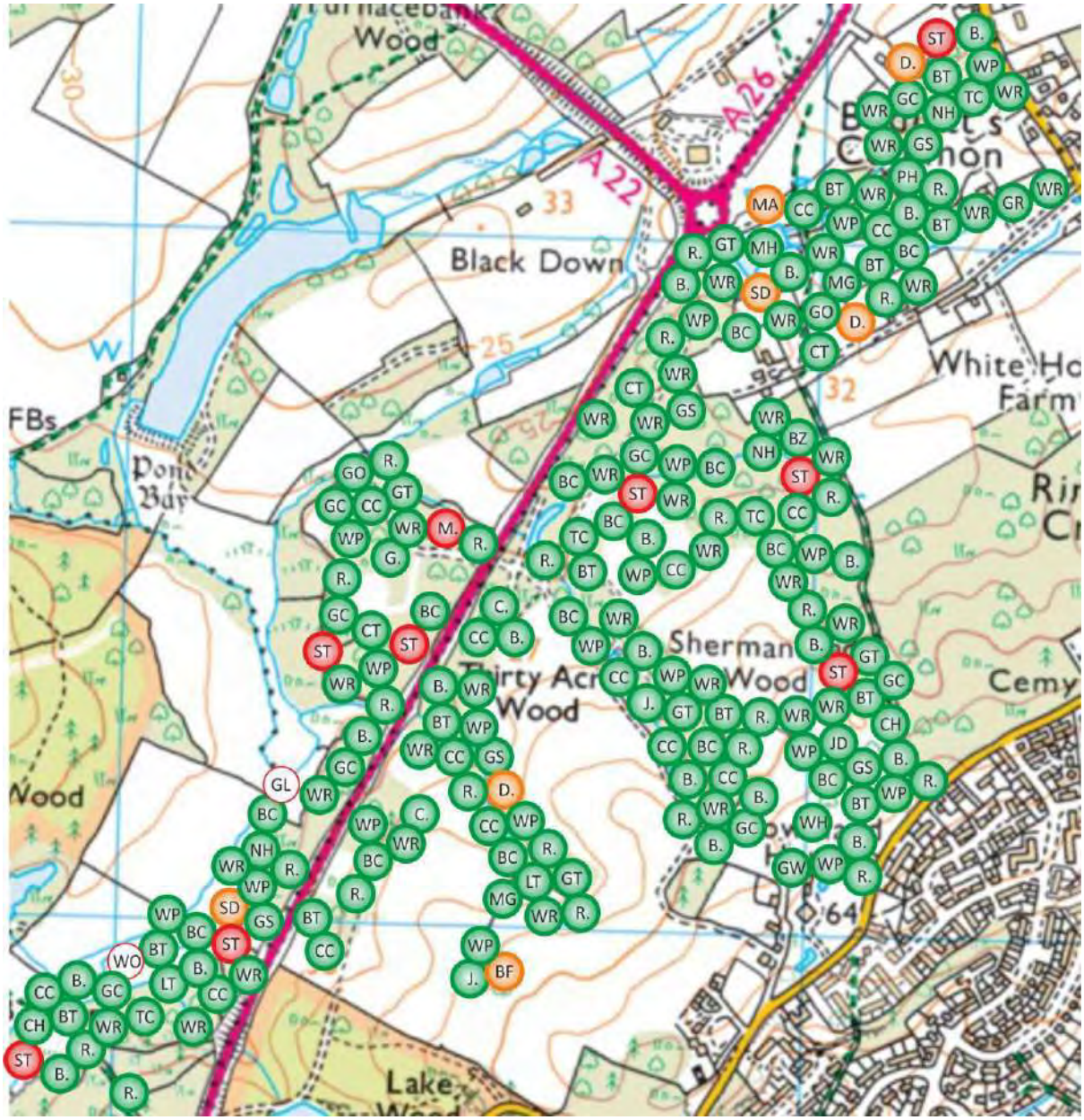
2 Results

2.1 A total of 39 species of birds was recorded during the surveys, of which 33 are breeding or probably breeding and two possibly breeding (i.e. habitat suitable to support the species is present). The remaining four species were either recorded in adjacent areas or flying over the site, or were represented by migrant individuals.

