Civil Parish of CROWHURST EAST SUSSEX BIODIVERSITY AUDIT

By
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on behalf of:
Crowhurst Parish Council (CPC)

Typical landscape of the parish in May 2021 (Hillcroft Farm) © John Feltwell

Flooding of the Recreation Ground 6 March 2020 © John Feltwell

[1] Feltwell, J. Local naturalist who has lived in the area for 43 years, and who wrote '*Rainforests*' in which there is a chapter of 'Global Warming' see illustrated chapter in www.drjohnfeltwell.com. He has also been the volunteer Tree Warden for Crowhurst for over three decades.

CONTENTS

Executive Summary 4
Crowhurst Facts & Figures 6
Major Impacts 8
Habitat Assets 15
Ancient Woodland 16-23
Meadows 24
Sandstone outscrops 29
Farms and effect on nature 28
Pond survey 2023 35
Ponds and streams 31
Management of Powdermill Stream 38
Footparhs and 1066 Footpath 43
Crowhurst Countryside Map 50
Important Hedgerows 51
Species Assets **55-**
Trees 63
Flowering Plants 62
Tree Preservation Orders (TPO's) 71
Tree Planting 79
Birds 82
Mammals 92
Invertebrates 94
Butterflies in Crowhurst Meadows, 2023 99
Conservation & Protected Places **101**
30 by 30 Campaign 102
SSSIs 103
Combe Valley Countryside Park 107
AONB 112
Verge Reserves & Management 115
Community Solar Farm proposed 118
Warmer Crowhurst – well-being, carbon footprint 120
Crowhurst Environment Group (CEG) 122
Threats to greenspace – allocated sites 125
Normanhurst – external threat 125
Dark Skies 128
Climage & Ecological Emergency 130
Climate Emergency and Flooding 132
Policies on Renewables, Biodiversity and Dark Skies 134
Flooding 138
Appendices **150**
Appendix A1 Link Road importance 151
Appendix A2 20 Measured Trees 154
Appendix A3 Trees on the Rec 164
Appendix A4 CAVAT of trees in the parish 174
Appendix A5 Ash report 181

Background,

This Biodiversity Audit has been produced for the 'Crowhurst Climate & Ecological Emergency Working Party' (CCEEWP) as part of their commitment to Rother District Council (RDC) since declaring their own Climate Emergency in September 2019.[2] The CCEEWP is a working party of Crowhurst Parish Council which declared the following resolutionat their meeting on 21st October 2019

> ***'Crowhurst Parish Council declares a climate and ecological emergency and aspires to be carbon neutral by 2030 taking into account both production and consumptions emissions'.***

The CCEEWP Working Document: Draft of 1 Nov. 2019 is working to the above resolution: One of its aims was '*to encourage and support the community of Crowhurst to increase biodiversity*.'

The Crowhurst Parish Council (CPC) had already published their '*Environment Description'* within their Neighbourhood Plan[3] in which one of their stated aims under '*3.4 Environment and Heritage'* was '*Policy EH3 To protect and enhance the biodiversity, nature and wildlife in the village*.'

- **The 1st iteration of this report was on 4 May 2020** (124pp). (reviewed as a gold standard – but now updated!!)
- **The 2nd iteration (203pp) of 28 Jan 2022** contained the following new themes

Table WM01 New items added

Items
Farms & their influence on nature
Threats to greenspace inc. allocated sites
Tally of Habitat Assets in Crowhurst - net gains & loss
CAVAT Report (commercial value of trees)
Ash Report (state of the disease) inc felling in Jan 22
New TPO of January 2022
New Hazel Dormice data

- **This 3rd iteration (27 Feb 2023) contains information on**

Items
The 30 by 30 campaign
Latest butterfly count
The Crowhurst Community Solar Farm proposal
Dark Skies Climate Emergency & CEG commitments

[2] Crowhurst Parish Website http://www.crowhurstpc.co.uk/ (retrieved 5 March 2020). In September 2019, Rother District Council declared a climate emergency and pledged to become carbon neutral by 2030.

[3] Crowhurst Neighbourhood Plan 1919. 123 https://storage.googleapis.com/wzukusers/user-21240710/documents/5a2e4a17e82d3twj9t3I/Environment%20Description%208%20Dec%202017.pdf 45pp (retrieved 26 March 2020).

Aims

The aims of this Biodiversity Audit is thus to set a baseline for the parish on which data can be added in the future. Data can also be used for the compliation of Biodiversity Metrics[4] to be prepared by all developers for any proposed planning developments in the future. The data can also be used as an evidence base for continued nature conservation in the parish.

Contents

This audit first quantifies the parish, then looks at the

- Habitat Assets, then the
- Species Assets, then looks at the
- Protected areas and species within the parish; then
- Finally the effects of climate change on the habitats and species.

Executive Summary

- The village is a well-wooded parish with a good range of ancient and medieval habitats and flora and fauna.
- About 70% of the parish is protected under nature conservation law.
- The parish has had a history of being sliced up by the London-Hastings railway line and the more recent Link Road and it is under continued threat from the east.
- Three Sites of Special Scientific Interest (SSSI)s are within the parish boundary.
- Numerous Biodiversity Action Plan (BAP) habitats and BAP species are present.
- The northern half of the parish is in the High Weald AONB, so it has plenty of responsibility and obligation to protect nature.
- At least one hedgerow is ‘Important’ under the law and is about 800 years old. It also has one of the oldest yew trees in England (ca.1000 yrs old) that was present at the Battle of Hastings in1066.

[4] The latest Biodiversity Metric is Version 4.0 to be mandatory for development sites in January 2024.

- Most habitat loss and species loss thus far has been due to man-made habitat destruction and agricultural practices.

- Evidence for climate change effects on habitats and species is currently very limited.

- Some apparent effects of climate change are being felt - most recently the flooding of early March 2020, and January 2023.

- This baseline of evidence will assist with future conservation.[5]

The following is a summary of the facts and figures for the parish:

This includes four management plans

- Powdermill Stream
- Fore Wood RSPB
- Combe Valley
- Verges

[5] This is a working document that can be expected to be updated at regular intervals. It will be deposited on the Crowhurst Parish website, so it will be available to all. Any correspondence can be directed to john@wildlifematters.com or howleyplato@gmail.com or other members of the parish council.

Table WM02 Crowhurst facts and figures

STATISTICS	
Size of parish	2,168 acres (877ha); 3.9sqmiles, or 2,496ac.
Length of parish boundary	17,868lm[6]
Length of parish boundary in & out of AONB	8.75km & 9.118km
HABITAT ASSETS	
Ancient Woodland	17 = about 15% of the parish = 129.16ha
Medieval Field Systems	ca. 17 (those in AONB area)
Meadows (managed)	2 (Muriel's and a National Trust Meadow)
Meadows	Many in the parish have never been described
Hedgerows	(length not calculated yet)
Streams	6 (Powdermill, Watermill, Rackwell, Brokes Gill, Decoy + unnamed)
Ponds and lakes	1. 40 in AONB + 30 not in AONB = 70 (info ex. AONB Unit) 2. 84 in parish (ESCC).These figures do not include garden ponds 3. Settling Lake North of Link Road is ca. 5.01ha
Springs	7 (i.e. 'Spr' on maps)
Wetlands	1 large area Combe Valley (not all of the valley is in the parish)
Sandstone Outcrops	At least seven
Heathlands	None in parish
Bogs	1 (?Little Bog Wood)
SPECIES ASSETS	**(NB. these are all under-estimates, until all the prolific Sussex Biodiversity data is transcribed – particularly the invertebrates)**
Flora: Flowering Plants	Probably well over 200 species
Tree Champions	1000 yr old Yew tree in churchyard'. SIX on UK Tree Register: 3 x Remarkable trees, 1 tallest in E.Sussex, 2 x Girth County Champions
Tree TPOs	3 x 'blanket TPOs'
Trees (CAVAT valuation)	Over £3million on small sample in village
Mosses and Liverworts	11 species
Fungi	37 species
Fauna: Mammals	26 species
Reptiles & Amphibians	5 species each
Birds	100+
Fish	7 species
Invertebrates: Butterflies & Moths	24 butterfly species, 22 moth species
CONSERVED / PROTECTED AREAS	
Statutory area	High Weald AONB (HWAONB) Size inside Crowhurst is 542ha
Statutory (Habitats)	Combe Haven SSSI, Fore Wood SSSI, Marline Wood SSSI (Combe Haven SSSI within Crowhurst parish is ca. 50.36ha).
Statutory (Species)	All bats; BAP species: hedgehog, house sparrows….
Percentage of parish CONSERVED	About 70%
Non-Statutory : Wildflower verges	5
Meadows (managed)	2 (Muriel's and aTrust one)
Linear corridors	4 (hedgerows, wayleaves, link road, railway line)
Quarry Wood	Nature Reserve
NET LOSSES AND NET GAINS	
NET GAINS	50m of new hedgerow along stream on Recreation Ground in 2022. Otherwise no new meadows, hedgerows, woodlands, wetlands recorded/
NET LOSSES - to Link Road NET LOSSES - grubbed out, 2019-21Wildlife losses	Crowhurst parish lost 12.14 acres valued at £60,700[7] (2017 values) 2460 sqm of habitat lost; 11 trees lost, Water vole and Native Crayfish – likely to be extinct in village

[6] Sizes calculated by Rosalyn Day, 6 April 2020

[7] John Feltwell, separate report on the Link Road (2023) now attached as an Appendix.

NET LOSSES (potential) of 3 allocated sites	1.44ha

The Civil Parish of Crowhurst, East Sussex,[8]

Size

According to the Parish Council Crowhurst is 2,168 acres (877ha).[9] According to Wikipedia it is 10.1km^2 (3.9sq miles, or 2,496ac)[10] in size. It is populated by 906 people with a population density of 1,342 sqkm [11] living in 327 homes in the village.[12] [13]

The outline of the parish is shown below as a brown line along the N,W and S and orange line denoting the eastern boundary.

Ecologically the parish is dominated by one very large block of woodland in the NW (Fore Wood) bounded in part by the parish boundary, and by the railway line (a linear green corridor) which traverses the parish in a sigmoid shape entering in the NW and exiting in the SE. Farmland comprises a lot of the parish and wetland south of the Link Road. Small woodlands, shaws and broken hedgerows are scattered around the parish as patches.

The east of the parish is buffered somewhat by the countryside along the west side of Queensway (as the Marline Woods SSSI);

[8] The centre of Crowhurst village is registered here as St George's Church at TQ75741233 and Post Code TN33 9AJ. Crowhurst is within '1066 Country'.

[9]Crowhurst Parish Council http://www.crowhurstpc.co.uk/5951 (retrieved 27 Feb 2020)

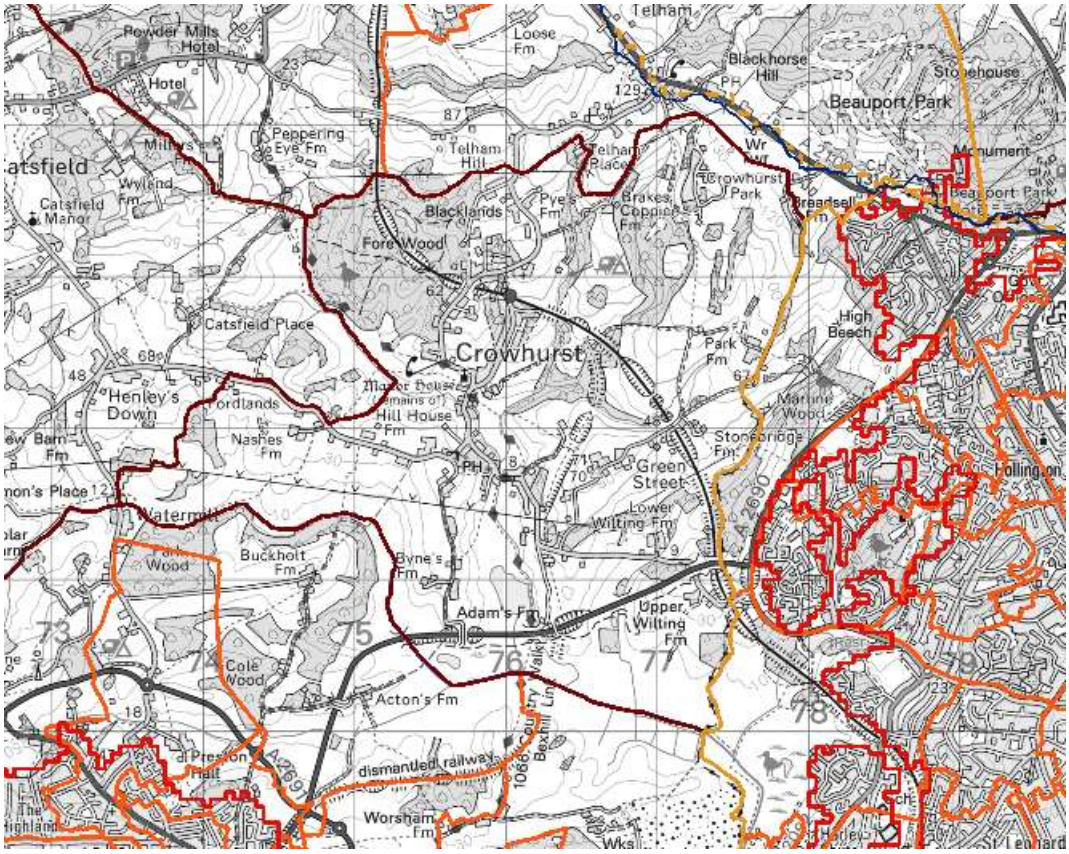
[10] Wikipedia, https://en.wikipedia.org/wiki/Crowhurst%2C_East_Sussex (retrieved 5 March 2020)

[11] https://www.citypopulation.de/en/uk/southeastengland/admin/rother/E04003804__crowhurst/(accessed 15 December 2021)

[12] Beth, L., 2019. Crowhurst Neighbourhood Development Plan Submission Version 2018 – 2028 Report of Examination March 2019 Undertaken for Rother District Council with the support of Crowhurst Parish Council on the submission version of the plan. Independent Examiner: Liz Beth BA (Hons) MA Dip Design in the Built Environment MRTPI.

[13] The population is mentioned here simply because people are believed to be the root cause of climate change. The Crowhurst population has not increased much since it was recorded as having 22 households in 1086, in the Domesday Book https://opendomesday.org/place/TQ7512/crowhurst/ (retrieved 30 March 2020)

Queensway marking the westerly development of St Leonards on Sea.



© magic.gov.uk © Ordnance Survey © Crown Copyright (2005). All rights reserved. Wildlife Matters Licence Number 100002077. Screen shot taken from www.magic.gov.uk by with permission from MAGIC support 6.4.13 Alexandra Hajok (retrieved 08 Feb 2020), showing some different colours representing the curtilages with adjacent parishes.

Major Environmental Impacts (1900 & 2015)

The parish has been cut in two twice, once by the London-Hastings railway line (early 1900), and second by the Link Road (2015) creating three parish parcels (E,W,S).

The ecological effect has been significant as the continuity of habitats has been severed, even in the Link road where attempts have been made to ‘soften’ the impact and establish some continuity of habitat across the carriageways.

In the future it is likely to be impacted by development from the east.

The following photograph shows the signficant environmental impact of the constuction of the Link Road in 2015. The route went through meadows and ancient woodlands in the Combe Valley, missing the

Combe Valley SSSI and but going through a small piece of Marline Woods SSSI.

© Getmapping plc © East Sussex County Council, © Ordnance Survey © Crown Copyright (2005). All rights reserved. Wildlife Matters Licence Number 100002077. (retrieved 08 Feb 2020). The satellite image above showing the loss of habitat across the southern part of the parish represented by the cleared land. The pink routes are footpaths, the green existing and new vehicular, tarmaced routes, and the blue route is a new pedestrian route created. More photographs are at Technical Appendix WM01.

The parish has had imposed upon it part of the Combe Valley Countryside Park which has been developed as a mitigation area as a result of the Link Road.

The construction of the Link Road through the south of the parish of Crowhurst has been the subject of an, as yet un-finished and un-published report.[14] This has tentatively calculated that 12.14ac or 4.92ha. The calculations are shown in this screenshot taken from the report; the report is written by this consultant which is why a quote can be made from it. However, it would appear that the figure may well be an underestimate, as the satellite photograph shown on the previous page indicates many areas where the width is greater than 22.5m. The loss should be balanced by the mitigation measures and the new wetland areas around the site, and away from the site which have been extensive and may provide an ecological gain.

[14] Feltwell, J. 2023. An Assessment of the Ecological Delivery of the Bexhill-Hastings Link Road (BHLR) – renamed the Combe Valley Way, East Sussex, TN33 draft of January 2023. 74pp.

Wildlife Matters
Draft 15 Nov 2019
Technical Appendix WM03

Land lost to Crowhurst Parish

How much of Crowhurst Parish was lost to the Link Road?

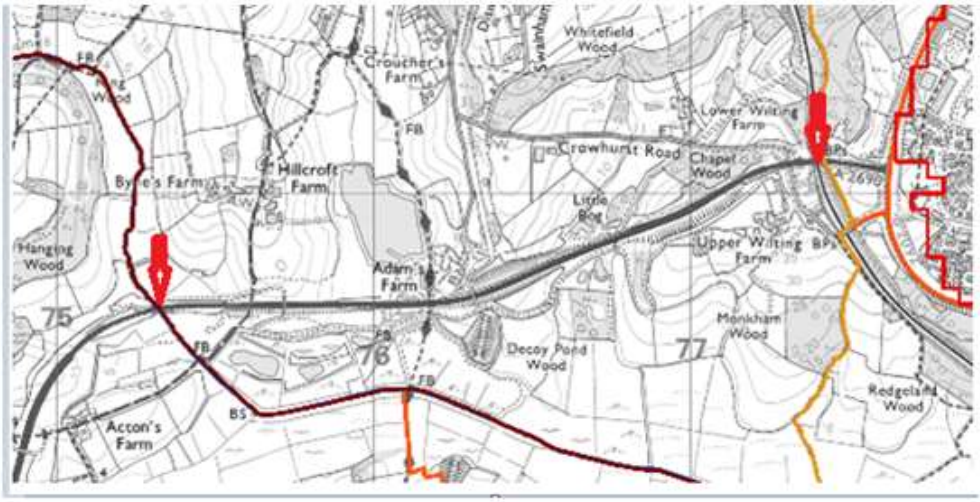
The Link Road within the civil parish of Crowhurst is that section from the Railway Line on the west of Queensway to where it intersects with the parish boundary of Catsfield before Acton's Farm. This length is ca. 2,184m[4].

The width of the carriageways is about 15m, but where there are embankments this rises to about 30m. An average of the two is 22.5m.

Thus the loss to Crowhurst is 2,184m x 22.5m = 49,140sqm or 12.14ac (4.92ha).

Applying land prices for grazing land [5] at £4,400 to £5,500 per acre (say £5,000) comes out at £60,000 for 12ac.

This is 12ac of land that Crowhurst has lost from its total quantum of greenfield land in the parish. It is greenspace that has been permanently lost.



© Ordnance Survey, and © magic.gov.uk, accessed 11 Nov 2019
Length of Queensway to Catsfield Boundary is 2,184m (between the red arrows)

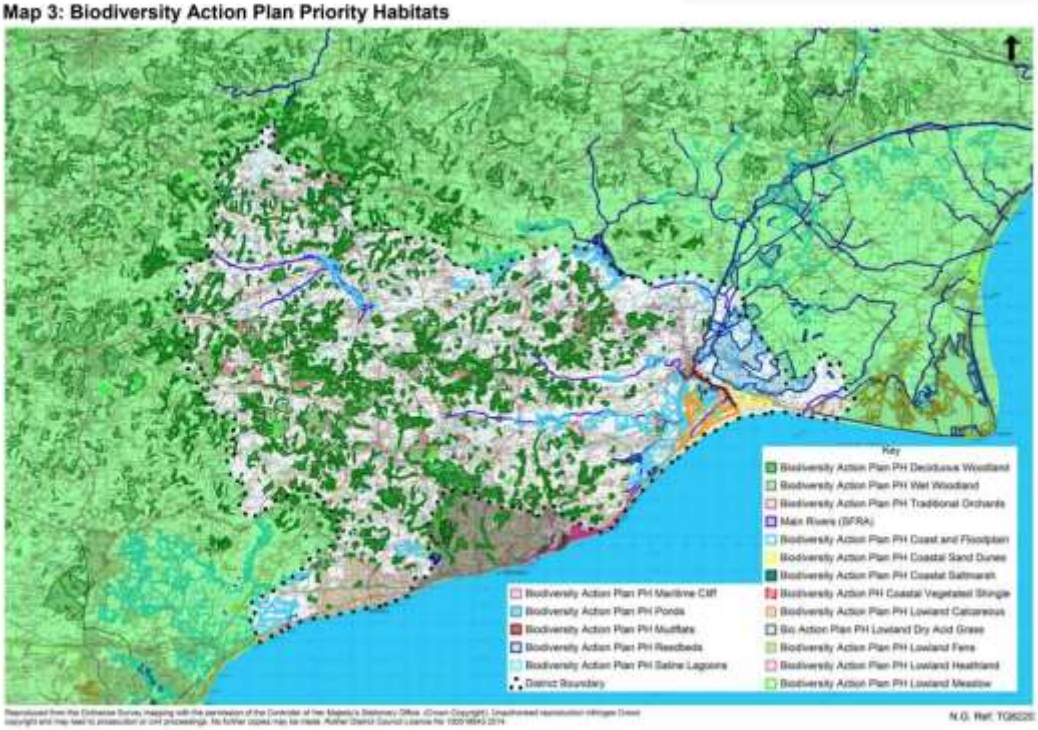
An overview of the natural history of Crowhurst from RDC [15]:

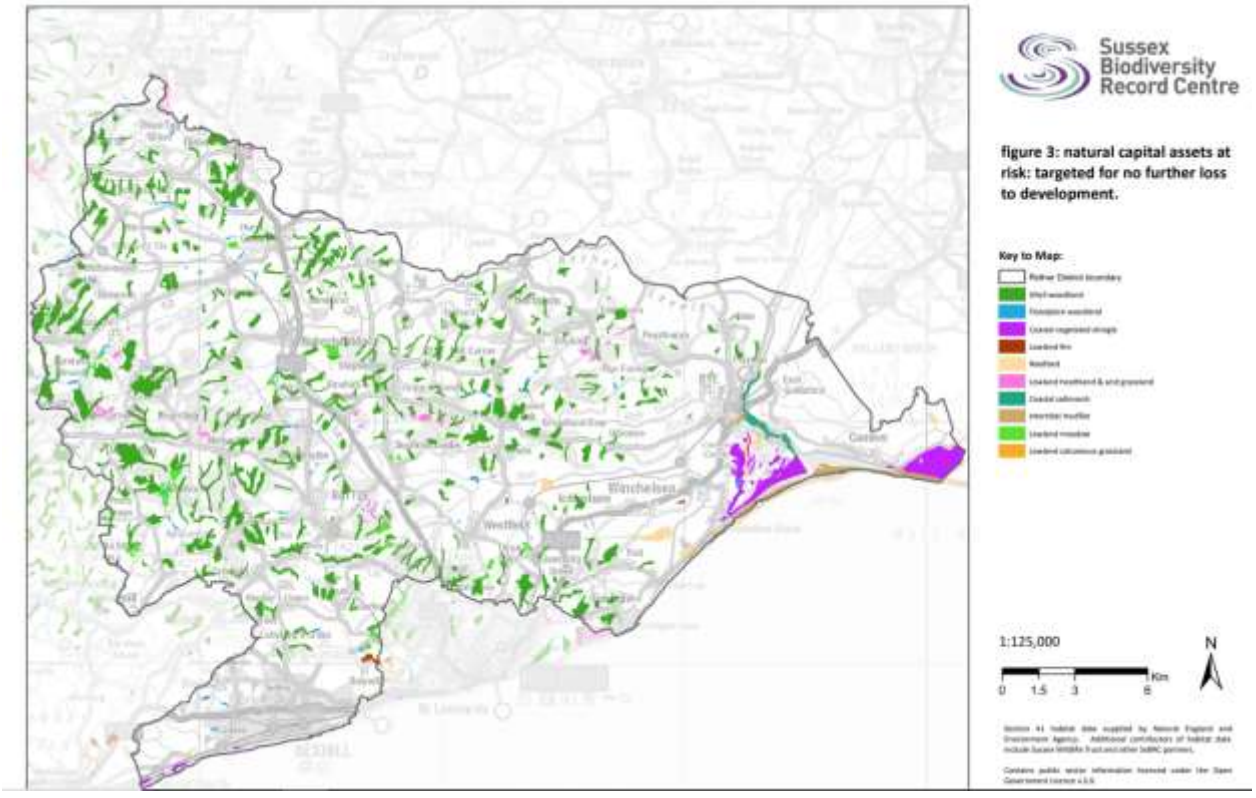
It is worth drawing attention to how RDC summarise the parish (rather well) including the following plan which shows BAP habitats. It is important to note that Crowhurst has collective responsibility for all the interconnected habitats with its neighbouring parishes.

'Crowhurst is a fragmented settlement which straddles the High Weald AONB's southern boundary. It is bisected centrally by the Darwell stream, a tributary of Combe Haven and the whole area is within the Combe Haven Valley landscape character area. It is characterised by small winding High Wealden valleys and much of the central and southern areas have drainage issues and are susceptible to flooding. SuDS will be an important consideration alongside any development that takes place. In addition there are possible land stability issues that will require further investigation. The surrounding area is well wooded, including the ecologically rich Ghyll woodland, which is also an important character feature of the High Weald AONB. Crowhurst hosts the District's sole RSPB reserve – Fore Wood, one of the largest deciduous Wealden woodlands which has been modified by a long history of coppicing, felling and associations with former iron industry: the latter dating from Roman times. Parts of it are designated SSSI and SNCI and the area is a groundwater source protection zone. Other areas of ancient woodland in the vicinity include Rackwell Wood to the east and Whitefield Wood to the south-east. The Darwell valley is interspersed by a series of historic field boundaries that serve to define the medieval pattern of small irregular fields that are interspersed with woodland, which is typical of the High Weald. There are numerous ponds are scattered across the landscape and some large geologically significant sandstone outcrops (a _special to Sussex' feature) abutting the village to the south-east. There are numerous species recorded as present in the area, including dormice (multiple records), grass-snakes, and butterflies (including Small Heath and White Admiral) Development may take the opportunity to provide dormice boxes and the appropriate sort of habitat opportunities set out in Table 1. The south of the village abuts the Combe Valley Countryside Park which stretches all the way to the sea, connects with Hastings and Bexhill, and is home to several BAP priority habitats. The northern section of the CVCP is a dedicated _wildlife zone' and there are opportunities to enhance this role, including by means of connectivity to the rich network of habitats north in the wider Parish. The area is also a designated _Biodiversity Opportunity Area' (Coombe Haven and Marline BOA) which identifies the following opportunities: wetland habitat management, restoration and creation; floodplain restoration and reconnection; access improvements and opportunities associated with development.' © RDC

[15] Rother District Council, 2016. Development and Site Allocations Local Plan. Green Infrastructure, Background Paper Addendum. November 2016 (states October on inside cover) 49pp. https://www.rother.gov.uk/wp-content/uploads/2020/01/Green_Infrastructure_Background_Paper_Addendum_Nov16.pdf (accessed 10 Dec 2021)

Map 3: Biodiversity Action Plan Priority Habitats



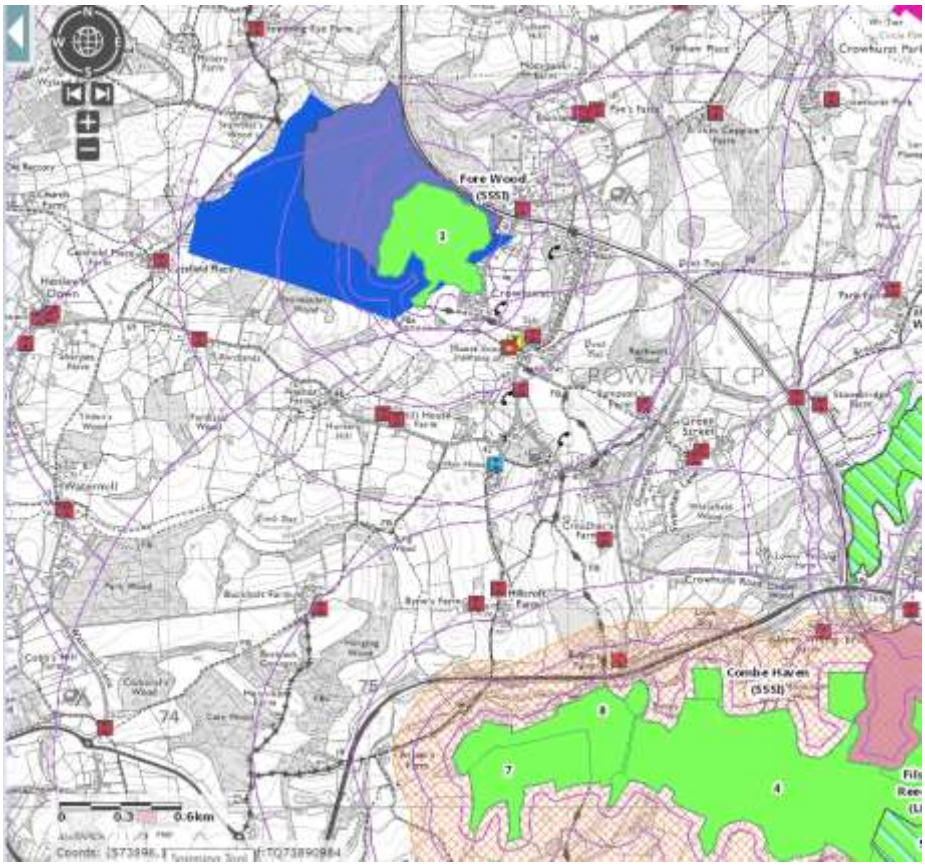


In conservation terms the parish is dominated by three SSSIs, all of which have been closely affected by development over the years. The three SSSIs are shown in the following plan marked in green.

The railway line was constructed before the Fore Wood SSSI was designated, but it now goes past and through the woodlands in the NW of the parish. Part

of the Combe Valley SSSI is now within the parish of Crowhurst, and the Marline Valley SSSI is on the border of the parish and squeezed in between the railway line and Queensway.

The most relevant point in the plan below are the faint purple rings radiating out from each SSSI at regular distances from each SSSI. These are called Impact Risk Zones (IRZ). It is therefore clear that all parts of the parish of Crowhurst are covered by these areas of influence associated with each SSSI. There are no parts of the parish that are not in an area subject to development control consideration.



© Ordnance Survey © Crown Copyright (2005). All rights reserved. Wildlife Matters Licence Number 100002077. (Retrieved 08 Feb 2020) (retrieved 27 March 2020). The red squares are Listed Buildings. The blue square is the church. The different colours of Fore Wood represent different habitat types.

Natural England have provided the following information regarding the interpretation of these purple rings, for the benefit of parishioners who wish to see control exercised, and developers and consultants who wish to understand the constraints on development:

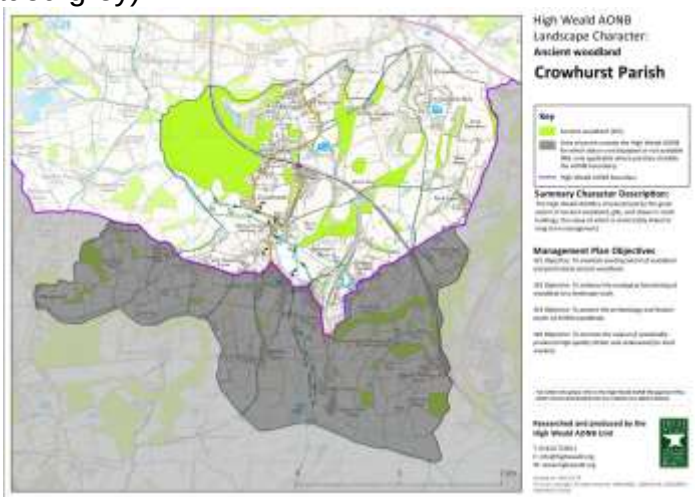
> *'Paragraph (v) of the Town and Country Planning (Development Management Procedure) (England) Order 2015 states that Local Planning Authorities (LPAs) are responsible for consulting with Statutory Consultees if a planning application has the potential to impact on a feature within their particular remit http://www.legislation.gov.uk/uksi/2015/595/contents/made. Natural England are statutory consultees for planning applications which may potentially affect a Site of Special Scientific Interest (SSSI), Important Wetland Area covered by the Ramsar Convention and Natura 2000 sites, such as a Special Area of Conservation (S)C), Special Protection Area (SPA).*
>
> *The onus is upon the Local Planning Authorities (as the competent authority in the planning process) to decide whether a development proposal is 'in or likely to affect a SSSI'. To help them assess whether Natural England should be consulted, the Local Planning Authority use Natural England's recently published set of mapped Impact Risk Zones (IRZs) for SSSI/SAC/SPA/Ramsar sites. These can be accessed at www.magic.gov.uk and can be used by Local Planning Authorities and developers to consider whether a proposed development is likely to affect a designated site and determine whether they will need to consult Natural England to seek advice on the nature of any potential impacts and how they might be avoided or mitigated. For guidance on how to access and use the Impact Risk Zones see our summary information sheet and questions and answers. Further information is available on the archived Natural England website: http://webarchive.nationalarchives.gov.uk/20140605090108/http://www.naturalengland.org.uk/ourwork/planningdevelopment/default.aspx. You can find the reasons why the SSSIs have been designated by clicking on the following website: http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm.'*

HABITAT ASSETS

- **Ancient Woodlands**
- **Fore Wood**
- **Hedgerows**
- **Medieval Field Systems**
- **Ancient Meadows**
- **Sandstone Outcrops**
- **Ponds and Springs**
- **Streams**

Ancient Woodlands

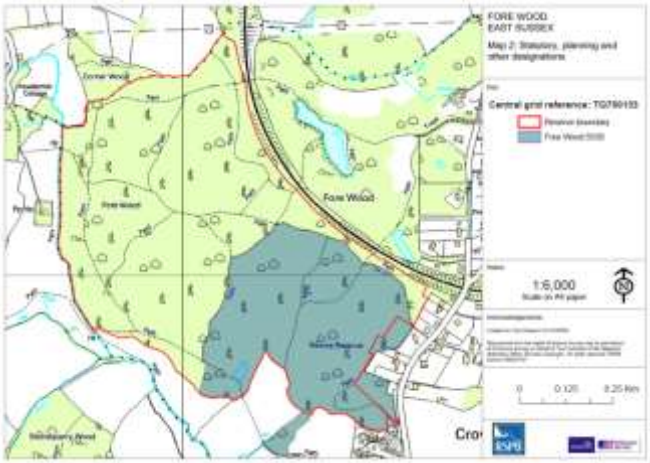
The following shows more detail on the Ancient Woodlands (showing in a lime green) within the AONB part of the parish. Fore Wood is the major block of woodland, with other fragments to the east and south east. Note there are more ancient woodlands outside the AONB, but within the parish to the southeast (shaded grey).



© High Weald AONB, © Ordnance Survey © Crown Copyright (2005). All rights reserved. Wildlife Matters Licence Number 100002077. (retrieved 08 Feb 2020)

RSPB Fore Wood

Fore Wood plays a prominent part in the parish of Crowhurst occupying the north west corner of the parish. Part of the whole Fore Wood (55ha) – which straddles the railway line - is the SSSI part (21.5ha) which is the south eastern part on the south side of the railway.[16]



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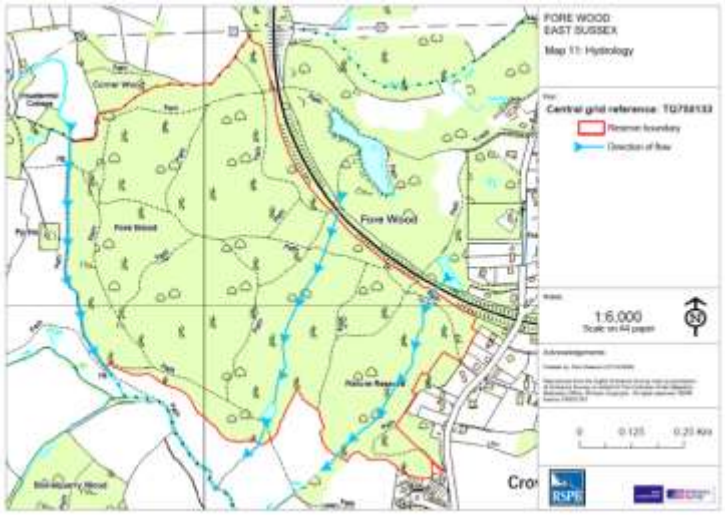
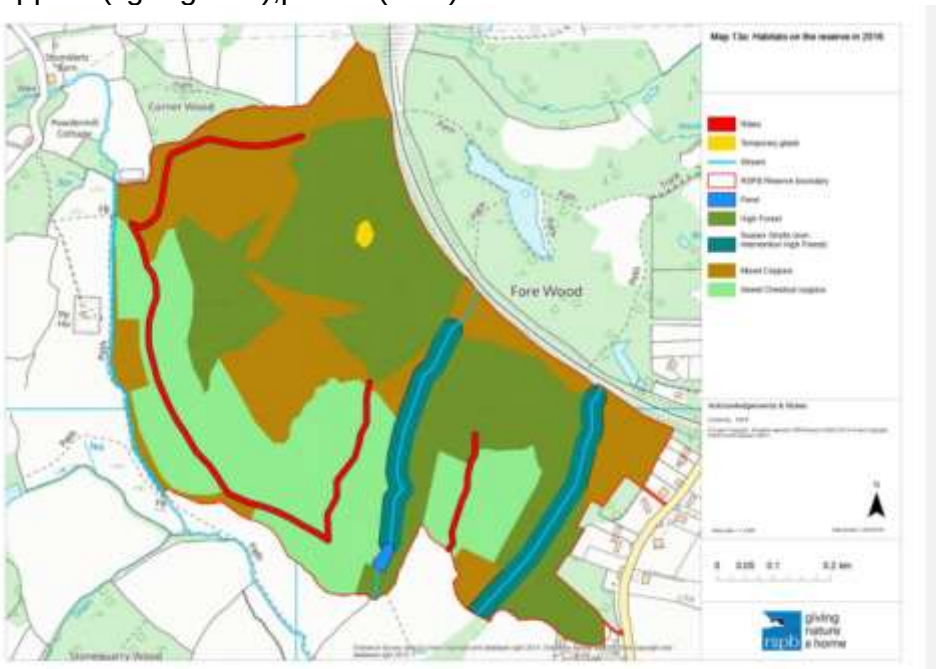
[16] Daw, A. & Twydell, M., 2016. RSPB Fore Wood Management Plan 2016-2026. 55pp

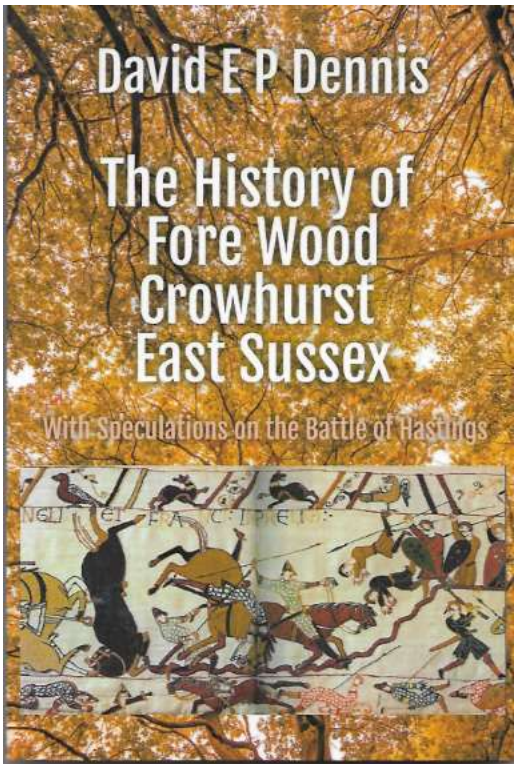
Fore Wood continued….

The following plan shows how the railway line bisects the woodlands, part of which is the SSSI. This plan neatly shows the water course and lake within the woodland.



The following plan shows rides (in red), high forest (dark green), mixed coppice (light green),ponds (blue).





Published by local author, David EP Dennis in 2023. 126pp £15 for Crowhurst residents, softback and as ePub via Amazon. A good read.

Ancient Woodlands

The following plan highlights the presence of ghylls[17] in Crowhurst. These are steep gulleys in the topography that are generally very humid. The ecological significance is that they support bryophytes (mosses and liverworts) of which Crowhurst has a number of species.

The following woods in Crowhurst are all Ancient Woodlands.

Table WM03 Ancient Woodlands in the parish

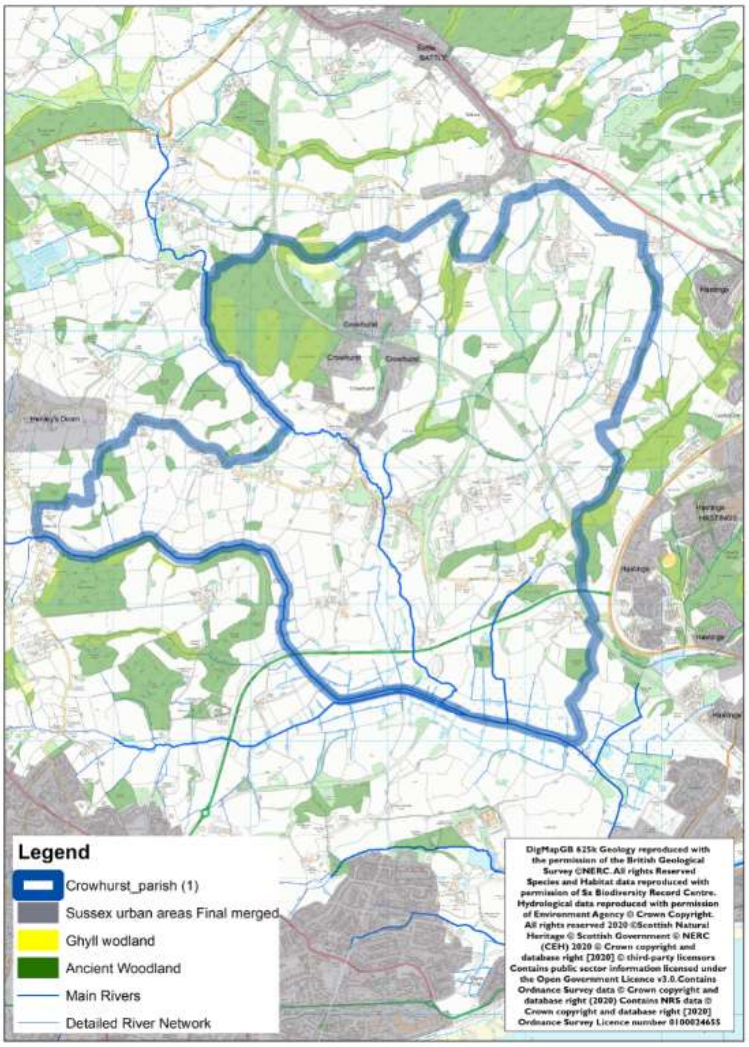
Name of Ancient wood	Size (ha)
'Round Wood' N of Railway Line	1.71
Brakes Coppice Wood (East)	4.59
Brakes Coppice Wood (West)	11.86
Brokes Gill	2.26
Chapel Wood	2.71
Crowhurst Park Wood (East)	0.47
Crowhurst Park Wood (West)	2.48
Decoy Pond Wood	1.91
Disused railway line wood	1.47

[17] Alternatively spelt as gill or gil. '*A deep rocky cleft or ravine, usually wooded and forming the course of a stream. A brook or rivulet 1625*' ex. Shorter Oxford English Dictionary. – which neatly sums up ecology and topography of Fore Wood.