2.2 A summary of observations for each species is included in table 2, whilst the distribution of breeding birds is shown in plan 1.

Species (and BTO species code)	RSPB listed	Est. no. pairs	Notes
Pheasant (PH) *Phasianus colchicus*	Feral	1	
Greylag goose (GJ) *Anser anser*	Feral	0	Three flew over in May.
Mallard (MA) *Anas platyrhynchos*	Amber	1	On a pond in the north.
Stock dove (SD) *Columba oenas*	Amber	2	
Woodpigeon (WP) *Columba palumbus*		19	
Collared dove (CD) *Streptopelia decaocto*		0	Noted on adjacent housing.
Moorhen (MH) *Gallinula chloropus*		1	On a pond in the north.
Herring gull (HG) *Larus argentatus*	Red	0	One flew over in June.
Buzzard (BZ) *Buteo buteo*		1	
Great spotted woodpecker (GS) *Dendrocopos major*		5	
Green woodpecker (G.) *Picus viridis*		1	
Jay (J.) *Garrulus glandarius*		2	
Magpie (MG) *Pica pica*		2	
Jackdaw (JD) *Corvus monedula*		1	
Carrion crow (C.) *Corvus corone*		2	
Coal tit (CT) *Periparus ater*		3	
Blue tit (BT) *Cyanistes caeruleus*		12	
Great tit (GT) *Parus major*		5	
Long-tailed tit (LT) *Aegithalos caudatus*		2	
Chiffchaff (CC) *Phylloscopus collybita*		13	
Willow warbler (WW) *P. trochilus*	Amber	0	A migrant present in April.
Wood warbler (WO) *P. sibilatrix*	Red	0-1	One singing along the western stream corridor in April.
Blackcap (BC) *Sylvia atricapilla*		14	
Garden warbler (GW) *Sylvia borin*		1	On the eastern boundary.
Whitethroat (WH) *Sylvia communis*		1	In scrub in the east.
Goldcrest (GC) *Regulus regulus*		8	
Wren (WR) *Troglodytes troglodytes*		38	Abundant throughout.
Nuthatch (NH) *Sitta europaea*		3	
Treecreeper (TC) *Certhia familiaris*		4	
Blackbird (B.) *Turdus merula*		19	
Song thrush (ST) *Turdus philomelos*	Red	8	
Mistle thrush (M.) *Turdus viscivorus*	Red	1	West of the A22.
Robin (R.) *Erithacus rubecula*		24	
Dunnock (D.) *Prunella modularis*	Amber	3	
Grey wagtail (GL) *Motacilla cinerea*	Red	0-1	On the stream on the west boundary.
Chaffinch (CH) *Fringilla coelebs*		2	
Bullfinch (BF) *Pyrrhula pyrrhula*	Amber	1	
Greenfinch (GR) *Chloris chloris*		1	
Goldfinch (GO) *Carduelis carduelis*		2	

Table 2: Systematic list of bird species recorded during the breeding bird surveys at Downlands Farm, Uckfield.



Plan 1: Distribution of breeding birds at Downlands Farm, Uckfield.
Red, Amber and Green List species are shown in their respective colour. Infilled circles indicate species breeding or probably breeding, unfilled circles those possibly breeding. Species locations do not necessarily show nest sites, but show the location of each species within its presumed territory. For the key to species, see the systematic list above.

3 Summary and Conclusions

3.1 Being dominated by mature deciduous woodland, the site supports a large population of breeding birds that is generally typical of the habitat, without being especially diverse, and resulting in a very high percentage of species that are definitely or probably breeding. In contrast, the open grassland areas were devoid of birdlife, save for the odd foraging carrion crow.

3.2 The most notable species recorded was a singing wood warbler along the western stream corridor in April, with grey wagtail also possibly breeding here – both species are included on the RSPB Red List having undergone major declines in their UK populations. Whilst the wood warbler was most likely a passing migrant, it nevertheless illustrates the quality of woodland habitat west of the A22.

3.3 Other Red or Amber List species breeding in woodland or scrub at the site include stock dove, song thrush, mistle thrush, dunnock and bullfinch, with mallard on a woodland pond. All these species remain common and widespread in both a local and national context, as are all the other species recorded breeding at the site.

Annex 5719/10:

Breeding Bird Survey – Detailed Results 2023

Downlands, Uckfield

Breeding Bird Survey

Ecology Surveys

July 2023

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1 Introduction and Methodology

1.1 Ecology Surveys was commissioned by Aspect Ecology Ltd. in April 2023 to undertake a breeding bird survey of an area of deciduous woodland surrounding open expanses of species-poor grassland, covering almost 1km^2 adjacent to the northwest side of the town of Uckfield in East Sussex, the area bounded to the northwest by the A22 trunk road.

1.2 Three morning surveys were carried out between April and June 2023 in order to assess breeding bird activity at the site. The times and weather conditions during the surveys are given in table 1.

Date (2023)	Start time	Weather summary
25th April	05:00	3/8 cloud, wind N3, 10°C.
30th May	04:00	0-4/8 cloud, wind NE1-3, 10°C.
25th June	09:20	0/8 cloud, wind SE3, 21°C.

Table 1: Weather conditions during the breeding bird surveys.

1.3 On each survey an experienced ornithologist slowly walked a circuitous route around the site, covering the vast majority of habitat, recording the locations, numbers and activity of all bird species present in (and around) the area during this time. Each survey lasted around five hours. This methodology ensures that the vast majority of species that regularly use the site would be recorded over the course of the three visits, although some species that may use the site as part of a larger territory may be missed, particularly nocturnal species such as owls.

1.4 To ascertain the breeding status of birds using the site, the following criteria were applied following the methodology used in the 'Atlas' surveys of 1988-1991 (Gibbons et al, 1993). This accepts the following activities as denoting breeding (including those probably breeding although definite proof was lacking):

- Bird apparently holding territory.
- Courtship and display.
- Nest-building (including excavating nest-hole).
- Distraction display or feigning injury.
- Adult carrying faecal sac or food.
- Adult entering or leaving apparently occupied nest site.
- Nest with eggs or eggshells found, or bird sitting but not disturbed.
- Nest with young; or downy young of ducks, game-birds, waders and other nidifugous species.
- Recently fledged young.