Fordland Wood	4.25
Fore Wood (N of Railway Line)	15.66
Fore Wood (S of Railway Line)	59.11 (RSPB Reserve is 20.9ha)
Little Bog Wood	0.63
Monkham Wood	3.87
Quarry Wood	1.8ha 4.5ac[18]
Rackwell Wood	4.96
Whitefield Wood	9.42

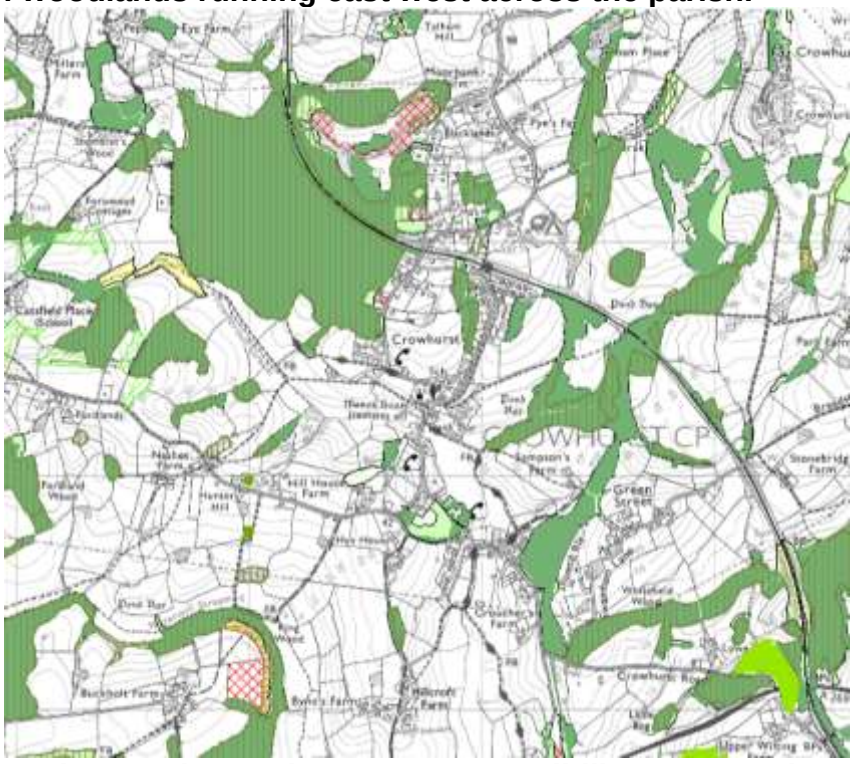
TOTAL ha……129.16ha
Woods as a percentage of the parish as a whole: about 15%

Crowhurst Ghyll & Ancient woodland



[18] According to Paul Johnson, Volunteer Warden pgcrow@yahoo.com

© John Feltwell Taken in June 1993, looking NW, showing Fore Wood to the north of the photograph,the curve of the railway line, and the three rows of woodlands running east west across the parish.



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© John Feltwell June 1993 showing the woods and coppices of the parish, looking NW. Note the curve of the railway line, and how there are three swathes of woodland across the parish – good for connectivity: N-S: Rackwell Wood, Whitefield Wood and Chapel Wood. Note that this image was taken long before The Link Road was built, thus original fields and hedgerows are shown in the bottom third of the photopgraph.

© John Feltwell Another view of much of the parish from the east of Queensway, also showing the extent of flooding in the Marline Valley to the south. The continuity of woodlands is good.

© John Feltwell, the village from Catsfield Road, April 2020

Continuity of woodland habitat

Continuity is good in the parish, in a N-S and E-W direction, but there are still plenty of gaps to fill.

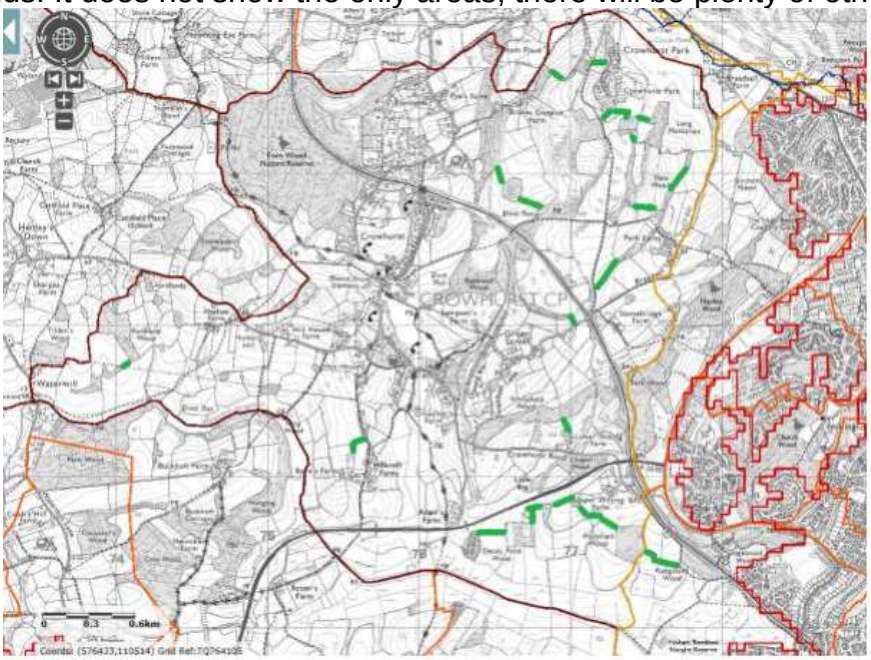
A fox could walk under cover from the NW to SE of the parish within woodland, i.e. from Fore Wood to Queensway (thanks to the railway) as per the following:

> Fore Wood is connected via the green corridor that is the railway line eastwards through Broke's Wood east of Station Road, and thus via the railway line east and then south into Rackwell Wood via the 'dismantled railway' line to the south end of Swainham Lane: then eastwards via Whitefield Wood, across the current railway line and across to Queensway.

There is good connectivity with the dismantled railway line which goes northwards up to Crowhurst Park in the NE.

Generally speaking the parish is blessed with a good range of woods – nearly all Ancient Woodlands. However, the SW around the promitory of Hillcroft Farm there are few woodlands.

This following plan which shows, in green, the possible areas of woodland that could be planted so as to close gaps in existing hedgerows and woodlands. It does not show the only areas, there will be plenty of others.



© magic.gov.uk © Ordnance Survey © Wildlife Matters
(this also appeared in the Neighbourhood Plan of 2019)

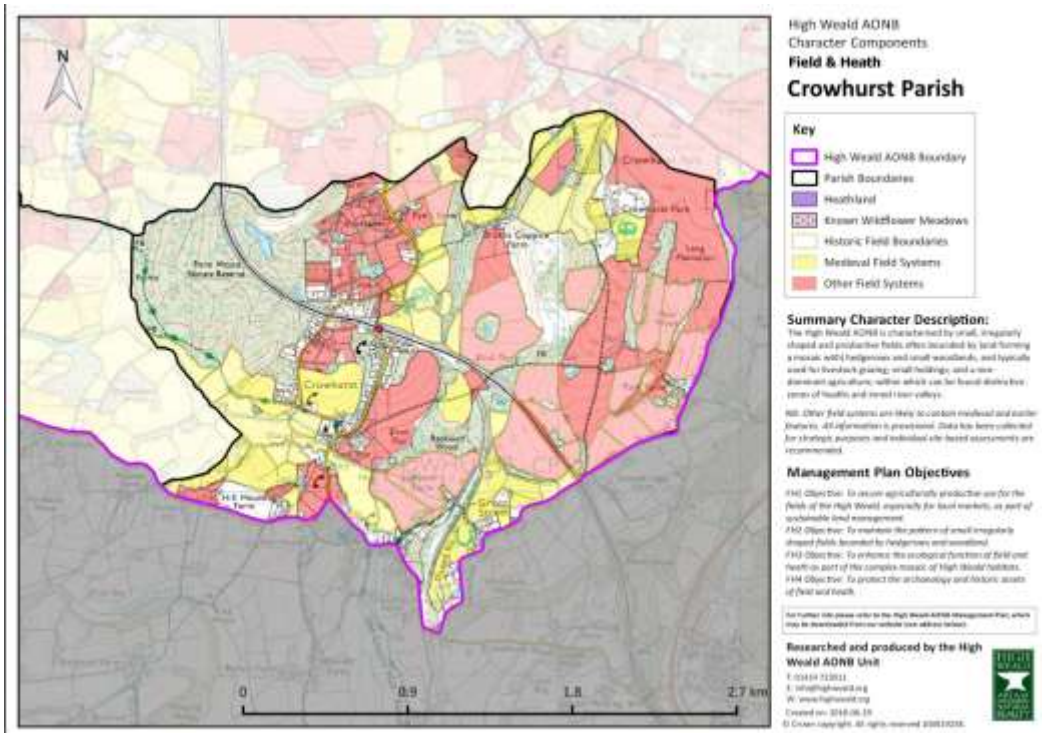
Medieval Field Systems – ancient meadows

According to the AONB unit there are approximately a dozen Medieval Field Systems in the AONB part of the parish as shown in the following plan. These are mostly in the north east of the parish in the Crowhurst Park area, north east of the station, north of Hill House and in Green Street to the east of the disused railway line. There will be other such fields in the non-AONB area to the south.

The plan is labelled 'Field & Heath' but for the avoidance of doubt there are no known heathland habitats in the parish (which is a pity as heathlands have excellent biodiversity).

No surveys of the ancient fields and meadows of the parish has ever been carried out, but AONB must be aware of the species status of the medieval field boundaries to have so marked them up.

The following plan from the AONB unit shows the 'Field & Heath' areas in the parish (only the AONB area).



Ancient meadows support high rates of biodiversity.[19] Many ancient meadows are likely to be present in parish, and only two have so far been identified.

[19] The author of this audit has written John Feltwell (1992). '*Meadows, A History and Natural History'* .Alan Sutton. 206pp.

Table WM04 Meadows

Meadow	Location
Muriel's Meadow	(this is a private nature reserve)
National Trust Meadow	Off Old Fore Wood Lane, at Easting 576071 Northing 113627.[20]

In 1089 there were 15 acres of meadows according to the Domesday Book. [21]

Public domain. Available from: https://commons.wikimedia.org/wiki/File:Crowhurst_Sussex_by_Henry_Harris_Lines_1820.jpg" [22] This shows St George's Church and two cottages, and three haystacks. The location could be from Cinderbrook looking northwest. When was the last haystack seen in the parish?

Two donkeys (Bojangles and Ernie) used to manage the vegetation at Muriel's Meadow in 2020-21; these have now been replaced by two sheep called Daphne and Doris.

---

[20] Thanks to Pam Woolley, Crowhurst.

[21] Domesday Book https://opendomesday.org/place/TQ7512/crowhurst/

[22] https://commons.wikimedia.org/wiki/File:Crowhurst_Sussex_by_Henry_Harris_Lines_1820.jpg) (retrieved 31 March 2020).

Medieval Field Systems – ancient meadows – continued

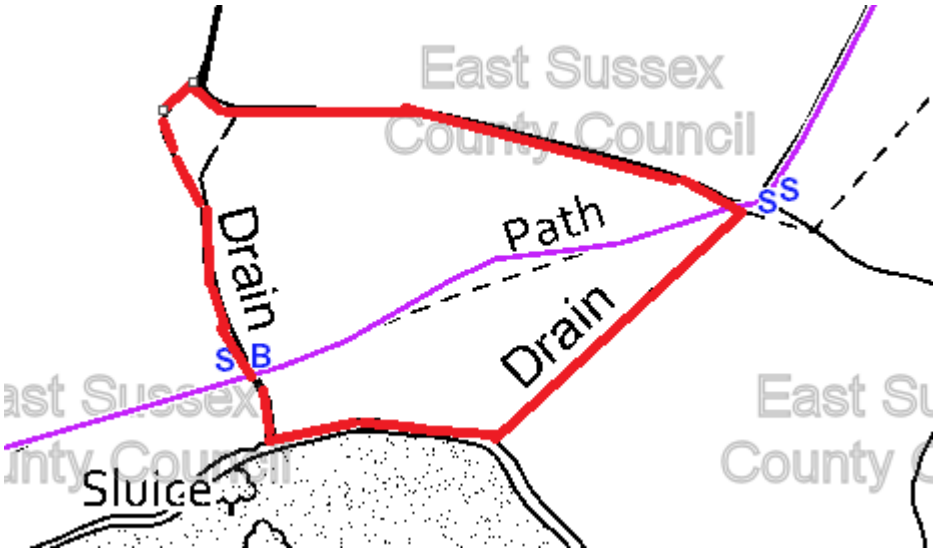
Here are two photographs from around 1900, probably taken at Nashes Farm

© Frances and Stephen Royston, Crowhurst, likely to be at Nashes Farm, Crowhurst

© Frances and Stephen Royston, Crowhurst. A un-named group of parishioners beside a haystack, probably in the village, and likely to have come from Nashes Farm.

An Ancient Meadow adjacent to Watermill Stream

An ancient meadow in the SW of the parish ('Crowhurst 9' footpath goes right through the middle of it). It shows the characteristic peppering of raised ant nests throughout which is an indicator of diversity and longevity of habitat. As far as is known this meadow has never been surveyed for flora and fauna. It is at TN39 5JB and Map Ref TQ74251154; it is trapezoid in shape and relatively small at 13,089 sqm. Priority is to alert the farmer, and suggest that it is never ploughed as it will loose its biodiversity value overnight.



The red line shows the potential ancient meadow; the purple line shows the footpath that goes through it. North is to the top. S = Stile. B = Bridge. Location as indicated in text above. From Definitive Map. ©ESCC

On a final note it is worth recording that the Christian Healing Centre in Crowhurst has a patch of ant hills which they are now conserving.

Farms – and their influence on nature

The following farms occur in the village. How the farmers worked the land had a profound effect on the 'look' of the countryside and the juxtaposition of the fields, woodlands. Hedgerows and wildlife. Hops used to be grown in the village and some of the architecture is reflective of this period for there are at least four oast houses as indicated below. There are no more hop fields in the village. However, 'hop dogs' still occur, but not presumably in large numbers.'Hop dogs' was the nickname of caterpillars of comma butterflies whose caterpillars feed on hops.

Table WM05 Farms in Crowhurst

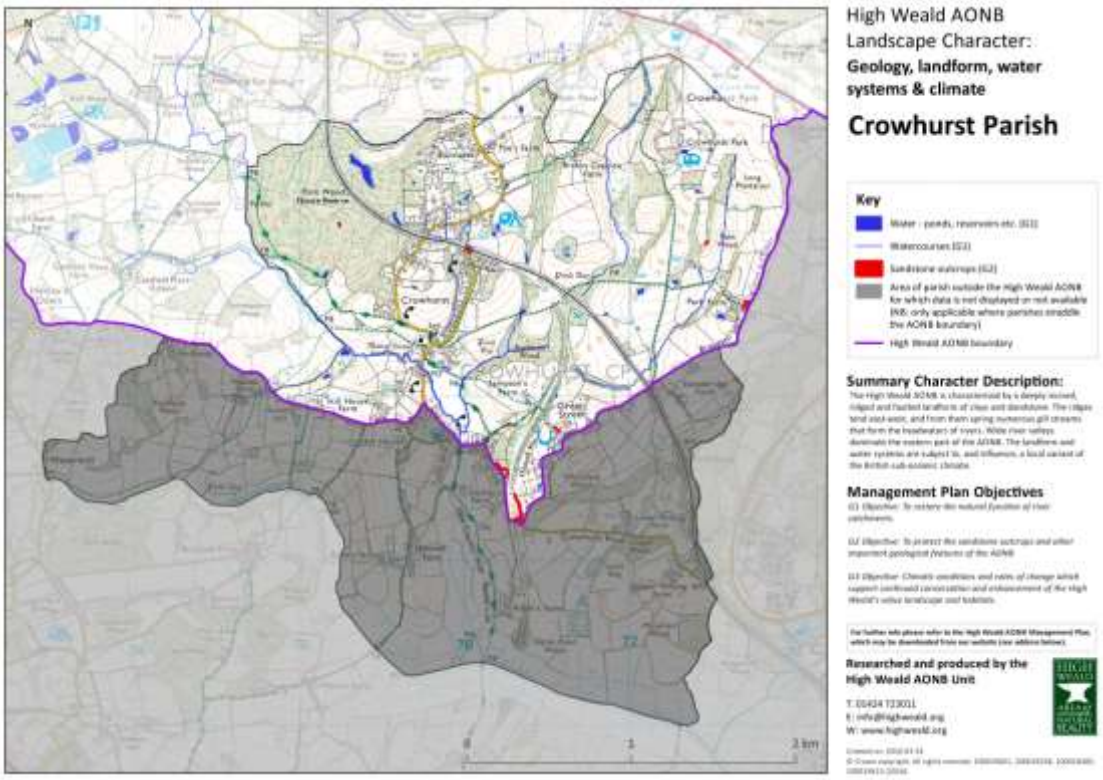
Farm	Notes
Adam's Farm	Ancient farm with old barn and orchard. Some parts dating from 1440
Blacklands Farm	17C restored Grade Ii listed timber framed farmhouse
Bynes Farm	Early 17C timber framed farmhouse and Romano-British ironworking site. Glamping and holiday cottage let
Crouchers Farm	17C Grade II listed – first mention of Croucher in 1428
Decoy Farm	Working farm
Green Acres **Oast,** Swainham Lane	
Green Street Farm[23]	18C Grade II listed building
Hillcroft Farm	Working farm
Horseshoe Farm (as above) - Swainham Lane	private dwelling with some fields
Hye House	
Hye House Farm	18C Grade II listed Georgian mansion. – working farm to 2016
Hyfield Riding School	
Long Walk Farm - Swainham Lane	private dwelling with some fields
Lower Wilting Farm - Crowhurst Road	working farm
Moorbank Farm, Old Forewood Lane	private dwelling with some paddocks
Nashes Farm - Catsfield Road	private dwelling with some fields
Oast House, Catsfield Road	
Park Farm, Swainham Lane	Livery and holiday lets
Pyes Farm **Oast**	17C or earlier, Grade II listed timber framed farmhouse
Stonebridge Farm and **Oast** House - Swainham Lane	
Upper Wilting Farm	18C Grade II listed nr ancient bronze age settlement
Wheatcroft Farm - Forewood Lane	livery and equine
Woodside Farm - Swainham Lane	private dwelling with some fields

[23] Listed as 'Greenstreet Farmhouse' in the late village historian John Springford's booklet *Crowhurst A Village in History*'.

Sandstone Outcrops

Sandstone Outcrops are important habitats in their own right as breeding habitats for solitary bees (ca. 250 species in the UK) and solitary wasps (ca. 250 species in the UK).

Crowhurst has seven outcrops, at least in the high AONB part of the site (see below). There is another outcrop in the garden of Cherry Tree House opposite the Old Post Office, and it should be known that the houses along Chapel Hill are apparently on old sea cliffs[24] when the fields to the north (e.g. Cinderbrook) were inundated by the sea.



[24] The geology of the sandstone in Crowhurst is *'Ashdown Formation – Sandstone, Siltstone and Mudstone. Sedimentary Bedrock formed approximately 134-146 million years ago in the Cretaceous Period. Local environment previously dominated by swamps, estuaries and deltas'* according to igeology (an App that is easily downloaded to a mobile 'phone). Swamps and deltas are not present today in the parish even though some conditions to the south of the parish may seem like it in periods of inundation.

©Frances and Stephen Royston

© Frances and Stephen Royston,

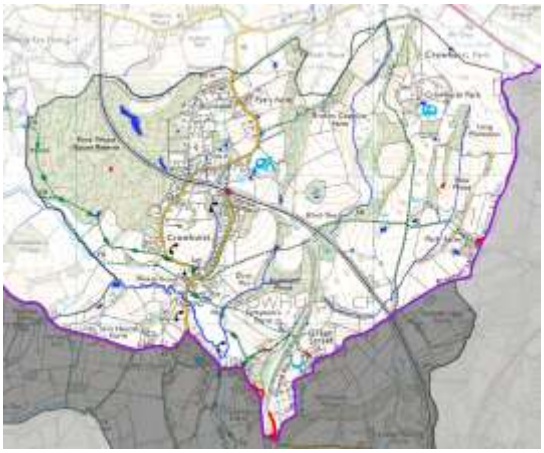
© John Feltwell Sandstone rock exposed in Quarry Wood Nature Reserve, and along Sandrock Hill (below)

© John Feltwell Sandstone rock exposed along the roadside

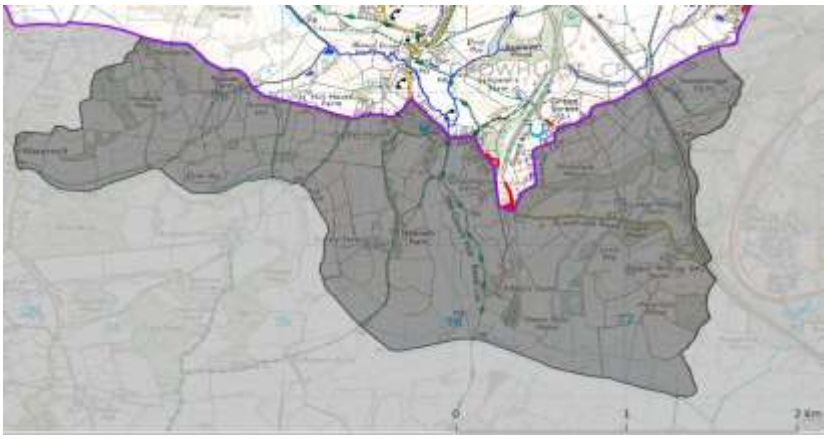
Ponds & Springs

There are about 70 ponds in the parish according to the AONB plans.[25] There are about 90 ponds according to the ESCC plan.[26] Neither plan includes garden ponds, so the total for the parish would be over 100 ponds.

There are ca. 40 ponds[27] in that part of the AONB within Crowhurst parish as shown in the following AONB plan. There are 30 ponds in the parish that are not within the AONB, giving a total of ca 70 ponds in the parish except residential ones.



High Weald AONB, © Ordnance Survey © Crown Copyright (2005). All rights reserved. Wildlife Matters Licence Number 100002077. (retrieved 08 Feb 2020)



High Weald AONB, © Ordnance Survey © Crown Copyright (2005). All rights reserved. Wildlife Matters Licence Number 100002077. (retrieved 08 Feb 2020)

[25] http://www.highweald.org/downloads/publications/parish-information.html

[26] file:///C:/Users/John/AppData/Local/Temp/Temp1_Crowhurst_Landscape%20Character%20Maps%20(1).zip/Crowhurst_Geology,%20Landform,%20Water%20Systems%20&%20Climate.pdf

[27] 37 marked as dark blue and 3 field ponds not marked as dark blue, but light blue instead (missed in cartography) = 40.

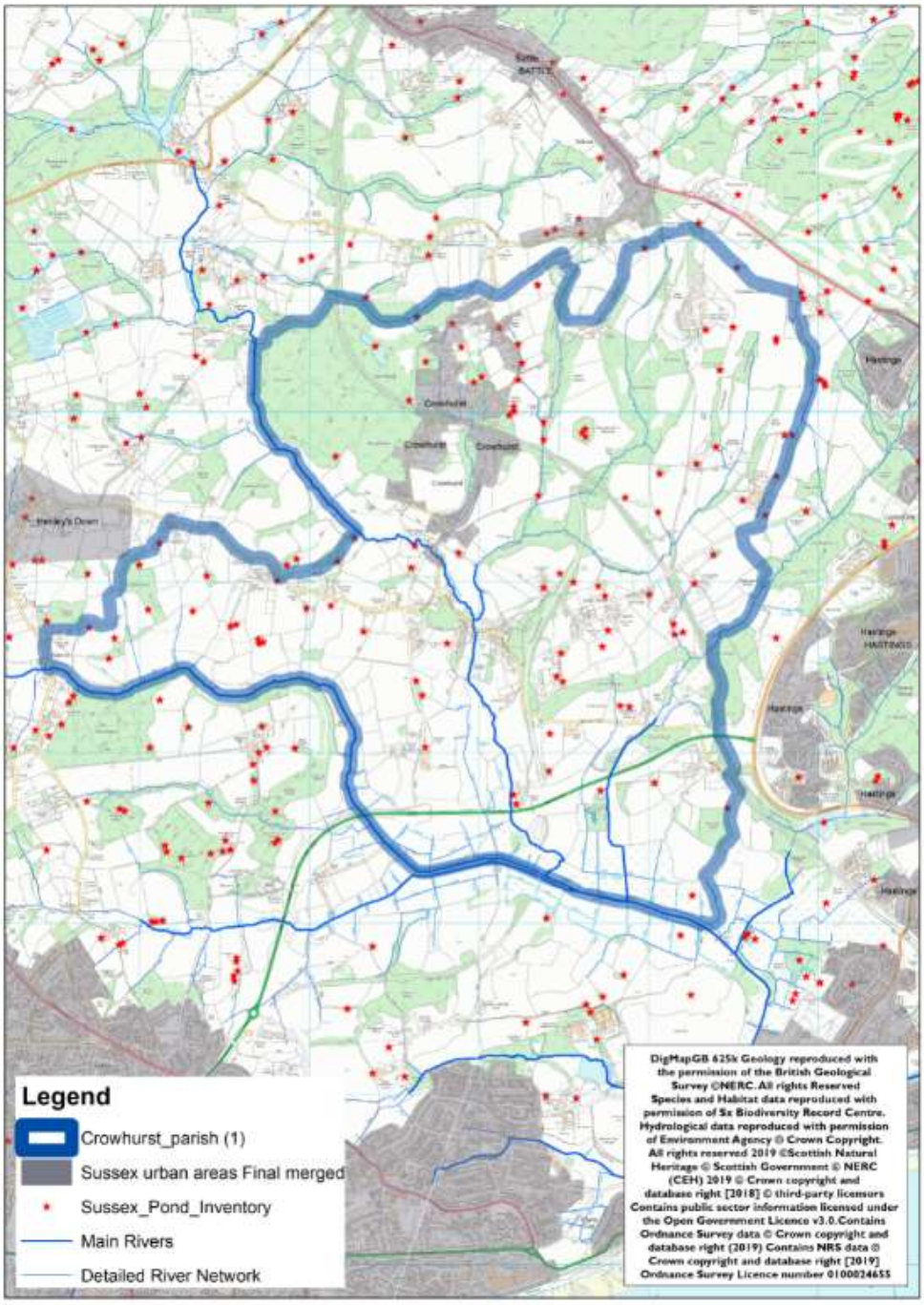
Ponds & Springs … continued

© John Feltwell The Long Pond in Quarry Wood Nature Reserve (over 100m long)

© John Feltwell Private pond beside ‘Public Footpath Crowhurst 9’ at TQ574545 111767

Ponds & Springs, continued…..

Crowhurst Ponds



According to the ESCC plan above there are about 90 ponds marked in red, including 11 that are on the boundary.

Named Ponds

There is currently no Village Pond, and no knowledge of there being one.

One pond has a name 'Circle Pond' which, curiously straddles the Parish Boundary in Crowhurst Park (NE of parish and not on a footpath) and is shown on OS maps.

Decoy Pond Wood is inside the parish to the SE but outside the AONB. The pond was historically built to lure birds.

Springs (7) and 'Pond Bays'

There are seven springs marked on these maps, in and out of the AONB.
The number of lost ponds is not known.

There are three historic '*Pond Bay'*s shown on the map that were once flooded.

Streams

All six streams in the parish flow generally south to the Combe Valley.

1. The main stream is Powdermill Stream (previously known as Asten Stream) which defines part of the parish boundary in the west, and which flows through the centre of the village. It is the stream around which Crowhurst has grown.

2. Watermill Stream is part of the parish boundary in the southwest, and then joins the Powdermill Stream at the weir (see Fish section).

3. Brokes Gill flows south and west of the houses on the west side of Station Road. It joins the Powdermill Stream.

4. Decoy Stream flows south, past Decoy Wood, and joins the Combe Valley streams draining south. It flows through Little Bog Wood.

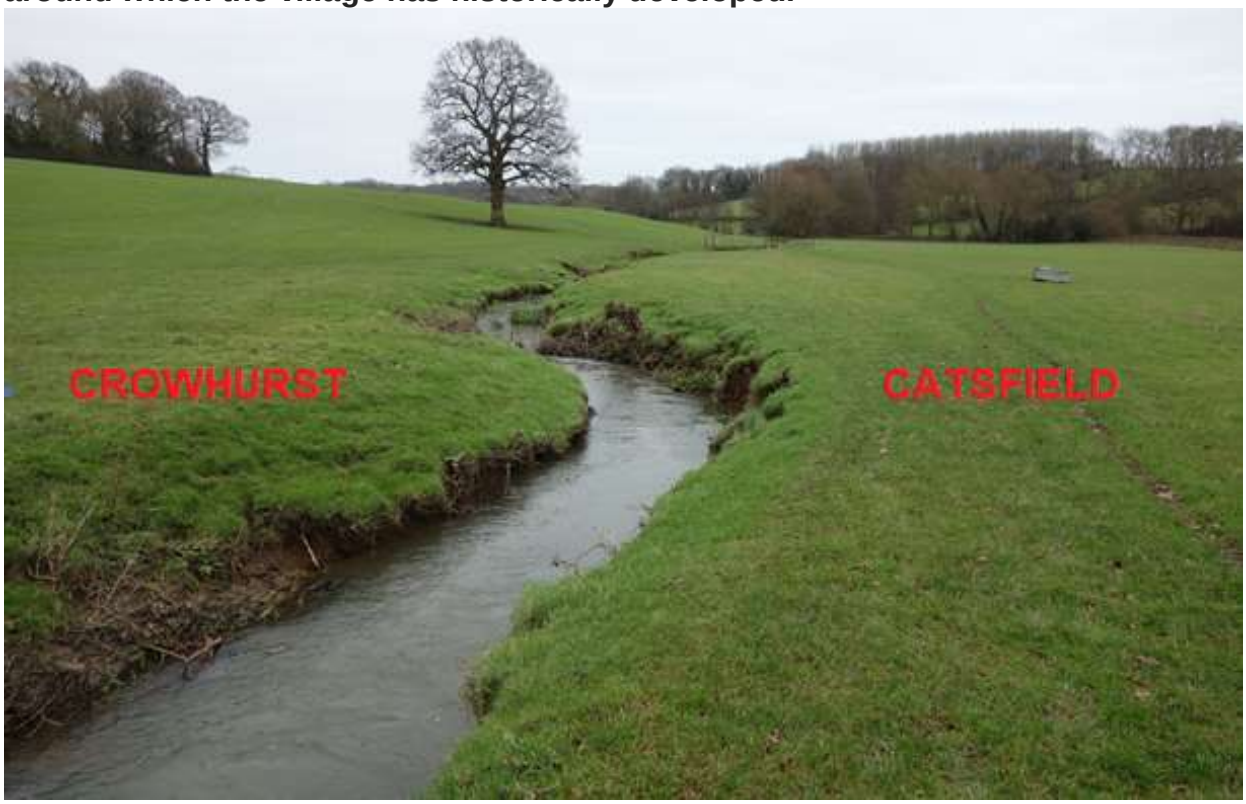
5. There is a stream that also flows from Brake's Coppice and joins the Powdermill Stream.

6. Rackwell Stream which originates in Rackwell Wood and flows directly south.

Crowhurst Environment Group – Pond Survey, 2023

1. Do you have any outside source of water that could be used by wildlife?
    a. Yes (tick all that apply and complete survey for each one)
        i. Bird bath
        ii. Water feature (e.g. fountain)
        iii. Pond
        iv. Rill
        v. Stream
    b. No
2. What is the approximate size?
    a. Less than $1m^3$
    b. Between $1m^3$ and $4m^3$
    c. Between $4m^3$ and $36m^3$
    d. Larger than $36m^3$
3. Is it natural?
    a. Yes
    b. No
4. Does it contain still or running water?
    a. Still
    b. Running water
5. Do you add anything to keep the water clean?
    a. Yes
        i. Chemicals
        ii. Barley Straw
        iii. Oxygenating plants
    b. No
        i. Do you remove excess weed/algae
        ii. No intervention
6. Does it contain plants?
    a. Yes
        i. Introduced species e.g. waterlilies
        ii. Native species
    b. No
7. What proportion is open water in summer?
    a. Less than a third
    b. More than a third
8. Does it contain fish?
    a. Yes
        i. Introduced species
        ii. Native species e.g. stickle backs
    b. No
9. Is it used by newts?
    a. Yes
        i. Common Newts
        ii. Great Crested Newts
    b. No
10. Do you have any problems with your pond?
    Free text field
11. Would you like some advice to make your pond more wildlife friendly?
    a. Yes
        i. Please add your name and phone number in the free text field to Q12
    b. No
12. Please add any further interesting information
    Free text field

© John Feltwell The Powdermill Stream (somewhat canalised) as it flows away from the main road through the village, southwards. This is the stream around which the village has historically developed.



© John Feltwell The Powdermill Stream flowing south to the centre of the village. 25 January 2015.

© John Feltwell The Watermill Stream marking the SW boundary of the parish, and looking west towards Watermill Lane, over the once-flooded water meadows which are now grazed by sheep. The sturdy brick sluice gates are in situ close to where the photograph was taken. The photograph was taken on Public Footpath 'Crowhurst 9'.

© John Feltwell Flood of 6 March 2020, looking north

The Powdermill Stream has such an adverse environmental impact on the village that Management Considerations have been tabled (below) for on-going reassessment:

POWDERMILL STREAM, **CROWHURST, EAST SUSSEX** **within** **Combe Valley Countryside Park**

Management Considerations

By
Dr John Feltwell FRSB of Wildlife Matters
Chartered Biologist
Chartered Environmentalist

on behalf of:

Crowhurst Parish Council
Crowhurst,
East Sussex

Dated 24 February 2021

Background

A small part of the Powdermill Stream lies within the Combe Valley Countryside Park (CVCP) – that is from the Crowhurst Road / Recreation Ground southwards (as shown in the interpretive board above in dark green).

This report does not seek to replace or contradict any Management Plan that the CVCP has for the Powdermill Stream (if any exists). [28] **It would appear that there is no current Management Plan of this part of the CVCP into the parish, as the last visual plan of the conservation is dated 2012-2015.**

Exhaustive enquiries have shown an alarming fact – that the Powdermill Stream through the village actually has no management plan. The EA do not have a plan, (other than a generic nationwide plan for all waterways, and no specific plan, though they take water samples) and the CVCP do not have a plan that runs northward into the parish.

The Powdermill Stream is completely without any specific Management Plan (which has implications regarding ecology and flooding).

There are various reports that include the portion of CVCP that extends into the parish of Crowhurst, and it is clear from the 2007 and 2008 documents that this extension into the parish is illustrated in the maps as a continuum of the SSSI on the south side of the Link Road. This makes the stream a very important complimentary habitat for the SSSI, and thus very important for biodiversity interest of the parish.

I am grateful to Dr Kristina Sodomkova of Rother District Council (Environment & Policy Manager Acquisitions, Transformation & Regeneration) for providing these important links:

> East Sussex County Council. (2007). Pebsham Countryside Park Project Development Strategy: https://democracy.eastsussex.gov.uk/Data/Economy,%20Transport%20and%20Environment%20Scrutiny%20Committee/20070918/Agenda/STE18Sept07item7App1and2.pdf (accessed 09 Feb 2021).
>
> PLB Consulting Ltd. and Acorn Consulting Partnership Ltd (2008). Pebsham Countryside Park Project Implementation Plan: http://consult.eastsussex.gov.uk/file/2294984 (accessed 09 Feb 2021).
>
> Hastings Borough Council ? (2012, Version 6.2). Development strategy review and implementation plan (2012-2015): https://www.hastings.gov.uk/content/planning/planning_policy/adopted_local_plan/dmp/doclist/HBC-PS-89.pdf (accessed 09 Feb 2021).

Aim of this report

- To assess the ecological importance of the stream.
- To see how the ecology of the watercourse informs its management.
- To recommend enhancements.

[28] Information on their management plan was sought from the rangers on 3 Feb 2021, and any further results will be incorporated into this report.

Note on usage

This report is simply for general interest, a stand alone report for the parishioners of Crowhurst. It also covers a lot more of the ecology of the Powdermill Stream upstream.[29]

The report can be circulated freely to others, and if it has implications or factual information of use for any consideration for any downstream development that might affect flooding or wildlife issues upstream in Crowhurst then that is fine. At the current time (Feb 2021) there are plans in Bulverhythe as per Hastings Borough Council's planning application HS/FA/20/00966.[30]

General Importance

The stream is one of six streams in the parish [31] and is the most important steam simply because the village had grown up around it.

It arises to the northwest, as two 'issues' to the south of the Squirrel Pub (Battle parish) in Tellis Coppice, with another issue to east of Starcroft Farm (Catsfield parish). By the time Powdermill Stream reaches Crowhurst it has flowed about 7km. It empties into Combe Valley and thereafter the sea at Bulverhythe.

The stream is likely to have had three names:

i) Today it carries the name of Powdermill Stream only because of its importance in the 18th century for its use in Battle (upstream) for the hammer ponds etc.

ii) Previously it was called the Asten Stream; Asten being a name still adopted for a residential area of Battle. Five of the seven mills which produced Battle gunpowder were situated on the Asten Stream.

iii) Prior to that it was presumably the stream around which the village of Crowhurst was established.

The centre of the village has changed over time. The ancient village centre with the manor ruin, St Georges Church and the ancient yew is where the village hall and school are now located. At the lower part of the village is the Plough Pub

[29] This report is being circulated, via Crowhurst Parish Council, to Combe Haven Sub Group which comprises CIC, EA, NE., Ornithologists (incl. Cliff Dean), Friends of Combe Valley and Catsfield Environment Group (CEG) – and ideas resultant from the above will be incorporated in due course.

[30] Bulverhythe plans https://www.hastings.gov.uk/new-homes/bulverhythe/

[31] Crowhurst Biodiversity Audit, 2020 Crowhurst Biodiversity Audit 2020 – Crowhurst Parish Council (crowhurstpc.co.uk)

(1805) and Recreation Ground. There was also a shop, garage, petrol pump and PO / Telephone Exchange between the two locations until the late 1990s.

The Plough is situated above the flood level of the stream

The present day Recreation Ground may have been a regularly flooded area that had never been drained by villagers. It was originally called the King George's Fields and given to the village – possibly early 20th century.

An altered watercourse

The Powdermill Stream has been straightened in the past ('canalisation') as it is unusually straight after the bridge outside the Plough Inn. In contrast, the stream upstream follows its usual curves and sits more naturally in the countryside.

Wildlife Importance

At the current time (February 2021) no serious ecological appraisal of the stream has been carried out. Fish have only been surveyed; flora and other fauna awaiting surveying.

Flora

A standard baseline for the stream includes the basic species which would be associated with most streams in the parish, and includes the following.

Table WM01 Angiosperms (Wild Flowers) recorded from site

DAFOR is a way of indicating abundance, for instance D is for Dominant, A Abundant, F Frequent, O Occasional and R is for Rare. Rare does not mean the species is rare, i.e. endangered; it just means it is rare on site (for instance there might only be a single dandelion on site, therefore it is noted as Rare).

SPECIFIC NAME	COMMON NAME	Tree	DAFOR RATING	NOTES Ornamental and introduced plants (that contribute little for biodiversity are shown in green)
Alnus glutinosa	Alder, Common	T	O	
Bambusa sp.	Bamboo		R	Invasive species
Buddleia davidii	Buddleia		O	Invasive species
Rubus complex	Bramble		F	
Rumex sp.	Dock		F	
Urtica dioica	Nettle		F	
(survey to be continued)				

Fauna

Seven species of fish were noted in the Biodiversity Audit.

Powdermill Stream flows through the centre of the village. The Watermill Stream flows to the west of the parish and joins the Powdermill Stream at the Weir which is south of the Link Road. The weir is an important physical barrier for fish species.

The streams of Crowhurst can thus be separated into the upper reach stream of the Powdermill Stream in the village, and the 'lower reaches' below the weir. The fish are different either side.

Fish in the upper reaches are Brown Trout, Eels, Brook Lamprey, Stone Loach and Bullhead. Surveys have indicated 'significant numbers' of these species.

Table WM02 Fish recorded from Crowhurst

Latin / Specific Name	Common English Name	Biodiversity Action Plan (BAP) species	Observations
Anguilla anguilla	Eel	BAP species, RED list	SX last seen 2013
Barbatula barbatula	Stone Loach		
Cottus gobio	Bullhead		
Lampetra planeri,	Brook Lamprey		SX last seen 2013 'Sussex Rare'
Rutilus rutilus	Roach		
Salmo trutta	Trout, Brown	BAP species	SX last seen 2014 'Sussex Rare'
Scardinius erythrophthalmus	Rudd		

SX = Information from Sussex Biodiversity Record

Evidence suggests that the waters around Adam's Farm are Brook Lamprey and Trout nursery areas. These are thus important areas for fish species, and their importance become relevant if there are any pollution incidents that might affect the fauna of these waterways. [32]

Pollution (potential)

The greatest long-term threat to the waterway is pollution as run-off from marginal agricultural land along its course through the countryside north of the Recreation Ground. This is manifest in either silt (which kills smaller animals in the food chain), or agricultural chemicals that can kill or disrupt breeding of aquatic animals. Vetinary products used for dogs and cats can also distrupt wildlife, so too various drugs used by humans. So we are all to blame. And need to be vigilent.

Visual evidence of pollution is seen in the greening over the stream by vegetation especially by algae, some of which can be toxic in hot weather. The run-off of nitrogen applied to fields increases the nutrients in the water which makes plants grow faster. This is a common phenomenon, seen widely, not just in the Powdermill Stream.

Other causes of pollution include one off accidents or spillages from the road or households. Remember that the Powdermill Stream drains the southwest side of present day Battle where there are various industries and countryside activities, but it is a while since the stream likely ran red with blood in 1066.

[32] Basil Dean, Environment Agency, Pevensey office, personal comm. 3 March 2020

Public footpaths

Enjoyment of the waterway and the Park can be had not only from the Recreation Ground but from the Public Footpath (PF) (numbered Crowhurst 16a). This indicated by a finger post at the junction with the main road.

© Magic.gov.uk and defra

Powdermill Stream showing erosion by the car park (taken from the FP).

Climate Change Importance

Powdermill Stream has become a major physical feature in the consideration of climate change in the parish of Crowhurst. Flooding is a regular event in the parish and houses get flooded. The following map shows the 'river and surface water flood zones'.

The above plan shows the outline of the parish (in brown) with the three major watercourses flowing into the Combe Valley (in blue).

Flooding events have occurred in 1974, 1984, 1004, 1995, 2001, 2009 (twice), 2010 (twice), 2020. Further details are given in the Biodiversity Audit, 2020.

Powdermill Stream looking south on 6 March 2020

Looking south 11 December 2020

Ownership of the stream

The EA have to seek permission from the CPC for access to carry out their 'Flood Risk Maintenance Works'.[33] The question of ownership was discussed at a late 2020 CPC meeting. Houses along the Powdermill have riparian ownership half way across the stream (as indeed residents up Chapel Hill) with the other side belonging to the Diment family where farmed. The Parish Council Trust probably own alongside the Recreation Ground, but is unclear about the other side and further down the stream to Combe Haven.

Management responsibility of the stream

EA's roles

The Environment Agency (EA) take responsibility for the waterway and the EA are guided by their FB&G Team (Fisheries, Biodiversity and Geomorphology). The EA's Public Liability Insurance, as of 1 April 2020 is shown below.

Environment Agency

Public Liability Insurance

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

ENVIRONMENT AGENCY INSURANCE – PUBLIC LIABILITY

The Environment Agency as a Public Body and in accordance with Government policy in these matters is self insured for public liability risks.

I confirm that we will consider any claim against us for which we are legally liable, subject to the proviso that we will not be legally responsible for any loss, damage or third party claim arising out of your wilful act or negligence.

Yours faithfully

Kevin Sykes
National Finance Manager - Risk and Compliance
Environment Agency

If you have any queries regarding insurance, please contact email us at

In carrying out their work, the EA do respect habitats and wildlife, as Luke Ball stated in email of 16 November 2020 referring to an interactive map, viz:

> 'This map is interactive and should have all the information you need. It's worth noting that locally, after discussions with our FB&G Team (Fisheries, Biodiversity and Geomorphology) we do change our maintenance to be as effective as possible with as little disturbance to the environment and thus the map is not 100% correct as we take local decisions to cut/not cut where we believe it will have the best result.'

The EA currently direct enquiries about maps of the area to their interactive web site as indicated below. [34]

[33] Email from Luke Ball to crowhurstpc dated 18 November 2020.