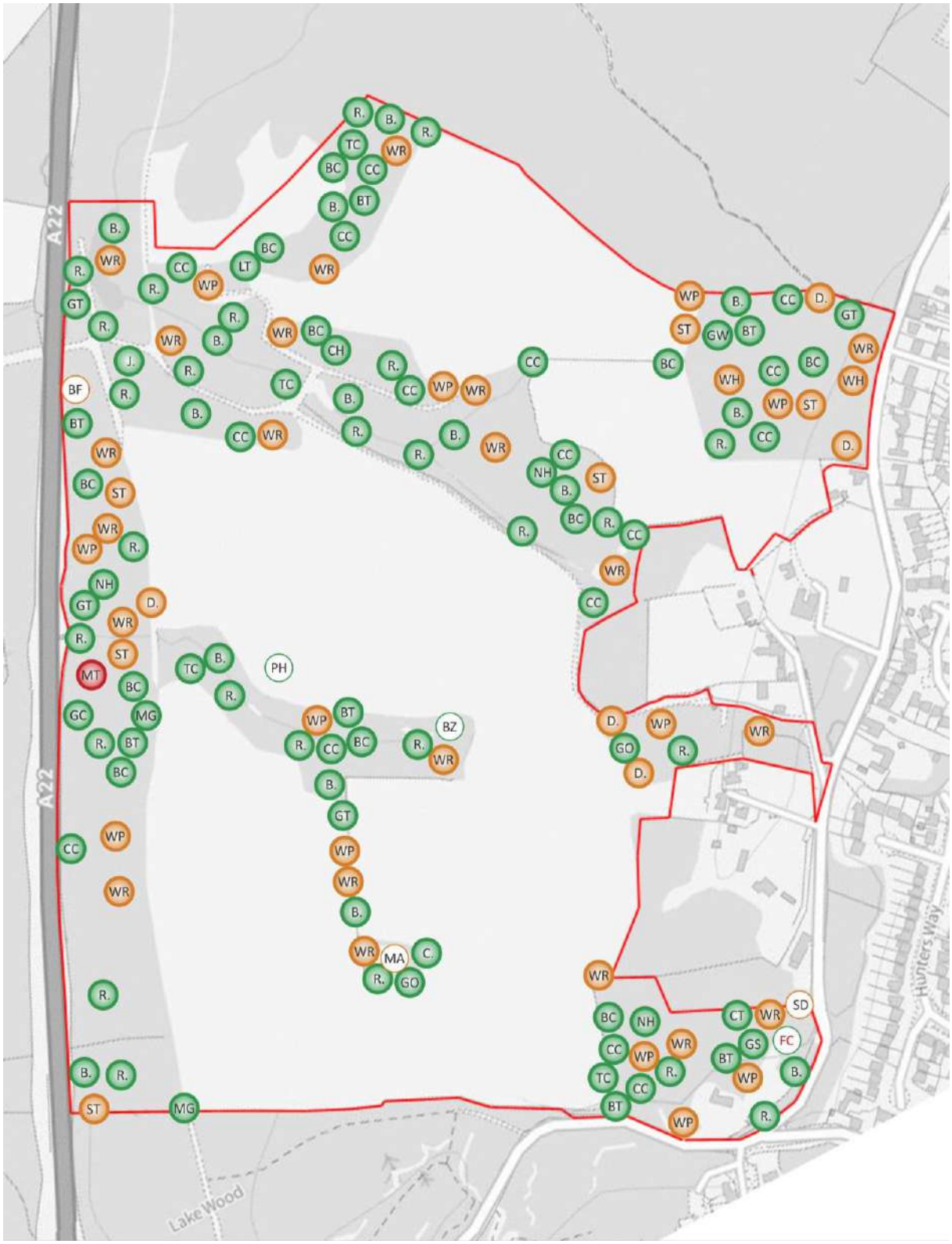
2 Results

2.1 A total of 38 species of birds was recorded during the three surveys, of which 24 species were considered to be breeding and six possibly breeding (*i.e.*, not meeting the criteria in paragraph 1.5, although habitat suitable to support the species is present). The remaining eight species were recorded either as migrants or flying over, or were represented only by non-breeding individuals.

2.2 A summary of observations for each species is included in table 2, including the estimated number of territories within the site boundary, whilst the distribution of breeding birds is shown in plan 1.

Systematic List of species (and BTO species code)	RSPB listed	Est. no. pairs	Notes
Mallard (MA) *Anas platyrhynchos*	Amber	0-1	On the pond.
Canada goose (CG) *Branta canadensis*	Feral	0	Three in grassland in April.
Swift (SI) *Apus apus*	Amber	0	One flew over in June.
Pheasant (PH) *Phasianus colchicus*	Feral	0-1	
Stock dove (SD) *Columba oenas*	Amber	0-1	
Woodpigeon (WP) *C. palumbus*	Amber	12	
Herring gull (HG) *Larus argentatus*	Red	0	Flew over in April.
Red kite (KT) *Milvus milvus*	Sch.1	0	Flew over in April.
Buzzard (BZ) *Buteo buteo*		0-1	
Great spot woodpecker (GS) *D. major*		1	
Hobby (HY) *Falco subbuteo*	Sch.1	0	One flew over in June.
Jay (J.) *Garrulus glandarius*		1	
Magpie (MG) *Pica pica*		2	
Carrion crow (C.) *C. corone*		1	
Raven (RN) *C. corax*		0	One flew over in April.
Blue tit (BT) *Cyanistes caeruleus*		7	
Great tit (GT) *Parus major*		4	
Coal tit (CT) *Periparus ater*		1	Also dispersing birds in June.
Marsh tit (MT) *Poecile palustris*	Red	1	
Long-tailed tit (LT) *Aegithalos caudatus*		1	
Chiffchaff (CC) *Phylloscopus collybita*		16	
Blackcap (BC) *Sylvia atricapilla*		11	
Garden warbler (GW) *Sylvia borin*		1	
Whitethroat (WH) *Curruca communis*	Amber	2	
Goldcrest (GC) *Regulus regulus*		1	Also lingering winterers in April.
Firecrest (FC) *Regulus ignicapilla*	Sch.1	0-1	A juvenile in June.
Wren (WR) *Troglodytes troglodytes*	Amber	21	
Treecreeper (TC) *Certhia familiaris*		4	
Nuthatch (NH) *Sitta europaea*		3	
Blackbird (B.) *Turdus merula*		15	
Song thrush (ST) *T. philomelos*	Amber	6	
Mistle thrush (M.) *T. viscivorus*	Red	0	One present in April.
Robin (R.) *Erithacus rubecula*		26	
Dunnock (D.) *Prunella modularis*	Amber	5	
Chaffinch (CH) *Fringilla coelebs*		1	
Bullfinch (BF) *Pyrrhula pyrrhula*	Amber	0-1	
Linnet (LI) *Linaria cannabina*	Red	0	One present in April.
Goldfinch (GO) *Carduelis carduelis*		2	