[34] https://environment.data.gov.uk/asset-management/index.html?element=http%3A%2F%2Fenvironment.data.gov.uk%2Fasset-management%2Fid%2Fasset%2F379880&layer=all-assets

CPC's roles

Riparian owners are responsible for their side of the stream being kept clear. As part of their Duty of Care for the environment the CPC do have to obtain a license from the EA to carry out any works on or close to the waterway within 8 metres of the middle of the stream.

Toxic algae

EA also have their own Duty of Care with regarding the safeguarding people who may be associated with the waterway. A poster was displayed on the noticeboard by the car park dated 14 August 2020 which stated:

- **This water body may contain levels of potentially toxic algae.**
- **These algae may cause illness in humans and animals, including pets.**
- **Keep away from the water's edge.**
- **Keep pets away from the water's edge**
- **Avoid contact with water or scum.**

Flood Warnings

Flood Warnings can now be received on mobile phones from Sussex Live, [35] or from Riverlevels.uk/flood warnings. [36] A typical flood alert was for January 202 as per:

The area marked in blue is the Powdermill Stream in the centre of Crowhurst. It represents 'the area where there the risk of flooding in any year is greater than 1% ' which follows the 'hundred year' flood risk.

[35] https://www.sussexlive.co.uk/news/sussex-news/live-sussex-flooding-updates-river

[36] https://riverlevels.uk/flood-warning-crowhurst#.X_X-vdj7SUk

Management Considerations

The management of the stream has to be balanced between

i) the conservation of fish,
ii) the conservation of other wildlife and protection of habitats along its lengths,
iii) the needs of the community with regard to flooding.

A pragmatic solution is required to address all issues. In principal, it is best to keep waterways open so that water flows away from the ground quicker, thus reducing the effects of flooding.

Timing is important though, since fish spawning times need to be respected. Thus clearing out the stream has to be done whilst respecting all of the above constraints.

From the EA's point of view they like to have open waterways so that they can monitor the state of the water and access the waterway at any time to deal with any blockage. Thus they like to clear out waterways and are not keen on riverside planting.

EA worker taking measurements 11 Dec 2020

Level indicator erected by EA who also monitor the stream as well as our Flood Warden who updates (informally) when flooding occurs

The point should also be made that the management of the Powdermill Stream is ultimately the result of an integrated approach that delivers the aims of the Combe Valley Countryside Park, the EA and the locals.

Enhancements

It is evident that along most of its path in the parish that the Powdermill Stream is often a bare waterway with a general lack of vegetation grown on its banks. Although the EA would like to see open banks for flood control, the biodiversity aims of the community would like to see vegetation that encourages wildlife. A compromise is always necessary. EA permits planting adjacent to waterways, with certain conditions.

Hedge planting in early 2021

Planting a native hedgerow along the east side of the waterway forms part of the aim to increase biodiversity on the Recreation Ground as it was a stated aim in the Crowhurst Neighbourhood Plan (2019).

The new hedgerow comprised the following native species: 160 x Hawthorn, 80 x Field Maple, 80 x Crab Apple, 80 x Hazel, 80 x Common Beech, 80 x Blackthorn, 80 x Hornbeam, 80 x Dog Rose, 80 x Common Dogwood

The hedge was positioned where Environment Agency (EA)[37] deem it is permitted; being about 8m back from the centre of the waterway. The distance from the waterway is to ensure that EA have free vehicular access at all times to deal with flooding events (clearing blockages etc).

Planting of native hedgerow species on 20 February 2021

[37] EA contract is Dan Sargent (Feb. 2021)

Further planting and projects

There are many other opportunities to plant native trees and shrubs along the waterway:

1) The Powdermill Stream past the Recreation Ground is in effect a linear nature reserve of good quality for the parish. It could easily be made an unofficial linear nature reserve for the parish, to augment the roadside verges already designated. The gaps in vegetation along the FP can be planted up with native trees and shrubs according to EA regulations.

2) There are opportunities within the village to plant up alongside the Powdermill Stream.

3) Further upstream much of the Powdermill Stream is bare of vegetation and would benefit for biodiversity, and assist flood control, as the following photographs indicate.

Powdermill Stream, upstream from the village in 2015

Powdermill Stream, upstream from the village in 2021

Document Audit trail

Revision	Date	Report Description	Prepared by
WM1,375	24 February 2021	Powdermill Stream	Dr John Feltwell

The Crowhust Community Map at the Railway Station

The Crowhurst Community Map was created in March 2023 by local artist Emily John with John Cole (photographer) and Audrey Koop (design & production). It aims to show footpaths, natural and historical conservation and wildlife recovery areas. It was funded by Southeast Communities Rail Partnership CIC, Crowhurst Parish Council and Rother District Council Community Grants.

Footpaths and 'Important hedgerows'

The parish is well furnished with Public Footpaths (PF) as shown on this map produced by ESCC in their Definitive Map of Rights of Way of East Sussex.

The only two areas not served with PF are in the NW and SE.

Hedgerows, some of them are 'ancient' and 'Important' according to The Hedgerow Regulations 1976 support much of the biodiversity of the parish, especially if they are on the parish boundary.

Hedgerows are an important aspect and landscape feature of the English countryside, albeit a man-made one that has integrated into the environment and has a rich biodiversity. Regulations introduced in 1997 made it an offence to remove a hedge which is over 30 years old and longer than 20 metres without local authority consent.[38]

The age of hedgerows is conventionally assessed by using the hedgerow dating field criteria proposed by Pollard et al (1974).[39] This relies on the relative abundance of woody species in 30 yard sections of hedgerow. Interpretation is that for every woody species this would be 100 years that it would take to be established.

There are three sections of the parish boundary which are coincident with roads (where there is public access), and where the hedges need to be checked for longevity (i.e. to carry out a hedge-dating exercise):

- Crowhurst Road from White Cottage to Hunter's Hill,TQ74481227 (ca1000m)
- Breadsell Lane from Brickyard Shaw to Breadsell Farm, TQ74811205 (ca1390m)
- Along Watermill Lane - a very short length that is now a garden hedgerow.

[38] Department of the Environment, 1997a. The Hedgerows Regulations 1997, 1997 No., 1160. 16pp. Department of the Environment, 1997b. The Hedgerows Regulations Your Questions Answered. Leaflet.

[39] Pollard, E., Hoopper, M.D., & Moore, N.W. 1974. Hedges. New Naturalist Series, Number 58. Collins. 256pp.

The following table records the number of woody species in the Crowhurst Road:

Table WM06 Woody Species within 30m sections of the hedgerow
(sections sampled from west of Nashes Farmhouse down through the sunken road to Nashes Wildflower Verge)

Latin name	Common Name	1	2	3	4	5
Acer campestre	Field Maple	X				
Carpinus betulus	Hornbeam			X	X	X
Corylus avellana	Hazel	X	X	X	X	
Crataegus monogyna	Hawthorn	X		X	X	X
Hedera helix	Ivy	X	X	X	X	X
Ilex aquifolium	Holly	X		X	X	X
Lonicera pericylemon	Honeysuckle	X	X	X	X	X
Prunus spinosa	Sloe/Blackthorn					X
Quercus robur	English Oak			X		X
Rubus sp.	Bramble		X	X	X	X
Ruscus aculeatus	Butcher's Broom	X	X			X
Ulex europeae	Gorse					X
Total number of woody species		7	5	8	7	10
Average number woody species = 7.4						

Average number of woody species per 30 yard section = 7.4
But that includes sections 1 and 2 which are west of Nashes Farmhouse.
However, sections 3, 4 and 5 are from Nashes Farmhouse downhill (eastwards) through the bends to Nashes Wildlife Verge.
The average here is 25 / 3 = 8.3 species.
Thus the hedgerows through this sunken lane are about 800 years old.
This is backed up with other flora on the banks, such as two species of fern (Bracken and Polypody) and indicator species[40] of bluebell, yellow archangel, wood sage and dog's mercury.

Note that this is a biodiversity hot-spot of the parish.

[40] Indicator species are species that indicate an ancient habitat

The following plan is taken from the ESCC Definitive Rights of Way:

© Getmapping plc © East Sussex County Council, © Ordnance Survey © Crown Copyright (2005). All rights reserved. Wildlife Matters Licence Number 100002077. (retrieved 08 Feb 2020). The red circle includes most of the parish.

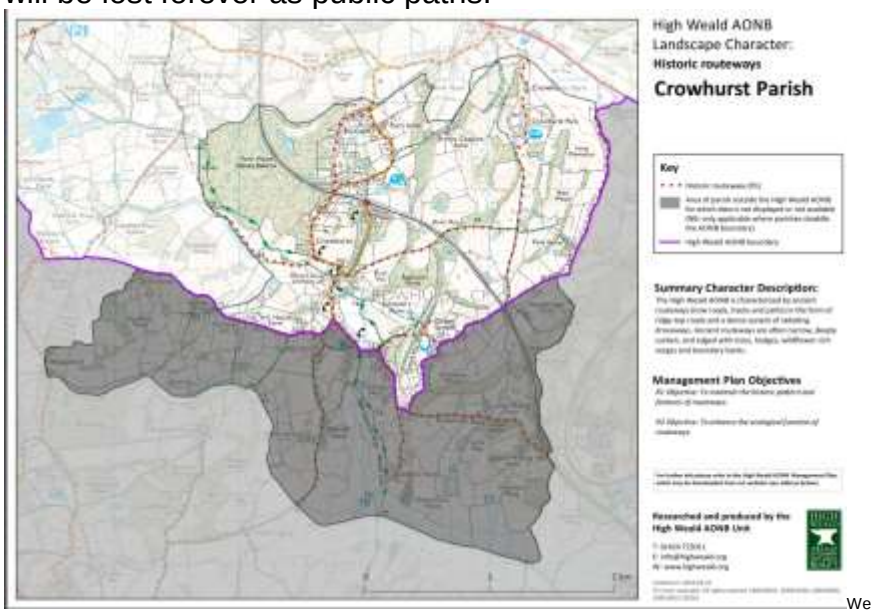
See also the footpaths in the Combe Valley Countryside Park at the end of this audit.

Possible 'Important Hedgerows' in the parish

© John Feltwell Crowhurst Road at Nashes Farm, showing old hedgerows 6 March 2020. Public footpaths branch north and south from this road at this point.

© John Feltwell Battle Ramblers tackling flooded Breadsell Lane, 19 Oct 2019; notice the hedgerows either side of the lane. Enjoyment of the biodiversity is greatly appreciated by walkers and ramblers using the footpaths and lanes of the parish, in all weathers.

The historic routeways, at least only in the AONB part of the parish are shown on this following AONB plan. The routeways do not all correlate with today's footpaths. This needs to be looked into, as any paths not registered by 2026 will be lost forever as public paths.



We

© High Weald AONB, © Ordnance Survey © Crown Copyright (2005). All rights reserved. Wildlife Matters Licence Number 100002077. (retrieved 08 Feb 2020)

Should parishoners wish to 'beat the hedgerows'[41] following a traditional manner, then these two hedgerows are accessible from the public highway.

© John Feltwell Drone footage, looking north, Autumn 2019. Crowhurst does not have any pavements or street lighting all of which is a benefit to biodiversity.

[41] Boundaries in Landscape History, https://en.wikipedia.org/wiki/Boundaries_in_landscape_history (retrieved 7 April 2020)

SPECIES ASSETS

- **Angiosperms**
- **Fungi**
- **Ferns**
- **Avifauna**
- **Reptiles**
- **Amphibia**
- **Invertebrates**

Data Collection

The Sussex Biodiversity Record Centre (SBRC) provided this author with an up to date (25 March 2020) data search for habitats, flora and fauna of Crowhurst Parish.

They logged a total of 5,386 species records of 53 species which have international designations, 151 species with National designations and 353 species of 'other designations' present in the parish.

There are 34 known species of invasive plants in the parish.

As the copyright data of the records belongs to those who collected it, either alive now, or dead, their collective permission cannot be obtained.

The long list of species ever found in the village runs to 111 pages and is NOT reproduced here, only the summary which is shown on the following page.

Therefore a snapshot of all the species records can only be given in the Biodiversity Audit.

In contrast, this Biodiversity Audit which contains data from many data collectors, will be available to all in a fully transparent way.

Sussex Biodiversity Record Centre

Ecological Data Search SxBRC/19/917 - Summary Report

An ecological data search was carried out for land at Crowhurst parish on behalf of Dr John Feltwell Feltwell (Dr John Feltwell) on 25/03/2020.

The following datasets were consulted for this report:

	Requested	Radius/buffer size
Designated sites, habitats & ownership maps	Yes	Site only
Protected, designated and invasive species	Yes	Site only

Summary of results

Sites and habitats

Statutory sites	3 SSSIs / 1 AONB / 1 LNR
Non-statutory sites	4 LWS / 1 LGS / 2 Designated Road Verges
Section 41 habitats	6 habitats
Ancient and/or ghyll woodland	Present

Protected and designated species

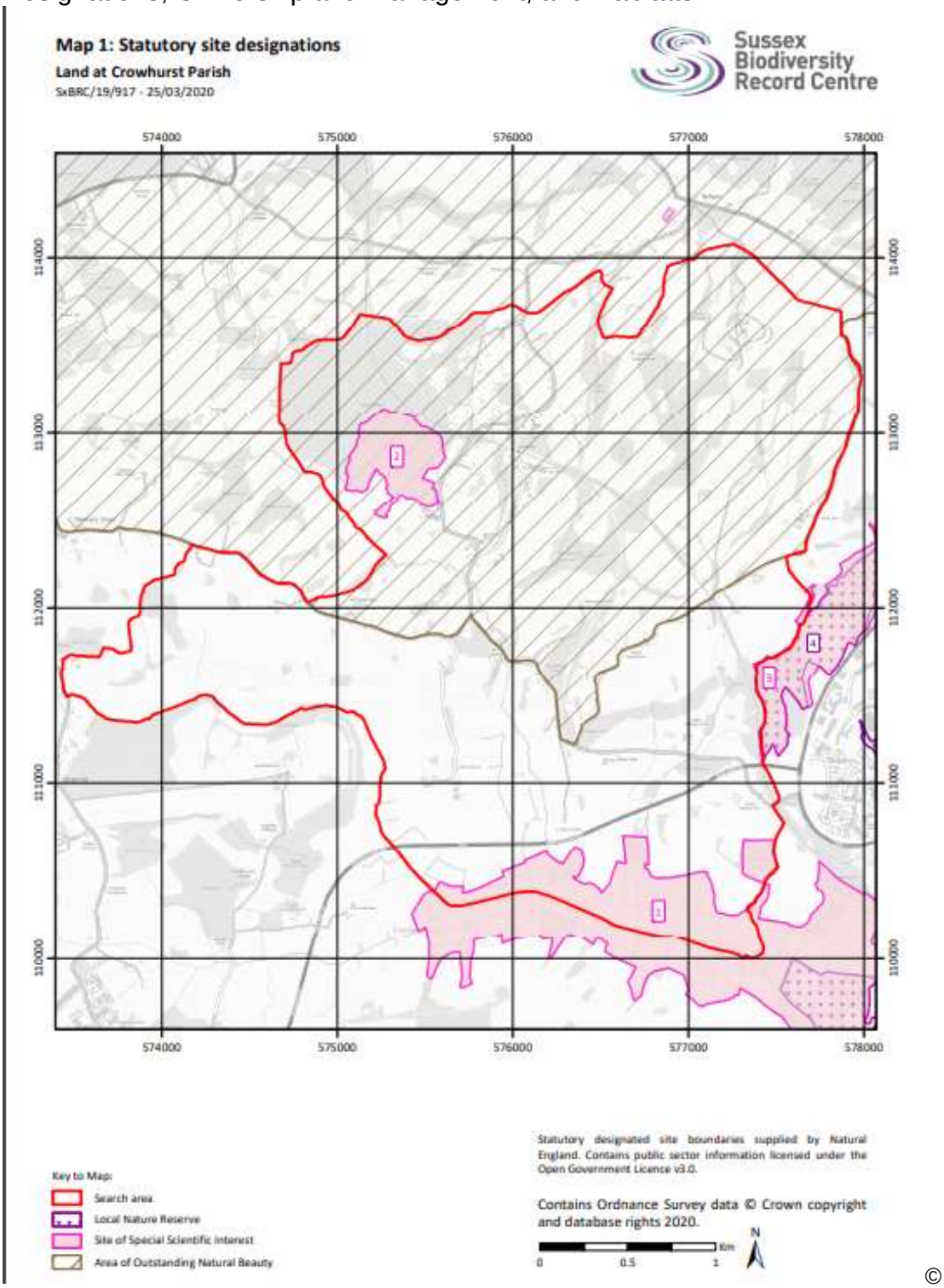
International designations	53 species	442 records
National designations	151 species	3,274 records
Other designations	353 species	4,802 records
Total	**381 species**	**5,386 records**
Invasive non-native	34 species	145 records

The report is compiled using data held by Sussex Biodiversity Record Centre (SxBRC) at the time of the request. SxBRC does not hold comprehensive species data for all areas. Even where data are held, a lack of records for a species in a defined geographical area does not necessarily mean that the species does not occur there – the area may simply not have been surveyed.

This summary page may be published.
The full report and maps may not be published or otherwise shared.

The data search report is valid until 25/03/2021 for the site named above.

The following four plans are reproduced © Courtesy of The Sussex Biodiversity Record Centre (SBRC) on Statutory and Non-Statutory Designations, Ownership and Management, and Habitats.



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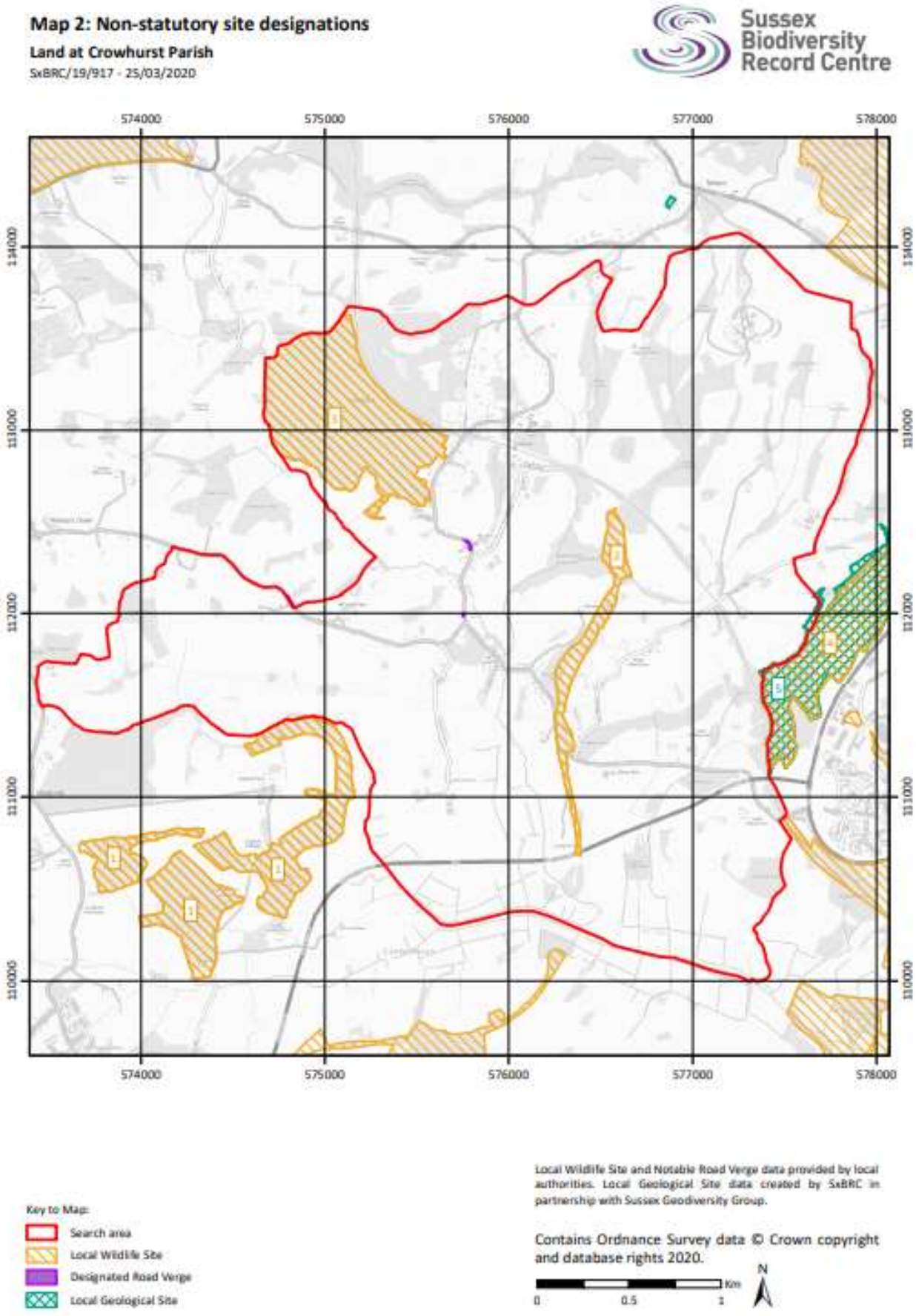

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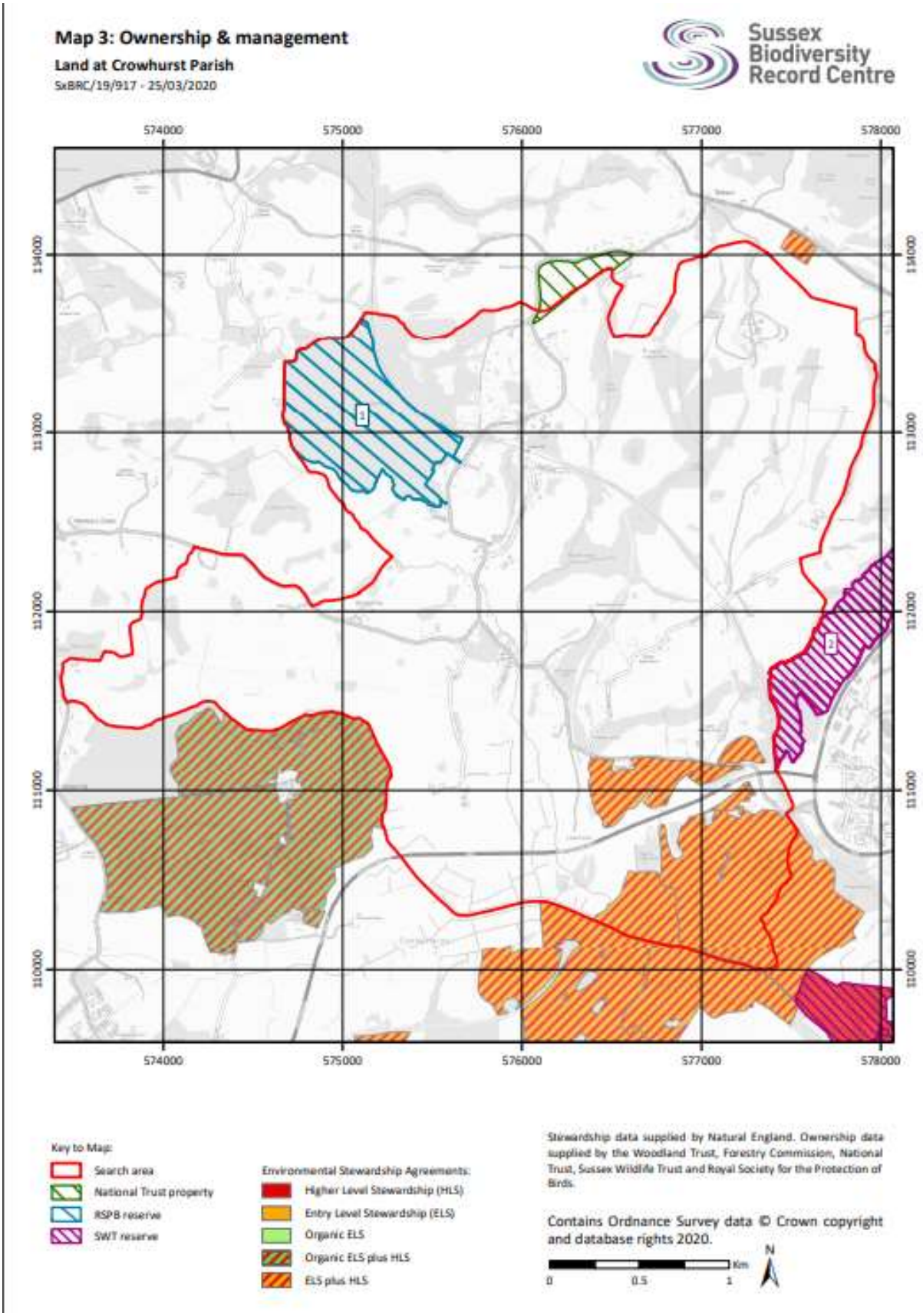

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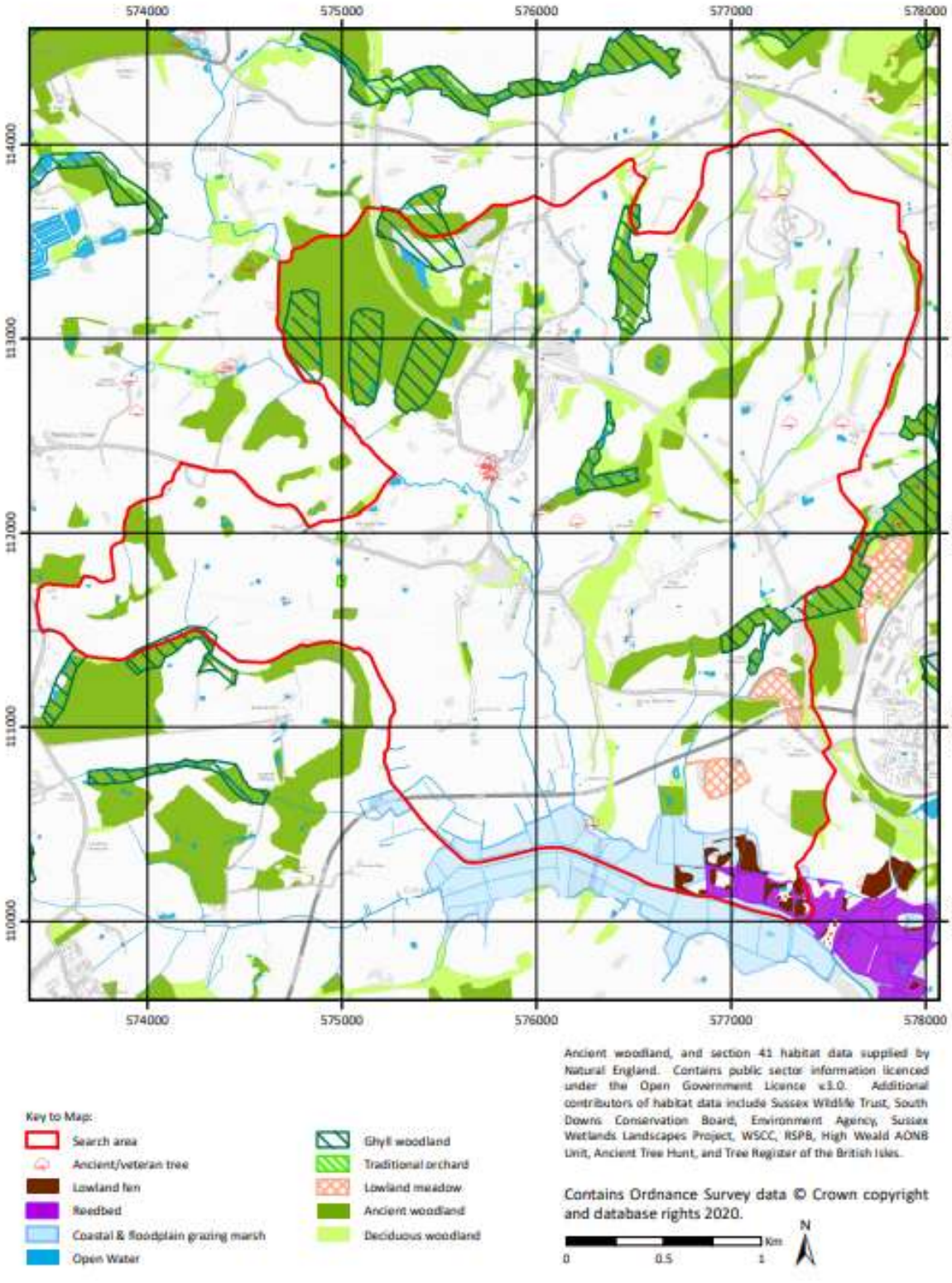
Map 4: Section 41 habitats and other

Land at Crowhurst Parish

SxBRC/19/917 - 25/03/2020

Sussex Biodiversity Record Centre



© Courtesy of The Sussex Biodiversity Record Centre (SBRC)

Angiosperms (Flowering Plants)

Nearly 200 species of flowering plant have been found in the parish (Table WM05).

The only UK protected species in the parish is the native Bluebell.

A dozen species of tree are listed below.

There are a number of introduced / alien species present, and these include sycamore (widespread in the parish), buddleia, Spanish Bluebell, Kerria, Grape Hyacinth and Daffodil. Some of these are at the Millennium Garden Verge and have been introduced for visual effect, not for nature conservation.

Planting any of these introduced species within the parish should be resisted in future as they displace native species. Japanese knotweed has been in the parish – opposite the church gate (2018) but was removed (but has re-occurred). Himalayan balsam is well established along the Powdermill Stream.

There are several tree species that are present throughout the parish and contribute part of the ancient woodlands; these include hornbeam once used for the Powdermill furnaces), sweet chestnut (a major component of coppice woodlands, with hornbeam), and ash, silver birch and hazel within hedgerows. Pines, eucalyptus and Leylandii are found in gardens and some of the latter dominate landscapes.

© John Feltwell Churchard trees in winter, 10 March 2018

Trees on The Tree Register:

(details supplied by Dr Judy Clark)

Crowhurst parish church

1. Yew: *Taxus baccata* TQ7574812321
S of church, female. The fragments of the hollow trunk are sagging outwards to slightly exaggerate the diameter. Meanwhile on the south side the loss of a quarter of the tree has almost healed over (reducing the recordable diameter). The railings were put up in 1907. 1680 John Aubrey; 1835 Horsfield; 1879 C S Greaves.
Height :12.00 m
Diameter: 289 cm
Girth: 908 cm
recorded 2006
Girth County Champion of East Sussex

2. Yew: *Taxus baccata* TQ7572312360
NW, leaning and very slightly hollow.
Height :13.00 m
Diameter: 160 cm
Girth: 503 cm
recorded 2001
Remarkable tree of East Sussex

3. Yew: *Taxus baccata* TQ7577812326
SE, with short clean bole
Height :14.00 m
Diameter: 151 cm
Girth: 474 cm
recorded 2001
Remarkable tree of East Sussex

Crowhurst

1. Blue Gum: *Eucalyptus globulus* (planted) TQ772120
Largest in a dense young group in the garden of Stonebridge Oast, Swainham Lane. Estimated.
Height :22.00 m
Diameter: 40 cm
Girth: 126 cm
recorded 2014

Girth & Height County Champion of East Sussex

2. Red Ash *Fraxinus pennsylvanica* (planted) TQ758123
Verge outside church, opposite village school. Much broken by 2020, but with a good bole.

Height :14.00 m
Diameter: 46 cm
Girth: 143 cm
recorded 2020
Remarkable tree of East Sussex

Fore Wood

Hybrid Black poplar *Populus* x *canadensis* 'Florence Biondi' (planted) TQ756128
Largest in remnant plantation in RSPB Forewood; W side of main track from vehicle gate in Forewood Lane.
Height :27.00 m
Diameter: 75 cm
Girth: 236 cm
recorded 2021

Girth & Height County Champion of East Sussex

Table WM07 Vascular Plants recorded from Crowhurst

1 = Churchyard[42]
2 = Muriel's Meadow (MM)[43]
3 = Triangle on Ballard's Hill[44]
4 = Millennium Garden Verge[45]
5 = Church verge
6 = Village Hall verge (= MUGA)
7 = Nashes Farm verge
8 = Records from SBRC: dates of 'last seen'
T = tree
Blue - an introduced species
Green – a protected species
RED – A 'Red-Listed' plant species by SXBRC

SPECIFIC NAME	COMMON NAME	T	1 Cya	2 MM	3 Tri	4 Mill	5 ChuV	6 Mug	7 Na	8
Acer campestre	Field Maple	T							x	
Acer pseudoplatanus	Sycamore	T	C	x						
Achillea millefolium	Yarrow		C					x	x	
Aegopodium podagraria	Elder, Ground							x		
Agrimonia eupatoria	Agrimony		C							
Agrostis capillaris	Common Bent		C							
Agrostis stolonifera	Creeping Bent		C							
Ajuga reptans	Bugle		C	x			x			
Alliaria petiolata	Garlic Mustard		C							
Allium vineale	Wild Onion		C							
Alopecurus pratensis	Meadow Foxtail		C							
Anagallis arvensis	Scarlet Pimpernel		C							

[42] Recorded in St George's Church, Crowhurst by Judy Clark, Ellen Campbell and Jacqueline Rose on 14.02.2017, 18.04.2017 and 15.09.2017. up to 2019 (114 spp)

[43] Recorded by David Horne 1 June 2019

[44] Recorded by Frances Royston and Sonia Plato 11 May 2019

[45] The following wildflowers were planted on the Millennium Garden Verge on 11 May 2019: foxgloves, evening primrose, cranesbill, ox eye daisies, viper's bugloss, wild angelica and cowslips, donated as native plants from plants from Julia Desch. Arisings for wildlife recovery verges and Muriel's Meadow were donated from the wildflower meadows at Great Dixter and also donated by Ian Donovan, Crowhurst horticulturalist

Anemone nemorosa	Wood Anemone		**C**				**x**			
Anthriscus sylvestris	Cow Parsley		**C**	**x**	**x**	**x**	**x**		*x*	
Arabidopsis thaliana	Thale Cress		**C**							
Arrhenatherum elatius	False Oat Grass		**C**							
Arum maculatum	Wild Arum/Lords-and-Ladies		**C**	**x**		**x**	**x**		*x*	
Asplenium ruta-muraria	Wall-rue		**C**							
Asplenium scolopendrium	Hart's-tongue Fern		**C**							
Bellis perennis	Daisy		**C**		**x**		**x**	**x**		
Brachypodium sylvaticum	Wood False-brome grass		**C**							
Brassica nigra	Mustard, Black							**x**		
Buddleia davidii	**Buddleia**					***x***				
Cardamine flexuosa	Wavy Bittercress		**C**							
Cardamine hirsute	Bittercress, Hairy			**x**						
Cardamine pratensis	Cuckoo Flower		**C**	**x**						
Cardamine sp.	Bittercress					**x**				
Carex divulsa subsp. *divulsa*	Grey Sedge		**C**							
Carex pendula	Pendulous Sedge		**C**							
Carex sp.	Sedge						**x**	**x**	**x**	
Carex sylvatica	Wood Sedge		**C**							
Castanea sativa	Chestnut, Sweet	**T**								**x**
Centaurea nigra	Knapweed		**C**	**x**					**x**	
Centaurea scabiosa	Greater Knapweed			**x**			**x**			
Cerastium glomeratum	Sticky Mouse-ear		**C**							
Chamerion angustifolium	Rosebay Willowherb		**C**							
Circaea lutetiana	Enchanter's Nightshade			**x**						
Convolvulus arvensis	Convolulus, Bindweed							**x**		
Corylus avellana	Hazel	**T**								**x**
Crataegus monogyna	Hawthorn	**T**				**x**			**x**	
Crepis capillaris	Smooth Hawk's-beard		**C**							
Cirsium arvense	Thistle, Creeping		**C**		**x**			**x**	**x**	
Cirsium vulgare	Thistle, Spear		**C**							
Cyclamen hederifolium	Sowbread		**C**							
Cymbalaria muralis	Ivy-leaved Toadflax		**C**							
Dactylis glomerata	Cock's-foot grass		**C**							
Daucus carota	Carrot, Wild								**x**	
Deschampsia	Tufted Hair-grass		**C**							

caespitosa										
Epilobium hirsutum	Willowherb			x				x	x	
Epilobium montanum	Broad-leaved Willowherb		C	x						
Equisetum sp.	Horsetail			x					x	
Erysimum cheiri	Wallflower		C							
Euphorbia peplus	Petty Spurge		C							
Fagus sylvestris	Beech (seedling)	T					x			
Festuca rubra agg.	Red Fescue		C					x		
Ficaria verna	Lesser Celandine		C							
Fragaraia vesca	Strawberry, Wild			x			x			
Fraxinus excelsior	Ash	T	C							x
Galanthus elwesii	Greater Snowdrop		C							
Galanthus nivalis	Snowdrop		C			x	x			
Galium aparine	Cleavers		C	x		x	x			
Geranium dissectum	Cut-leaved Crane's-bill		C							
Geranium pratense	Meadow Crane's Bill			x						
Geranium pyrenaicum	Hedgerow Crane's Bill			x						
Geranium robertianum	Herb Robert		C	x					x	
Geranium rotundifolium	Geranium, Round-leaved				x		x	x	x	
Geum sp.	Avens					x	x		x	
Geum urbanum	Wood Avens		C	x			x	x		
Glechoma hederacea	Ground Ivy		C	x	x			x	x	
Hedera helix	Ivy		C				x	x	x	
Helminthotheca echioides	Bristly Ox-tongue		C							
Heracleum sphondylium	Hogweed		C	x	x	x	x		x	
Holcus lanatus	Yorkshire Fog grass		C							
Hottonia palustris	Water violet									***2003***
Hyacinthoides non-scripta	**Bluebell**		C	x			x			
Hyacinthoides* x *massartiana	**Hybrid Bluebell**		C			x				
Hydrocharis morsus-ranae	Frogbit									***2011***
Hypericum androsaemum	Tutsan		C							
Hypericum perforatum	St John's Wort			x		x				
Hypericum tetrapterum	Square-stalked St John's-wort		C							

Hypochaeris radicata	Cat's-ear		**C**							
Ilex aquifolium	Holly		**C**							
Iris foetidissima	Stinking Iris			**x**						
Juncus articutus	Rush			**x**						
Juncus effusus	Soft-rush		**C**							
Kerria japonica	**Kerria**					**x**				
Lamium album	White Dead-nettle								**x**	
Lamium purpureum	Red Dead-nettle		**C**						**x**	
Lapsana communis	Nipplewort		**C**							
Lathyrus pratensis	Meadow Vetchling		**C**							
Lathyrus sp.	Vetch					**x**	**x**	**x**	**x**	
Leucanthemum vulgare	Ox-eye Daisy		**C**	**x**					**x**	
Lolium perenne	Rye grass		**C**				**x**	**x**		
Lonicera pericylemon	Honeysuckle								**x**	
Lotus corniculatus	Bird's-foot Trefoil		**C**	**x**						
Luzula campestris	Field Woodrush		**C**	**x**						
Lysimachia nummularia	Creeping Jenny		**C**							
Malus pumila	Apple (domestic)		**C**							
Medicago arabica	Spotted Medick		**C**							
Medicago lupulina	Black Medick		**C**							
Melampyrum pratense	Common cow wheat									***2012***
Mentha arvensis	Corn Mint			**x**						***2007***
Mercurialis perennis	Dog's Mercury		**C**	**x**			**x**		**x**	
Muscari armeniacum	**Grape Hyacinth**		**C**							
Myosotis sp.	Forget me not					**x**			**x**	
Myosotis sylvatica	Wood Forget-me-not		**C**							
Myriophyllum verticillatum	Whorled Water-milfoil									***1995***
***Narcissus* agg.**	**Daffodil**		**C**		**x**	**x**	**x**	**x**	**x**	
Oenanthe crocata	Hemlock Water-Dropwort			**x**						
Papaver somniferum	Opium Poppy		**C**							
Picris echiodes	Bristly Ox tongue							**x**		
Pilosella officinarum	Mouse-ear Hawkweed		**C**							
Pimpinella saxifraga	Burnet-saxifrage		**C**							
Plantago lanceolata	Ribwort Plantain		**C**				**x**	**x**	**x**	
Plantago major	Greater Plantain		**C**		**x**	**x**	**x**			
Platanus hybrid	London Plane	**T**								**x**
Poa annua	Annual Meadow Grass		**C**			**x**	**x**	**x**		
Poa trivialis	Rough Meadow		**C**							

	Grass									
Polygonum aviculare	Knotgrass		C							
Potentilla erecta	Tormentil		C							
Potentilla reptans	Creeping Cinquefoil		C							
Potentilla sterilis	Barren Strawberry		C							
Potrentilla sp.	Potentilla						x			
Primula veris	Cowslip			x						
Primula veris x vulgaris	False Oxlip			x						
Primula vulgaris	Primrose		C					x	x	
Prunella vulgaris	Self-heal		C	x						
Prunus avium	Cherry	T	C							
Prunus spinosa	Sloe/ Blackthorn	T						x	x	
Pulicaria dysenterica	Fleabane			x	x				x	
Quercus cerris	Turkey Oak	T					x			
Quercus robur	English Oak	T	C				x			
Ranunculus acris	Meadow Buttercup		C		x					
Ranunculus ficaria	Celandine, Lesser		C	x	x	x	x	x	x	
Ranunculus repens	Creeping Buttercup		C	x	x	x	x	x	x	
Ranunculus sceleratus	Celery Leaved buttercup		C	x						
Ribes sp.	Raspberry								x	
Rosa canina	Dog-rose		C	x					x	
Rubus fruticosus agg.	Bramble		C	x		x	x	x	x	
Rumex acetosa subsp. acetosa	Common Sorrel		C	x						
Rumex sanguineus	Wood Dock		C							
Rumex sp.	Dock				x	x	x	x	x	
Sagina procumbens	Procumbent Pearlwort		C							
Salix capraea	Sallow	T							x	
Sambucus nigra	Elder	T	C							x
Scorzoneroides autumnalis	Autumn Hawkbit		C							
Sedum album	White Stonecrop		C							
Sedum rupestre	Reflexed Stonecrop		C							
Senecio erucifolius	Hoary Ragwort		C							
Senecio jacobaeae	Ragwort							x		
Senecio vulgaris	Groundsel		C					x		
Silene dioica	Red Campion								x	
Solanum dulcamara	Nightshade, Woody					x				
Sonchus asper	Prickly Sowthistle		C			x	x	x		
Sonchus oleraceus	Smooth Sowthistle		C							
Spergula arvensis	**Corn Spurrey RED**									***2008***

Stachys arvensis	Field Woundwort									***2011***
Stellaria graminea	Stitchwort, Lesser		***C***							
Stellaria holostea	Stitchwort								***x***	
Stellaria media	Chickweed				***x***					
Stratiotes aloides	**Water soldier RED**									***1990***
Tamus communis	White bryony								***x***	
Tanacetum parthenium	Feverfew								***x***	
Taraxacum agg.	Dandelion		***C***		***x*** **1**	***x***	***x***	***x***	***x***	
Taxus baccata	Yew	**T**	***C***							
Trifolium pratense	Red Clover		***C***		***x***		***x***		***x***	
Trifolium repens	White Clover		***C***							
Ulex europaeus	Gorse		***C***				***x***		***x***	
Urtica dioica	Common Nettle		***C***		***x***	***x***	***x***	***x***	***x***	
Utricularia australis	Bladderwort 'Sussex Rare'									***2003***
Veronica arvensis	Wall Speedwell		***C***							
Veronica chamaedrys	Germander Speedwell		***C***							
Veronica filiformis	Slender Speedwell		***C***							
Veronica hederifolia subsp. *hederifolia*	Ivy-leaved Speedwell		***C***							
Veronica persica	Common Field-speedwell		***C***							
Veronica serpyllifolia	Thyme-leaved Speedwell		***C***							
Veronica sp.	Veronica					***x***	***x***			
Vicia hirsute	Hairy Tare		***C***							
Vicia sativa subsp segetalis	Common Vetch		***C***							
Vicia sepium	Bush Vetch		***C***							
Viola odorata	Sweet Violet		***C***							
Viola riviniana	Common Dog-violet		***C***							
Viola sp.	Violet						***x***		***x***	
	Pyramidal orchid CDA 2.7.24									
	Autumn Ladies Tresses CDA 8.9.14									
	Broad-leaved Helleborine CDA 4.7.20									

Although there are 14 tree species listed above, there are many other tree species within the parish, particularly those in the working woodlands, such as Sweet Chestnut, Hornbeam and Silver Birch. Gorse and Broom are widespread in the parish. Invasive species include leylandii and rhododendron.

A modest review of some of the trees of the parish was completed in 2017 (see Technical Appendix WM02) and a review of the trees around the Recreation Ground in 2019 (see Technical Appendix WM03.

Tree Protection Orders (TPOs)

There are no isolated trees in the parish that are protected by TPOs.

There are however a group of 32 trees TPO'd at The Firs, Station Road, as illustrated on the following page.

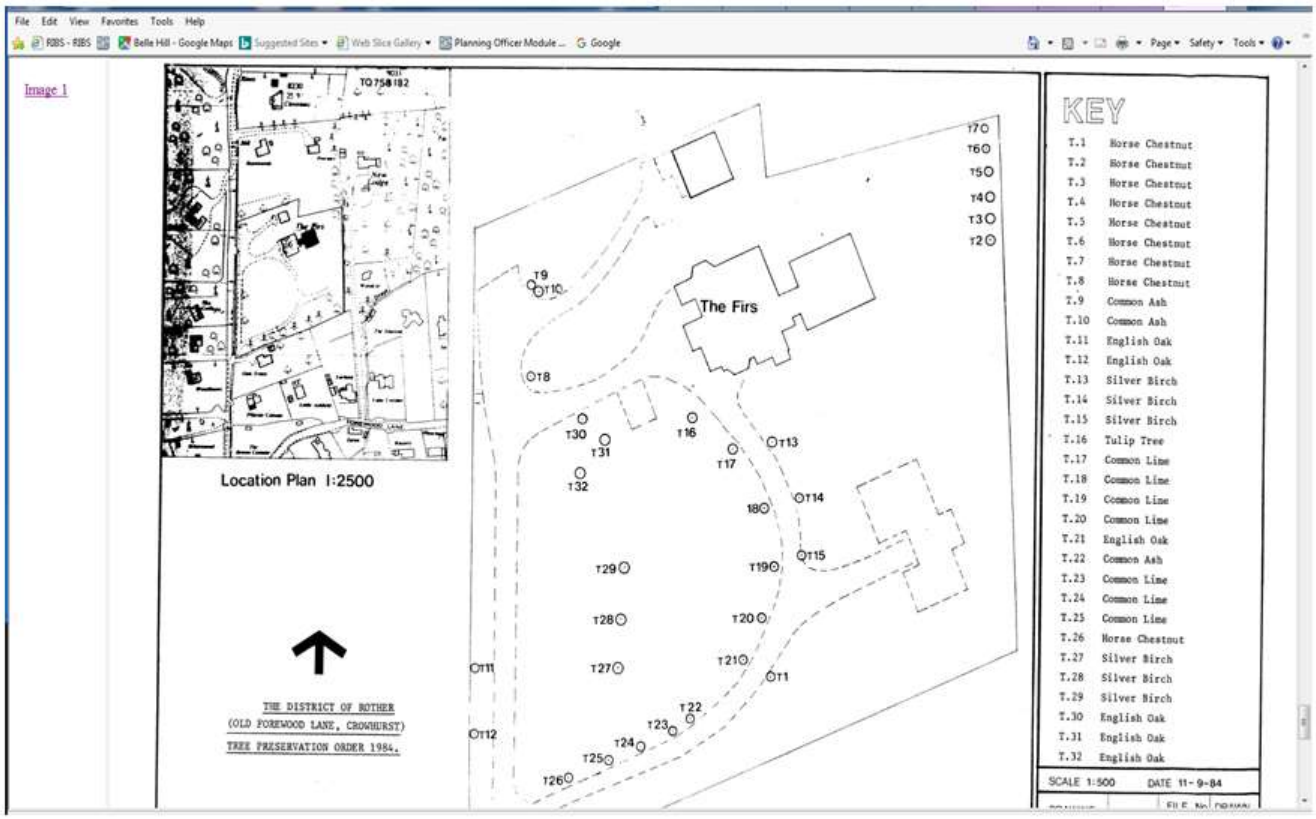
There are three blanket TPOs where all the trees within a group are offered protection. These are situated at the top (north) of Station Road at The Firs, off Chapel Hill (north side) and between the disused railway line and Sandrock Hill, as shown in green in the following plan.[46]

[46] Rother District Council, https://www.rother.gov.uk/planning-and-building-control/online-mapping/ (retrieved 30 March 2020)

Tree Protection Orders (TPOs), continued…

The plan below is headed:
'The Rother District (Old Forewood Lane, Crowhurst) Tree Preservation Order 1984. At scale of 1:2500

No. 1 Forewood Lane



The three TPO details:

1. Land at The Haven, Station Road, Crowhurst 1999, Reference no. TPO 186.
2. Sabon Gari - land adj., Crowhurst Road, Crowhurst, 2018, Reference no. TPO 380.
3. Land at Blacksmith Field, Sandrock Hill, Crowhurst, 1995, Reference no.TPO 150.

No. 2 Ballards Hill

The case for TPO'ing the woodlands around Chapel Hill and Ballards Hill
Area to be TPO'd: within the red line. Not included is the garden of Sabon Gari which has had permission to be removed (January 2021).

Reasons: part of it (dark green) is already a Priority Woodland protected by Section 41 of NERC (2006). However, RDC Planning have permitted removal of some of this protected woodland Therefore the remainder needs to be protected as NERC (2006) and TPO provision has failed to protect the woodland. This block of woodland is near the centre of the parish and has a landscape and nature conservation value. It also has good connectivity, via hedgerows with other parts of the village, which needs to be protected from fragmentation.

KEY
Green (Lemon): SOUTH SIDE Chapel Hill Broadleaf Woodland = 2.26 ha
Green (Lemon): NORTH SIDE Chapel Hill Broadleaf Woodland = 0.63ha
Green (Dark): 'Priority Habitat Inventory', Deciduous Woodland' 0.63ha
No colour (in centre) : 'Conifer woodland' = 0.51ha

No. 3 SwainhamLane

A new TPO in 2022

A temporary TPO (No. 416) was issued by RDC, dated 2 January 2022, for 12 Oak trees along Swainham Lane at Land at Southmead, where some other mature trees had already been felled during 2021.

Town and Country Planning Act 1990

The Rother District Council (Land at Southmead Swainham Lane Crowhurst TPO416) Tree Preservation Order 2022

The Rother District Council, in exercise of the powers conferred on them by section 198 of the Town and Country Planning Act 1990 make the following Order

Citation

1. This Order may be cited as the **Rother District Council (Land at Southmead Swainham Lane Crowhurst TPO416) Tree Preservation Order 2022.**

Interpretation

2. (1) In this Order "the authority" means the Rother District Council.
(2) In this Order any reference to a numbered section is a reference to the section so numbered in the Town and Country Planning Act 1990 and any reference to a numbered regulation is a reference to the regulation so numbered in the Town and Country Planning (Tree Preservation)(England) Regulations 2012.

Effect

3. (1) Subject to article 4, this Order takes effect provisionally on the date on which it is made.
(2) Without prejudice to subsection (7) of section 198 (power to make tree preservation orders) or subsection (1) of section 200 (tree preservation orders: Forestry Commissioners) and, subject to the exceptions in regulation 14, no person shall—
(a) cut down, top, lop, uproot, wilfully damage, or wilfully destroy; or
(b) cause or permit the cutting down, topping, lopping, wilful damage or wilful destruction of, any tree specified in the Schedule to this Order except with the written consent of the authority in accordance with regulations 16 and 17, or of the Secretary of State in accordance with regulation 23, and, where such consent is given subject to conditions, in accordance with those conditions.

Application to trees to be planted pursuant to a condition

4. In relation to any tree identified in the first column of the Schedule by the letter "C", being a tree to be planted pursuant to a condition imposed under paragraph (a) of section 197 (planning permission to include appropriate provision for preservation and planting of trees), this Order takes effect as from the time when the tree is planted.

Dated this 21st day of January 2022

.....
Executive Director, Rother District Council

.....
Member of the Rother District Council

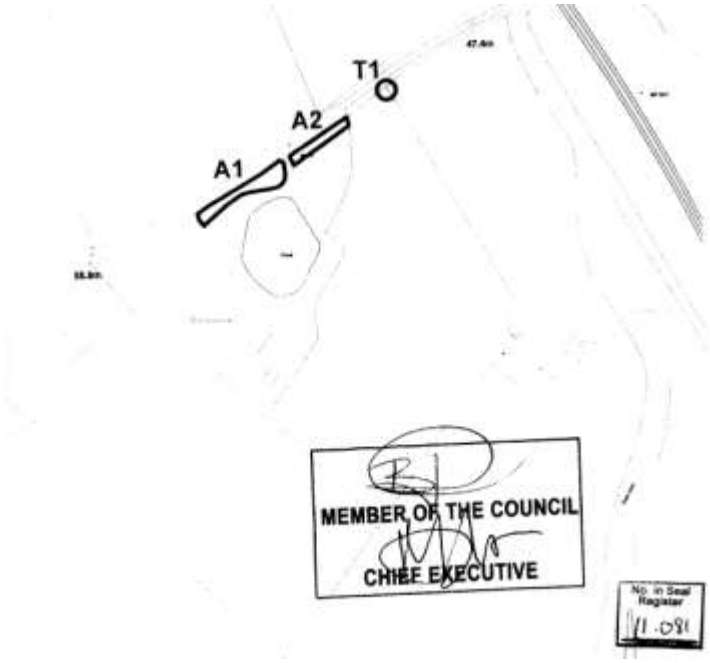
Specification of trees

Trees specified individually (encircled in black on the map)

Reference on map	Description	Situation
T1	OAK	The mature oak tree is on the roadside at Southmead, on the south side of Swainham Lane.

Trees specified by reference to an area (within a dotted black line on the map)

Reference on map	Description	Situation
A1	6 OAK TREES	The mature oak trees are on the roadside at Southmead, on the south side of Swainham Lane.
A2	5 OAK TREES	The mature oak trees are on the roadside at Southmead, on the south side of Swainham Lane.



The TPOd trees outside Southmead

T1 Oak tree at entrance to property

No. 5 Crowhurst Road

IMPORTANT - THIS COMMUNICATION MAY AFFECT YOUR PROPERTY

TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (TREE PRESERVATION)(ENGLAND) REGULATIONS 2012

THE DISTRICT OF ROTHER (LAND KILBARRY, CROWHURST ROAD, CROWHURST– TPO415) TREE PRESERVATION ORDER 2021

ROTHER DISTRICT COUNCIL

To: Mr J De Bruxelles
Kilbarry
Crowhurst Road
Crowhurst, Battle
East Sussex TN33 9AR

THIS IS A FORMAL NOTICE to let you know that on 15th November 2021 the Council made the above Tree Preservation Order.

A copy of the Order is enclosed. In simple terms, it prohibits anyone from cutting down, topping or lopping any of the trees described in the Schedule and shown on the map without the Council's consent.

The Council have made the Order because the trees are a prominent feature in the landscape visible from Crowhurst Road, Sandrock Hill, Crowhurst Recreation Ground and public footpath 16a (1066 Country Walk).

The mature trees on the western boundary of the paddocks to the rear of Kilbarry form the boundary with the adjacent property known as Oakleigh. Various site clearance and earth moving works have been carried out on this adjacent land.

The Council are concerned that owners of the adjacent land may cut back overhanging branches on the boundary with the paddocks and that this would have a serious detrimental effect on the safety, health and longevity of these boundary trees.

The Order took effect on a provisional basis, on the date the Order was made. It will continue in force on this basis for a further 6 months or until the Order is confirmed by the Council, whichever first occurs.

The Council will consider whether the Order should be confirmed, that is to say, whether it should take effect formally. Before this decision is made, the people affected by the Order have a right to make objections to other representations about any of the trees, groups of trees or woodlands covered by the Order.

If you would like to make any objections or other comments, please make sure we receive them in writing by 16th December 2021. Your comments must comply with regulation 6 of the Town and Country Planning (Tree Preservation)(England) Regulations 2012, a copy of which is provided overleaf. Send your comments to Mrs. K. Newton, Wealden and Rother District Council's joint legal service, Town Hall, Bexhill-on-Sea, East Sussex TN39 3JX – karen.newton@wealden.gov.uk. All valid objections or representations are carefully considered before a decision on whether to confirm the Order is made.

The Council will write to you again when that decision has been made. In the meantime, if you would like any further information or have any questions about this letter, please contact Mrs. K. Newton, Wealden and Rother District Council's joint legal service, Town Hall, Bexhill-on-Sea, East Sussex TN39 3JX (tel. 01424 787843).

Signed:  Dated: 15th November 2021

on behalf of Rother District Council
Town Hall
Bexhill-on-Sea
East Sussex TN39 3JX

KEN/9/5/380

NOTE

COPY OF REGULATION 6 OF THE TOWN AND COUNTRY PLANNING (TREE PRESERVATION)(ENGLAND) REGULATIONS 2012

6.—(1) Subject to paragraph (2), objections and representations—

(a) shall be made in writing and—

(i) delivered to the authority not later than the date specified by them under regulation 5(2)(c); or

(ii) sent to the authority in a properly addressed and pre-paid letter posted at such time that, in the ordinary course of post, it would be delivered to them not later than that date;

(b) shall specify the particular trees, groups of trees or woodlands (as the case may be) in respect of which such objections and representations are made; and

(c) in the case of an objection, shall state the reasons for the objection.

(2) The authority may treat as duly made objections and representations which do not comply with the requirements of paragraph (1) if, in the particular case, they are satisfied that compliance with those requirements could not reasonably have been expected.

Tree planting

800 mixed native species saplings were planted I January 2021 as part of the 'I Dig Project' to create a new hedge at the Recreation Ground, parallel to the Powdermill stream. This was in line with Crowhurst Neighbourhood Plan's aspiration (2019) to protect and enhance biodiversity and the rural nature of the Village.

Black Poplar has also been planted on the Recreation Ground – this was part of the RHS Wisley / Environment Department Project.

Table WM08 Pteridophytes (Ferns) & Bryophytes (Mosses and Liverworts)

A feature of the parish part of the AONB is the Sussex ghylls. These are often deep, steep and shaded and provide ideal habitat for pteridophytes and bryophytes. The following species have been recorded in the parish.

The following species were recorded in Quarry Wood Nature Reserve in October 2008 by members of the South-East Regional Group of the Pteridological Society and details were posted by the warden Paul Johnson on line.[47]

Table WM08

SPECIFIC NAME	COMMON NAME	NOTES
PTERIDOPHYTES (FERNS)		
Asplenium scolopendrium	Hart's Tongue	QW Oct 2008; In the Churchyard, 2019
Asplenium ruta-muraria	Wall Rue	In the Churchyard, 2019
Athyrium filix-femina	Lady Fern	QW Oct 2008
Dryopteris aemula	Hay-scented Buckler Fern	'Regionally important (Atlantic species) RSPB Management Plan, 2016
Dryopteris affinis	Scaly Male Fern	QW Oct 2008
Dryopteris dilatata	Broad Buckler fern	QW Oct 2008
Polystichum setiferum	Soft Shield Fern	QW Oct 2008
Dryopteris filix-mas	Male Fern	In the Churchyard, 2019
Pteridium aquilinum	Bracken	QW Oct 2008
SPECIFIC NAME	**COMMON NAME**	**NOTES**
MOSSES		
Bryum dunense	(moss)	'Nsc' RSPB Management Plan, 2016
Fissidens exiguous	(moss)	'Near-threatened' 'Restricted to one deep Ghyll rockface' RSPB Management Plan, 2016
Fissidens rivularis	(moss)	'Nsc, Restricted to the ghylls'. RSPB Management Plan, 2016
Leucobryum juniperoideum	(moss)	'Nsc' RSPB Management Plan, 2016

[47] Tales from Quarry Wood, by Paul Johnson, warden of Crowhurst Nature Reserve. Fabulous Ferns. October 2008. https://talesfromquarrywood.wordpress.com/previous-articles/2008-9/fabulous-ferns-oct-2008/ (retrieved 27 Feb 2020).

Table WM09 FUNGI recorded from site See photographs taken in Quarry Wood [48]

SPECIFIC NAME	COMMON NAME	RECORDER
Marline Valley Wood (SSSI)		
Agaricus arvensis	Horse mushrooms	Clare Van Moppes 2019
Agaricus campestris	Field mushrooms	Clare Van Moppes 2019
Boletus edulis	Cep, Penny Bun	Clare Van Moppes 2019
Calvatia excipuliformis	Puff-ball	Clare Van Moppes 2019
Cantharellus cibarius	Chanterelle	Clare Van Moppes 2019
Coprinus comatus	Shaggy ink cap	Clare Van Moppes 2019
Craterellus cornucopioides	Horn of plenty	Clare Van Moppes 2019
Fistulina hepatica	Beefsteak fungus	Clare Van Moppes 2019
Hydnum repandum	Hedgehog fungus	Clare Van Moppes 2019
Imledia badia	Bay bolete	Clare Van Moppes 2019
Laccaria amethystea	Amethyst Deceiver	Clare Van Moppes 2019
Lactarius deliciosus	Saffron milk cap	Clare Van Moppes 2019
Laetiporus sulphureus	Chicken of the woods	Clare Van Moppes 2019
Leccinum scabrum	Birch bolete	Clare Van Moppes 2019
Lycoperdon perlatum	Puffball	Clare Van Moppes 2019
Macrolepiota procera	Parasol	Clare Van Moppes 2019
Pleurotus ostreatus	Oyster mushroom	Clare Van Moppes 2019
Psilocybe semilanceata	Psilocybe fungus	Clare Van Moppes 2019
Sparassis crispa	Cauliflower fungus	Clare Van Moppes 2019
Fore Wood		
Amanita citrina	False death cap	Clare Van Moppes 2019
Amanita muscaria	Fly agaric	Clare Van Moppes 2019
Amanita pantherina	Panther cap	Clare Van Moppes 2019
Amanita phalloides	Death cap	Clare Van Moppes 2019
Amanita sp.	Destroying angel	Clare Van Moppes 2019
Boletus satanoides	Satan's bolete	Clare Van Moppes 2019
Daldina concentrica	King Alfred's Cakes	Clare Van Moppes 2019
Hygrocybe conica	Conical wax cap	Clare Van Moppes 2019
Mutinus caninus	Dog stink horn	Clare Van Moppes 2019
Oudemansiella mucida	Porcelain fungus	Clare Van Moppes 2019
Phallaceae	Stink horn	Clare Van Moppes 2019
Russula sp.	Russula	Clare Van Moppes 2019
Scleroderma citrinum	Common Earth ball	Clare Van Moppes 2019
Strobylomyces strobilaceous		'Vulnerable' 'Chestnut coppice close to main ghyll' RSPB Management Plan, 2016
Crowhurst (Sussex Records)		
Leccinum scabrum	Brown Birch Bolete	SX last seen 2016. RED list
Pseudocraterellus undulatus	Sinuous Chanterelle	SX last seen 2017 'Sussex Rare'
Trametes hirsuta	Hairy Bracket	SX last seen 2016 'Sussex Rare'
Tremella foliacea	Leafy Brain	SX last seen 2017 'Sussex Rare'

[48] cf Tales from Quarry Wood Fungi Trail 11.10.15. https://talesfromquarrywood.wordpress.com/tags-events/fungi-trail-11th-oct-2015/

Birds recorded from Crowhurst

© Chris Davidson - Green Woodpecker is a typical woodland edge bird of the AONB, and of the parish, that frequent forages in gardens

The following list of birds have been recorded from the parish.

The foremost woodland bird habitat is Fore Wood RSPB reserve in the north, whereas the foremost wetland habitat is in the south of the parish.

The Sussex Ornithological Society (SOS) maintains a list of the species for the area as a whole, and for Fore Wood it has a list of 97 species.[49] Other bird species are known from the rest of the parish in tetrads.[50]

- Twelve species are known only from one record: White-fronted Goose, Mute Swan, Bewick's Swan, Mandarin Duck, Water Rail, Coot, Lesser Black-backed Gull, Osprey, Long-eared Owl, Skylark, Common Redstart and Brambling.

- Largest numbers of records are for Great Spotted Woodpecker (36 records), Lesser Spotted Woodpecker (35), Woodpigeon (35), Green Woodpecker (34), Robin and Wren (30 each) reflecting the characteristic woodland habitats in Fore Wood.

- BAP bird species include 30 species, past and present, as shown below in the following table.

Although nearly 100 species have been identified from RSPB Fore Wood, the following are the important bird species for RSPB Fore Wood, as stated in the Management Plan dated 2016.

[49] Extracted information from list supplied by SOS March 2020

[50] TQ7411,TQ7511,TQ7512,TQ7513,TQ7611,TQ7612,TQ7613,TQ7711,TQ7712, TQ7713

Breeding birds

Species	Popn. Size*	Status	Comments
Lesser spotted woodpecker	0.4 pairs	Red List - RSPB reserves priority species	Pair recorded in 2013 & 2015. Possibly under recorded in other years due to lack of staff time.
Marsh tit	4.6 pairs	Red List - RSPB reserves priority species	4 pairs recorded on 2015 point counts
Spotted flycatcher	1 pair	Red List - RSPB reserves priority species	One pair recorded in 2015
Hawfinch	Not surveyed	Red List	Recorded on one point count in 2015. Not recorded in previous 4 years.
Nightingale	absent	Red List - RSPB reserves priority species	Male singing just beyond Northern boundary in 2015
Nightjar	Not surveyed	Amber List - RSPB reserves priority species	A pair were flushed from a coppice plot in 2015. No survey was undertaken to confirm breeding presence.
Song Thrush	9 recorded on 2015 point count	Red List	
Mistle Thrush	8 recorded on 2015 point count	Red List	
Woodcock	Unknown	Red List	Survey to be undertaken in 2015 to determine presence

* 5 year mean

<u>Swift NB. Moved from Amber-listed to RED-listed in December 2021</u>

One bird species, the swift, has a local society devoted to its conservation: The Hastings and Rother Swift Society. [51] Although the species was not on the Fore Wood list of birds, here is the list for the rest of the parish as supplied by the Sussex Ornithological Society (SOS):

2237728	TQ71 10km (Battle)	Common Swift	01/06/1991			PS
871386	Crowhurst	Common Swift	16/07/2006		8	X
1015550	Crowhurst	Common Swift	17/06/2007		3	X
5041063	Crowhurst	Common Swift	17/06/2018		1	X
871147	Crowhurst	Common Cuckoo	21/05/2006		1	X

<u>Other bird species</u> not at Fore Wood, but in the parish included Little Egret, Wood Duck, Red Kite, hoopoe, Bearded Tit and Roller.

[51] The Hastings and Rother Swift Group https://www.swift-conservation.org/Local%20Swift%20Groups.htm (retrieved 28 Feb 2020)

Table WM10 Birds recorded from Crowhurst

The bird species listed below mostly come from two sources, i) the SOS database for birds from Fore Wood, and ii) from the on-line species mentioned for Quarry Wood.

KEY

Royal Society for the Protection of Birds (RSPB)'s Lists:

Red List	Species that are Globally Threatened, for which there is high conservation concern. The designation is according to the criteria of the IUCN (International Union for the Conservation of Nature). Represents a population decline in the UK during 1800-1995 with 50% decline over last 25 years.
Amber List	Species showing a moderate decline in the UK over the last 25 years. (from: Royal Society for the Protection of Birds, 1996. *Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man*. Royal Society for the Protection of Birds, leaflet.). Often a rare breeder with 1-300 pairs in the UK, or rare non-breeder with less than 900 pairs.
Green List	Species that occur regularly in the UK but do not qualify under any of the above criteria.

WCA 1981 Wildlife & Countryside Act 1981 (as amended)

Recorders:

CD: Cliff Dean for records from Combe Valley SSSI
JF: John Feltwell
MW Martin White
SOS Crowhurst
SOS Fore Wood
SX Sussex Biodiversity
CDa Chris Davidson, photos

Scientific Name	Common Name	W&CA, 1981	Importance	RSPB	Notes
	Duck, Wood				**SOS Crowhurst**
Accipiter gentilis	**Goshawk**			**Notable**	SX last seen 2010
Accipter nisus	**Sparrowhawk**			**Green**	**CD 21.03.18, 12.01.19, OS Fore Wood CDA window casualty 24.8.20**
Acrocephalus schoenobaenus	**Warbler, Sedge**			**Green**	**2018 SOS Crowhurst**
Aegithelos caudatus	**Tit, Long-tailed**			**Green**	**CD 21.03.18, SOS Fore Wood**
Aix galericulata	**Duck, Mandarin**			**No status**	**SOS Fore Wood**
Alauda arvensis	**Skylark**		**BAP Species of Principal Importance**	**RED**	**SOS Fore Wood**
Alcedo atthis	**Kingfisher**	**Sch. 1 Part 1**		**Amber**	**SOS Fore Wood**
Alectoris rufa	**Partridge, Red-legged**			**No status**	Introduced gamebird SX last seen 2010
Anas acuta	**Pintail**			**Amber**	**CD 21.03.18, 12.01.19**
Anas crecca	**Teal**			**Amber**	**CD 21.03.18 (50*) SOS Crowhurst**
Anas platyrhynchos	**Mallard**			**Amber**	**CD 21.03.18, 12.01.19, CD 29.12.19 SOS Fore Wood**
Anas strepera	**Gadwall**			**Amber**	**CD 21.03.18, 12.01.19, CD 29.12.19**
Anser albifrons	**Goose, White-fronted**			**RED**	**SOS Fore Wood**
Anser anser	**Greylag**			**Amber**	**CD 21.03.18, 12.01.19, CD 29.12.19**
***Anser* hybrid**	**Goose, hybrid**			**No status**	**CD 12.01.19**
Anthus pratensis	**Pipit Meadow**			**Amber**	**CD 29.12.19, CD 21.03.18 SOS Fore Wood**
Anthus spinoletta	**Pipit, Water**			**Amber**	**CD 12.01.19 2012 SOS Crowhurst**
Anthus trivialis	**Pipit, Tree**			**RED**	**SOS Fore Wood**
Apus apus	**Swift**			**RED**	**2018 SOS Crowhurst Moved to Red DEC 21**
Ardea cinerea	**Heron**			**Green**	**CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood**

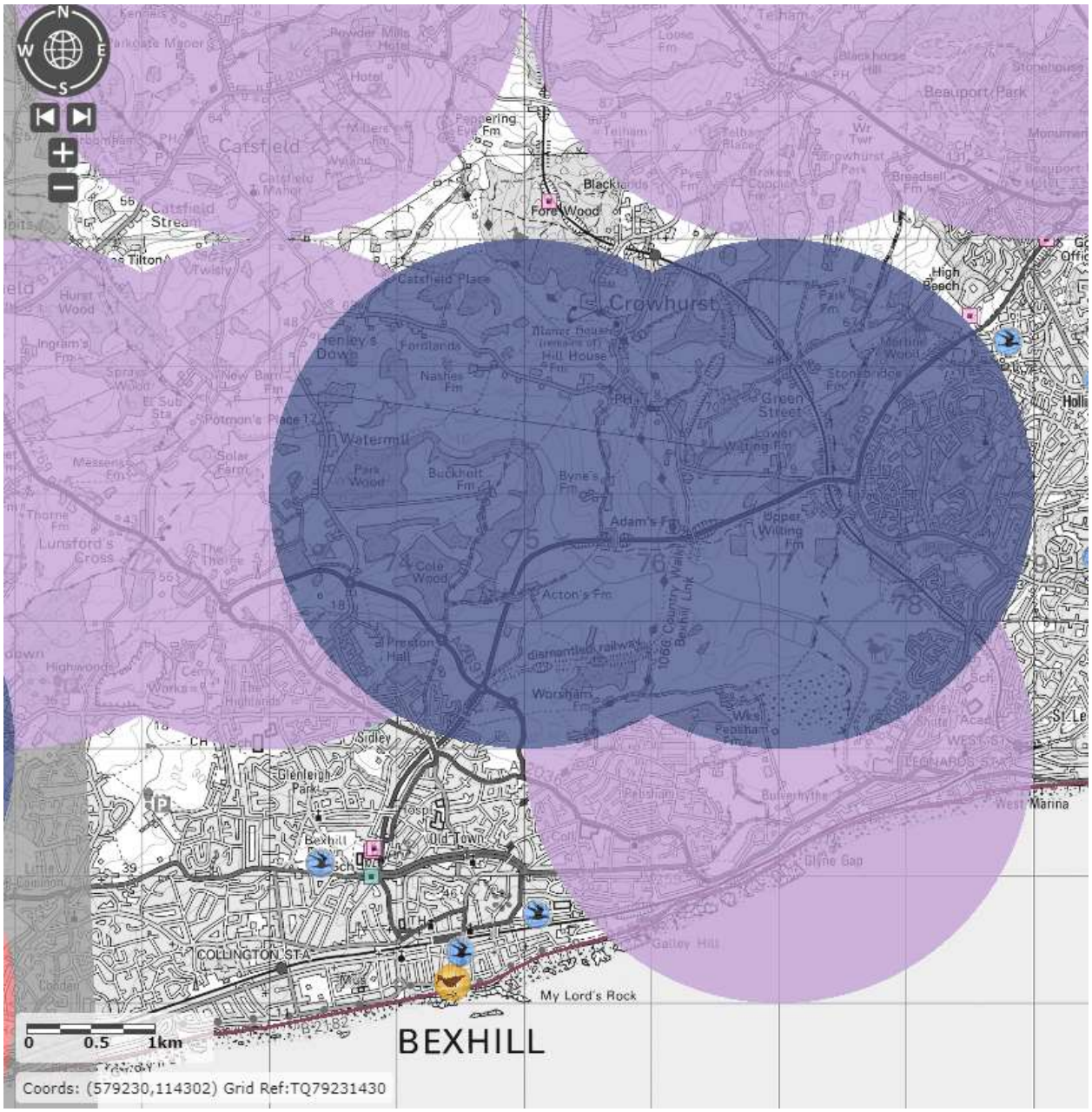
Asio flammeus	Owl, Short-eared			Amber	1990 SOS Crowhurst
Asio otus	Owl, Long-eared			Green	SOS Fore Wood
Athene noctua	Owl, Little	introduced		No status	JF 13.10.17 Bryne's Fm, SOS Fore Wood MW 30 March 2020
Branta bernicla	Brent Goose			Amber	SOS Fore Wood
Branta canadensis	Goose, Canada	introduced		No status	CD 21.03.18, CD 29.12.19, SOS Fore Wood
Burhinus oedicnemus	Stone curlew			Amber	SX lalst seen 1984
Buteo buteo	Buzzard			Green	CD 21.03.18 (4), CD 12.01.19, CD 29.12.19, SOS Fore Wood
Calidris alpina	Dunlin			RED	CD 21.03.18 Moved to Red DEC 21
Caprimulgus europaeus	Nightjar			Amber	SX last seen 2008
Carduelis cabaret	Redpoll, Lesser		BAP	RED	SOS Fore Wood 2011 SOS Crowhurst
Carduelis cannabina	Linnet, Common		BAP Species of Principal Importance	Red; SAP	CD 21.03.18, SOS Fore Wood
Carduelis carduelis	Goldfinch			Green	CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Carduelis chloris	Greenfinch			RED	CD 21.03.18 SOS Fore Wood CDA 11.4.21 Moved to Red DEC 21 (from Green)
Carduelis flavirostris	Twite			Red	
Carduelis spinus	Siskin			Green	SOS Fore Wood
Certhia familiaris	Treecreeper			Green	CD 21.03.18, SOS Fore Wood
Cettia cetti	Warbler, Cetti's			Green	CD 21.03.18, CD CD 29.12.19 CD 12.01.19
Chroicocephalus ridibundus	Black-headed gull			Amber	CD 12.01.19, 29.12.19
Chrysolophus pictus	Pheasant, Golden	introduced		No status	SOS Fore Wood
Ciconia ciconia	Stork, White				Seen 2019 Combe Valley, escapee Knepp Estate
Ciconia nigra	Black Stork			vagrant	CDA 28.8.15
Circus aeruginosus	Marsh Harrier			Amber	SX last seen 2018
Coccothraustes coccothracustes	Hawfinch			RED	SOS Fore Wood CDA 8.2.18 window casualty
Columba livia	Dove, rock, feral pigeon			Green	CD 21.03.18, 12.01.19, CD 29.12.19 SOS Fore Wood
Columba oenas	Dove, Stock			Amber	12.01.19 SOS Fore Wood
Columba palumbus	Woodpigeon			Green	CD 21.03.18, 12.01.19, CD 29.12.19 SOS Fore Wood
Coracias garrulus	Roller				1790 SOS Crowhurst
Corvus corax	Raven			Green	CD 29.12.19, SOS Fore Wood
Corvus corone	Crow, Carrion			Green	CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Corvus frugilegus	Rook			Green	CD 21.03.18, SOS Fore Wood
Corvus monedula	Jackdaw			Green	12.01.19, CD 29.12.19, SOS Fore Wood
Crex crex	Corncrake				SX last seen 2003
Cuculus canorus	Cuckoo		BAP	Red	SOS Fore Wood
Cyanistes caeruleus	Tit, Blue			Green	CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Cygnus columbianus bewickii	Swan, Bewick's			Amber	SOS Fore Wood
Cygnus olor	Swan, Mute			Green	CD 21.03.18, 12.01.19,

					CD 29.12.19 SOS Fore Wood
Delichon urbica	Martin, House			RED	SOS Fore Wood Moved to Red DEC 21
Dendrocopos major	Great Spotted Woodpecker			Green	12.01.19, SOS Fore Wood CDA 16.5.21
Dendrocopos minor	Woodpecker, Lesser Spotted			RED	SOS Fore Wood
Dendrocopus major	Woodpecker, Great Spotted			Green	CD 21.03.18
Egretta garzetta	Egret, Little			Green	CD 21.03.18, SOS Crowhurst
Emberiza citronella	Yellowhammer		BAP	Red	CD 21.03.18, SOS Fore Wood
Emberiza schoeniclus	Bunting, Reed			Amber	CD 21.03.18
Erithracus rubecula	Robin			Green	CD 21.03.18, 12.01.19, CD 29.12.19, RSPB Fore Wood
Falco columbarius	Merlin			Red	SX last seen 2015
Falco subbuteo	Hobby			Green	SOS Fore Wood
Falco tinnunculus	Kestrel			Amber	12.01.19, CD 29.12.19, SOS Fore Wood
Ficedula hypoleuca	Flycatcher, Pied			RED	SOS Fore Wood
Fringilla coelebs	Chaffinch			Green	CD 21.03.18, CD 29.12.19, SOS Fore Wood
Fringilla montifringilla	Brambling	Sch. 1 Part 1		Green	SOS Fore Wood
Fulicia atra	Coot			Green	CD 21.03.18 (34), CD12.01.19, CD 29.12.19 SOS Fore Wood
Gallinago gallinago	Snipe			Amber	CD 21.03.18, 12.01.19
Gallinula chloropus	Moorhen			Green	CD 21.03.18, SOS Fore Wood
Garrulus glandarius	Jay			Green	Migrant, CD 21.03.18, SOS Fore Wood
Hirundo rustica	Swallow			Green	SOS Fore Wood
Hirundo rustica	Swallow			Notable	SX last seen 2018
Jynx torquilla	Wryneck			Notable	SX last seen 2000
Larus argentatus	Gull, Herring		BAP	Red	CD 29.12.19, SOS Fore Wood
Larus canus	Gull, Common			Amber	CD 21.03.18, 12.01.19, CD 29.12.19
Larus fuscus	Lesser Black Backed gull			Amber	CD 21.03.18 SOS Fore Wood
Larus melanocephalus	Mediterranean Gull			Amber	SX last seen 2017 Circus aeruginosus
Larus ridibundus	Gull, Black-headed			Amber	CD 21.03.18 (23) CD12.01.19, SOS Fore Wood
Locustella naevia	Warbler, Grasshopper			RED	1980 SOS Crowhurst
Loxia curvirostra	Crossbill, Common			Green	SOS Fore Wood
Lullula arborea	Woodlark			Notable	SX last seen 2002
Luscinia megarhynchos	Nightingale			RED	SOS Fore Wood , JF 2019 on Link Road SP 2019 on Chapel Hill
Mareca penelope	Wigeon			Amber	CD 21.03.18 (52 seen) CD12.01.19, CD 29.12.19
Milvus milvus	Red kite	Sch. 1 Part 1		Amber	SOS Crowhurst
Motacilla alba	Wagtail, Pied			Green	CD 29.12.19, SOS Fore Wood
Motacilla cinerea	Wagtail, Grey			RED	SOS Fore Wood
Motacilla flava	Yellow wagtail			Notable	SX last seen 2018
Muscicapa striata	Flycatcher, Spotted		BAP	Red	SOS Fore Wood
Numenius arquata	Curlew			Amber	SOS Fore Wood

Oenanthe oenanthe	Wheatear			Green	JF 2019
Oriolus oriolus	Golden Oriole			RED	SOS Fore Wood
Pandion haliaetus	Osprey			Amber	SOS Fore Wood Sx last seen 2000
Panurus biarmicus	Tit, Bearded			Green	1982 SOS Crowhurst
Parus major	Tit, Great			Green	CD 21.03.18, 12.01.19, SOS Fore Wood
Passer domesticus	Sparrow, House			Red & Defra's Red	BAP CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Passer montanus	Sparrow, Tree			RED	SOS Fore Wood
Periparus ater	Tit, Coal			Green	CD 21.03.18, SOS Fore Wood
Phalacrocorax carbo	Cormorant, Great			Green	CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Phasianus colchicus	Pheasant			No status	CD 21.03.18, 12.01.19, CD 29.12.19 SOS Fore Wood
Phoenicurus ochruros	Black redstart			RED	SX last seen 2018
Phoenicurus phoenicurus	Redstart, Common			Amber	SOS Fore Wood
Phylloscopus collybita	Chiffchaff			Green	Migrant, SOS Fore Wood
Phylloscopus sibilatrix	Warbler, Wood			RED	SOS Fore Wood
Phylloscopus trochilus	Warbler, Willow			Amber	Migrant, SOS Fore Wood
Pica pica	Magpie			Green	CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Picus viridis	Woodpecker, Green			Amber	CD 21.03.18, CD 29.12.19, SOS Fore Wood CDA frequent 2021
Poecile montanus	Tit, Willow			RED	SOS Fore Wood
Poecile palustris	Tit, Marsh			RED	SOS Fore Wood
Prunella modularis	Dunnock			Amber	CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Psittacula krameri	Parakeet			No status	From 1 January 2010 it can be shot if it is being a nuisance SX last seen 2000
Pyrrhula pyrrhula	Bullfinch			Amber	BAP, SAP CD 21.03.18, SOS Fore Wood
Rallus aquaticus	Rail, Water			Green	CD 21.03.18, SOS Fore Wood
Regulus ignicapillus	Firecrest			Green	SOS Fore Wood 2014 SOS Crowhurst
Regulus regulus	Goldcrest			Green	CD 21.03.18, 12.01.19, SOS Fore Wood
Riparia riparia	Sand martin			Notable	SX last seen 2018
Saxicola rubetra	Whinchat			Green	2017 SOS Crowhurst
Saxicola rubicola	Stonechat			Green	CD 21.03.18
Scolopax rusticola	Woodcock			RED	SOS Fore Wood SX last seen 2017
Sitta europaea	Nuthatch			Green	CD 21.03.18, CD 29.12.19, SOS Fore Wood
Spatula clypeata	Shoveler				CD 21.03.18, 12.01.19, CD 29.12.19
Steptopelia decaocto	Turtle dove		BAP	Red	SOS Fore Wood
Streptopelia decaocto	Dove, Collared			Green	CD 29.12.19, SOS Fore Wood
Strix aluco	Owl, Tawny			Green	2019 Chapel Hill SP, SOS Fore Wood
Sturnus vulgaris	Starling		BAP	Red & Defra's Red	12.01.19, CD 29.12.19, SOS Fore Wood
Sylvia atricapilla	Blackcap			Green	SOS Fore Wood
Sylvia borin	Warbler, Garden			Green	SOS Fore Wood
Sylvia communis	Whitethroat, Common			Green	SOS Fore Wood
Sylvia curruca	Whitethroat,			Green	SOS Fore Wood

	Lesser				
Tachybaptus ruficollis	Grebe, Little			Green	CD 21.03.18
Tringa ochropus	Sandpiper, Green			Amber	SOS Fore Wood
Troglodytes troglodytes	Wren			Green	CD 21.03.18, 12.01.19 CD 29.12.19, SOS Fore Wood
Turdus iliacus	Redwing			Red	SOS Fore Wood
Turdus merula	Blackbird			Green	CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Turdus philomelos	Song thrush		BAP Species of Principal Importance	Red	CD 21.03.18, CD 29.12.19, SOS Fore Wood
Turdus pilaris	Fieldfare	Sch. 1 Part 1		Red	Migrant, SOS Fore Wood
Turdus viscivorus	Thrush Mistle			Amber	CD 21.03.18, 12.01.19, CD 29.12.19, SOS Fore Wood
Tyto alba	Barn Owl			Amber	SOS Fore Wood, JF 13.10.17 pellets at Bryne's Fm
Upupa epops	Hoopoe			Not assessed	1968 SOS Crowhurst
Vanellus vanellus	Lapwing			Red	CD 21.03.18 (66 seen), CD12.01.19 2 at Nashes Farm, 14.2.21 (S.Plato)

Information from magic.gov.uk draws our attention to the possibility that two important species, lapwing and turtle dove may be in our area, as the coloured circles indicate (blue for lapwing, and pink for turtle dove). These maps are generated so that planners and potential house builders will be aware of any threatened or rare species in the area. Both species are found in Crowhurst.



MAMMALS IN CROWHURST

© Chris Davidson Fecund rabbits in a garden habitat in Crowhurst

Twenty-five species of mammal are known to be present in the parish, of these nine species are bats whose records have been collated from ecological surveys carried along the south of the parish (2005-2006) for the purposes of the Link Road construction. Other data used is from the Quarry Wood Nature Reserve species lists on-line (thus 'QW2013' etc).

Mammals in danger include all bat species which are protected by UK and EU law. There are three Biodiversity Action Plan (BAP) species present:

- Hedgehog and
- Hazel Dormouse (declining according to the Sussex Wildlife Trust.[52]
- Pipistrelle bat

Badger casualty on Ballards Hill 08 Oct 2021 © John Feltwell

[52] Sussex Wildlife Trust, The last dormouse in Sussex? https://sussexwildlifetrust.org.uk/news/the-last-dormouse-in-sussex (retrieved 28 Feb 2020)

Two other BAP mammals have become not known from the parish:

- Brown Hare and
- Water Vole - 'Britain's fastest declining mammal'[53] and is likely now to be extinct in Crowhurst.

Badger is common in Crowhurst and a number of badger setts exist. Unfortunately badger mortality is regular on roads, but it does not seem to adversely affect badger numbers. In parts of the community there are more badgers than people. Badgers live in a matriarchal society, and perhaps sows keep boars away from the young cubs over winter, thus more males cross roads then, and that contributes to their highest mortality in February.

Hazel Dormouse

© Chris Davidson. Present in the village in 2011

October 2021 from Fore Wood

During our October survey, 13 active dormice were found, of which 7 were adults, and 6 were juveniles. 7 were female, of which 2 were adults and 5 were juveniles, 6 were male of which 5 were adults and 1 was a juvenile. The juveniles ranged from 9.5 to 14 grams, the adults ranged from 16 to 23 grams. The Dormice were located in 4 different compartments within the woods. (data kindly supplied by Sophie Streeter with approval of RSPB.)