Table 2: Bird species recorded during the breeding bird surveys at Downlands, Uckfield.



Plan 1. Distribution of breeding birds at Downlands, Uckfield.
Red, Amber and Green List species are shown in their respective colour (with Schedule 1 species in red font). Infilled circles indicate species breeding or probably breeding, unfilled circles those possibly breeding. Species locations do not necessarily show nest-sites, but show the location of each species within its presumed territory. For the key to species, see table 2.

3 Summary and Conclusions

3.1 The site supports a reasonably diverse assemblage of breeding birds that is entirely typical of the woodland habitats that are present. There was virtually no breeding activity associated with the extensive areas of open grassland.

3.2 The most significant species recorded was marsh tit, including a family party in June proving successful breeding. Marsh tit is included on the RSPB Red List having undergone a major decline in its UK population and range.

3.3 Species protected under Schedule 1 of the Wildlife & Countryside Act that were recorded in June include a hobby flying over, and a juvenile firecrest in the far south of the site. There was, however, no indication of either of these species breeding within the site boundary, with both records presumed to relate to post-breeding dispersal.

3.4 Other species breeding at the site include small numbers of woodpigeon, whitethroat, wren, song thrush, dunnock and possibly stock dove and bullfinch, with mallard potentially breeding at the pond. All these species are included on the RSPB Amber Lists, although they all remain very common and widespread, both locally and nationally, as indeed are all the remaining species that are breeding at the site.

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aspect

Aspect Ecology Ltd
West Court
Hardwick Business Park
Noral Way
Banbury
Oxfordshire OX16 2AF

T: 01295 279721
E: info@aspect-ecology.com
W: www.aspect-ecology.com

ENCLOSURE 4

FLAC 40-1020_JFL
DOWNLANDS

The use of pile-supported boardwalks for access routes through ancient woodland –

Technical Note, 210823 (Revised 050923)

Context

Boardwalks are a known and accepted response to the possibility or occurrence of unmade path degradation at sensitive sites, including nature reserves, peatland, ancient woodland and so on. As such, boardwalks are a **mitigation measure**, that is, a measure is designed to reduce or remove harm that would otherwise occur.

It is for this reason that many landowners use ground protection boardwalks, including the Woodland Trust, the National Trust, many Wildlife Trusts, Royal Botanic Gardens Kew, and also the reason why Natural England frequently recommends and often requires their installation.

The latter is true in the case of Downlands, where NE has asked for boardwalks to be installed for SANG pathways within ancient woodland, as a mitigation measure for ground damage.