[53] Water Vole https://watervole.org.uk/ (retrieved 28 Feb 2020)

Table WM11 Mammals recorded from the parish (25 spp, was 26spp)

CLASS MAMMALIA (Mammals)

Latin / Specific Name	Common Name	Biodiversity Action Plan (BAP) species ('registrations' = sound recordings)
Apodemus sylvaticus	Mouse, Field	Presumed to be present **Chapel Hill 2019 SP**
Arvicola terrestris	**Vole, Water BAP**	**LIKELY TO BE EXTINCT IN PARISH** 'There are no known populations of water voles in your Parish, and not for some time now'[54] **SX = last seen 1997**
Capreolus capreolus	Deer, Roe	QW 2013
Clethrionomys glareolus	Vole, Bank	Chapel Hill 2019 SP
Dama dama	Deer, Fallow	Stonebridge Farm, TQ77291204 2018 by ID
Eptesicus serotinus	Serotine bat	Nine recorded, Nr. Upper Wilting's Farm, , Crowhurst Lane, Decoy Farm Pond, Adam's Farm, Acton's Farm, [55]
Erinaceus europaeus	**Hedgehog BAP**	Presumed to be present. Craig Close 'regularly' 2020 Seen at night crossing Station Road, and Fore Wood Lane in 2019.[56]
Lepus europaeus	**Hare, Brown BAP**	Last seen in Combe Haven, 1980 (SP)
Meles meles	Badger	Throughout the parish QW 2013
Microtus arvalis	Vole, Common	Presumed to be present
Mus musculus	Mouse, House	Presumed to be present. CDA 24.7.16 photographed
Muscardinus avellanarius	**Hazel Dormouse BAP**	Named as an important species in RSPB Fore Wood; its populat size being 'unknown' and it is 'not monitored'. It is a 'BAP priority regionally important species' RSPB Management Plan 2016. Known to be present in adjacent Parish of Catsfield in 2019. [57] **SX = last seen 2019** **Seen in garden by CDA, photographed, confirmed 25.7.11**
Mustela erminea	Stoat	Stonebridge Farm, TQ77291204 2018 by ID
Myotis daubentonii	Daubenton's bat	Three seen at Decoy Wood Farm, only place along the route. Seen 2005 and 2006.
Myotis mustacinus	Whiskered bat	Flood plain near Hillcroft Farm, two near Adam's Farm.
Myotis mystacinus / brandtii	Brandt's bat	(as above – difficult to separate
Myotis nattereri	Natterer's bat	'the commonest of the Mysotis bats', at Upper Wiltings Farm, Adam's Farm, Acton's Farm, railway cutting west of Glover's Farm. Roosting in Hillcroft Farm in Aug 2005.
Neosciurus carolinensis	Squirrel, Grey	Presumed to be present
Neovison viso	Mink, American	Seen in Powdermill Stream summer 2019, by Robin Young.[58] RSPB Fore Wood 2019
Nyctalus noctula	Noctule bat	18 registrations along the route of the scheme, Upper Wilting's Farm, Decoy Farm Pond, Acton's
Oryctolagus cuniculus	Rabbit	QW 2013
Pipistrellus pygmaeus	**Pipistrelle bat BAP**	47 registrations along the link route, including Acton's Farm, Adam's Farm. Also present on Chapel Hill
Pipistrellus sp.	Pipistrelle bat (45 kHz)	103 registrations, highest at Upper Wilting's Farm, Acton's.
Plecotus auritus	Long-eared bat	Eight registrations Upper Wilting's Farm, Acton's and Adam's Farm.
Rattus norvegicus	Rat, Brown	Presumed to be present
Sorex araneus	Shrew, Common	Presumed to be present
Talpa europeae	Mole	Throughout the parish

[54] Fran Southgate, Sussex Wildlife Trust, email to Sonia Plato, 2 March 2020.

[55] ESCC (undated) but 2005. Environmental Statement, Chapter 12. Nature Conservation and Biodiversity. Appendix 12D. Mammals. Bexhill to Hastings Link Road. file:///C:/Users/John/Documents/REPORTS%201300-1350/LINK%20ROAD%20WM%201317/WM1317%20ESCC%20(undated)%20Chapter%2012%20Nat%20Con%20&%20Biodiversity.pdf (retrieved Feb 2020)

[56] Robin Young email to Sonia Plato, 2 March 2020

[57] Hazel Dormouse in the Catsfield churchyard in 2019 (Feltwell).

[58] Robin Young, email to Sonia Plato 2 March 2020

Vulpes vulpes	Fox	Throughout the parish, QW 2013

Table WM12 Reptiles – Amphibians – Fish recorded from Crowhurst

Reptiles recorded from Crowhurst

CLASS REPTILIA (Reptiles)

Table WM13

Latin / Specific Name	Common English Name	Biodiversity Action Plan (BAP) species	Observations
Anguis fragilis	Slow worm	BAP	Chapel Hill 2019 SP, Seen in compost 2019[59] CDA 31.5.20
Natrix natrix	Snake, Grass	BAP	Chapel Hill 2019 SP CDA 6.8.16 photographed
Viper berus	Adder	BAP	SX = last seen 2013 Sunbathing on Station platform (N bound) each year. Dog killed by adder in Fore Wood about 2010. SP
Zootoca vivipara	Lizard, Viviparous	BAP	SX = last seen 2017
Lacerta agilis	Lizard, Sand	BAP	SX = last seen 1992

Amphibian recorded from Crowhurst

CLASS AMPHIBIA (Amphibians)

Table WM14

Latin / Specific Name	Common English Name	Biodiversity Action Plan (BAP) species	Observations
Bufo bufo	Toad, Common	BAP	SX = last seen 2018 Chapel Hill 2019 SP Stonebridge Farm, TQ77291204 2018 by ID
Rana temporaria	Frog, Common		QW 2013 (photos) Chapel Hill 2019 SP
Triturus cristatus	Newt, Great Crested	BAP	SX = last seen 2013 Stonebridge Farm, TQ77291204 2018 by ID
Lissotriton helveticus	Newt, Palmate	BAP	SX = last seen 2017
Lissotriton vulgaris	Newt, Smooth or Common	BAP	SX = last seen 2017 CDA 22.5.20 photographed

[59] Robin Young, email to Sonia Plato 2 March 2020

Table WM15 Fish recorded from Crowhurst

Seven species of fish are known from the streams of Crowhurst. The main stream is Powdermill Stream flowing through the centre of the village and around which the village has historically developed. The Watermill Stream flows to the west of the parish and joins the Powdermill Stream at the Weir which is south of the Link Road.

The streams of Crowhurst can thus be separated into the upper reach stream of the Powdermill Stream in the village, and the 'lower reaches' below the weir. The fish are different either side.

Fish in the upper reaches are Brown Trout, Eels, Brook Lamprey, Stone Loach and Bullhead. Surveys have indicated 'significant numbers' of these species.

Evidence suggests that the waters around Adam's Farm are Brook Lamprey and Trout nursery areas. These are thus important areas for fish species, and their importance become relevant if there are any pollution incidents that might affect the fauna of these waterways.[60]

SX = Information from Sussex Biodiversity Record

Table WM15

Latin / Specific Name	Common English Name	Biodiversity Action Plan (BAP) species	Observations
Anguilla anguilla	Eel	BAP species, RED list	SX last seen 2013
Barbatula barbatula	Stone Loach		
Cottus gobio	Bullhead		
Lampetra planeri,	Brook Lamprey		SX last seen 2013 'Sussex Rare'
Rutilus rutilus	Roach		
Salmo trutta	Trout, Brown	BAP species	SX last seen 2014 'Sussex Rare'
Scardinius erythrophthalmus	Rudd		

[60] Basil Dean, Environment Agency, Pevensey office, personal comm. 3 March 2020

Table WM16 Invertebrates recorded from site


Purple Hairstreak © Will Kemp


White Admiral © John Feltwell

CLASS INSECTA
ORDER LEPIDOPTERA (BUTTERFLIES and MOTHS)

Latin / Specific Name	Common English Name	Observations
Anthocharis cardamines	Orange tip butterfly	Fore Wood transect 2019[61]
Apatura iris	Purple Emperor	SX = last seen 5.5.2005 'Sussex Rare'
Aphantopus hyperantus	Ringlet	Fore Wood transect 2019
Argynnis paphia	Fritillary, Silver-washed	Fore Wood transect 2019. Peak of 35 in survey of 2015.
Boloria euphrosyne	Pearl-bordered Fritillary BAP	SX = last seen 2017
Celastina argiolus	Holly Blue butterfly	Fore Wood transect 2019
Coenonympha pamphilus	Small Heath BAP	SX = last seen 2019
Erynnis tages	Dingy Skipper BAP	SX = last seen 2010
Favonius quercus	Purple Hairstreak	Fore Wood transect 2019 Photographed in Catsfield by Will Kemp in 2023.
Hipparchia semele	Grayling BAP	SX = last seen 2011
Inachis io	Peacock butterfly	Fore Wood transect 2019
Lagoda camilla	Admiral, White BAP	Fore Wood transect 2019; peak of 4 in 2015 survey, Population 'stable' in 2015 (RSPB Management Plan).
Lasiommata megera	Wall BAP	SX = last seen 2015
Ochlodes venatus	Skipper, Large	Fore Wood transect 2019
Pararge aegeria	Speckled Wood butterfly	Fore Wood transect 2019
Pieris brassicae	Large white butterfly	Fore Wood transect 2019
Pieris rapae	Small White Butterfly	Fore Wood transect 2019
Pieris napi	Green-veined white butterfly	Fore Wood transect 2019
Polygonia c-album	Comma	Fore Wood transect 2019
Pyrgus malvae	Grizzled skipper BAP	SX = last seen 2012
Pyronia tithonus	Gatekeeper	Fore Wood transect 2019
Satyrium w-album	White-letter hairstreak BAP	SX = last seen 2010
Vanessa atalanta	Red Admiral	Fore Wood transect 2019
Vanessa cardui	Painted lady	Fore Wood transect 2019
EXPECTED BUT NOT RECORDED		
Aglais urticae	Small Tortoiseshell butterfly	
Gonepteryx rhamni	Brimstone	
Lycaena phaeus	Small Copper	
Maniola jurtina	Brown, Meadow	
Polyommatus icarus	Blue, Common	
Thymelicus flavus	Skipper, Small	
Thymelicus sylvestris	Skipper, Essex	

[61] Terry Anderson and Sophie Streeter (volunteers), 2019. Fore Wood Butterfly Survey

Fore Wood Butterfly Survey

RSPB Volunteers Report by Terry Anderson and Sophie Streeter

Each year a butterfly survey is conducted in Fore Wood to record the species of butterfly present and the numbers of each species seen.

When a vacancy arose this year to conduct the survey, we jumped at the opportunity to improve our butterfly identification and general knowledge.

The survey method is via a transect, whereby a set route is walked around the wood each week from April to October to provide a representation across the wood. This route is split up into 10 sections and a description of each section is recorded to understand the type of habitat and woodland being walked (you may have seen our numbered orange post around the woods marking these sections out). The butterflies seen on each section are recorded as we walk the route. We also record information about weather conditions at the start of each walk.

The route remains the same each year to enable comparisons and analysis to be made on the data recorded, and enables RSPB to assess the impact of creating new habitat for wildlife through its woodland management plan. The data is included on the UK Butterfly Monitoring Scheme to aid UK wide analysis.

Over the course of the year, we saw a total of 765 butterflies, and 20 different species during our surveys. Our highlight of the year was being able to add the Small Heath to Fore Wood's species count, for the very first time. The Small Heath is typical to dry grassland, but may visit grassy woodland rides.

It was also encouraging to see the positive impact for butterflies from opening up woodland rides and creating scallops, as there was a marked increase in butterflies this year on 4 sections were this type of work has been undertaken in recent years; (areas along the 1066 footpath, and the footpath from the bench above the pond to the bench on the top ride).

This year saw an increase of Meadow Browns (292), the highest annual count so far recorded at Fore Wood, and the butterfly most frequently seen. The Silver-washed Fritillary was the second most seen butterfly with an annual count of 101 across the survey period. White Admirals (20), and Gatekeepers (80), had the highest count since 2014, with Gatekeepers having a substantial increase from just 19 in 2018.

There was a notable absence of Green-veined White and Purple Hairstreak on the count this year; the latter being particularly elusive high up in the tops of oak trees.

We have really enjoyed doing the weekly surveys, and as butterflies have different flight periods, we were thrilled each time we were able to add a species to our annual list. It has been an excellent way to observe butterflies and improve our knowledge.

Silver-washed Fritillary

White Admiral

Peacock

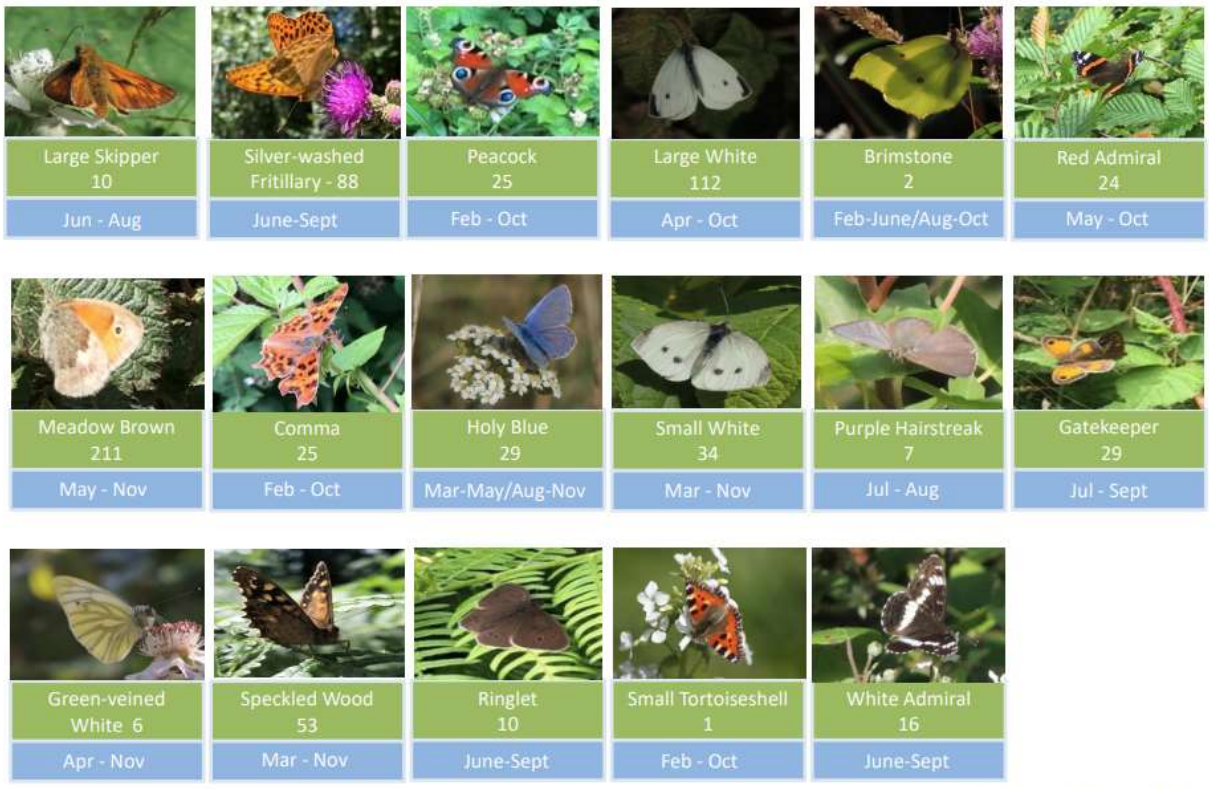
Gatekeeper – mating pair

Species List and Count:

Meadow Brown 292, **Silver-washed Fritillary** 101, **Gatekeeper** 80, **Speckled Wood** 80, **Peacock** 36, **Large White** 30, **Red Admiral** 24, **White Admiral** 20, **Brimstone** 18, **Comma** 16, **Small White** 14, **Ringlet** 11, **Large Skipper** 10, **Painted Lady** 10, **Holly Blue** 9, **Orange-tip** 6, **Purple**

Fore Wood Butterfly Survey 2020

Butterfly species observed May 27th – Sept 22nd 2020
(Including Numbers seen and Flight Period).



Total Annual Count: 682

© Terry Anderson and Sophie Streeter [62]

[62] Terry Anderson and Sophie Streeter (volunteers), 2020. Fore Wood Butterfly Survey file:///C:/Users/John/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/N7DXKUGD/Fore%20Wood%20Butterfly%20Survey%202020.pdf (13pp).

Fore Wood Butterfly Survey 2021

RSPB Volunteers Report by Terry Anderson and Sophie Streeter

There was a slow start to the butterfly year in 2021 due to the inclement weather in early spring. This caused a delay to many activities in the natural world, including butterfly emergence, and did seem to have an impact on some of our survey data for butterfly species with an early flight period. Also, unfortunately, we were only able to conduct 18 out of 26 survey weeks, so this too has had some impact to the data count of some butterfly species across the survey weeks.

Despite the weather, the count for **Peacock** butterflies – 54 was the highest count since 2016, and **Red Admirals** - 49 was the highest count since the Fore Wood records started in 1987 (25 was the second highest count in 2019). This is particularly impressive as both species have long flight periods and can be seen from February/March right through to October/November if the conditions are right, so even with the weather issues at the beginning of the year, both species did well.

Silver-washed Fritillaries, seemed to maintain good levels this year, and although we only had a count of 60, we missed 3 survey weeks in August which is a prime flight period for this species. We are confident the numbers would have been at least on par with last year's count of 88, if they had been fully surveyed through August.

Unfortunately, there was a marked decrease in the count for **Meadow Brown** in 2021 with only 52 counts across the survey period. In the last couple of years, we have typically reached numbers above 200. Whilst one of the reasons for the low count will be the missed survey weeks, the weather at the binging of the year is less likely to have been an issue since their flight period starts at the very end of May/June.

The spring weather did seem to impact the count for both **Specked Wood** and **Comma**. Speckled Wood can be seen from March, through to November, but are more widely seen mid-April to mid-October, however we didn't see our first Speckled Wood until late May. After seeing just 1 Comma in the first week of April, we didn't observe them again on a survey until early June, yet they are usually widely seen from February through to early October. We had a count of 40 Speckled Wood in 2021, compared to 53 in 2020, and only 9 for Comma, compared with 25 in 2020.

After a really good year for the **Large White** in 2020 (with a count of 112), this year we only had a count of 17. Large White butterflies have a long flight period from April to September, but usually with an absence for part of July, so the drop in sightings is a concern.

We were really pleased to add **Small Skipper** to the species list in 2021, they had been absent from survey recordings since 2016 (we had seen 1 in 2020, but not during a survey, so we couldn't formally record it!).

When conducting the survey, we also record any moth or dragonfly/damselfly species we can identify; the later being much harder as they skitter past at speed. 2021 was a good year for dragonfly and damselfly, there were weeks when over the course of our survey walks we would encounter numbers into hundreds scouting rides or over the pond at various heights of flight. One week in June, we counted 338 Damselfly around the pond (believed to be Azure Damselflies). Most were in their mating pair egg laying, where the male guards the female by gripping behind her head with claspers at the tip of its abdomen, and standing vertical whilst the female lays their fertilised eggs on vegetation below the waterline. This behaviour by the male is to ensure that no other rival male can mate with the female before his fertilised eggs are laid.

We look forward to what the butterfly season holds for Fore Wood this year in 2022, and whilst we survey; endeavouring to hone our dragonfly identification skills!

Peacock

Red Admiral

Comma

Silver-washed Fritillary

Small Skipper

Species seen & count

Silver-washed Fritillary 60; Peacock 54; Meadow Brown 52; Red Admiral 49; Speckled Wood 40; Small White 34; Gatekeeper 22; Large White 17; White Admiral 12; Purple Hairstreak 8; Brimstone 7; Comma 9; Large Skipper 3; Orange Tip 3; Small Skipper 2; Ringlet 2; Green-veined White 1.

Butterflies in Crowhurst Meadows

Sophie Streeter and Terry Anderson surveyed Crowhurst Meadows in June, July and August 2023 and here are the results. Four new species were added to the list (Holly Blue, Peacock, Small Heath, and Green-veined White). Small Heath is a Biodiversity Action Plan (BAP) species because of its declining numbers so it is of conservation importance.

The large number of butterflies reflect the effort to manage the sites, especially Muriel's Meadow.
This makes butterflies a significant contributor to the rich biodiversity of the parish.

Crowhurst Meadows Surveys

22nd June - Start time: 14:40, sunny day	**28th July - start time: 15:50, sunny day**	**10th August - start time: 16:05, started slightly cloudy then improved to sunny**
Church: 0	Church: 2 Gatekeeper 1 Meadow Brown	Church: 1 Meadow Brown
Community Centre: 0	Community Centre: 1 Gatekeeper 2 Meadow Brown	Community Centre: 3 Gatekeeper 1 Meadow Brown
Memorial Garden: 3 Meadow Brown 1 Red Admiral	Memorial Garden: 3 Gatekeeper 2 Meadow Brown	Memorial Garden: 1 Holly Blue 1 Speckled Wood
Nashes Verge: 2 Meadow Brown (1 Large Skipper in the field just behind the hedge)	Nashes Verge: 2 Small Copper 10 Meadow Brown 3 Common Blue 8 Gatekeeper 2 Small White 2 Small Skipper 2 Brown Argos	Nashes Verge: 1 Speckled Wood 5 Meadow Brown 8 Gatekeeper 1 Comma 1 Holly Blue 1 Common Blue 2 Whites (not able to identify)
Muriel's meadow: 40E Meadow Brown 3 Speckled Wood 1 Red Admiral 1 Large White 1 Small White	Muriel's Meadow: 20E Gatekeeper 3 Red Admiral 1 Holly Blue 3 Large White 2 Peacock 30E Meadow Brown 2 Small Copper 4 Brown Argos 2 Common Blue 2 Comma 2 Large Skipper 1 Small White	Muriel's Meadow: 1 Purple Hairstreak 20E Gatekeeper 15E Meadow Brown 1 Small White 1 Large White 4 Green-veined White 1 Common Blue 1 Comma 1 Speckled Wood 1 Small Heath 1 Holly Blue

Table WM18

CLASS INSECTA
ORDER LEPIDOPTERA : HETEROCERA) Moths

Latin / Specific Name	Common English Name	Observations
Autographa pulchrina	**Beautiful Golden Y**	**QW 2016**
Crocallis elinguaria	**Scalloped Oak**	**QW 2015**
Eupithecia dodoneata	**Oak tree pug**	**Nb Population size unknown RSPB Fore Wood Management Plan 2016**
Gandaritis pyraliata	**Barred Straw**	**QW 2016**[63]
Geometra papilionaria	**Large Emerald**	**QW 2015**
Habrosyne pyritoides	**Buff arches**	**QW 2015**
Lithophane social	**Pale pinion**	**Nb Population size unknown RSPB Fore Wood Management Plan 2016**
Lomaspilis marginata	**Clouded Border**	**QW 2016**
Lomographa temerata	**Clouded Silver**	**QW 2016**
Lymantria monacha	**Black arches**	**QW 2015**
Miltochrista miniata	**Rosy Footman**	**QW 2015**
Opisthograptis luteolata	**Brimstone moth**	**QW 2015**
Paracolax tristalis	**Clay fanfoot**	**Na Population size unknown RSPB Fore Wood Management Plan 2016**
Parectropis similaria	**Brindled white spot**	**Nb Population size unknown RSPB Fore Wood Management Plan 2016**
Schrankia taenialis	**White-line snout**	**Na Population size unknown RSPB Fore Wood Management Plan 2016**
Spilosoma lubricipeda	**White ermine**	**QW 2016**
Spilosoma lutea	**Buff Ermine**	**QW 2016**
Synanthedon vespiformis	**Yellow-legged clearwing**	**Na Population size unknown RSPB Fore Wood Management Plan 2016**
Tethea or	**Poplar lutestring**	**Nb Population size unknown RSPB Fore Wood Management Plan 2016**
Tetheella fluctuosa	**Satin lutestring**	**Nb Population size unknown RSPB Fore Wood Management Plan 2016**
Timandra comae	**Blood vein**	**QW 2016**
Tortrix viridana	**Green Oak Tortrix**	**QW 2016**

CLASS INSECTA
ORDER HYMENOPTERA (BEES, WASPS, ANTS)

CLASS INSECTA **Latin / Specific Name**	**Common English Name**	**Observations**
Diplolepis rosae	**Rose bedeguar gall, or Robin's pincushion, or Moss gall**	**JF Trust land Feb 2020**
Osmia pilicornis	**Fringe Horned Mason Bee**	**Nationally noteable A – RSPB reserves priority. Recorded at NW end of compartment 19 in 2015. RSPB 20-16 Management Plan**

OTHER ARTHROPODS
CLASS CRUSTACEA (Crabs and woodlice)

Latin / Specific Name	Common English Name	Observations
Austropotamobi us pallipes	**Native Crayfish**	**'No known populations of native crayfish left in Sussex (though not everywhere has been surveyed) – widespread American signal crayfish throughout Sussex.**64

CLASS INSECTA
ORDER COLEOPTERA (BEETLES)

CLASS INSECTA **Latin / Specific Name**	**Common English Name**	**Observations**
	Glow worm	**CDA 15.6.20 photographed in garden**

63

64 Fran Southgate, Sussex Wildlife Trust, email to Sonia Plato, 2 March 2020.

CONSERVATION

The Crowhurst Nature Reserve
Trust Land
Muriel's Meadow

Verges

- Nashes Farm verge
- Village Hall (MUGA)
- Churchyard verge
- Millennium Garden Verge
- Triangle

Community Solar Farm
(as nature reserve)

The '30 by 30' Campaign

This is 30% of '*new land in England will be designated and protected'* by 2030.[65]

The Prime Minister (Boris Johnson) in September 2020, committed to protect 30% of the UK's land by 2030. He said that existing National Parks, AONBs and other areas comprise about 26% of land in England, and that an additional 4% or over 400,00ha will be protected to support the recovery of nature. COP27 & Wildlife Trusts also promote 30 by 30[66].

The Prime Minister signed the UN's Leaders **Pledge for Nature**[67] '*committing to put nature and biodiversity on a road to recovery by 2030*.' He called for '*immediate action*', since we had to '*act now to reverse devastating biodiversity loss and prevent more species from being lost forever, with a 68% decline in global wildlife populations since 1970 alone'*.

So how much of Crowhurst is already designated and protected? Do we need any more? Nothing extra appears to have been added to Crowhurst or E. Sussex to date (January 2023); I asked Huw Merriman MP on 24 October 2022, but he did not reply.

How do the numbers stack up? There is a lot of overlap of protected areas. First of all, the AONB amounts to about 61% of the parish[68]. So that is a good start. Ancient Woodlands represent about 15% of the parish, but most of these are in the AONB, so they are already protected. Fore Wood RSPB is an already important nature reserve, but it is all in the AONB. It is also a SSSI which is also inside the AONB.

The Maths: We can add Ancient Woodland not in the AONB (22.79ha), 4 x RDC Registered Verges + Muriel's Meadow + Trust land (est. 1ha), Combe Valley SSSI within the parish south of the Link Road (50.36ha) = 51.36ha. Therefore AONB (542ha) + Combe Valley (50.36ha) + Verges etc (1ha) = 602ha or 69% of the parish is already protected. To this could also be added the settling lake north of the Link Road (5.01ha) which is protected (possibly) under the Combe Valley Country Park north of the Link Road (but not in the SSSI). Priority Habitats (S41) have not been added at this stage.

Summary

Over 70% of the parish is theoretically already protected as AONB, SSSI, Ancient Woodlands etc via various UK and EU law and local policies. Basically Crowhurst appears to be alright with so much of the parish protected for nature conservation. However it is the failure to uphold the law that is eating away at the quality of the protected areas. If Huw Merriman MP has any ideas to protect more habitat in Crowhurst we will listen. This would undoubtedly include ELMS[69] farming projects to enhance the environment.

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[65] Press Release. 28 September 2020. PM commits to protect 30% of UK land in boost for biodiversity. **https://www.gov.uk/government/news/pm-commits-to-protect-30-of-uk-land-in-boost-for-biodiversity** (accessed 24 October 2022).

[66] Wildlife Trusts **https://www.wildlifetrusts.org/30by30** (accessed 02 January 2023**). @30by30**

[67] Leaders Pledge 4 Nature. **https://www.leaderspledgefornature.org/** (accessed 03 January 2023)

[68] As measured on magic.gov.uk, where the AONB in the parish is 542ha, and the Parish is 877ha.

[69] Environmental Land Management Schemes (ELMS) **https://www.bbc.co.uk/news/science-environment-63029266.** (accessed 03 January 2023).

NO EU protected sites in the parish

Under EU law there are no EU designated sites in the parish, such as SPA, SACs, Ramsars or WHS.

However, there are EU protected species within the parish, such as bats, GCNs and Hazel Dormouse.

Table WM19 showing statutory sites and proximity to site:

STATUTORY DESIGNATIONS*	Notes
UK LAW	
SSSI	
Combe Haven (SSSI)	**Partially in the parish**
Fore Wood (SSSI)	**Partially in the parish**
Marline Valley Woods (SSSI)	**Only a few metres in the parish**
LNR	
Marline Valley Woods (LNR)	**Only a few metres in the parish**
NNR	
None	
AONB	
High Weald (AONB)	**The north part of parish is in the AONB**
COUNTRYSIDE PARK	
Combe Valley Countryside Park	
Non-Statutory sites:	
LOCAL WILDLIFE SITES	
CR01 - Woodland Complex at Buckholt Farm	
CR18 - Disused Railway, Crowhurst	
CR29 - Fore Wood	
Ha31 – Marline Valley Woods	
DESIGNATED & Undesignated ROAD VERGES	
Fore Wood Lane,	
Nashes Farm	
Millennium Garden Verge	
School verge MUGA	
Triangle	
LOCAL GREEN SPACES	**Policy CF3 is applicable in the Neighbourhood Plan for the sites listed below**
Fore Wood	
St George's Churchyard	
Crowhurst Recreation Ground	
Crowhurst Nature Reserve (= Quarry Wood)	

The following are the CITATIONS for the three SSSIs that Crowhurst are fortunate to have in the parish. The citations list the important factual information, habitats and flora and fauna.

1. FORE WOOD SSSI

COUNTY: EAST SUSSEX SITE NAME: FORE WOOD

DISTRICT: ROTHER

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authority: ROTHER DISTRICT COUNCIL

National Grid Reference: TQ 753128 Area: 21.5 (ha.) 52.6 (ac.)

Ordnance Survey Sheets 1:50,000: 199 1:10,000: TQ 71 SE

Date Notified (Under 1949 Act): 1966 Date of Last Revision: 1973

Date Notified (Under 1981 Act): 1984 Date of Last Revision: –

Other Information:
Fore Wood SSSI forms part of the larger Royal Society for the Protection of Birds reserve.

Reasons for Notification:
The interest of this particular area is twofold; it includes one of only 5 East Sussex examples of ghyll woodland (a habitat which is otherwise restricted to the Atlantic coast of Britain) and it contains a rich breeding community which includes hawfinch, woodcock and greater woodpecker.

The wood itself is rather variable and much modified in places. Areas of neglected pedunculate oak *Quercus robur* with hornbeam *Carpinus betulus* coppice also contain ash *Fraxinus excelsior* and birch *Betula pendula* above a sparse ground flora of ivy *Hedera helix* and bramble *Rubus fruticosus*. Some areas have been thinned and shrubs, particularly hazel *Corylus avellana* encouraged. Systematic clearing of old sweet chestnut *Castanea sativa* coppice has also taken place in order to promote oak high forest. In these thinned and cleared areas bluebells *Hyacinthoides non-scriptus*, enchanters nightshade *Circaea lutetiana* and honeysuckle *Lonicera periclymenum* form a dense ground flora.

The wood contains examples of Sussex ghylls. These steep ravines have been created by the vigorous down-cutting of streams into the sandstone. Alder *Alnus glutinosa* and ash *Fraxinus excelsior* trees form a closed canopy and help create an unusual micro-climate which is more typical of the western shores of the UK. Thus several 'Atlantic' plant species are found here including 3 rare mosses and the hay-scented buckler fern Dryoptera aemula. Greater woodrush Luzula sylvatica and hard fern Blechnum spicant are more common 'Atlantic' species. In addition to the modification of woodland type and the planting of trees and shrubs to attract birds, several glades and a pond have also been created. As yet the birdlife is not of exceptional quality but can be expected to improve considerably. At present

breeding birds of note include hawfinch, sparrowhawk, woodcock, cuckoo, tawny owl, greater spotted woodpecker, nuthatch and willow tit.

2. MARLINE VALLEY WOODS SSSI

COUNTY: EAST SUSSEX SITE NAME: MARLINE VALLEY WOODS

BOROUGH/DISTRICT: HASTINGS, ROTHER

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authority: HASTINGS BOROUGH COUNCIL, Rother District Council

National Grid Reference: TQ 780122 Area: 55.0 (ha.) 135.82 (ac.)

Ordnance Survey Sheets 1:50,000: 199 1:10,000: TQ 71 SE

Date Notified (Under 1949 Act): 1965

Date Notified (Under 1981 Act): 1986 Date of Last Revision: 1989

Other Information:
Part of this site is a reserve of the Sussex Wildlife Trust.
This site was formerly known as Marline Wood.

Reasons for Notification:
These ancient woodlands on Wadhurst Clay and Lower Tunbridge Wells sandstone are dominated by a nationally uncommon woodland type. A valuable feature of the site is the steep sided stream valley (ghyll) which contains plants that have an 'Atlantic' distribution. The site also includes an area of species-rich unimproved grassland, a nationally declining habitat.

The nationally uncommon pedunculate oak-bornbeam (birch-hazel variant) woodland type dominates the woods. There is some variation in composition due to local differences in drainage, soil type, slope and management. There is a history of management under the coppicewith-standards system. The ghyll has been created by vigorous downcutting of the stream through the soft sandstones which underlie the Wadhurst clay. It has a moist and warm microclimate which favours 'Atlantic' plants, now restricted in Britain to the Weald and the west of the country.

Standards of pedunculate oak *Quercus robur* are widespread throughout above coppice of hornbeam *Carpinus betulus* and, less commonly, hazel *Corylus avellana* or sweet chestnut *Castanea sativa*. There are scattered stands of birch *Betula pendula*, ash *Fraxinus excelsior*, field maple *Acer campestre* and beech *Fagus sylvatica*. Alder *Alnus glutinosa* occurs discontinuously along the stream valley and in small flushes which drain into the stream. Occasional stands of alder coppice are present. Active coppicing has generally reduced the shrub layer but holly *Ilex aquifolium* is locally common and two shrubs associated with ancient woodland are present: butcher's-broom *Ruscus aculeatus* and midland hawthorn *Crataegus laevigata*. The ground flora varies with the current state of management, but honeysuckle *Lonicera periclymenum*, enchanter's-nightshade *Circaea lutetiana*, dog's mercury *Mercurialis perennis*, bluebells *Hyacinthoides non-scripta* and wood avens *Geum urbanum* are often

2. MARLINE VALLEY WOODS SSSI, continued….

abundant. The stream valley and lateral flushes support a flora of pendulous sedge *Carex pendula*, yellow archangel *Lamiastrum galeobdolon* and opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*. Two wide rides have been cut through Marline Wood and are dominated by tufted hair grass *Deschampsia cespitosa* with bramble *Rubus fruticosus*.

The stream valley supports 61 species of bryophytes (mosses and liverworts) including 3 uncommon 'Atlantic' species: *Fissidens rivularis*, *Tetrodontium brownianum* and *Metzgeria furcata*. Other plants of the ghyll area include soft shield fern *Polystichum setiferum* and broad buckler fern *Dryopteris dilatata*.

The agriculturally unimproved pasture supports a species-rich neutral grassland flora, dominated by lesser knapweed *Centaurea nigra*, red fescue *Festuca rubra* and common bent *Agrostis capillaris*. Other species adding to the interest of the pasture include adder's-tongue fern *Ophioglossum vulgatum*, dyer's greenweed *Genista tinctoria*, quaking grass *Briza media* and common spotted-orchid *Dactylorhiza fuchsii*.

3.

3.COMBE HAVEN SSSI

COUNTY: EAST SUSSEX SITE NAME: COMBE HAVEN

BOROUGH/DISTRICT: HASTINGS; ROTHER

Status: Site of Special Scientific Interest notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authority: HASTINGS BOROUGH COUNCIL; ROTHER DISTRICT COUNCIL

National Grid Ref: TQ 770102 Area: 156.1 (ha) : 385.7 (acres)

Ordnance Survey Sheets 1:50,000: 199 1:10,000: TQ 71SE TQ 70NE

Date notified (under 1949 Act): - Date of last revision: -

Date notified (under 1981 Act): 1985 Date of last revision: -

Other Information: This site lies within the High Weald Natural Area. Filsham Reed Bed is a Local Nature Reserve declared by Hastings Borough Council and managed by the Sussex Trust for Nature Conservation.

Reasons for Notification:

This extensive site contains a rich diversity of habitat types. Alluvial meadows dominate much of the site and a nationally uncommon grassland type is present. Filsham reed bed is the largest reed bed in East Sussex and carries a rich community of breeding birds. Blocks of ancient woodland add to the site's interest. The range of habitat types is responsible for the wide diversity of plant, invertebrate and bird life at the site.

The alluvial meadows and the drainage ditches which dissect them are the remnants of a once much more extensive marshland which developed on river alluvium over Ashdown sandstones. Filsham reed bed has colonised poorly drained, ungrazed marsh and a small lagoon is present within the bed. Two areas of mixed tall fen communities are also present within the site. Woodlands have developed on higher ground over Wadhurst Clay and support several unusual plants. The whole site, but particularly the reed bed, is valuable for breeding, wintering and passage birds. The invertebrate fauna includes two notable dragonflies and important butterfly populations.

ALLUVIAL MEADOWS The meadows vary in composition and most are poorly drained. Reed sweet grass *Glyceria maxima* dominates large areas and its association with reed canary grass *Phalaris arundinacea* and marsh bedstraw *Galium palustre* is a nationally uncommon grassland type. Tussock grass *Deschampsia cespitosa*, rushes *Juncus* species and creeping bent grass *Agrostis stolonifera* occur commonly in the sward but corky fruited water-dropwort *Oenanthe pimpinelloides* and common meadow rue *Thalictrum flavum* are two unusual species. The ditches dissecting the meadows have a rich flora which includes several uncommon plants such as marsh violet *Hottonia palustris*, arrowhead *Sagittaria sagittifolia*, frogbit *Hydrocharis morsus-ranae* and flowering rush *Butomus umbellatus.*

3.COMBE HAVEN SSSI, continued..

FEN COMMUNITIES Common reed *Phragmites australis* dominates Filsham reed bed although open water and ditches within the bed are richer in plant life. Two areas of mixed tall fen (at TQ 777095 and TQ 778103) contain common reed, reed sweet grass, gipsywort *Lycopus europaeus*, yellow flag *Iris pseudacorus* and purple loosestrife *Lythrum salicaria*. Alder *Alnus glutinosa* and sallow *Salix cinerea* fringe parts of the reed bed and the tall fen community.

WOODLAND Variation in past management and in local drainage conditions have resulted in a range of woodland types. Redgeland Wood consists of hazel *Corylus avellana* coppice below standards of ash *Fraxinus excelsior* and pedunculate oak *Quercus robur*; notable plants of the shrub and ground layers include butcher's broom *Ruscus aculeatus*, Midland hawthorn *Crataegus laevigata* and bird's-nest orchid *Neottia nidus-avis*. Marsh Wood is another oak-hazel-ash wood but with field maple *Acer campestre* present above a ground flora which includes wood speedwell *Veronica montana* and goldilocks *Ranunculus auricomus*. Monkham Wood is coppice-with-standards woodland with oak and ash standards above coppiced hazel, hornbeam *Carpinus betulus* and sweet chestnut *Castanea sativa*. Decoy Pond Wood has developed on wet ground around a pond which is drying up; white willow *Salix alba*, crack willow *Salix fragilis*, alder *Alnus glutinosa* and sallow *Salix cinerea* occur above a ground flora of cyperus sedge *Carex pseudocyperus*, wood bittercress *Cardamine flexuosa*, yellow flag *Iris pseudacorus* and purple loosestrife *Lythrum salicaria*. Ash, oak and English elm *Ulmus procera* occur on the drier margins of this wood and early purple orchid *Orchis mascula* and twayblade *Listera ovata* occur in the ground flora.

RAILWAY EMBANKMENT A dense scrub of hawthorn *Crataegus monogyna*, wild privet *Ligustrum vulgare*, gorse *Ulex europaeus*, broom *Cytisus scoparius*, oak and sallow dominates much of this area. Open patches include fenland species such as the purple small-reed *Calamagrostis canescens*, and species associated with the chalk substrate used in the construction of the embankment; the latter group includes mullein *Verbascum thapsus*, bladder campion *Silene vulgaris* and wild mignonette *Reseda lutea*.

FAUNA Breeding birds associated with the reed and fen include reed warbler, moorhen, coot, sedge warbler and water rail. Other breeding birds from the whole site include grasshopper warbler, yellow wagtail and cuckoo. Wintering birds such as lapwing, teal and snipe are found on the alluvial meadows and the site is important for passage birds including large flocks of thrushes, finches, warblers and buntings. There is also a rich dragonfly fauna which includes the uncommon species *Coenagrion pulchellum* and *Brachytron pratense*. A good variety of butterflies are present including orange tip, holly blue, red admiral and purple hairstreak.

Combe Valley Countryside Park (CVCP)

The northern part of the park, and especially the northwards projection of lake and wetlands is within the Crowhurst Parish. The north part of the Park actually follows the curve of The Link Road from the intersection on Queensway through to the west where it joins the Bexhill bypass. This area was previously known as Combe Haven (locally known as The Marsh).

This map shows the availability of footpaths, several within Crowhurst, which are in addition to those defined by Ordnance Survey on their Definitive map of East Sussex.

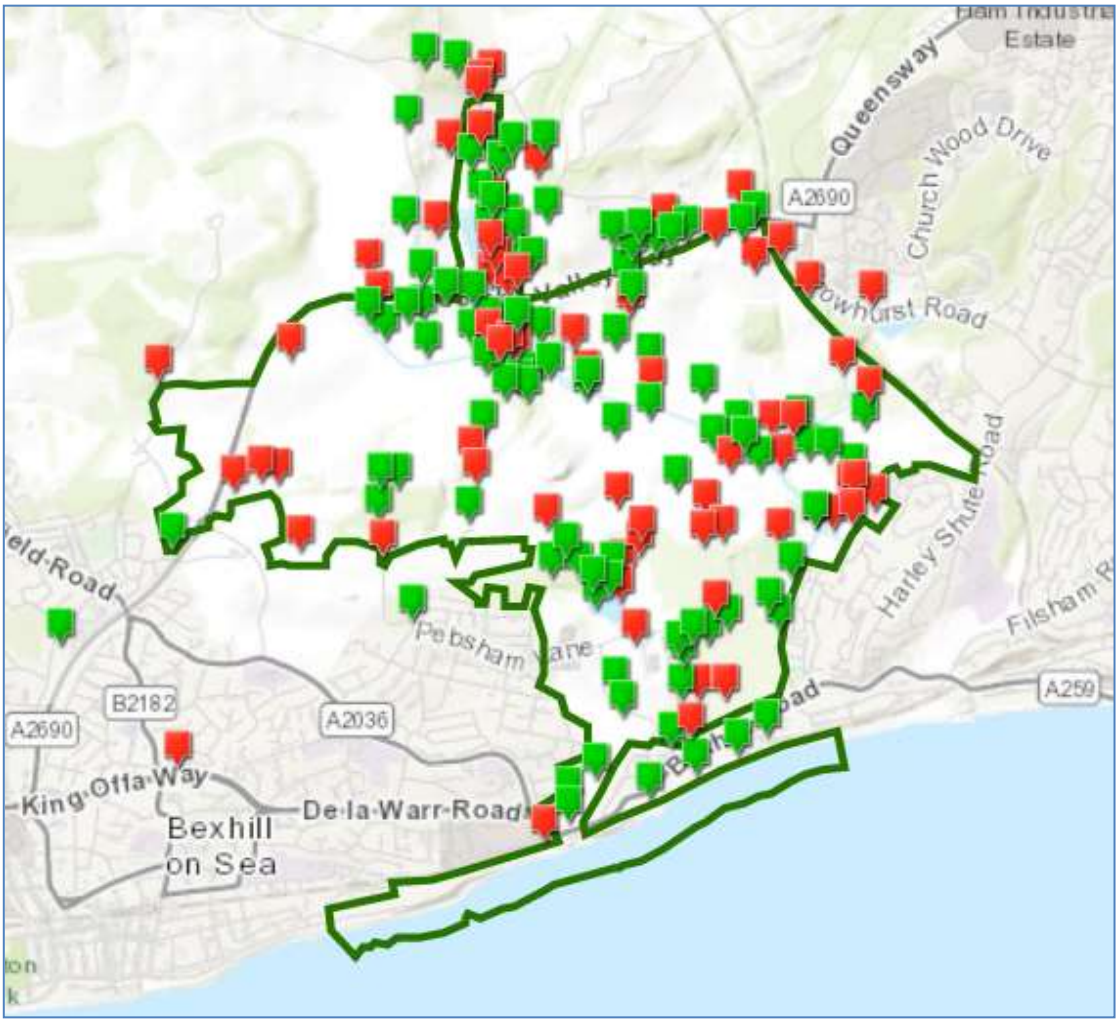
Footpaths

Combe Valley Countryside Park, 2019.
http://combevalleycountrysidepark.com/footpaths (retrieved 4 May 2019)

CVCP have a 5 year 'activation' and fundraising plan 2020-2025 [70]

Combe Valley Countryside Park. The greater part of the Park is outside Crowhurst parish south through St Leonards on Sea and part of the marine environment. This is a park for three things, only one of which is nature.
'Combe Valley Countryside Park is a Park for People, a Park for Health and a Park for Nature.'