The adverse effect of ground damage on trees

The adverse effect of ground damage from excessive and unmanaged foot traffic on trees is confined to their roots but, via these, can have a whole-tree impact. Specifically, severe ground damage on unmade paths:

1. Leads to path spreading as people try to go around damaged areas.
2. Destroys ground flora, including that comprising woodland specialist plants.
3. Compacts the soil to localised bulk densities that exceed the range tolerated by roots.
4. Causes poaching and waterlogging, thereby creating anaerobic conditions within which roots cannot respire.
5. Causes an inversion in the fungi : bacteria ratio, to the detriment of the former, including mycorrhizal fungi beneficial to trees, which are highly sensitive to adverse soil conditions.
6. Results in tree stress, rendering affected trees vulnerable to frequently lethal, endemic, soil-dwelling pathogens such as Armillaria and Phytophthora.
7. Leads to a collapse in soil microfauna, in turn impacting the whole subterranean food-web.

These deleterious effects can become difficult to reverse and so lead to the progressive deterioration of woodland adjacent to damaged paths. This is the existing situation with many paths in ancient woodland at Downlands, such that the installation of boardwalks would be strongly net beneficial.

Boardwalk elements

The design of ground protection boardwalks includes two essential elements, and a number of optional elements. The essential elements are a traffic surface (e.g. wooden cross-slats with anti-slip finish), and a ground support system.

This Technical Note considers the nature and effect of the proposed ground support system.

Tree root protection areas

As a technical editor for BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*, and, now Chair of the British Standards Committee *Trees and Tree Work*, that oversees all tree-related British Standards, I have been closely involved in the preparation of standards for construction systems for use near to trees since 2003.

BS5837:2012 specifically endorses the use of piles for foundation systems in tree root protection areas, and does so with regards to the relatively large-sized piles required for building foundations.

However, much smaller piling systems are available for lightly-loaded structures, for example *Radix Ground Screws*, which result in even less (essentially zero) impact. Ground screws can be installed with hand tools and located to avoid likely high-density rooting areas by adjusting the pile-spacing (within the maximum), which is marked out during the site assessment and installation process.

Proposal at Downlands

In relation to excavation for the foundation/ support system, **no excavation is proposed** because the design relies on minimally invasive piles of the type referred above. These piles would be narrow diameter (76mm) screwpiles that are specifically designed for and endorsed for use in tree root protection areas (and other sensitive locations). See example product brochure at Enclosure 1.

Impact assessment

The boardwalk proposal at Downlands will sit on existing unmade paths that are already heavily trafficked and severely damaged in many places, whilst in others comprise bare ground. As such, there is no existing, sensitive ground flora assemblage at risk.

The proposed boardwalk within ancient woodland at Downlands is a mitigation measure explicitly sought by Natural England. It must follow that Natural England considers this an acceptable and site-appropriate solution. The proposed boardwalk would be installed using the single most environmentally friendly and minimally invasive system currently available. As such, we would not expect this feature to result in any measurable adverse impact on the receptor woodland.

In relation to trees in close proximity to the boardwalk route, direct impacts on these have been assessed by means of walkover survey. This survey found that:

- No high or moderate quality trees would need to be removed to deliver the SANG boardwalk.
- A small number, fewer than 20, of low quality trees *might* need to be removed, subject to topo survey & setting out of the route on site. This equates to a mean spacing along the route between trees for removal of >30m at the worst-case loss estimate.
- A small number, fewer than 20, of early-mature (but not ancient or veteran) hazel coppice stools *might* need to be translocated to nearby areas within the woodland, where receptor opportunities are plentiful; the final total required for relocation is also subject to topo survey & setting out.

The above effects on trees were assessed on the basis of a 2m wide boardwalk installation. However, the actual design utilised will be 1.5m in width and hence effects on trees will be reduced. Effects could be reduced still further by utilising localised narrowings of the boardwalk to avoid trees at the time of its installation. The felling of trees for timber or other woodland products is part of normal woodland management, and any losses to the boardwalk would be replanted elsewhere.

By preventing further/ ongoing ground damage on the existing path network, damaged areas would start to recover, and healthy soil conditions would return over time. This would significantly improve rooting conditions for adjacent trees.

Overall, there would be no harmful impacts on ancient woodland, and strongly net beneficial impacts on it from the boardwalk proposal.

Julian Forbes-Laird