- A Park for People
- A Park for Health
- A Park for Nature



[70] Community Interest Company, 2020. 5 year 'activation' and fundraising plan 2020-2025, dated September 2020. 30pp

CVCP do say in their literature that the following measures to monitor their progress and they will follow specific local and national strategies, as per:

However, they do not publish what they have already (i.e. ecological surveys, impact assessments) which they need to do to set a quantitative baseline of what they have already which is needed before they start to conserve anything.

We will look to increase the environmental performance of the Park, future improvements will consider:

- **Biodiversity enhancement and monitoring**
- **Carbon sequestration**
- **Flooding management**
- **Connecting habitats within the park and more widely**
- **Accessibility and legibility of nature**

As a Park for Nature, the CVCP will identify ways to support specific local and national strategies including:

- **Rother DC Biodiversity Action Plan and Local Plan Green Infrastructure Study**
- **Hastings BC Biodiversity Action Plan and Local Plan Green Infrastructure Study**
- **Sussex Wildlife Trust Biodiversity and Planning strategy**
- **Biodiversity 2020: A strategy for England's wildlife and ecosystem services**
- **Natural Capital Investment Strategy from Sussex Local Nature Partnership**
- **National 25 year Environment Strategy**

The High Weald Area of Outstanding Natural Beauty (AONB)

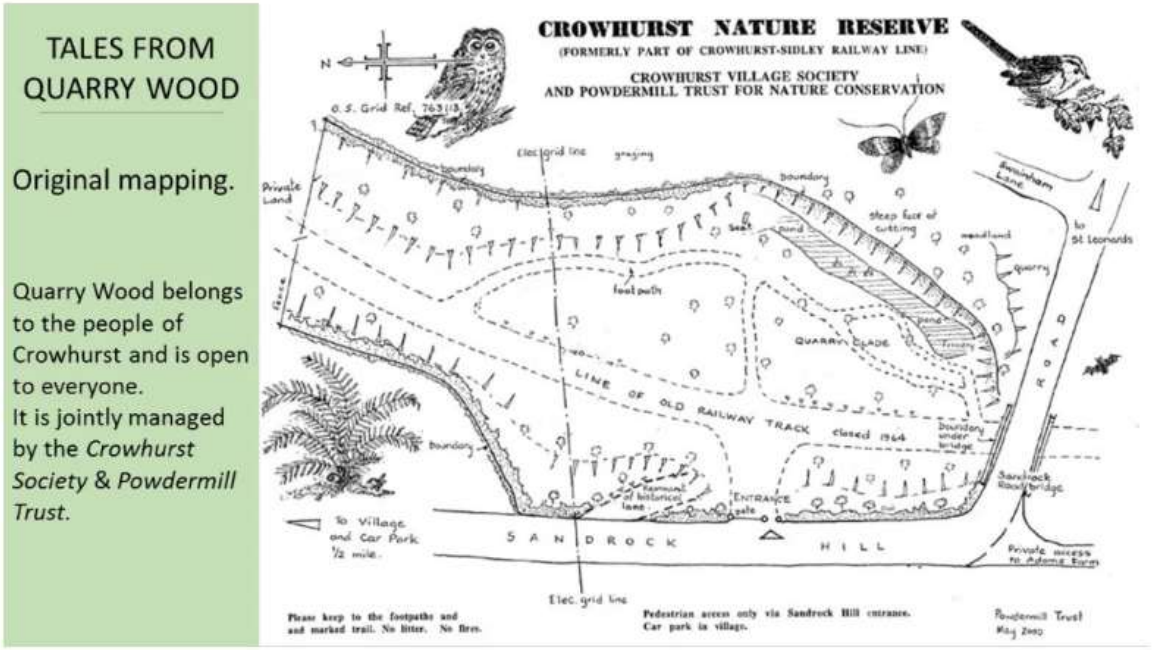
The north of the parish is within the AONB whilst the southern part is not. An approximate length of the parish boundary in the north is 11,260m, whilst the slightly smaller southern part is 19,881m. The north part of the AONB is roughly bounded by the Crowhurst Road eastwards to Queensway.

The landscape characteristics of the AONB are rolling countryside and ghylls, typically found in the north of the parish, whilst the southern part of the parish outside the AONB has many more low-lying wetland habitats.

Fore Wood (RSPB), Quarry Wood Nature Reserve are within the AONB, so too the following woods: Brake's Coppice, Rackwell Wood, Long Plantation, New Wood and Crowhurst Park's woodlands.

The Crowhurst Nature Reserve (4.5ac) also known as Quarry Wood TQ76291131

Purchased by the village in 1999. It is established on part of the railway line that was constructed in the early 1900s.[71] It is run by the Crowhurst Society & Powdermill Trust. Species lists are posted on the website.



[71] Tales from Quarry Wood, The Story of Crowhurst Nature Reserve. https://talesfromquarrywood.wordpress.com/tags-events/the-story-of-crowhurst-nature-reserve/ (retrieved 27 Feb 2020).

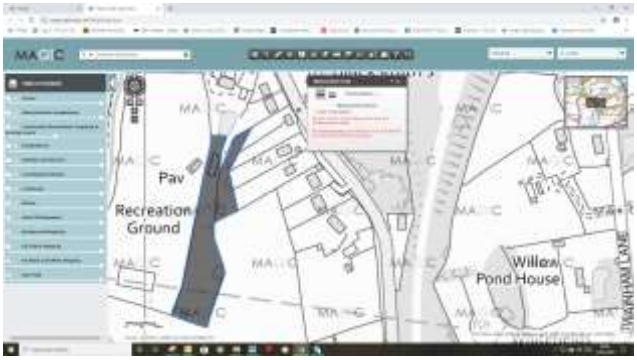
Trust Land (ca 0.6ha). TQ76051144
(Not to be confused with National Trust land)

Situated on the east side of Recreation Ground, a long strip of land with a small section on higher ground (to be confirmed with deeds). Owned by the Trust, managed by the Parish Council on their behalf.

Ecologically, the oldest parts of the site are the two hedgerows running north-south containing large oak trees. The central body of the site has self-set trees (sycamore, willow and alder) indicating that the site was once open, perhaps originally grazed.

The Biodiversity value is Medium to Low, but the wet woodland can be improved by clearing out much of the scrub and allowing the sunshine to penetrate are site.

As seen from the Recreation Car Park. 12 Feb 2020 (outlined in red)



A note on the extent of the Trust land as shown above: the little piece of land that extends in a NE direction, uphill beyond a ditch and is at the end of various back gardens, may not actually be part of the Trust land.

Verges in Crowhurst

The verges in the parish represent a wildlife corridor or linear nature reserve; three of them were made official verge reserves in 2019. A fourth verge (MUGA) is on Parish Council Trust land. The fifth (the triangle) was confirmed in early 2020. There is continuity of verge habitat east and west and northwards. The following map from ESCC shows the designated verges (up to 27 Nov 2019) and how they are linked in the middle of the village by a section that ESCC says is 'Urban Grass' (shown in green in following cropped plan).

This is an enlarged version of the above

Wildflower Verges (5) and a Meadow

© Sonia Plato Crowhurst School, MUGA verge summer 2019 TQ75811240

© John Feltwell Crowhurst School, MUGA verge 20 Feb 2020, TQ75811240

© John Feltwell Crowhurst Church Verge: TQ75791236

© John Feltwell Millennium Garden Verge TQ7574129

© John Feltwell Nashes Farm, verge, 2019 TQ74811205

© John Feltwell Nashes Farm, verge, 2020 TQ74811205

© Will Kemp Muriel's Meadow (private location)

© Sonia Plato 2020 TQ758119

Muriel's Meadow – Hedge planting in 2021

Planting a mixed native species hedge along the boundary with the railway, by the Crowhurst Environment Group (CEG) volunteers.

Management Plan for Crowhurst Verges[72]

- The verges are cut with a power scythe normally in September in a spell of dry weather (but can be from July - September) & the arisings left to dry on the surface for 3-7 days.

- The arisings are then raked up & either composted, spread elsewhere or burnt. The reason this process happens is to allow the seeds in the arisings to settle on the sward below by drying & dispersal by raking.

- The sward is then kept to 50mm in height from September - April allowing any finer seeds the space to germinate without getting blocked by the growth of course grasses.

- From early - mid April, the verges are allowed to grow again until September when the process is repeated.

Note: this management is currently in negotiation with ESCC.

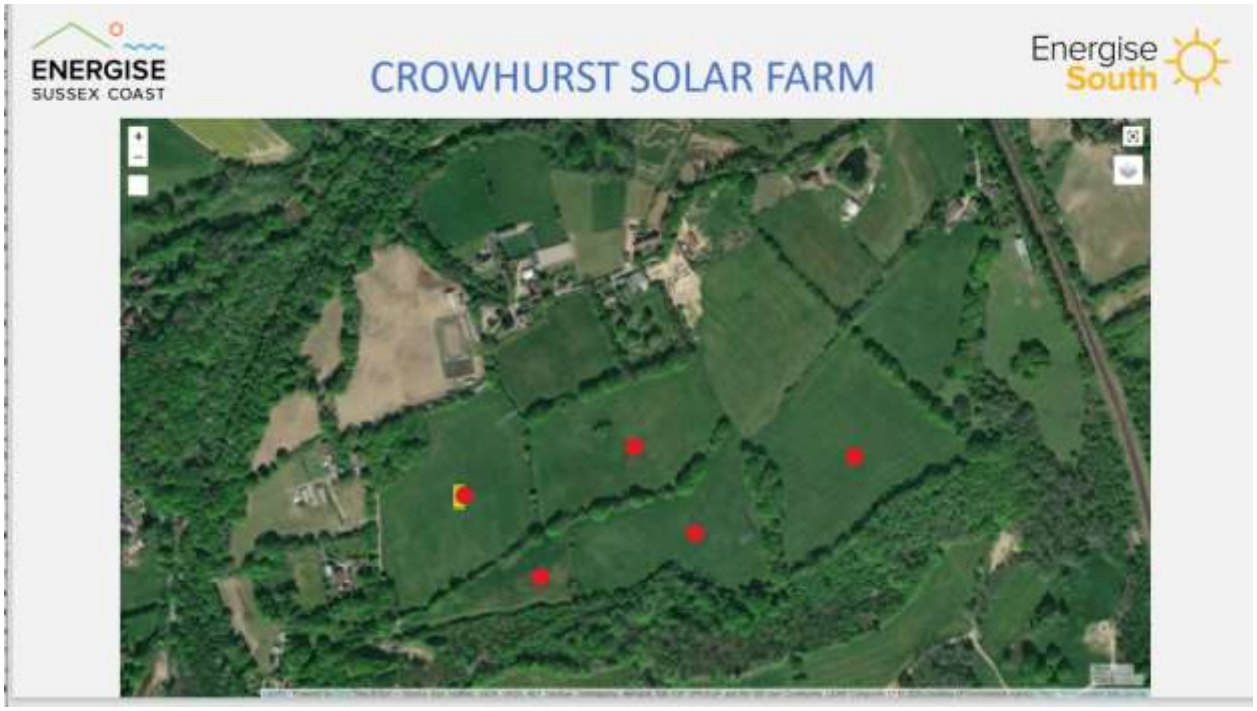
[72] Provided by Ian Donovan, 7 April 2020

Community Solar Farm

The parish is looking to have a community solar farm which will provide energy to the community. The present location is in the east of the parish next to the railway line, as shown below. Another potential location is in the grounds of the Healing Centre.

The importance to this Biodiversity Audit, is that when a solar farm gets established it will become a nature reserve overnight. With the overnight cessation of agricultural practices flora and fauna invade the location and thrive.[73] Management by sheep is a frequent way of management the grass and wild flowers. The solar farm off Swainham Lane will provide good linkage across the parish and into Marline Valley SSSI, which is what government promotes, as a 'stepping stones'.

Connection to the railway line or grid or local businesses is required.



The above is © Richard Watson's ENERGISE SUSSEX COAST presentation on 'Crowhurst Solar Farm, 2022. 9pp.

When completed it would be 13ha of nature reserve

Alternative energy options

The parish is open to other measures to generate electricity, such as wind turbines and anaerobic digesters, both fairly innocuous in their effects on wildlife.

[73] Feltwell, John. 2023 Solar Arrays – what's the problem?. http://wildlifematters.com/?p=645 (accessed 17 Jan 2023).

Carbon Footprint & Well-being as part of Climate Emergency
Warmer Crowhurst

Since RDC declared a Climate Emergency in 2019 they have produced an *Environment Strategy* as a means of addressing it. In it they specifically state that 'well-being' is part of it. [74]

> Solutions are available to build resilience and transform our energy supplies, creating new opportunities for a low-carbon economy. Technology is improving and the cost is reducing. Many solutions provide additional benefits from enhancing biodiversity, improving health and wellbeing to providing a driver for economic renewal which has the potential to localise our economies.

RDC made this specific pledge

> **PLEDGE:**
>
> - We will work with partners to take forward initiatives enabling Rother to become a 'smart digital district' contributing to carbon neutrality with the added health and wellbeing benefits that this will bring.

Warmer Crowhurst - and Air Pollution

Statements from this group are expected soon. However, suffice it to say the quantitative study into the present usage of energy needs of households in the parish will show continued dependence on gas boilers.

The relevance to this Biodiversity Audit is a question of Air Pollution and Well-being, i.e. living in a healthy and greener environment. As Well-being is an important factor in the Climate Change discussion of the results of the carbon footprint in the parish will be included here.

All of us breathe in particulates and they are not good for us. This is what the Office of National Statistics say [75]:

74

Rother District Council, Environment Strategy, 2020-2030 https://rdcpublic.blob.core.windows.net/website-uploads/2020/11/RotherEnvironmentStrategy2020-2030-VersionSept2020.pdf (accessed 18 January 2023).

[75] National Statistics. Updated 22 Feb 2023. Emissions of air pollutants in the UK – Particular matter (PM10 and PM2.5) https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-particulate-matter-pm10-and-pm25 (accessed 26 Feb 2023).

Particulate Matter (PM) is everything in the air that is not a gas and as such it is made up from a huge variety of chemical compounds and materials some of which can be toxic. Due to the small size of many of the particles that form PM some of these toxins may enter the bloodstream and be transported around the body, lodging in the heart, brain and other organs. Therefore, exposure to PM can result in serious impacts to health, especially in vulnerable groups of people such as the young, elderly and those with respiratory problems. As a result, particulates are classified according to size. The UK is currently focused on measuring the fractions of PM where particles are less than 10 micrometres in diameter (PM10) and less than 2.5 micrometres (PM2.5) based on the latest evidence on the effects of PM to health.

The particulates that affect Crowhurst are the PM 2.5 ones that come out of wood burners. There is not a lot that parishioners can do on a national scale, but with regard to wood burners in the parish, that quantum has yet to be done and any mitigation discussed.

The Convention on Long Range Transboundary Air Pollution's amended Gothenburg Protocol (CLRTAP) and the National Emissions Ceiling Regulations (NECR) require the UK to reduce emissions of PM2.5 by 30 per cent compared to emissions in 2005 by 2020 and in each subsequent year until 2029. The NECR also requires the UK to reduce emissions by 46 per cent compared to emissions in 2005 by 2030.

The UK has seen a 28 per cent reduction in PM2.5 emissions between 2005 and 2021. Therefore, in 2021, the UK did not meet the 30 per cent emission reduction commitment required between 2020 to 2029 as set out in the NECR and the CLRTAP.

The Crowhurst Environment Group (CEG) made the following presentation in October 2019, which included

Presentation to Crowhurst Parish Council by Crowhurst Environment Group

Why Crowhurst Parish Council need to declare a Climate Emergency (SONIA)

Rother District Council declared a Climate Emergency on 16th September 2019, Wealden on 24th July, Hastings on 13th February and Eastbourne on 10th July.

Rother District Council has pledged to become zero carbon by 2030, after becoming the latest local authority to declare a climate emergency.

The pledge was made at a full council meeting on Monday (September 16), as councillors unanimously passed a motion put forward by the Rother Alliance – the council's cross-party leadership group.

Cabinet member for environment and transport Kathryn Field (Lib Dem) said: "We as councillors and the council are in a very good position for influencing the rest of the community. We are role models and we can take people with us.

"The government has a target of becoming carbon neutral by 2050, we believe that actually we should aspire to being carbon neutral by 2030. We have been told we have 11 years before the damage to the climate of this planet is irreversible.

"I think 2030 is a very reasonable target and it should be at the forefront of our minds to work hard for that goal.

"We can't do this on our own. We must involve the community, we must take them with us and not do it to them.

Now we are asking Crowhurst Parish Council to follow their lead and work with them.

We ask that Crowhurst Parish Council make a commitment to tackling climate change and to pass the resolution as follows:

'Crowhurst Parish Council declares a climate and ecological emergency and aspires to be carbon neutral by 2030 taking into account both production and consumption emissions (v)'

SEVEN YEARS TO GO

And to achieve this by the following:

'Crowhurst Parish Council will develop a policy to achieve the above aim which will:

- Set out a workable strategy to set realistic, achievable and measurable targets
- Set out an evolving action plan
- Aim to encourage and support the community of Crowhurst to increase biodiversity
- Work in partnership with Rother District and East Sussex County Council to provide the support and resources to make the 2030 target possible.
- Agree to work with local people and groups and with local authority organisations such as neighbouring town and parish Councils to determine and implement best practice methods to limit global warming to less than 1.5°C above pre-industrial levels
- Agree to continue to work with partners across the district, county and region to deliver this new goal through all relevant strategies and plans
- Agree to place this issue on Parish Council agendas and agree strategies and action plans
- Agree to report to residents, the actions the Council will take to address this emergency within six months
- Agree to set up a working group, accountable to the Parish Council, to achieve these objectives made up of both parish council and resident members

We hope that you will take this emergency seriously and move swiftly to pass this resolution for the following reasons:

1. The global scientific consensus is that humans have already caused irreversible change, the impacts of which are being felt around the world. The Inter-governmental Panel on Climate Change (IPCC) reports that human activities are to have already caused 0.8-1.2°Celsius of global warming above pre-industrial levels.
2. To reduce the chance of runaway global warming and limit the effects of climate breakdown, it is imperative that we as a species significantly reduce our CO2 (carbon equivalent) emissions to less than 2 tonnes per person per year as soon as possible. Carbon emissions result from both production and consumption.
3. Individuals cannot be expected to make this reduction on their own. Society needs to change its laws, taxation, infrastructure, etc., to make low carbon living easier and the new norm.
4. Current plans and actions are not enough. The world is on track to overshoot the Paris Agreement's 1.5°C limit before 2050.(i)
5. The IPCC's Special Report on Global Warming of 1.5°C, published in November, describes the enormous harm that a 2°C rise is likely to cause, compared to a 1.5°C. However, limiting global warming to 1.5° C may still be possible with ambitious action from national and sub-national authorities, civil society, the private sector, indigenous peoples and local communities.(ii)

6. Local Councils around the world are responding by declaring a 'Climate Emergency' and committing resources to address this emergency.(iii)

Crowhurst Environment Group, Climate Change Working Group October 2019

References:

I. World Resources Institute: https://www.wri.org/blog/2018/10/8-things-you-need-know-about-ipcc-15-c-report
II. The Intergovernmental Panel on Climate Change (IPCC)'s Special Report on Global Warming of 1.5 °s Celsius: https://www.ipcc.ch/report/sr15/
III. For example Bristol and Manchester City Councils: https://www.businessgreen.com/bg/news/3066475/bristol-andmanchester-unveil-fresh-plans-to-tackle-climate-emergency Also US cities, Berkley: https://www.theclimatemobilization.org/blog/2018/4/25/hoboken-resolves-to-mobilize And the C40 cities: https://www.c40.org/other/deadline
IV. ICLEI – Local Governments for Sustainability, provides many examples of good practice, models and toolkits for Climate Change Adaptation and Urban Resilience: http://iclei-europe.org/topics/climate-change-adaptation-urban-resilience/
V. Scope 1,2 and 3 of the Greenhouse Gas protocol explained: https://www.carbontrust.com/resources/faqs/services/scope-3-indirect-carbon-emission
VI.

Crowhurst News is often a source of historical and naturel history facts

THREATS TO GREENSPACE IN THE PARISH
Allocated Sites

There are three 'Allocated Sites' (allocated for housing) proposed for the village, as set out in the Neighbourhood Plan [76] and the Design Plan [77] These are:

1. CH1 - Land adjoining Station Road and Forewood Lane
2. CH2 - Land south of Forewood Rise
3. CH3 - Land adjacent to the Station Car park

Environmental Impact

Each of these sites is currently greenfield, and once developed will become built-up environments even with their enhancement gains (on and off the sites).

Table WM20

SITE	Current greenfield usage	Size	Proposed usage
CH1	Agricultural grassland	0.62ha	12 units
CH2	Un-managed woodland	0.74ha	6 units
CH3	Agricultural grassland	0.086ha	12 units

All three sites, once developed, will be seen from the main road through the village. They will thus have a significant landscape impact upon the community.

All three sites are in full view of the public, two of them have Public Footpaths through the sites, and CH1 is fully open to the public's view as it is adjacent to the station car park.

Net Gain calculations

Without any compensation there would be a finite net loss of 1.44ha of these sites.

The average footprint of a house in England is 656 sq ft. [78]

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[76] Crowhurst Neighbourhood Plan, 2019. https://storage.googleapis.com/wzukusers/user-21240710/documents/5cdd1d101ff5ftxFI1iS/Crowhurst%20NDP%20final%20version%2013May2019.pdf

[77] Design Plan, 2021

[78] David Wilson Homes, 2021. https://www.dwh.co.uk/advice-and-inspiration/average-house-sizes-uk/

Mitigation

The permanent loss of 1.44ha from the parish should be compensated by way of other sites brought forward in the ownership of the developer that can be enhanced exclusively for nature conservation. This is the essence of The Environment Act 2021, whose commencement date is stated as being in 2023.

Landscape shielding should be applied to each of the sites to lessen the visual impact of each development.

CH1

CH3 Land off Railway Car Park 19 Nov 2021

The Natural Capital of the County of Sussex has been appraised in recent years [79] and the Sussex Local Nature Partnership (SLNP) stress the need 'to hold the line' against habitat loss.

It is important to be aware of habitat loss in the village, especially with respect of the Environment Act 2021 which deals with net gain. The following table lists the various activities in the village which have resulted in a quantifiable net loss of green space in the village. If the allocated sites are built upon there will be a net loss of 1.56ha unless mitigation and compensation are carried out. CH1 would be loss of brownfield (though now the site has greened itself up to form a wood), and CH2, and CH3 would be loss of greenfield land.

Table WM21 Tally of Habitat Assets lost in Crowhurst Village
(Tally commenced since initial audit of parish from May 2019)

Date	Location	OS Map Ref.	Area destroyed	Reason for removal of asset
2019	Oak View formerly 'Sabon Gari', Chapel Hill	TQ75911181	Ash tree removed, despite CPC objections to RDC	Private development
2019	Oak View formerly Sabon Gari', Chapel Hill	TQ75911181	Unsuccessful request to RDC for TPO on oak at entrance	Tree remains but not TPO'd
2020/21	Southmead, Swainham Lane		Felling of 10 mature oak trees. Reported to CPC and RDC. No response from RDC up to 16.12.21	
Jan 2021	Land adjacent to 'Sabon Gari' Chapel Hill	TQ75911181	c. 2,437 sqm woodland removed	Permitted development under RR/2020/945/P
16 Feb 21	'Oak View' Chapel Hill		23m x1m of native hedgerow removed	Replaced with non-native laurel
01 Nov 21	Woodlands Way	TQ75871157	Garden with badgers bulldozed including extensive unauthorised woodland and soil removal.	Police Incident No SXP 20210927-0416 Enforcement action by Rother District Council
TOTAL Loss of greenspace 19-21			2460 sqm of habitat lost 11 trees lost,	
Upcoming loss	**Allocated Sites**		**Size**	
CH1	(Station Rd)		0.74 ha,	
CH2	(Forewood Rise)		0.64 ha,	
CH3	(Station CP)		0.086ha	
UPCOMING	**TOTAL**		**1.44ha**	

Developments in adjacent parishes can affect the ecology of Crowhurst.

[79] Sussex Local Nature Partnership, 2019. Natural Capital Investment Strategy for Sussex 2019-2024. Sussex Local Nature Partnership December 2019. Final Version (Adopted by Sussex LNP October 2019). http://sussexlnp.org.uk/wp-content/uploads/2019/12/Natural-Capital-Investment-Strategy_ADOPTED_Final_Dec2019.pdf 73pp (accessed 10 Dec 2021)

Another example (other than the Link Road), was the controversial **Normanhurst** proposal to create 211 lodges in AONB TPO woodland in Catsfield (RR/2023/217/P). It was thrown out unanimously by Rother District Council in September 2023. The problem for Crowhurst was that Normanhurst is on higher ground at the top of the watershed that drains down through Crowhurst so all manner of materials could pass through the parish and thus out to sea. (further information see Crowhurst News, October 2023).

Dark Skies – countering the effects of Light Pollution

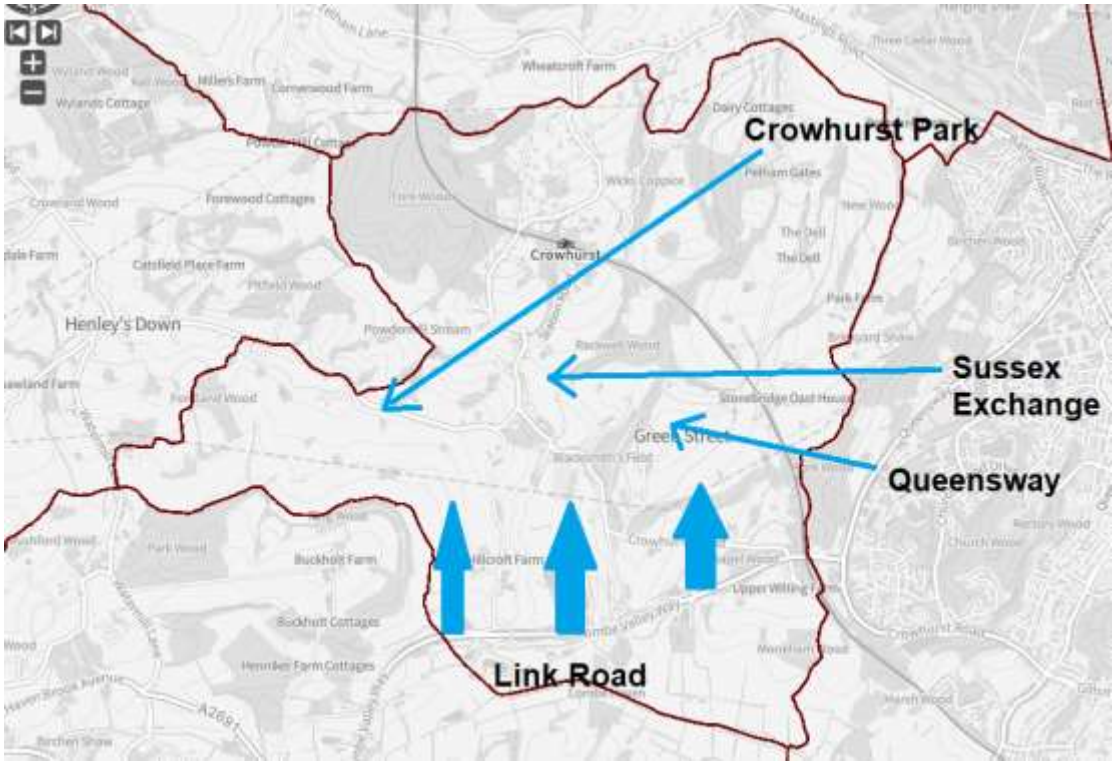
There are emerging Dark Sky Policies from RDC and the AONB Unit and both are likely to formalise their policies this year (2023). South Downs National Park has one, and villages such as Burwash and Lamberhurst.

Crowhurst village is a very dark village at night with no pavements and no street lighting, even along Station Road. The only light pollution, in the village, is at the station (below). The rest of the village is very dark, especially around the church [80] and school (no lights at all at CH1) and very few lights around The Plough Pub.

Crowhurst is negatively impacted by light pollution from inside the parish and outside (mostly).

The worst source of light pollution in the parish is Crowhurst Park which as shown on magic.gov.uk has over 200 caravan pitches. It is in the AONB (as is the north part of the parish) and was given planning permission by RDC. Its lights penetrate well into the east of Catsfield as the Park is on one of the highest spots in Crowhurst (ca. 130m above sea level),.

[80] A few years ago, the church were given a bequest to light up the church from two ground-based spotlights in the graveyard. These are on every night and have been for a number of years.



Light Pollution from inside and outside Catsfield parish. In some case light pollution is accompanied with Noise Pollution.

Cinderbrook is a very large expanse of greenspace in the centre of the village. At night it is completely dark, and only a few specks of light can be seen from the church of the houses gathered along the stream east of the Plough. However, this dark space in the village has light spillage from the Sussex Exchange on Queensway (outside the parish) that is visible across the valley. Now that the Link Road is complete, there is light from road traffic that spills over into the south of the parish.

Crowhurst station at night

The Plough at night

The parish wish to be less subject to light pollution and have dark skies that everyone can enjoy, and that wildlife do not become adversely impacted.

There is a law that protects against a nuisance from artificial light: namely Section 102 of the Clean Neighbourhood and Environment Act 2005 which amends section 79 of The Environmental Protection Act 1990.

This aim of the parish fits in nicely with two objectives of the High Weald AONB (in which at least half of Crowhurst sits).[81]

Objective OQ4 *To protect and promote the perceptual qualities that people value. Rationale. To ensure that the special qualities people value, such as tranquillity, dark skies, sense of naturalness and clean air, are recognised and taken account of in AONB management. Indicators of Success i. No loss of dark skies or tranquillity: HWJAC: CPRE tranquillity data and citizen science sky quality meter reading*

Objective OQ2 *To increase the contribution of individuals and communities to the conservation and enhancement of the AONB. Run citizen science projects to gather data on AONB heritage e.g. dark skies.*

The High Weald AONB describe themselves as *'intrinsically a dark landscape'* where dark skies can be expected [82] where the call is to *'minimise lighting and glare from windows to protect dark skies and reduce energy use.'*

The CPC's have already set out their wish to reduce lighting in the village, in their CPCs Design Guide (May 2021 – being updated in October 2023) where it states

- *No streetlights in order to maintain optimum dark*
- *Exterior domestic lighting to be down-lighters only to maintain dark skies and conform to bat friendly guideline*

[81] The High Weald AONB – Management Plan 2019-2024

[82] The High Weald Design Guide

Chapel Hill at night showing external illuminated pillars

The next iteration of this Bio Audit will include a map of the parish and the places where measurements have been made. In the meantime take a look at the results to date for the UK – and you may be able to zoom in on Crowhurst. https://www.nightblight.cpre.org.uk/maps/?_ga=2.100888833.1437024492.1537789736-320654422.1537789715

Light pollution on wildlife

Light pollution has a profound negative effect on wildlife. Wildlife generally is experiencing a massive decline mostly due to habitat loss[83] but light pollution is a factor in that decline. Currently there is a 41% decline in all species in Britain, as stated in *The State of Nature* report of 2019. Butterflies are suffering from a 80% decline, moths (41%) birds (42%), amphibians (36% and reptiles (31%). The losses attributed to light pollution are 65% of hedgehogs prefer dark areas than lighted areas, caterpillars (of moths and butterflies) decline in lighted areas, and toads have a 25% decline in their ability to find mates and to find food in lighted areas.

Insects are drawn to street lights, and bats are drawn to catch insects: causing an un-natural balance of nature, and disrupting the behaviour of many animals. [84]

[83] Feltwell, J. 2022. The Anthropocene – is anybody listening. *The Linnean*. Vol 38(2) October 2022. 36-40.
[84] Feltwell, J. 2003. Light pollution – are we still in the dark. Buglife- The Invertebrate Conservation Trust. *Buglife Update,* Autumn p. 11.

Goodbye – we may never see you again

Hedgehogs are Biodiversity Action Plan (BAP) species because of their declining numbers; they need conservation.

What are RDC doing for Crowhurst on Climate Change?

Rocks on the beach at Glyne Gap to prevent erosion;
Galley Hill in the distance to the west

First, within recent times RDC have covered the Glyne Gap with masses of rocks to stop the sea breaking through and flooding landward. Second, they have a **Climate Change team** (= **Directorate of Place and Climate Change**) at your disposal, they are currently (July 23) as per Councillor's letterheads:

- **Peter Dijkhuis**, BLArch, MCPUC, TRP(SA), MRTPI,
  Principal Planning Officer – Development Management,
  Directorate of Place and Climate Change
  For and on behalf of Rother District Council
- **Kemi Erifevieme**, Development Manager Directorate of Place & Climate Change
- **Ben Hook**, Director of Place and Change
- **Mr. Jeff Pyrah** BSc(Hons), MA, MRTPI. Planning Policy Manager and Directorate of Place and Climate Change. 01424 787610.
- **Mrs S Shepherd** MRTPI, BA(Hons), Development Management Team Leader Directorate of Place and Climate Change 01424 787610.

RDC also have a **Climate Change Steering Group (CCSG)** which met 10 times during the to year to April 2023[85] Comprising Councillors:

- K.M. Field (Chair),
- S.J. Coleman,
- P.J. Gray,
- L.M. Langlands,
- P.N. Osborne
- S.M. Prochak, MBE.

The following attended CCSG meetings in the last year: Councillors

- J. Barnes,
- Mrs V. Cook,
- P.C. Courtel,
- B.J. Drayson,
- C.A. Madeley,
- A.S. Mier,
- G.F. Stevens,
- H.L. Timpe
- J. Vine-Hall.

The CCSG completed 5 projects: i) Emmissions Baselining, ii) Tree planting in Bexhill, iii) Tree planting Strategy Bexhill, iv) Urban Forest 1066, v) Couch to Carbon Zero. They also have 5 on-going projects, i) Village Halls Energy Project (Crowhurst involved), Electric Vehicle Charging Points (EVCP), iii) Biodiversity Audit across the County Estate, iv) Parish and Town Council

[85] RDC **Overview and Scrutiny Committee**. Date 24 April 2023. https://rother.moderngov.co.uk/documents/s7429/Climate%20Change%20Steering%20Group%20Update.pdf (accessed 14 July 2023)

Climate and Ecological Emergency Declaration (Crowhurst has been offered assistance) v) Bexhill's bedding plants to be replaced with perennials.

So, of ten projects only two have filtered down to Crowhurst, neither completed. Electric Vehicle Charging Points (EVCP) are not yet in the parish.

- At the current time (18 Oct 2023) RDC have been offered £3K for refitting the Youth Club to be more energy efficient, and it has been accepted.

- Crowhurst is applying for solar farm in the parish off Swainham Lane to address the climate ermergency to meet net zero in 2030. The application was submitted in July 2023. It remains to be validated by Rother .

The solar farm team have been working with with **Dr Lucie Bolton** (Environment Strategy Officer) and **Elize Manning** (Projects Officer Environment) of RDC to find ways to work together to link the projects to help individuals, parish and districts work together to meet the climate challenges.

It is worth reflecting that whilst the Neighbourhood Plan (NP) is being updated (late Oct 2023) it will have the following three village policies on Renewables, Biodiversity and Dark Skies.

Renewables Policy

The parish is open to all means of renewable energy in the light of the man-made climate change. That includes solar panels (and farms), wind (turbines), anaerobic digesters (ADs), air-source heat pumps and ground-source heat pumps. Advice must be sought from the Catsfield Parish Council with regard to any updates from their Warmer Crowhurst initiatives, before any works are commenced or applications submitted to Rother District Council (RDC). Solar farms must be only on Grade 4 land (and no higher) so as not to decrease any potential to grow crops of higher grade land (this is often called BMV Land or 'Best and Most Versatile Land' – keep off them). Solar farms and ADs must be in areas screened from public view, or screened with native trees and shrubs to be so. As innovation gathers apace, the installation of batteries to store energy from solar farms is encouraged (and to be screened), and these can be at some distance from the solar farm or ADs (1-5km via underground trenches) so as to benefit smaller communities within the parish. The impact of any renewable energy project will avoid any adverse environmental impact on ancient woodlands, protected areas, protected species, and people. The impacts to be avoided with renewables is noise pollution (especially wind turbines, lesser extent inverters on solar farms), water pollution (especially from ADs – not to be sited next to a watercourse), air and light pollution. Wind turbines must always be sited well away from edges of woodlands and hedgerows (at least 20m) to avoid any interaction with bats that use wood edges and hedgerows as commuting and foraging routes. Policies and guidances which must be followed include those promulgated from RDC, the Local Plan, NPPF (2021) and Catsfield Parish Council. The current codes of best practice must be followed for all the types of renewable energy, using issued by Natural England.

Biodiversity Policy

All proposals and projects within the parish must have a tangible and visible biodiversity element. As the country is currently experiencing a serious (and catastrophic) man-made decrease in wildlife due to habitat loss and the use of chemicals, every proposal must be accompanied by a significant gain in biodiversity. That gain must be calculated using the latest Biodiversity Net Gain (BNG) software which is currently version 3.1 (as of 11 March 2023). It becomes obligatory in November 2023. The gain, be it, trees or shrubs, need not be within the proposal site. It can be locally, but definitely within the parish boundary, and consultation with the Parish Council must be sought and the location agreed with the parish before applications are submitted. Any new habitats to be created must be in line with the concept of linking habitats that have been removed in the past, i.e. promoting 'connectivity' which it good for the dispersal of flora and fauna. These 'links' are part of the 'Stepping Stones' of habitats promoted in government literature to boost biodiversity. All species planted must be native species, and of local provenance, and must not include any native species that have been imported from outside the UK (to limit any disease transfer). All plantings must be accompanied with a 5-year monitoring programme to ensure establishment, and these matters must be expressed at the planning stage prior to any application being submitted. Rabbit guards must be biodegradable. When wildflower seed is introduced to create meadows then all the sourced seed must come from local Wealden seed sources, from local provenance and absolutely no imported seeds (which happens), to maintain veracity of native wildflower species. Where enhancements include wildlife boxes, then these are to be encouraged, for instance for bats, birds (including owls), hedgehog homes, insect hotels. Log piles and buried buckets of wood chippings for beetles are encouraged, so too scrapes in banks to encourage solitary bees to breed. Policies which are expected to be followed are the NPPF (2021), National Pollinator Policy, B-Lines and British Standards: Biodiversity 2020.

Dark Skies Policy

Crowhurst is a very rural and wooded community and residents enjoy relatively dark skies, providing them an environment for healthy living. However, the parish is being impacted by light pollution from the Link Road (from the south), Queensway (west), St Leonards (south) and Crowhurst Park (north east). It is doubtful if any policy for light suppression can be actioned outside the parish, but light suppression of major lights in the parish could be accomplished in Crowhurst Park. One of the most noxious aspects of light pollution is external lights, particularly on roadsides, put up by residents. All lights must face down. LED lights must be used, particularly ones with the blue element missing, as this is injurious to insects. Light pollution also affects UK protected mammals such as bats, badgers, hedgehogs, and diminishes biodiversity overall in the parish. Residents can assist with light reduction affecting the environment by i) not having external lights in the garden (except for safety reasons), ii) turning lights off when not in use, iii) pulling curtains after dark, iv) using LED lights. There is currently no street lighting in the parish, but where safety is an issue, such as the train station or the church the parish is negotiating for reducing lights and timings. Policies. Both Rother District Council and the AONB Unit have emerging Dark Skies policies, so developers and private individuals need to follow the recommendations made by both groups. The AONB Management Plan (to be updated soon) also needs to be consulted to note their wishes for the community.

WHAT EVIDENCE IS THERE FOR THE EFFECTS OF CLIMATE CHANGE ON HABITATS AND SPECIES IN THE PARISH?

The following habitats and species are now listed with evidence, where available (however, there is precious little evidence)**WM22 Climate Change evidence:**

HABITAT	EVIDENCE OF CHANGE FROM CLIMATE CHANGE
Wetlands i) Temperatures will continue to rise[86] ii) Frost-free season (and growing season) will lengthen iii) Changes in precipitation patterns iv) More droughts and heat waves v) Hurricanes will be come stronger and more intense vi) Sea levels will rise 1-4 feet by 2100	None of this has been charted for Crowhurst ??
Ancient Woodland • Current projections suggest that areas of south, central and eastern England will have drier and warmer summers, resulting in increasingly severe soil moisture deficits which will reduce tree growth – particularly on shallow, south facing slopes, and sandy-textured, freely-draining soils. 87 Changes in the seasonality of rainfall have occurred gradually over the past century, and this trend is projected to continue and to strengthen in the future. The resulting wetter autumn and winter periods will cause greater water table fluctuations, limit rooting depth, and reduce tree stability on exposed sites. Changes in the wind climate are highly uncertain	Evidence is lacking in deficits in tree growth Evidence is lacking in tree stability

[86] The effects of Climate Change. https://climate.nasa.gov/effects/ (retrieved 4.3.2020)

[87] Ray, D., Morison, J., & Broadmeadow, M. 2010. Climate change impacts and adaptation in England's woodlands. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/695127/Climate-change-impacts-adaptation-English-woodlands.pdf (retrieved 4.3.2020)

but, with reduced anchorage on wet sites, the risk of windthrow will increase. • The incidence and severity of tree disease and pest outbreaks will increase. A warmer climate and, particularly, warmer winters will allow tree pests and pathogens to extend their range. • Drier and warmer summers will heighten the risk of fire	Evidence is lacking in windthrow Some evidence that Ash Dieback disease is more prevalent today. Warmer, yes, but no fires (only arson in reedbeds in 2019)
Medieval Field Systems	No evidence of change
Meadows (managed)	No evidence of change
Hedgerows	No evidence of change
Sandstone Outcrops	No evidence of change
Medieval Field Systems & meadows	No evidence of change
Hedgerows	No evidence of change
Streams	No evidence of change, though increased flooding, **see below**
Ponds	No evidence of change
Springs	No evidence of change
Bogs	No evidence of change
SPECIES	
Flowering Plants	Flowering early
Trees	No evidence of change
Mammals	**Water vole possibly extinct**
Reptiles	No evidence of change
Amphibians	No evidence of change
Birds	No evidence of change
Fish	No evidence of change
Invertebrates :	**Native crayfish possibly extinct**

FLOODING – an issue of climate change? Yes, of course.

Flooding was always an opportunity to refresh 'water meadows' with nutrients, and so flooding in Crowhurst was probably used and arranged in various low lying areas, eg. Cinderbrook field.

However, even though the village is built around the Powdermill Stream there are other social issues considered with flooding.

The Flood Marker by the roadside in the centre of Crowhurst. © John Feltwell Residents will be reminded that there is a weather centre for Crowhurst which provides day to day weather information. [88]

© Frances and Stephen Royston

[88] Crowhurst SW – IBATTLE3, forecast forBattle, GB https://www.wunderground.com/dashboard/pws/IBATTL3 (retrieved 9.3.2020)

Table WM23
Known Flood years have been:

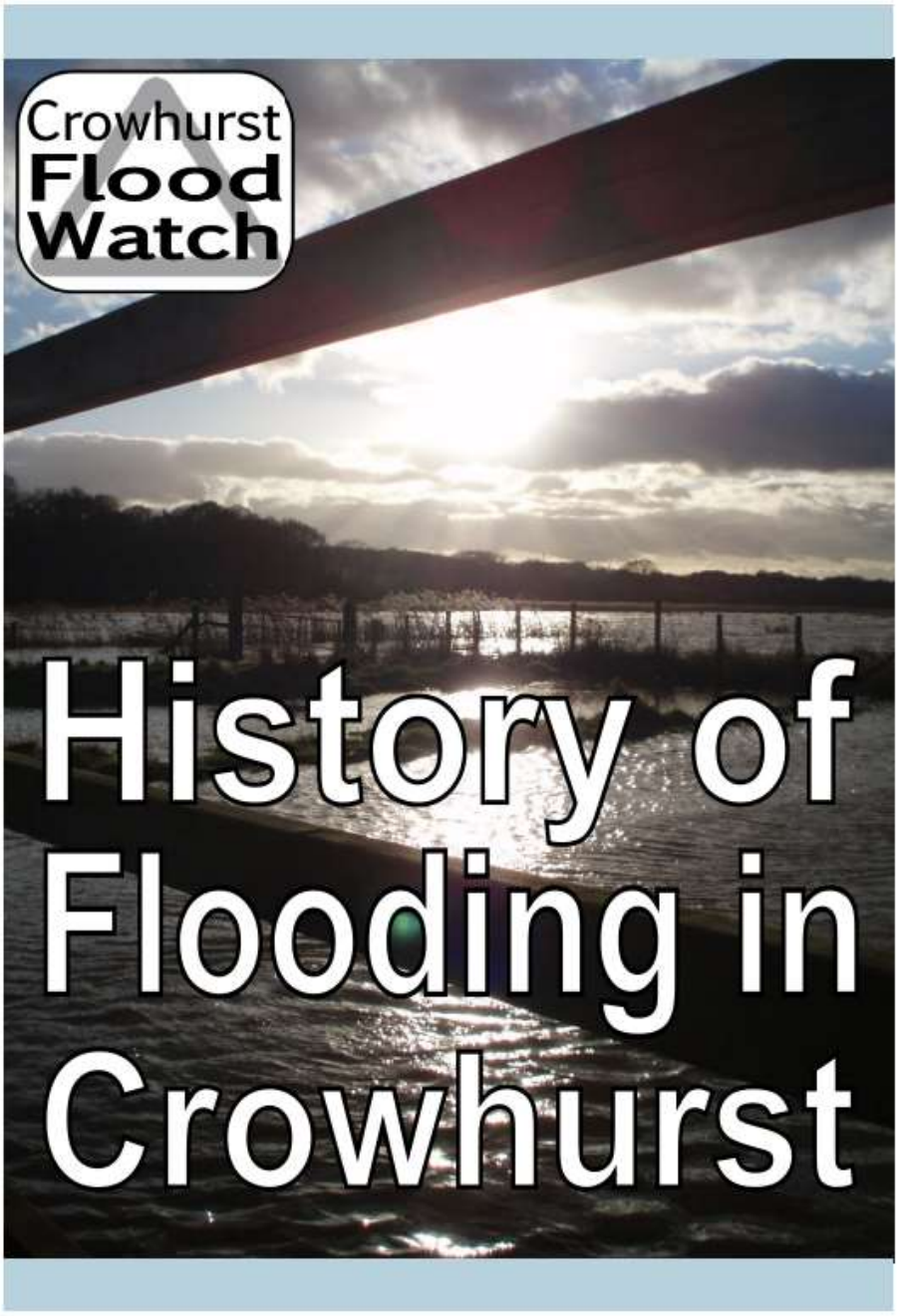
Flood	Notes
November 1974	Noted in Flood Report, 2010[89]
16 December 1984	'my diary records that it was the first flood since 1977, and that several houses opposite the recreation ground were seriously flooded, in addition to Hunters Moon and Springfield. [90]
December 1984	Before Christmas, Hunters Moon Farm flooded, Springfield Tea Rooms flooded [91]– see photo below
09 December 1994	'my diary records that there was "a little flooding" at Springfield.'
26 January 1995	'my diary records that the flooding was worse than in 1984. I made a VHS video of the flooding, which we still have.'
02 February 2001	my diary records that the flooding was the worst since 1995 and that most of the houses opposite the recreation ground were flooded, along with two properties near Cinderbrook Field.
February 2009	Noted in Flood Report, 2010
July 2009	Noted in Flood Report, 2010
February 2010	Noted in Flood Report, 2010
05 March 2020	Reached +9 on marker (flooded 7 houses) 'villagers have said that this was the first significant flooding since 2001, although there have been a number of "near misses".'
16 January 2023	Houses flooded

© Sonia Plato. View northwards over Cinderbrook Field 5/6 March 2020

[89] Published by Crowhurst Flood Watch in April 2010, it runs to 16pp and collates floods since 1974. These have been Nov 1974, Dec 1984, Jan 1995, Feb 2001, Feb 2009, July 2009 and Feb 2010.

[90] Diary notes, courtesy of Stephen Royston, dated 9.3.2020

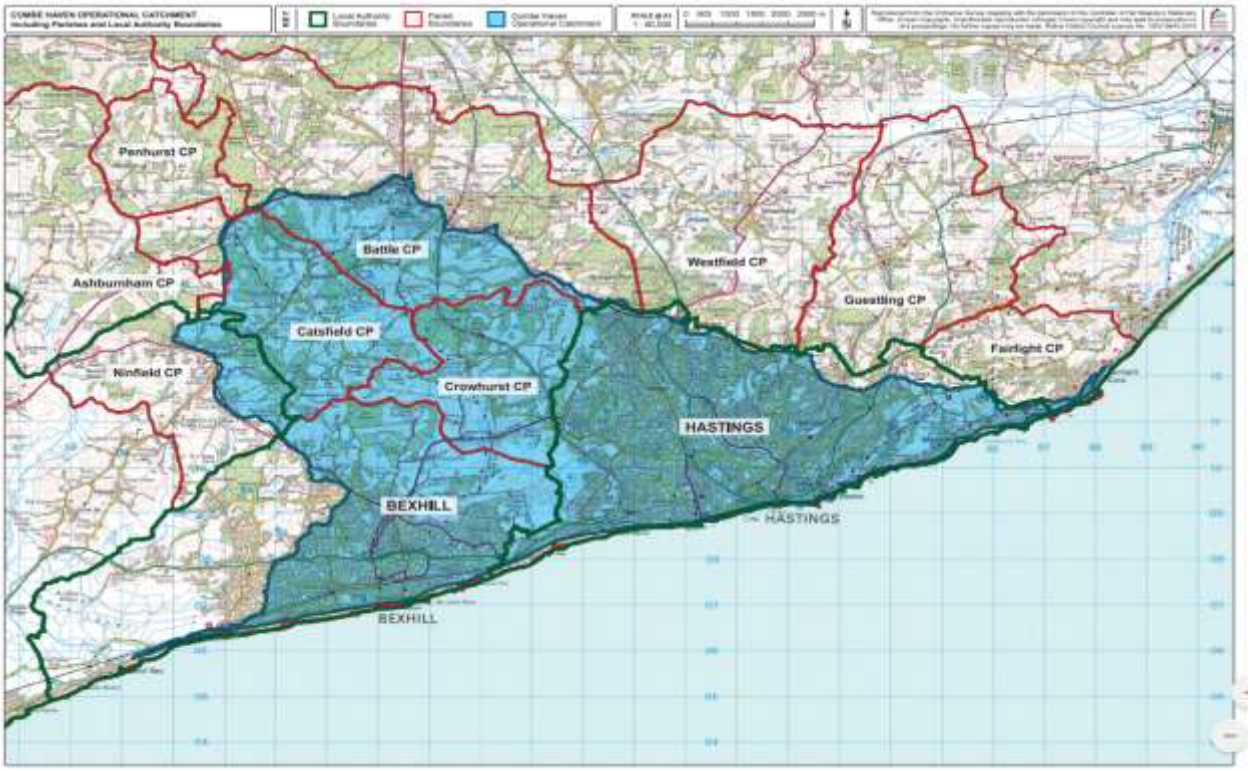
[91] Sussex Express 21.12.84 Heroes of flood save horse.



It states: "*It can easily be seen that the locally quoted frequency "once in ten years" is no longer accurate. Even excluding the atypical July 2009 floods, the average over the whole period is one in six years, but more worryingly, one in three years during the last decade. Introduction There are two main areas of flood risk - the Springfield area, marked in pink, and the Sampsons area, marked in yellow*."

© John Feltwell 6 March 2020 Looking south from the Crowhurst Road to low lying fields, flooding adjacent to the Powdermill Stream, on the Crowhurst parish boundary at ca. TQ 75411128. Notice the red lorry along The Link Road.

Crowhurst Parish is part of the catchment of five parishes as the following plan shows.



© Ordnance Survey and © Rother District Council. Combe Haven Operational Catchment.

© John Feltwell Looking southwest, from close to bridge by Quarry Wood, flooding in the SSSI, just in the Crowhurst parish, and beyond. The water is encouraged to lay up in this northern part of the Combe Valley Countryside Park.

Flooding of the Recreation Ground 4 Dec 2020

FLOOD MAPS

The parish are very grateful to Fran Southgate (Sussex Wildlife Trust) for especially preparing the following flood maps for Crowhurst. They were created from a Natural England layer on potential climate change impacts in March 2020. The notes about how the model was created and what it means are copied below:

"With thanks to Sarah Taylor, Senior Adviser - Climate Change Adaptation

Climate change is one of the key future parameters which will exacerbate existing pressures on biodiversity and which will bring new challenges in terms of enabling sites, species, humans and habitats to adapt to a changing landscape. Adaptation to climate change is therefore a priority for conservation and environmental management, and it was deemed important to include a measure of climate change adaptation in the ARC HPM. The best available electronically represented data on climate change at the time of the creation of the new ARC HPM, is a model created by Natural England. This model has been used to generate some initial assumptions around what may happen to wetland habitats in the ARC project area, if climate change proceeds as predicted. As with the whole HPM model however, specialist knowledge is essential in interpreting how this information can be used on the ground.

Natural England (NE) Climate change model

In 2013, Natural England developed a model that allows non-specialists to assess the vulnerability of areas of priority habitat to climate change based on widely accepted principles of climate change adaptation for biodiversity. They produced two versions of a National Biodiversity Climate Change Vulnerability Assessment (NBCCVA) model. The NBCCV Assessment provides a high level indication of the relative vulnerability of priority habitats to climate change in different places. It identifies why areas are vulnerable and which possible interventions can have the biggest impact in increasing resilience in a changing climate. This is intended to inform the prioritisation of adaptation actions and assist in the development of adaptation strategies for biodiversity both within Natural England externally.

The Aims of the National Biodiversity Climate Change Vulnerability Model (NBCCVM) are :-

- to provide a spatially explicit assessment of the relative vulnerability of priority habitats, based on established climate change adaptation principles;
- to create a suite of map-based GIS outputs at a variety of scales, which can be used (in conjunction with other relevant spatial data) to target action to build biodiversity resilience;
- and to provide a flexible, GIS based, decision support tool that allows the user to incorporate locally specific datasets and select how adaptation principles are combined to reflect local circumstances and priorities.

The NBCCVM uses a GIS-based 200 x 200m grid to assess areas of priority habitat for their:

- Intrinsic Sensitivity to Climate Change; the model assigns high, medium or low sensitivity to direct climate change impacts – reflecting the habitat itself on the basis of expert judgement and scientific literature.

- Adaptive capacity; a range of different local factors can increase or decrease the ability of the habitat to adapt to climate change – to reflect this the model includes measures of fragmentation, topographic variation and management and condition.
- Conservation Value; this assigns a relative value to (i) priority habitat only, (ii) priority habitat within a national designation, or (iii) priority habitat within an international designation – with the latter valued highest.

These elements are then added together to produce an overall assessment of vulnerability. Key outputs are maps showing the results for individual and combined metrics and the range of relative vulnerability, giving a visual representation of the areas vulnerable to climate change.

Version 1 of the data includes four of the five metrics used in the assessment – sensitivity to climate change, habitat fragmentation, topographic heterogeneity and management and condition. This first version is the 'Overall Vulnerability' (sensitivity + fragmentation + topography + management) for the All Habitats dataset. Where all priority habitats are included in the run, and when 2 or more habitats are found within a 200m grid square the most vulnerable habitat overall gives its score to that square.

Version 2 includes a fifth metric of 'conservation value' which helps those using the model to prioritise action to mitigate potential climate change effects. As the assessment is one of relative vulnerability the scores change depending on the metrics included. The addition of the 'conservation value' metric (sensitivity + fragmentation + topography + management + value) alters the overall vulnerability scores attributed to each of the modelled habitats.

The following habitats modelled using the Natural England NBCCVA were extracted for Sussex use:-

CGM – Coastal Grazing Marsh
FGM – Floodplain Grazing Marsh (Merged with CGM)
LF – Lowland Fen (the ARC HPM Base Rich and Base Poor fen data can be merged to
LMD – Dry Lowland Meadows
LMW – Wet Lowland Meadows
SM – Salt Marsh
PMG – Purple Moor Grass and Rush Pasture
DW – Deciduous Woodland (covers wet woodland)
RIV – Rivers (a proxy data set, see the report)
RB - Reedbed

There were no appropriate layers to match to our species poor tussock grassland layer, but by merging the NE CGM/FGM layers, the ARC HPM data could be compared, and by merging the ARC HPM fen layers, they could be integrated with the NE NBCCVA model. It was decided that the rivers (RIV) layer and the Dry Lowland Meadows layer (LMD) could not be appropriately matched with the ARC-HPM data and so these were excluded.

NE classify the data within the NBCCV Assessment in 3 ways. These classification types are a) 1/2/3 or H/M/L, b) 1/3 or Y/N and c) Quartiles (breaking the data in to 5 sections) using Natural Breaks. The assessment and the classifications created using the method in c) are relative and as such they change when you change the area of data you are classifying (i.e. the natural breaks in the data identified by the GIS software will be slightly different when looking at the national dataset to when looking at the more local cut of the data, as there is

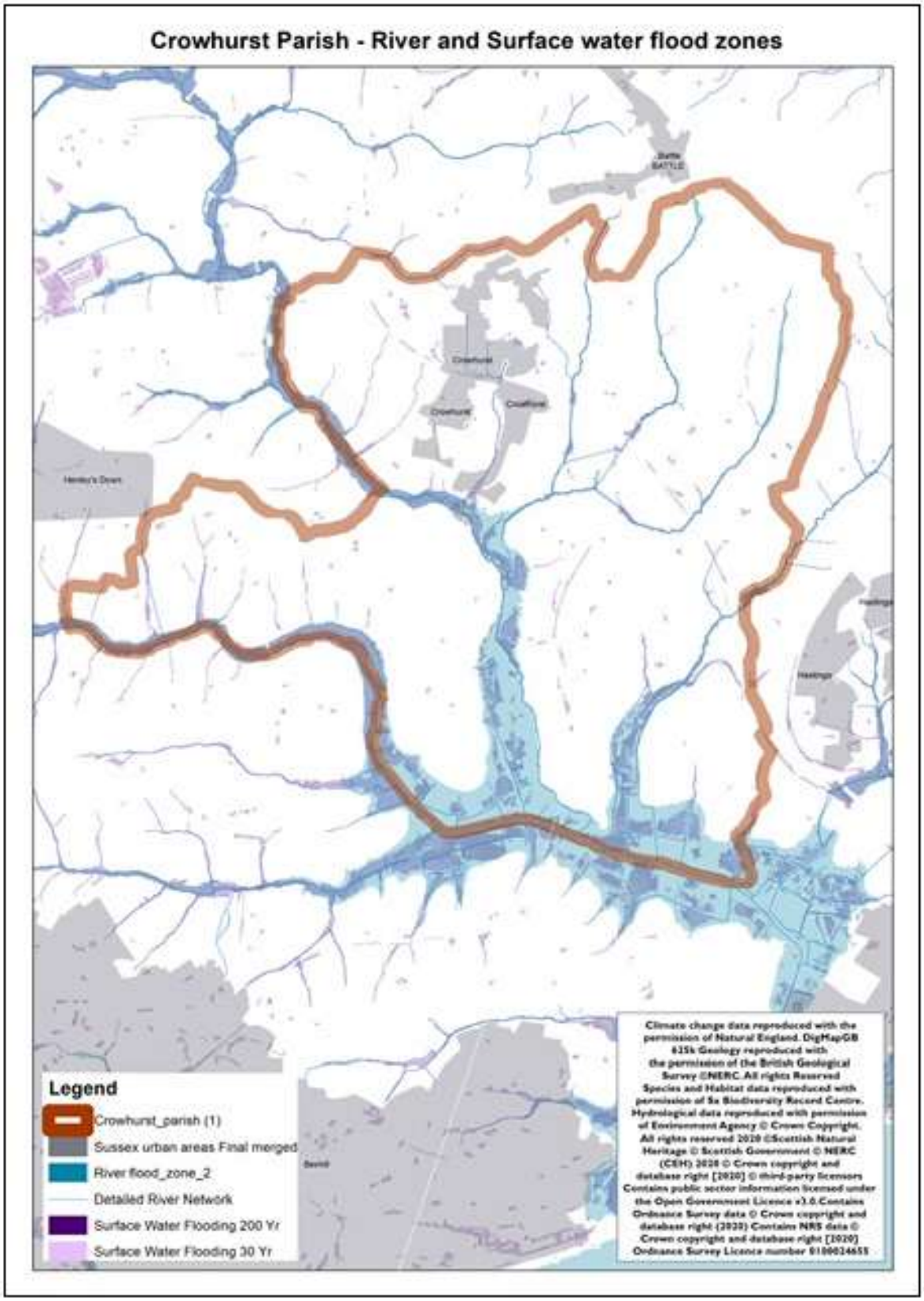
a different spread of data). Both of these relative classifications are relevant and valid, but need to be used appropriately depending on the model purposes.

The natural break values representing the national spread of data (the natural breaks values identified when looking at the whole dataset for England) are detailed in a separate spreadsheet. These enable us to see how the vulnerability data for the Sussex area looks in the national context. When creating the display (symbology in the maps) for the Sussex cut, this provides relative local values, creating the the ability to look at relative vulnerability across the area of data you have. The classes and therefore the maps will look exactly the same for Sensitivity, Management & Condition and Conservation Value as these are not relative values (they are H/M/L or Y/N etc). However, the values for Habitat Fragmentation, Topographic Heterogeneity and the 2 versions of MaxVuln (overall vulnerability and overall vulnerability plus conservation value) are relative and will therefore be slightly different for national and local data cuts.

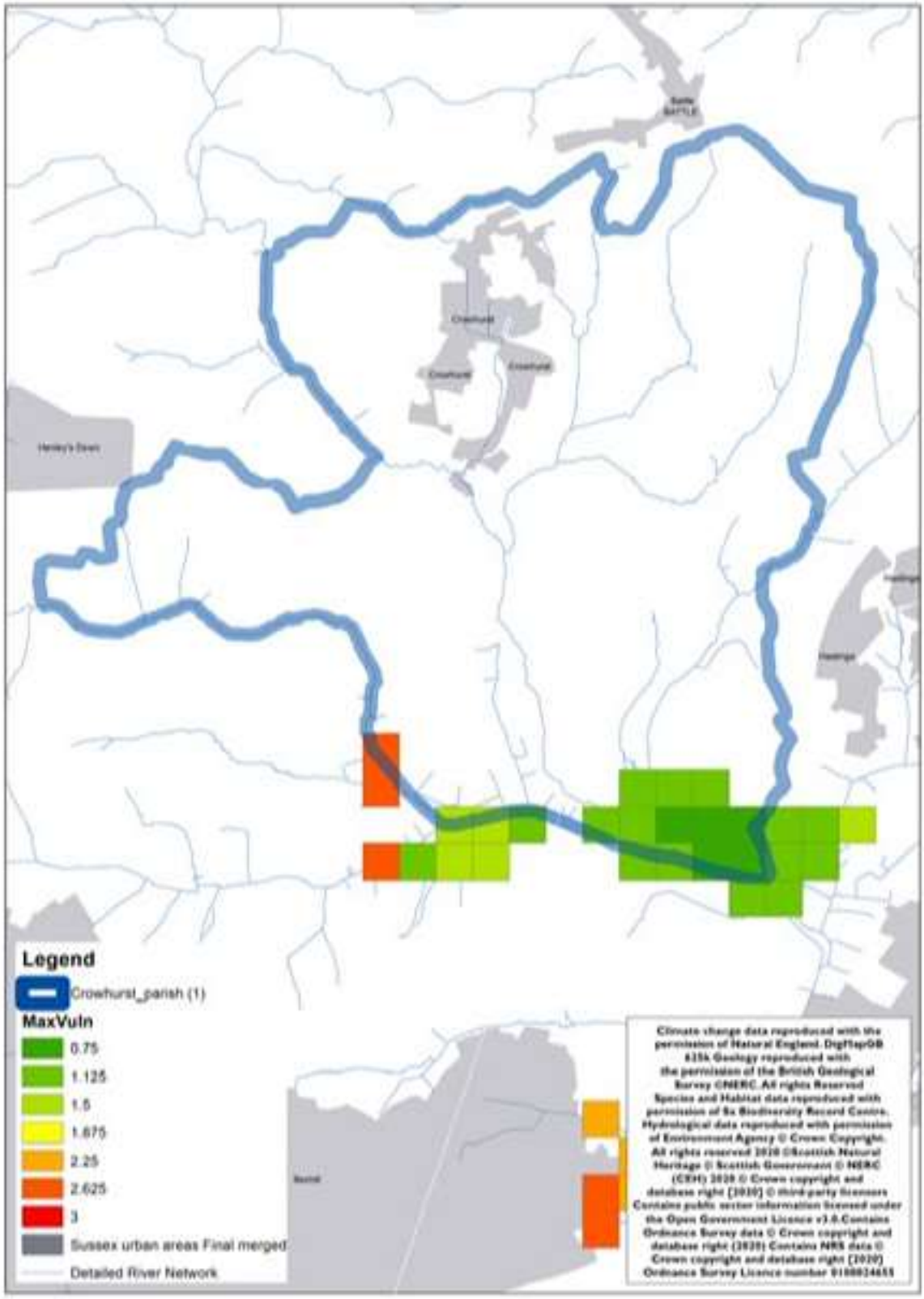
A full manual explaining the NE climate change model can be found here
http://publications.naturalengland.org.uk/publication/5069081749225472

Taylor, S; Knight, M; and Harfoot, A; (2014). Natural England Research Report NERR054. National biodiversity climate change vulnerability model. "

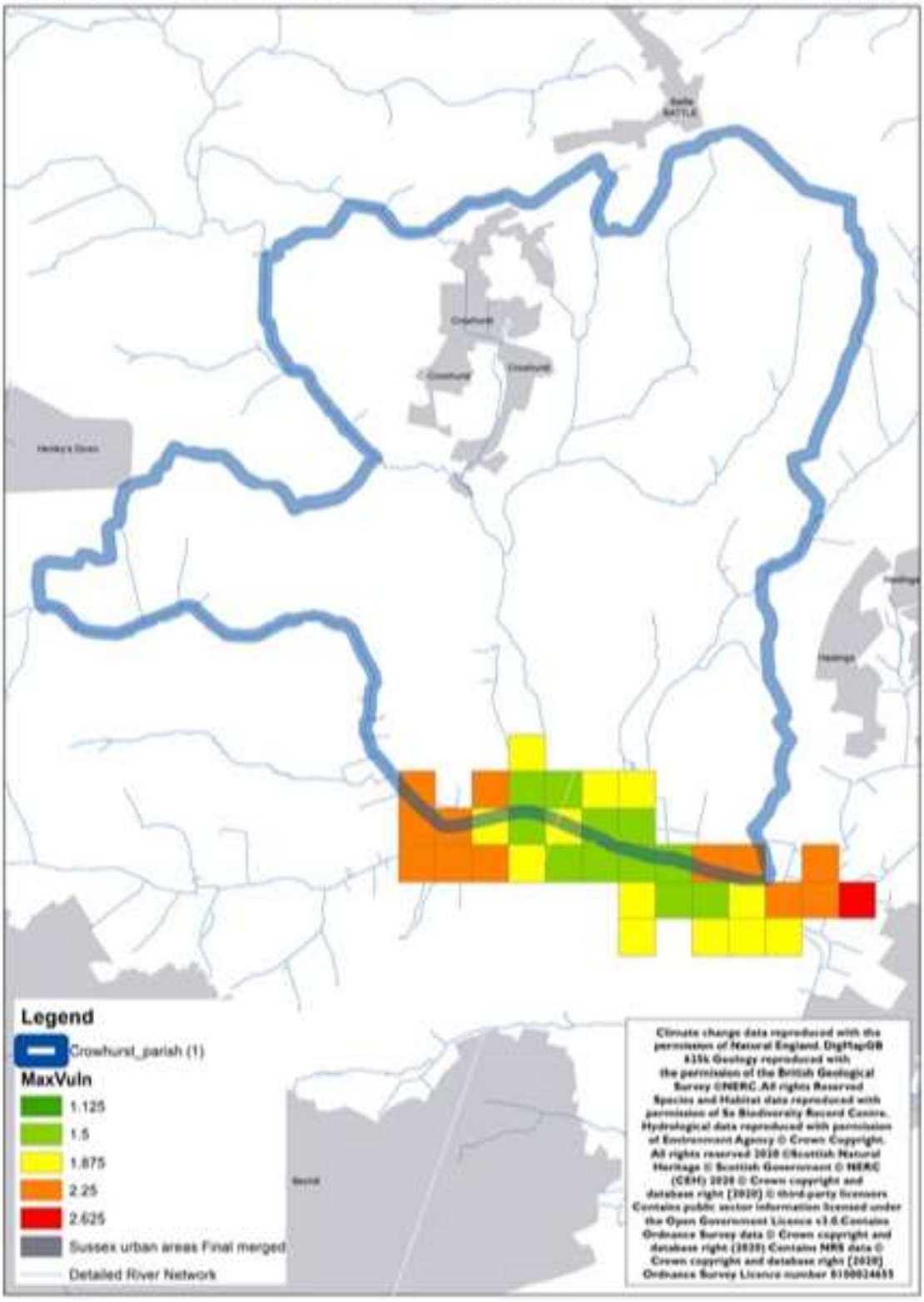
The following four self-explanatory maps follow:


Crowhurst Parish - River and Surface water flood zones
Legend
Crowhurst_parish (1)
Sussex urban areas Final merged
River flood_zone_2
Detailed River Network
Surface Water Flooding 200 Yr
Surface Water Flooding 30 Yr
Climate change data reproduced with the permission of Natural England. DigMap/GB 625k Geology reproduced with the permission of the British Geological Survey ©NERC. All rights Reserved Species and Habitat data reproduced with permission of Sx Biodiversity Record Centre. Hydrological data reproduced with permission of Environment Agency © Crown Copyright. All rights reserved 2020 ©Scottish Natural Heritage © Scottish Government © NERC (CEH) 2020 © Crown copyright and database right [2020] © third-party licensors Contains public sector information licensed under the Open Government Licence v3.0.Contains Ordnance Survey data © Crown copyright and database right (2020) Contains NRS data © Crown copyright and database right [2020] Ordnance Survey Licence number 0100024655

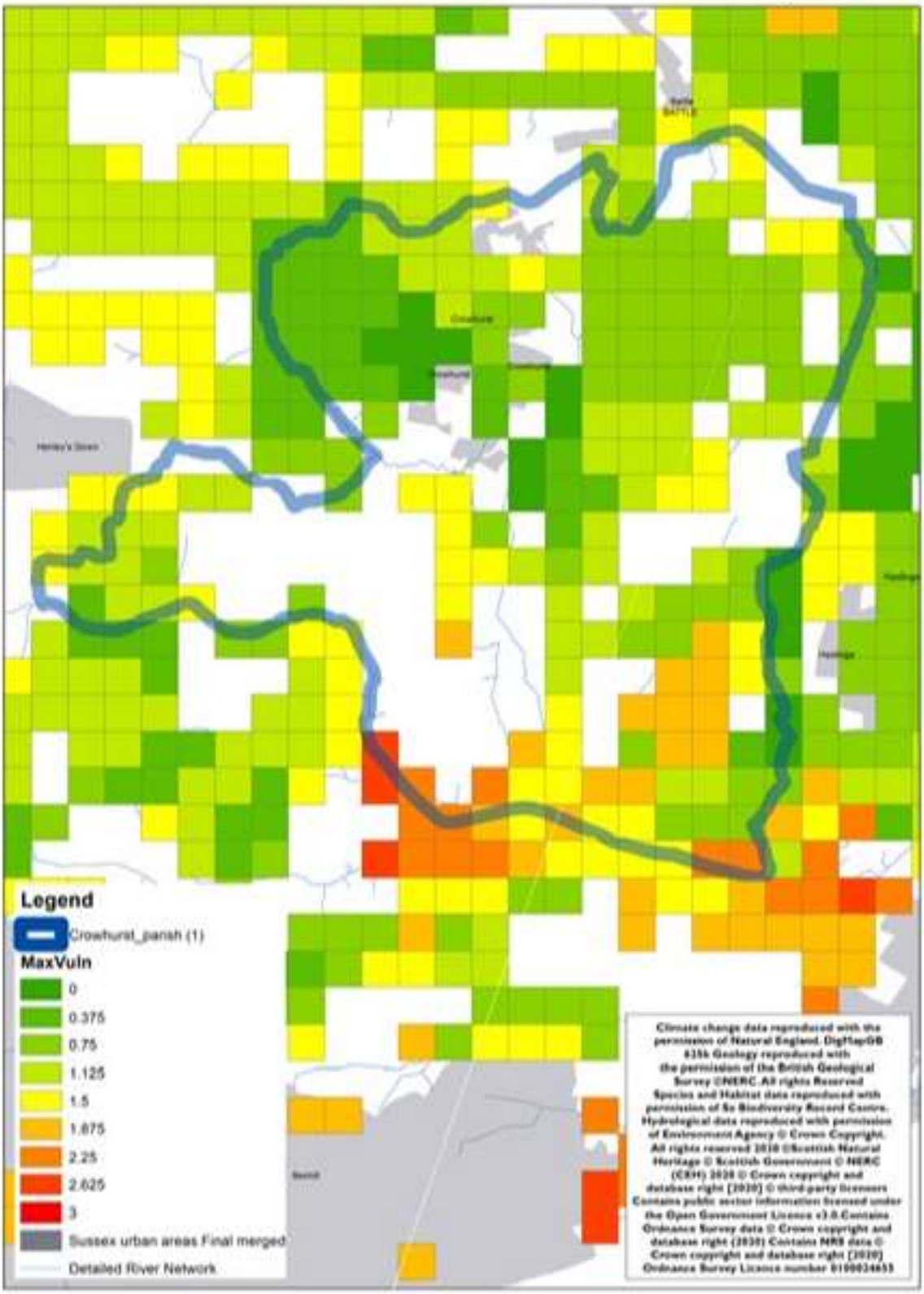
Crowhurst Parish - Coastal Grazing Marsh - Climate Vulnerability



Crowhurst Parish - Purple Moor Grass & Rush Pasture - Climate Vulnerability



Crowhurst Parish - Overall Climate Vulnerability



Powdermill Stream Management

Water Framework Directive, 2020

APPENDICES

Appendix WM01 The Link Road environmental impact

Appendix WM02 Twenty measured trees

Appendix WM03 Trees of Recreation Ground

Appendix WM04 CAVAT of some Crowhurst trees

Appendix WM05 Ash survey of Crowhurst

Appendix WM01

The Link Road environmental impact

NB. This is just a two page description of the Link Road.

See the last part of this Biodiversity Audit for a fuller review on page 212 …

Technical Appendix WM01

The following sequence of 'snips' are taken from the 'Definitive Rights of Way of East Sussex', and each follows on, westwards from the previous one.

© Open Government Licence.

So the first, above, is the junction with Queensway showing the temporary 'Site Compound' of the development. It also shows Chapel Wood and the smaller Little Bog wood to the west.

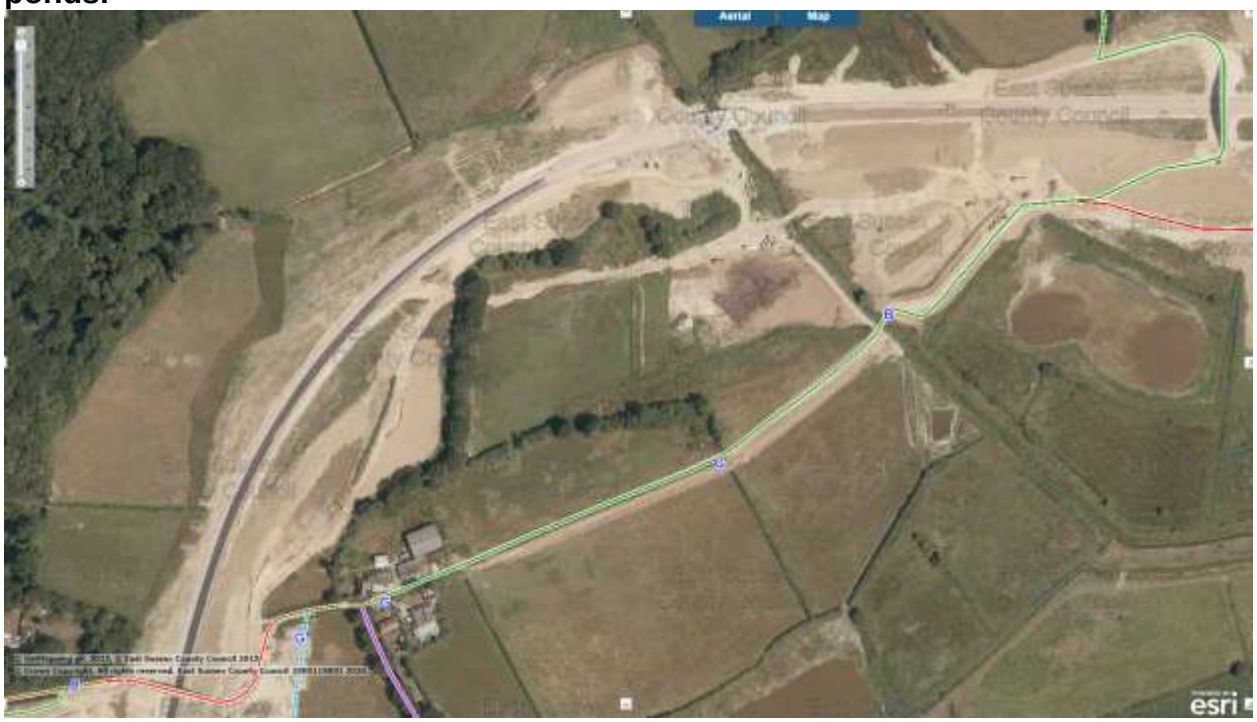
© Open Government Licence.

This carries on the from the above, westwards, showing the intact square Decoy Pond Wood whilst the route has gone through the disused railway line woodlands. Note that the continuity of the woodlands flowing south from Little Bog Wood has also been broken.

Technical Appendix WM01

© Open Government Licence.

This is just to the west of the dismantled railway line. Notice the new bridge over the Link Road (above and below) south and below Adam's Farm. Notice too the double ponds.



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Appendix WM02 Twenty measured trees

Technical Appendix WM02
Crowhurst Trees, originally circulated 22 Sept 2017

The following 20 trees were measured in 2017

Trees around the Church and Primary School

Number	English Name	Latin Name	Map Ref	Circ (cm)	Notes
1	Yew	*Taxus baccata*	TQ757123	920	The Historic Yew
2	Yew	*Taxus baccata*	TQ 757123	530	
3	Yew	*Taxus baccata*	TQ 757123	495	By main gate
4	Oak	*Quercus robur*	TQ 757123	212	Just o/s c/yard by gate to north
5	Oak	*Quercus robur*	TQ 757123	228	
6	Oak	*Quercus robur*	TQ 757123	204	4,5,6 are in a row (old h'row)
7	Oak	*Quercus robur*	TQ 757123	500	
8	Oak	*Quercus robur*	TQ 757123	390	
9	Oak	*Quercus robur*	TQ 757123	316	Just outside churchyard
School	**Trees**				
10	LondonPlane	*Platanus*	TQ758123	405	
11	LondonPlane	*Platanus*	TQ758123	388	
12	Yew	*Taxus baccata*	TQ758123	230	Next to old part of school
13	Yew	*Taxus baccata*	TQ758123	330	
Station	**Road**				
14	Ash	*Fraxinus excelsior*	TQ758122	160	Bottom of road, southside
Cinderbrook field					
15	Field maple	*Acer campestre*	TQ759120	300	#5
AboveCinderbrook					
16	Oak	*Quercus robur*	TQ761120	400	#6
Sampsons Farm					
17	Oak	*Quercus robur*	TQ763199	?	On private land, but ?300cm
Along Sampsons Lane					
18	Oak	*Quercus robur*	TQ764119	210	Close to entrance to Sampson Farm
19	Oak	*Quercus robur*	TQ763118	249	Opposite to 'Private Woodlands'
20	Oak	*Quercus robur*	TQ762118	300	In 'Private Woodland'

:

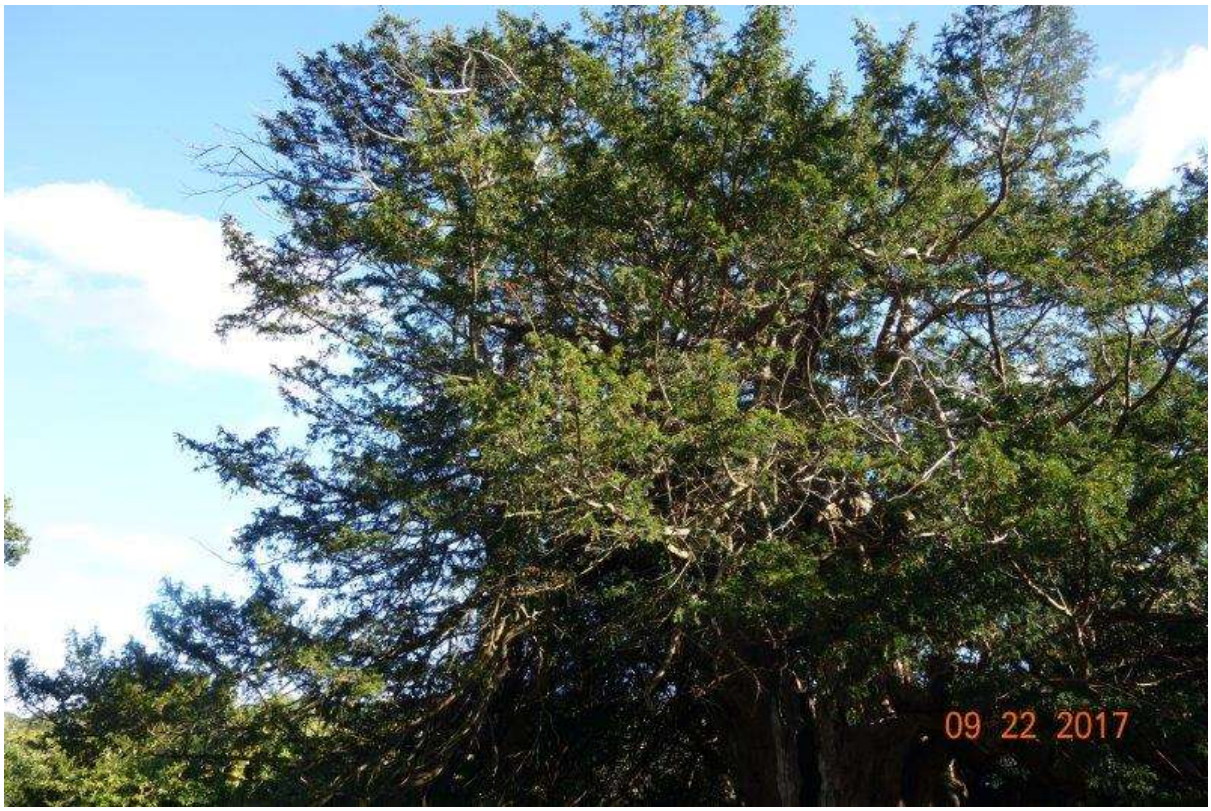
Technical Appendix WM02

Crowhurst Trees, originally circulated 22 Sept 2017

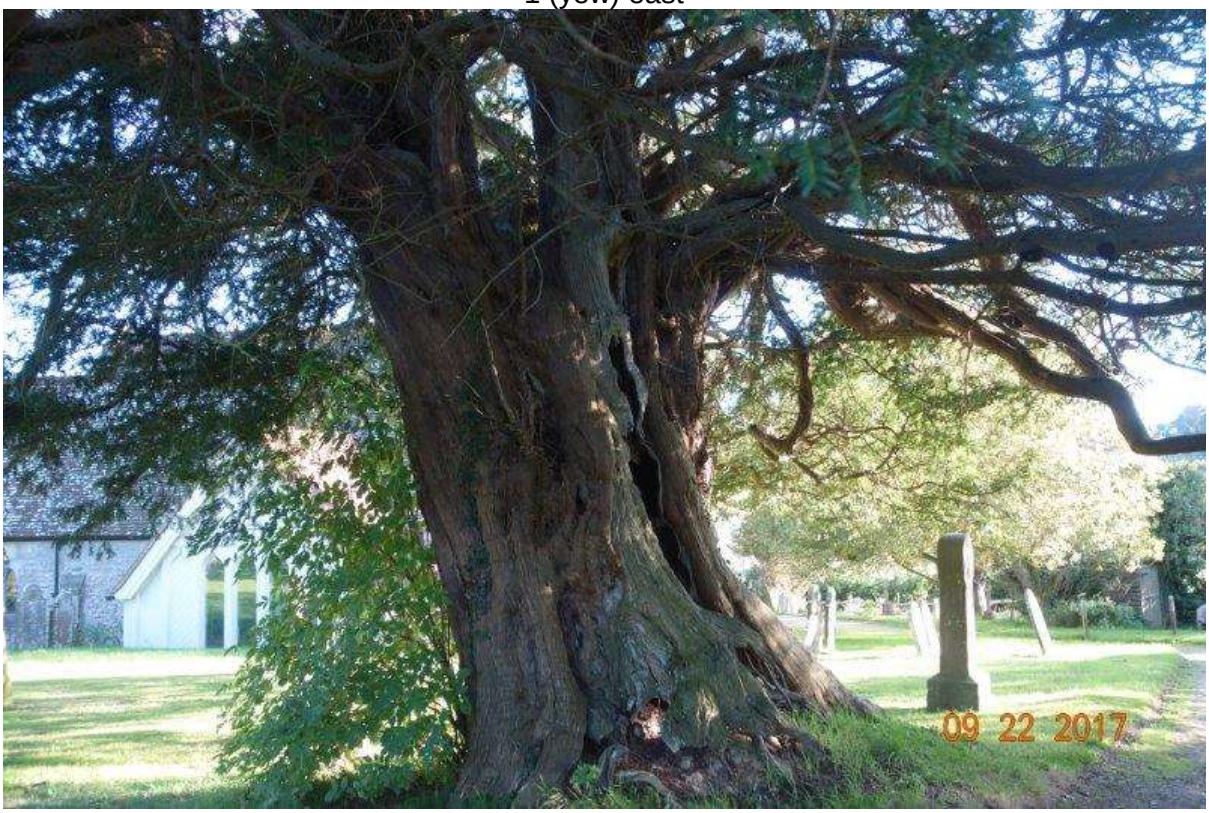
St George's Village Church at Crowhurst (above and below)

The churchyard yew

It is worth noting what East Sussex resident and tree expert Owen Johnson says of this tree in his '*The Sussex Tree Book* (1998). He regards it as the second largest yew in Sussex, after Coldwaltham. It was measured in 1680 by John Aubrey with a diameter of 262cm, now 289cm in 1998. The southern part which is sagging away may well be shed in future, without trace, leaving another part to retain the enigma of its real age.

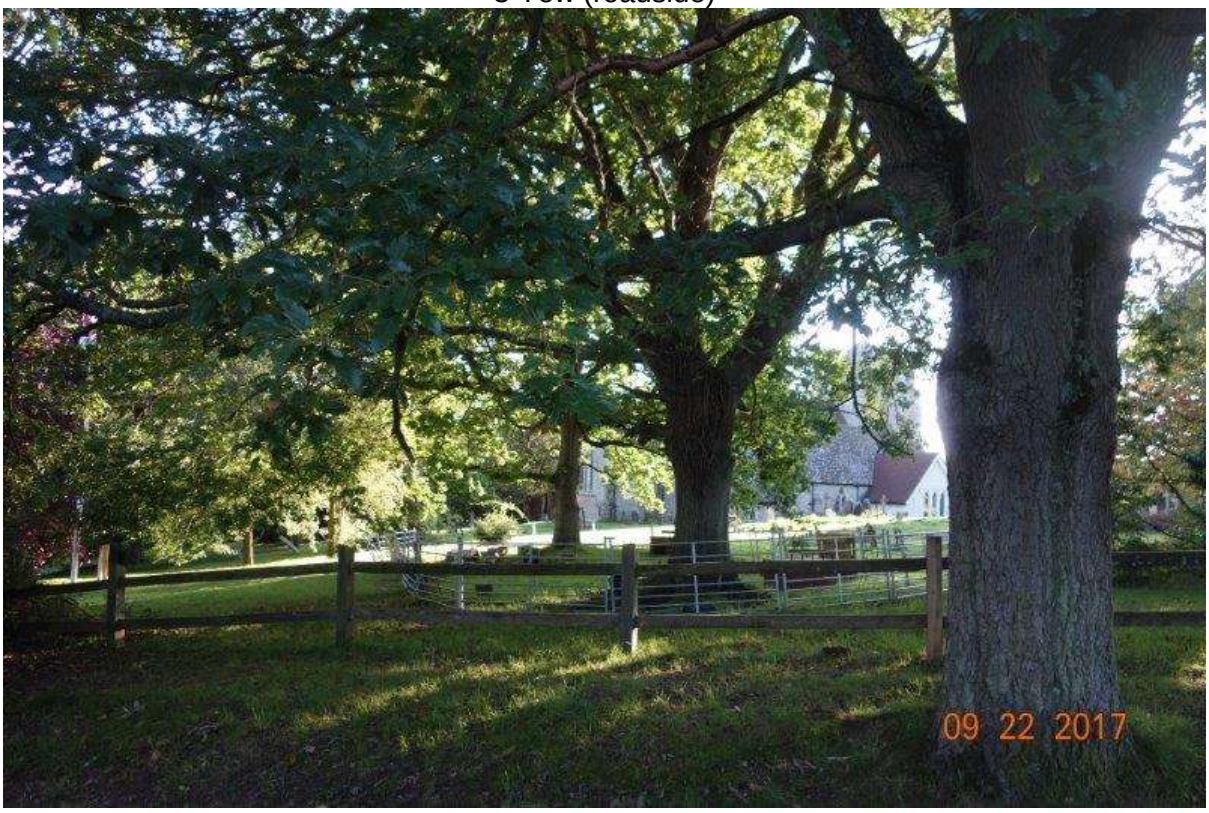


1 (yew) east



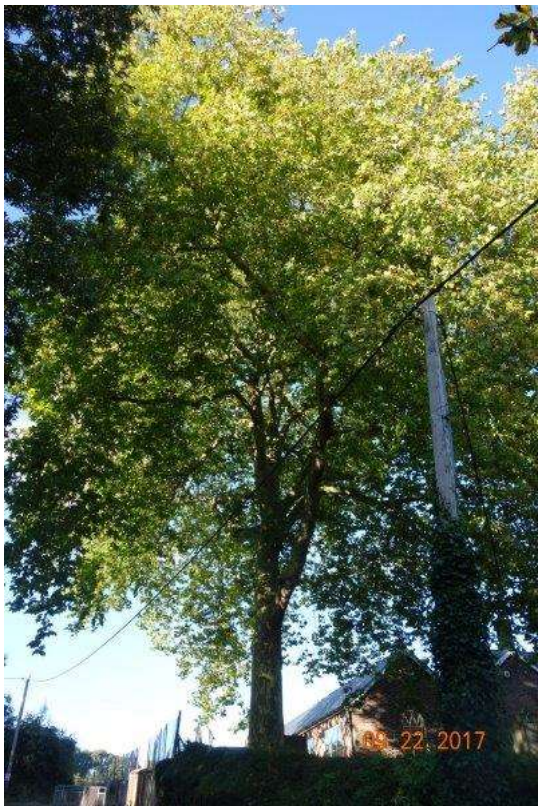
2 Yew (west)

3 Yew (roadside)



4,5,6 oaks in a row (from the north)

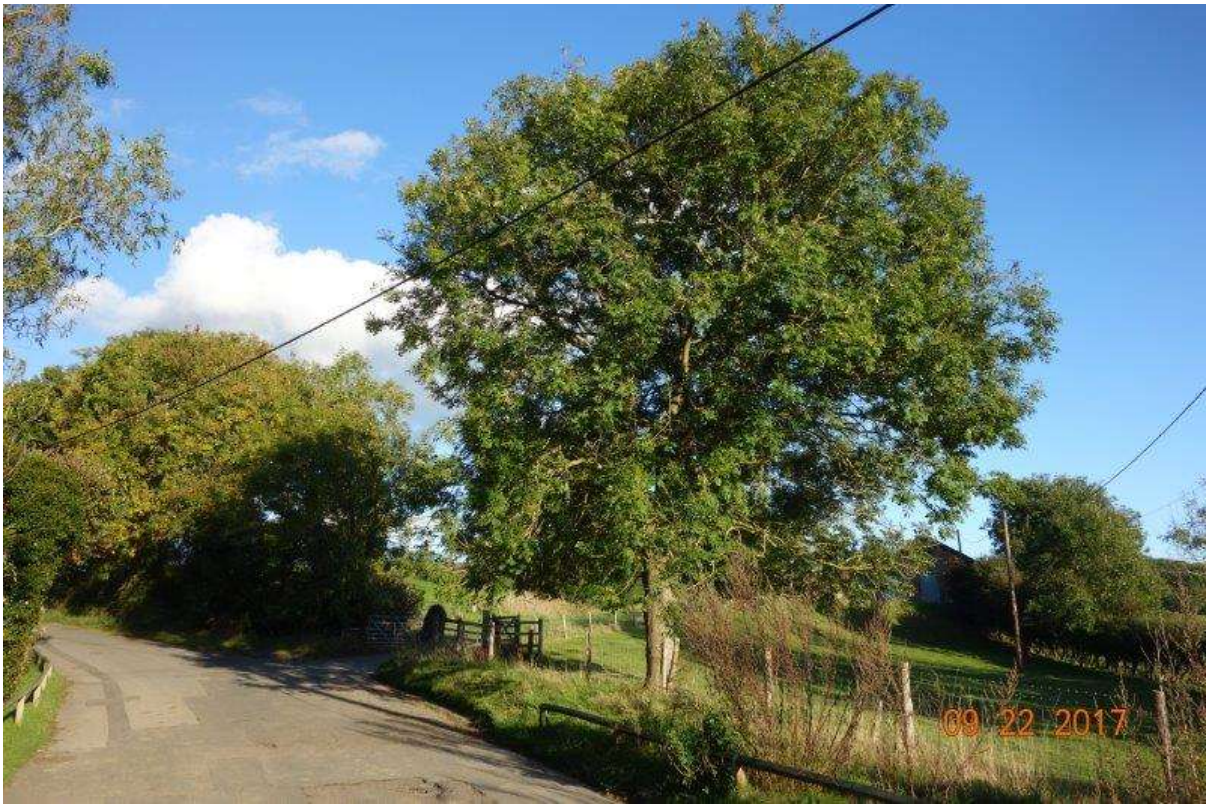
10 (left) and 11 (below) London Planes in School Grounds



11

12

13



14 at entrance to Station Road

16 Ancient oak on Footpath

15,16 Ancient oak on Footpath

17 on private land at Sampson's Farm

An anceint Field Maple, Acer campestre

Appendix WM03
Trees of Recreation Ground

Technical Appendix WM03

Crowhurst Recreation Ground
Tree Survey

Crowhurst Pavilion with a backdrop of trees (2 July 2018)

Dr John Feltwell (Tree Warden for Crowhurst), assisted by (then) Keith Robertson (Secretary to Crowhurst Parish Council)
April 2019

Aim

- To assess the state of the trees on the property with regard to the use of the site by the general public.
- To identify any tree that may become an issue in the future.
- To register the fact that the parish have given some consideration with regard to the juxtaposition of the trees and the public.
- To identify any trees for which management is recommended.
- To set out a plan to safeguard the trees.
- To register the trees as part of the 'Natural Capital' of the parish.

Limitations

This report is a 'snapshot' assessment of the trees of the Recreation Ground as of 4 April 2019.
This report is not a professional assessment of the trees, but it has been prepared by local persons.

Site Visit

The site visit was made on the 4th April 2019, and all the trees were assessed in a clockwise fashion from the northeast of the site. The trees are numbered from the northeast.

Photographs

The following photographs are screen grabs from a drone video taken by one of the authors (JF) on 2 July 2018). The other photographs were taken by KP on the site visit.

© John Feltwell View of north end of Recreation Ground (2 July 2018)

© John Feltwell View of east curtilage of the site (north of pavilion) (2 July 2018)

© John Feltwell View of east curtilage of the site (south of pavilion) (2 July 2018)

© John Feltwell View of south curtilage of the site (2 July 2018)

© John Feltwell West curtilage of the site (north end) devoid of trees (2 July 2018)
(following course of Powdermill Stream)

Trees on and adjacent to the site

The following Table WM01 shows the trees on or around the site.

- 18 trees actually on site (includes one group of 3, one of 2)
- 07 trees on neighbouring properties but limbs affecting site
- 02 trees on boundary (shared ownership)

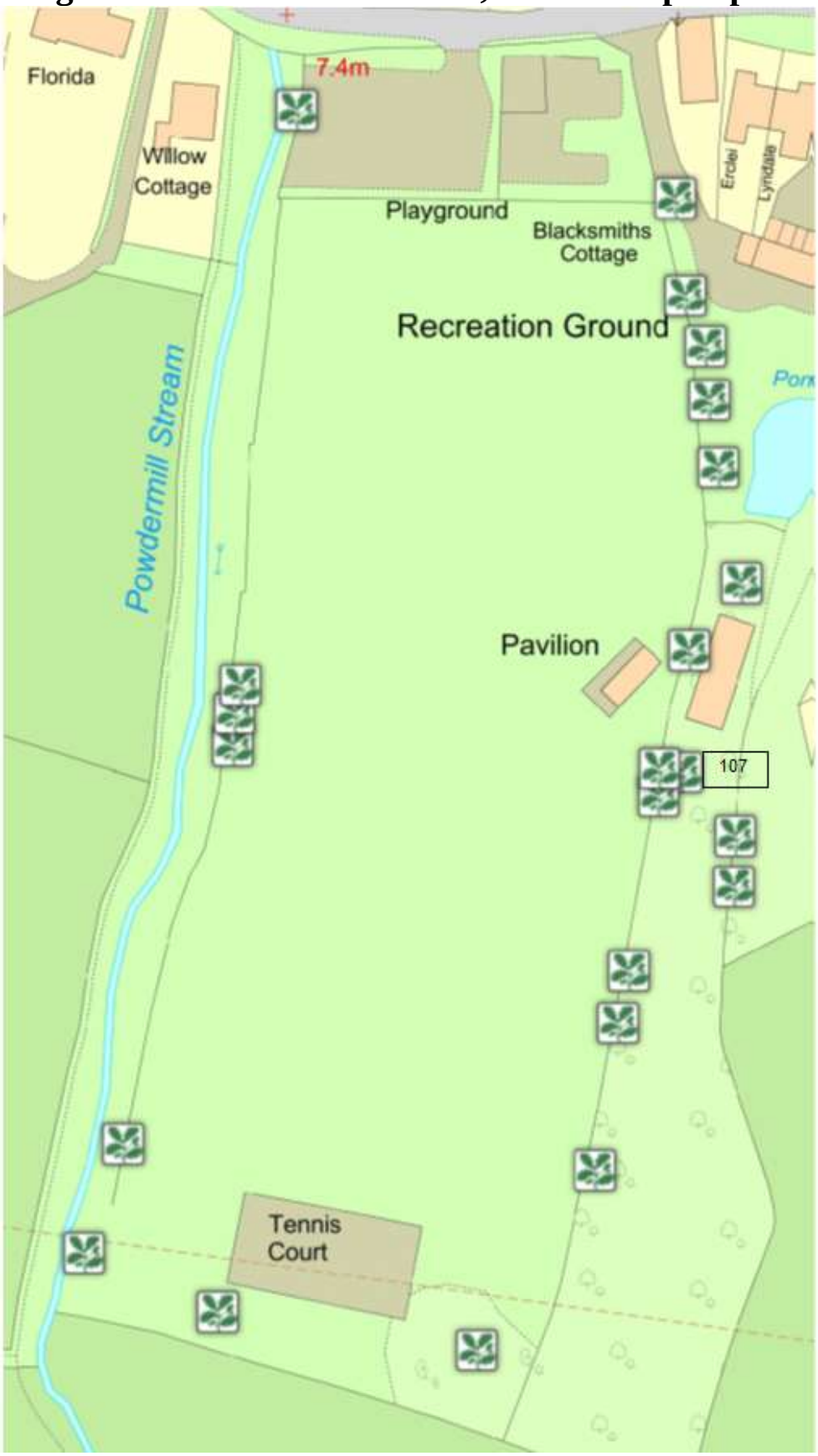
Table WM01 Tree Survey at Crowhurst Recreation Ground 04 April 2019:

Index	On site	Type	Notes
101	NO	Oak	Has decay. Needs some boughs removed and inspection. 4m overhang into rec. On private land.
100	NO	Oak	Good Cond. 3m overhand into rec. On private land.
102	NO	Oak	Good Cond. On private land.
103	NO	Oak	Good Cond. Private land
104	NO	Oak	Good Cond. On private land. Overhang into rec
105	Yes	Oak	Some decay. OK for now.
106	Yes	Oak	OK cond. needs Ivy removed. I bough to cut
107	Yes	TBA	OK. Tidy and Pollard is an option
108	Yes	Oak	OK Cond
109	Yes	Oak	leaning in toward rec. Cut overhanging boughs
110	NO?	oak	on border to private land. OK
111	NO?	oak	on border with private land. OK
112	Yes	Oak	Good Cond. Needs Ivy removed
113	Yes	Oak	Good cond. needs ivy removed. Overhang 7m
114	Yes	Oak	Two smaller trees. OK
115	Yes	Oak	OK cond.
116	Yes	Poplar	Good Cond
117	Yes	Cracked Willow	Remove tidy loose boughs or cut down to regrow
118	Yes	Leylandii x3	Row of 3 .keep or cut down. Cond Ok
119	Yes	Oak	Oak. OK
120	Yes	Oak	Cut down, dying
121	Yes	Oak	OK Cond. trim one dead bough
122	Yes	Alder	1 of 2 x Alder trees near bridge - good cond.
123	Yes	Alder	2 of 2 x Alder trees near bridge - good cond.

Notes:
The Leylandii (#118) are a group of three trees
The two small oaks (#114) are numbered as one.

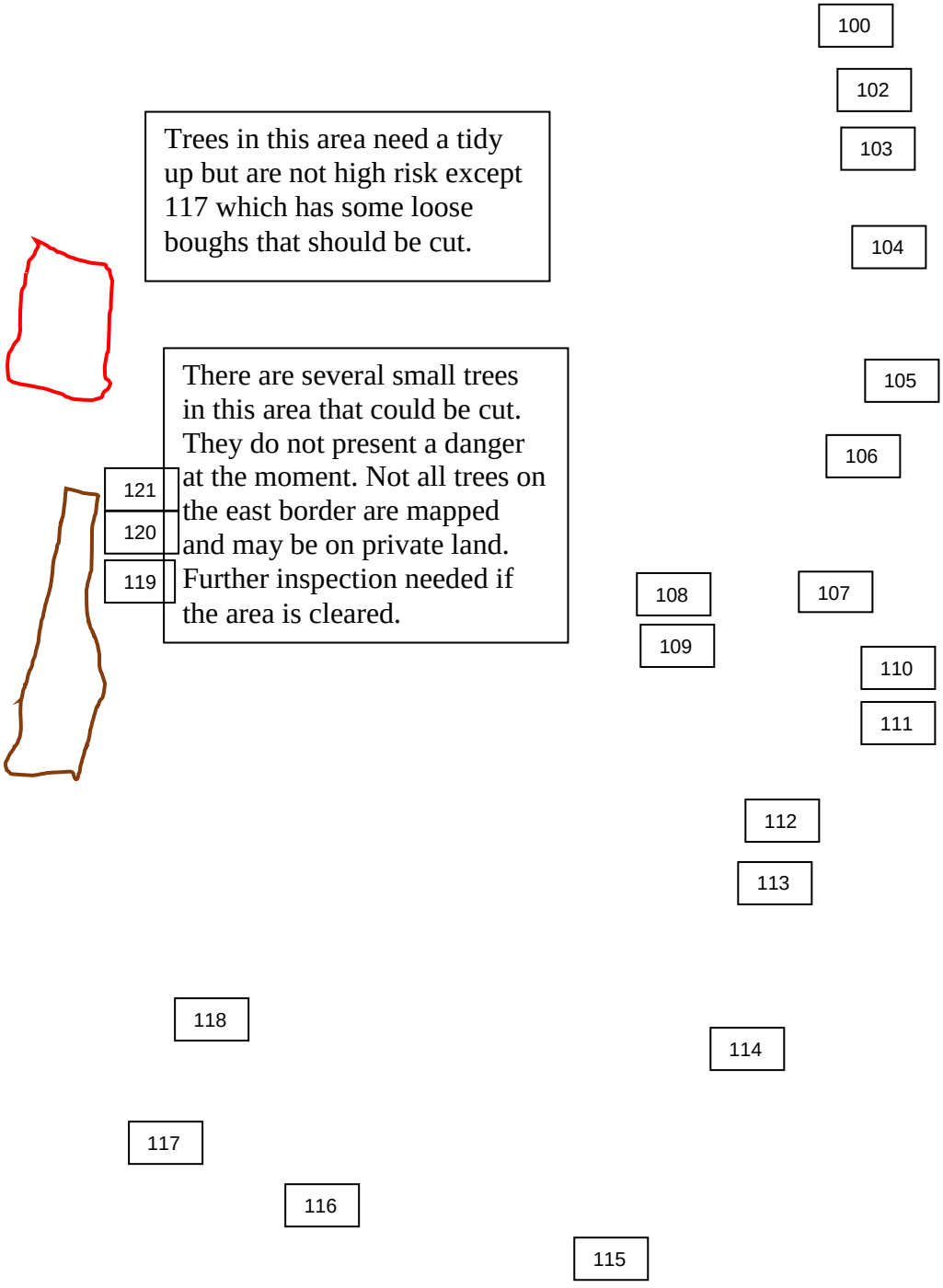
The locations of the above numbered trees are shown in the following Figure WM01:

Figure. 01 WM01 Plan of site; north to top of plan



Action list for trees on site

The following plan and photographs indicate which trees need to be managed.



Tree 101. Decay. Dead bough. Leaning

Tree 109

Tree . 106 Ivy & dead bough

Tree 117 Tidy /Cut

General comments
The Recreation Ground hosts a good number of trees some of which have been there for over 200 years.

Due consideration should therefore be made in conserving the tree heritage of this part of the parish.

The Parish therefore has a duty to look after the trees.

The Parish is conscious that the mature trees on site, and off-site on neighbouring properties, need to be regularly checked as there is plenty of interaction between members of the public using the Recreation Ground.

This report thus demonstrates unequivocally that the parish has considered the trees on the Recreation Ground and has set out management that should be considered and taken place were necessary.

Responsibilities
The limit to the Parish's responsibility lies with the 18 trees that it looks after on the Recreation Ground.

The Parish is aware that there are some mature trees (along the east curtilage) that affect the site in two ways i) overhanging branches from trees on neighbouring properties, and ii) trees that are on neighbouring properties but have roots that penetrate below the actual Recreation Ground.

The two alder trees on Powdermill Stream bank may be the responsibility of the water authorities.

Decisions and Actions
1. Discussion needs to be had with the neighbouring properties (2) on the east curtilage before any works take place.

2. The tree work as indicated in Table WM01 needs to be actioned between Sept 19 and 1 Feb 2020 (outside bird-nesting period). Advise RDC Tree Officer that works will take place.

3. The three Leylandii under the pylons,
i) do not add to the biodiversity of the area,
ii) do not compliment the landscape of the area, and
iii) are under the pylons and are a threat. Consider contacting the authorities that have a requirement to keep 'wayleaves' open under all their pylons. Cracked Willow (# 117) would also benefit from coppicing.

4. Consider on-going works on the Scouts Hut woodland (below).

Youth & Playgroup Hut
The Hut is at the northern end of a block of woodland that has been partially cleared and had a former open habitat. The various scrubby vegetation needs to be cleared so that groups can access the greater area.

A phased approach over three years is recommended.

Year one (autumn 2019) clear a circuitous path along the middle of the whole length from the hut to the southern curtilage.

Year Two (autumn 2020) clear half of the distance from the hut southwards.

Year Three (autumn 2021) clear the remainder.

Updating this tree survey
Recommended every three years.

John Feltwell
Keith Robertson

Appendix WM04

CAVAT of some Crowhurst trees

CAPITAL ASSET VALUATION of AMENITY TREES (CAVAT)

IN

CROWHURST, EAST SUSSEX

By
Dr John Feltwell FRSB of Wildlife Matters
Chartered Biologist
Chartered Ecologist
Chartered Environmentalist

on behalf of:

Crowhurst Parish Council,
Crowhurst,
East Sussex

Dated 17 Dec 2021

1.0 Executive Summary

- Twenty-nine trees in the village of Crowhurst were surveyed.
- Their total CAVAT valuation was £3,087.98
- The most valuable trees were the yews in the churchyard which are valued at over a quarter of million pounds each.
- This CAVAT study demonstrates that it is tool that can be successfully used to assess the biodiversity asset of trees in the parish – for inclusion into a Biodiversity Audit, and to value trees that are threatened by development.

2.0 What is CAVAT?

CAVAT is a scientific method for calculating the monetary value of an amenity tree. It uses evidence from the tree itself (measurements, health, amenity value, longevity) its value in the community, via a suitable algorism, to calculate a pecuniary value for any amenity tree.

3.0 Scientific basis for CAVAT

It is a technique developed by Christopher Neilan (Epping Forest District Council) over several years. Background information can be found in this 2018 publication.[92]

4.0 Purpose of CAVAT

It is a useful measure used by local planning authorities to establish the capital value of their tree.

CAVAT has also traditionally been used in courts to establish value of loss, usually where a developer has removed a tree. CAVAT was successfully used in a Swansea court case to fine a housing developer and contractor.[93]

By measuring the value of a tree beforehand, puts local authorities in a good position to manage their stock and re-coup monies for any loss, whether deliberate or accidental.

Since the Climate Emergency was announced in 2019, many local authorities have encouraged parishes to audit their biodiversity assets. The use of CAVAT is an obvious tool to assess tree assets in any community, which has been done here.

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[92] Doick, K.J., Neilan, C., Jones, G., Allison, A., McDermott, I., Tipping, A., 2018. CAVAT (Capital Asset Value for Amenity Trees): valuing amenity trees as public assets. *Arboricultural Journal. The International Journal of Urban Forestry*, Vol. 40, 2018, Issue 2. 67-91.

[93] BBC, 15 October 2019. Illegal tree felling: Fiorenzo Sauto and Enzo Homes fined £300. https://www.bbc.co.uk/news/uk-wales-50061303

5.0 Aims of this survey

- To provide biometric data, and pecuniary value to some of the important trees along the main road through the village, so that it can be incorporated into a future Biodiversity Audit.

- To alert villagers to the landscape and amenity importance of the trees in the parish, and to indicate that these are mostly old trees, and that not many young trees are being planted for the future.

- To provide East Sussex Highways with a valuation of the trees in Crowhurst.

- To provide scientific evidence in case any tree is accidentally or deliberately damaged or removed.

6.0 The parameters

Data is collected by a suitably qualified ecologist (SQE) on each tree, for instance the diameter of its trunk at 1.3m from the ground, the human population density of the area where the tree is growing, its accessibility to the public, how it is growing, its canopy growth, its amenity value and how long it is likely to live.

The methodology followed is that published by LTOA (London Tree Officers Association), as published by Christopher Neilan in 2018, with the pecuniary value of trees updated each year.[94] The seven parameters used to calculate the CAVAT are listed in Technical Appendix WM01.

7.0 Parameter

The Population Density of Crowhurst is 1,342 /sq km (13/ha).
It is populated by 906 residents in 2020.
These figures are required to go into the CAVAT algorithm that calculates the value of trees.

8.0 The surveyor

The CAVAT survey was carried out by Dr. John Feltwell who is a PhD in Botany, and Life Member of the International Dendrological Society (IDS). The author has been Tree Warden of Crowhurst for a number of years.

9.0 Survey Area

The areas surveyed included the road from Catsfield to Crowhurst, known as the Catsfield Road, Ballards Hill, Chapel Hill, the Recreation Ground and the churchyard and environs.

[94] Neilan,C., 2018. CAVAT Full Method – A Guide to recent updates. Summary of changes applied to the CAVAT Full Method, April 2018. Available on people https://www.ltoa.org.uk/resources/cavat (accessed 12 Feb 2021).

10.0 Results

The results are shown in Table WM01

Tree Nos	Species		Circum. (cm)	Diameter (cm)	Growth factor	Age ca (yrs)	VALUE (£)
CHURCHYARD							
T1	Yew		920	294	2.5	735	**242,162**
T2	Yew		530	169	2.5	422	**242,162**
T3	Yew		495	158	2.5	395	**242,162**
T4	Oak		212	68	1.88	128	**64,266**
T5	Oak		228	73	1.88	137	**77,411**
T6	Oak		204	65	1.88	122	**64,255**
T7	Oak		500	159	1.88	298	**242,162**
T8	Oak		390	124	1.88	233	**192,340**
T9	Oak		315	100	1.88	188	**109,974**
SCHOOL GROUNDS							
T10	London Plane		406	129	2.5	322	**192,340**
T11	London Plane		388	124	2.5	310	**192,340**
T12	Yew		230	73	2.5	182	**77,411**
T13	Yew		330	105	2.5	263	**148,284**
T14	Ash	Beware developr	180	57	2.75	495	**19,471**
CINDERBROOK							
T15	Field maple	Best example	300	95	2.5	238	**82,480**
T16	Oak	large cavity	400	127	1.88	239	**144,255**
T17	Oak		300	95	1.88	179	**109,974**
T18	Oak		210	67	1.88	156	**54,266**
T19	Oak		249	79	1.88	149	**77,411**
T20	Oak		300	95	1.88	564	**109,974**
RECREATION GRD							
T21	Oak	small tree	83	26	1.88	49	**7,300**
T22	Oak	forked oak	286	91	1.88	171	**82,480**
T23	Oak		134	43	1.88	81	**19,630**
T24	Black Poplar	on Recreation				1	**215**
T25	Black Poplar	in Broadfields'				1	**215**
T26	Walnut					1	**215**
FOOTPATH CRH/18/1							
T28	Oak	Cinderbrook	426	135	1.88	253	**181,621**
T29	Oak	Cinderbrook	355	113	1.88	212	**111,213**
						TOTAL £	**3,087,989**

Notes. ThreeBlack poplars planted on Recreation Grou ound in March 2021. Two died during the year.

NB. The data above relies on measurements made of the trees in the churchyard, school and Cinderbrook in 2017. The recreation ground trees were measured in 2021.

11.00 Discussion

The overall value of the trees is within normal limits for a small village, even though it is over three million pounds.

These 29 trees only represent a small fraction of trees in the parish. If, or when, other trees are assessed the figure will more than double.

The importance of having a value to the trees is that it is assessed well before any damage may occur to the tree, such as vehicle damage to the roadside tree, or from housing development.

The assessment is according to methodology used by county councils for assessing their natural capital.

For Crowhurst the CAVAT value is useful in quanitifying the tree assets in the parish, that informs the Biodiversity Audit (where this report resides).

In the case of one of the allocated sites (CH3) at the bottom of Station Road, the solitary ash tree is valued at about £20K, and should thus be protected and conserved whatever development occurs in that area.

Technical Appendix WM01
CAVAT parameters

The following table outlines the parameters that are used to assess each tree. It all starts with the measurement of the circumference, and then, using a growth factor for each tree species, the age of the tree is calculated. Then the situation of the tree is assessed, for instance in a churchyard which is lower risk to damage than a tree in a farmer's field, and this is fed into the algorisms to produce a value that also takes into consideration the interaction with people – the relative population of the village, the state of the tree and its predicted longevity.

<table>
<tr><th>#</th><th>Parameters</th><th>Further details</th></tr>
<tr><td>1</td><td>BASE VALUE.
UVF</td><td>The DIAMETER of trunk at 1.3m from the ground in cm.
This is used to produce a Unit Value Factor (UVF)</td></tr>
<tr><td>2</td><td>CTI</td><td>COMMUNITY TREE INDEX (CTI) value. This is a parameter that calculates the potential impact of the public on the amenity tree, using the Population Density of the community.
Most areas fall into 100, inner cities into 250 factors.
<table>
<tr><th>Population Density (ha)</th><th>CTI Factor (%)</th><th>CTI Band</th></tr>
<tr><td>>20</td><td>100</td><td>1</td></tr>
<tr><td>20-39</td><td>125</td><td>2</td></tr>
<tr><td>40-59</td><td>150</td><td>3</td></tr>
<tr><td>60-79</td><td>175</td><td>4</td></tr>
<tr><td>80-99</td><td>200</td><td>5</td></tr>
<tr><td>100-119</td><td>225</td><td>6</td></tr>
<tr><td><119</td><td>250</td><td>7</td></tr>
</table></td></tr>
<tr><td>3</td><td>LF</td><td>LOCATION FACTOR The CTI factor is adjusted to reflect whether the tree is fully accessible for public enjoyment in its location.. The amount of depreciation is increased.</td></tr>
<tr><td>4,5</td><td>FCV1

FCV2</td><td>FUNCTIONAL CROWN VALUE. It is in two parts.
Part 1 Structural Framework (FCV1) is about how it measures up as fully expressing 'the characteristic growth patterns of its species.' If perfect it scores 100%.
Part 2 is Canopy Completeness and Condition (FCV2)</td></tr>
<tr><td>6</td><td>AV</td><td>AMENITY VALUE the tree is assessed for its contribution as a species, its setting, its habitat and heritage characteristics.</td></tr>
<tr><td>7</td><td>LIFE EXPECTANCY</td><td>As per the table below, following BS5837-2012
<table>
<tr><th>Life Expectancy</th><th>% Value retained</th></tr>
<tr><td>>80</td><td>100</td></tr>
<tr><td>40-<80</td><td>95</td></tr>
<tr><td>20-<40</td><td>80</td></tr>
<tr><td>10-<20</td><td>55</td></tr>
<tr><td>5-<10</td><td>30</td></tr>
<tr><td><5</td><td>10</td></tr>
</table></td></tr>
</table>

Appendix WM05

Ash survey of Crowhurst

ASH SURVEY OF CROWHURST PARISH, East Sussex, TN33

17 Dec 2021

The Church & dead ash, as seen from Ballards Hill 8 Oct 2021

By

Dr John Feltwell, Battle, East Sussex, TN33 9BN
(Tree Warden of the parish[95])

Executive Summary

- **70 trees from the Ballards & Chapel Hill area were assessed.**
- **At least 40% of the ash trees are dead or dying.**
- **several dead trees are close to roads.**

Reason for survey

Many of the ash trees in the parish are dying, and the reason for the survey was to see what extent this was. Crowhurst clearly has a visual / landscape problem with dead and dying ash trees.

Ash dieback disease

The disease is caused by a fungus called *Hymenoscyphus fraxineus* (previously C*halara fraxinea*). It attacks the trees and quickly kills the tree. The effects of the dieback in the parish area now quite evident. Symptoms are brown scaring on the bark, dead twigs at the top of the tree, brown leaves and eventually the whole trees die, sometimes then overwhelmed by ivy.

[95] Contact: john@wildlifematters.com

The National Problem

The National Trust is set to fell 40,000 trees this year (2020), and The Woodland Trust believes that 80% of the UK's ash trees will die.[96] Gloucestershire have 27,000-32,000 dead trees to fell.[97] The national outbreak is predicted to cost £15 billion to address.[98] A recent scientific paper, published in August 2020 indicated there is never 100% mortality of ash trees, and that some degree of genetic resistance to ash dieback occurs.[99] It may well be the case that some ash saplings today will create the ash trees of the future, and it will continue to play host to many animals, fungi and lichens as a native British species. Currently there is no prevention or treatment available.

Responsibility for the ash trees

This report apportions no responsibility onto anyone who has an ash tree on their property, and inclusion of a tree in this report affords no liability. Most of the ashes listed are on private land, on verges, or road islands, or owned by the authorities, or in hedgerows, or wood edges. Owners will manage them as they wish, as and when, or not at all. There are of course safety issues regarding highways and footpaths.

Importance of survey

The survey is just a statement in time (October 2021) as to the state of ash in this parish of East Sussex. East Sussex prides itself in being one of the most wooded counties in England, and much of the parish is within the High Weald Area of Outstanding Natural Beauty (AONB). Many of the trees are in the AONB and contribute to its landscape and beauty – the very reason why it has been designated. This ash assessment is therefore a useful note on the contribution of ash in the greater part of the AONB, at a time when ash is becoming hit by the disease nationwide. It is noted that there is a general decline of ash in the UK at the present time and that large areas now have to be rid of the dead ash, causing pecuniary, legal and logistical problems, thus impacting on landscape going forward.

Extent of survey

The survey was limited to Ballards Hill, Chapel Hill, Catsfield Road and Breadsall Road.. Nearly all the tall ashes visible along the hedgerows or very obviously close-by in woodlands were noted. For the most part all the ash listed have been photographed. They have mostly been photographed in the direction of travel along the section of road stated, and have been photographed with easier to identify locations. The survey was carried out near the end of October 2021 as leaf-fall was starting to occur, and the leaves

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[96] The Times, October 2 2020 p.16.

[97] **https://www.wiltsglosstandard.co.uk/news/18730905.ash-dieback-trees-across-gloucestershire-felled/**

[98] **https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/a-z-of-british-trees/ash/.**

[99] Beardon, E. 2020. Out of the Woods. *The Biologist* Vol 67, No. 4, 20-23.

of ash were sometimes changing from green to pale orange. It is clear that not all smaller ash were counted, especially those in hedgerows.

Ash in the parish

Ash (*Fraxinus excelsior*) is a constituent part of the wooded environment that makes up the countryside with the parish. It is a native tree, along with English oak, Hornbeam and Field Maple that frequent our woods and hedgerows. Sycamore is also prominent in the parish, but that is not native and does not sit well with conservationists as it excludes native trees.

Pre-Norman ash

Ash would have been in the parish before William the Conqueror arrived in 1066. It was always a native of the Wealden forests and hamlets, and it would have been cut down to make handles for woodsman's and gardener's tools, as it has shock-proof properties and is a pliant timber. When many of the hedgerows were created in the Enclosures several hundred years ago, ash would have been planted alongside other native species. Equally it would have migrated from the woods and copses into the hedgerows all by itself, which is why it is present today. So ash has a great historical origin that predates the conquest, and its genes go back pre-conquest. Crowhurst was mentioned in the Doomsday Book.

What about Crowhurst's ashes?

What can be learnt from walking the village roads about our ashes? They seem to occur in clusters. There are roads with no ashes, and then patches where they can be abundant. There are plenty of ash between The Plough pub and Ballard's Hill. They are not like elm that suckers along a hedgerow and one gets rows and rows of different aged elms radiating out from the central 'mother' elm. It is likely that natural selection will allow some ash to regenerate and be free of the disease.

What happens when the ash trees disappear from the parish? Loss of Biodiversity

i) There will be a change in the typical views of some roads and lanes. Landscape will change. English oak and Field Maple will continue to survive in the hedgerows and may even fill the gap made by dead ash.

ii) There will be a decrease in biodiversity in the parish, as ash supports a wide range of wildlife. At least 112 invertebrate species will be lost.[100] Another view, is that '*more than 950 other species rely on ash….12 birds, 28 mammals, 58 bryophytes, 68 fungi, 239 invertebrates and 548 lichens.*' (Beardon, 2020)

[100] Biological Records Centre database of Insects and their Food Plants http://www.brc.ac.uk/dbif/hostsresults.aspx?hostid=2329

Limits of the survey

The survey was only of the roadsides and environs of the roadsides. The public footpaths were not surveyed. This could easily double the ash trees in the parish. There are many ash trees within the hedgerows of the parish. Where these are tall and distinctive they have been included. A not surprising number of tall ash are by telephone poles as they have escaped the hedge cutting blades. If all hedgerows in the parish were not cut for two years, then the population of ash in the parish could double again, as they are a permanent constituent part of Crowhurst's hedgerows and grow particularly fast in the clay. After ten years a hedgerow ash can be tall enough to make a substantial young tree.

Conclusion

About 40% of the ash trees in the parish are dead or dying.

As the disease accelerates through the parish it is likely to cause a greater problem.

There are several tall and diseased trees on higher ground behind The Plough Pub, and along Chapel Hill that will need some attention.

Ash Dieback symptoms

Brown staining on bark

Dead trees

Part-dead canopies

Dead bark, scaring, staining, dead leaves

ASH TREES IN THE PARISH
TREE & PHOTOGRAPHIC LOG

# Ash	Road
	Catsfield Road (eastbound) to top of Ballards Hill
1	N side of road
2-6	Both sides of road
7	N side of road by Hill House
8-9	South side of road
10	N side of road
	The Plough clockwise to The Plough again via Ballards Hill (around 'island')
11-17	Behind The Plough
18-19	Behind The Chapel
20-31	Path up behind The Plough
	Down Ballards Hill,
32-33	West side
34-47	Down the hill
	Down Chapel Hill
48-65	
	Sampsons Lane
66	Besides footpath and farm gate
67	Behind shed, covered in ivy
68-70	In field, beside lane

Catsfield Road
(from Catsfield, eastbound)

No. 1 Ash on north side of Catsfield Road (eastbound)

No. 2-6 On both sides of the road past the ‘Crowhurst’ sign

No. 7. Overhanging road from north side near Hill House

No. 8 On south side of Catsfield Road

No. 9 On south side of Catsfield Road (Oct 21) – diseased, also with internal rot

Felled in January 2022 – holes likely due to larvae of Stag Beetles
At least 94 tree rings

No. 10 On north side of Catsfield Road

BALLARDS HILL (CLOCKWISE ROUND ISLAND, PAST PUB)

No.11, 12, 13 Behind Pub

No.14,15 Behind Pub

No.(15 again),16,17 Behind Pub

No18,19

No. 20,21

No. 22,23,24,25

No. 26-27

No. 28-29

No. 30 Left side of track No 31 route onto road

Down Ballards Hill

No.32 Top of hill, west side

No.33 Top of hill, looking back to Catsfield

No.34, 35,36 Looking down Ballards Hill

No.37, 28,39 Looking down Ballards Hill

No.40,41 Looking down Ballards Hill

No.42,43,44 Looking down Ballards Hill

No.45, 46, 47 as seen through garden on east side of Ballards Hill

Down Chapel Hill

No.48 in garden

No. 49, 50.. in garden north side of Chapel Hill

No. 51 South side of Chapel Hill

No. 54 South side of Chapel Hill

No. 55 South side of Chapel Hill

No. 56 North side of Chapel Hill

No. 57 North side of Chapel Hill

No. 58 North side of Chapel Hill

No. 59 South side of Chapel Hill

No. 60 North side of Chapel Hill

No. 61-64 North side of Chapel Hill

No. 65 South side of Chapel Hill

SAMPSON'S LANE

No.66 In hedgerow along Footpath

No.67 Ivy clad behind building

No.68, 69, 70 In the landscape

Projects to Consider / Food for thought

This Biodiversity Audit is a baseline for what is present in the parish. Some topics are deficient in data. It is clear that this audit has not produced much scientific evidence on the effects of climate change.

There are other views on climate change.[101]

PROJECT / TOPIC	Notes
Climate change	Evidence is mostly lacking on many fronts.
Ancient Meadows	There must be many ancient meadows in the parish, on private land, but a concerted effort needs to made to map them and then survey them.
Ponds	There is no data or review of private ponds in the parish.
Hedgerows	Plenty missing, and plenty to replant
Butterflies	EXPECTED BUT NOT RECORDED: Small Tortoiseshell, Brimstone, Small Copper, Meadow Brown, Common Blue, Small Skipper, Essex Skipper.

Further Information

Bexhill to Hastings Link Road ES – Chapter 15B: Social and Community Effects 2245458/30/A Bexhill to Hastings Link Road Chapter 15B: Social and Community Effects. 64pp

Crowhurst Environment Group
https://www.crowhurstenvironmentgroup.uk/wildlife-meadow

Crowhurst 2019. Crowhurst Neighbourhood Development Plan
Final version - May 13 2019 https://www.crowhurstneighbourhoodplan.org/

Crow---hurst

[1] Terry Anderson and Sophie Streeter

[101] **Lomborg, B. 1998**. *The Skeptical Environmentalist, Measuring the Real State of the World*. Cambridge University Press. 515pp. See also the much hailed: **Stern, N., 2007.** *The Economics of Climate Change. The Stern Review.* Cambridge University Press. 692pp. Also see. **Al Gore, 2013.** *The Future*. W.H. Allen. 558pp. **Prof John Houghton, 1994**. Global Warming. A Lion Book. (many current updates).

Community Initiative and Acknowledgements

This report has been produced by Dr John Feltwell on a pro bono basis, and can be circulated freely. The following have been very helpful in providing information, and they have all agreed that their data can be used, and be used on-line on the Crowhurst web site, and thus usage to the wider world.

Organisations such as RSPB, SWT, EA, ESCC, AONB Unit and biological societies have been very helpful including Sussex Botanical Recording Society Churchyard Project, Powdermill Trust and the British Pteridological Society.

- Anderson, Terry - butterfly records of Fore Wood
- Battle Wildflower Meadows Group – for contributions and collaboration
- Campbell, David – SOS records for Fore Wood (and Audrey Wende, Richard Cowser)
- Crowhurst Environment Group (CEG) – Verges & Muriel's meadow management[102]
- Clark, Dr Judy, Ellen Campbell & Jacqueline Rose – for Sussex Botanical Recording Society Churchyard Project
- Day, Rosalyn – Crowhurst – statistics
- Dean, Basil – Fisheries & Biodiversity Officer, at Environment Agency – fish data
- Dean, Cliff – Pett - bird lists – https://rxbirdwalks.wordpress.com/
- Desch, Julia – Crowhurst – donation of wildflower plants
- Donovan, Ian – Crowhurst – horticulturalist for help and work on wildlife verges and meadows
- Feltwell, Tom – Newcastle, technical and copyrights
- Garrett, Fergus – Michael Wachter, Great Dixter – advice/help with verges and meadows
- Henderson, Phil – Assistant Warden, RSPB Fore Wood - documents
- Hoad, Tracy – Flood Warden for flood records and flood report
- Horne, David – botanical surveys for Fore Wood and Muriel's Meadow
- Ingrams, Andrea – TPO Officer, Rother District Council
- Johnson, Paul – Volunteer Warden of Quarry Wood Nature Reserve – for fungi lists
- Kemp, Will – Photograph of Purple Hairstreak
- Koop, Audrey – many parish project, including WARMER, CEG groups
- Lavender, Jason – High Weald AONB Unit, Flimwell – maps and plans
- Neville, Lorna – Volunteer Quarry Wood Nature Reserve
- Newmarsh, James – ESCC for advice and support for wildlife verge designation
- Plato, Sonia & Dave – Chapel Hill, Crowhurst – co-ordination, contacts and species records
- Young, Robin Crowhurst – for local Crowhurst species accounts
- Robertson, Keith – Clerk to Crowhurst Parish Council
- Royston, Frances and Stephen – Crowhurst – old photographs and species records
- Scott-Wood, Muriel and Lindsay – for loan of Muriel's Meadow and Woodland as a wildlife recovery area.
- Sodomcova, Kristina, Dr. – formerly of RDC in 2020-21
- Southgate, Fran – Sussex Wildlife Trust, - emails to Sonia Plato, various to March 2020
- Streeter , Sophie – butterfly records of Fore Wood
- Sussex Biodiversity Record Centre (SBRC) – supplying biodiversity records
- Sussex Wildlife Trust (SWT) – information
- Van Moppes, Clare – Crowhurst – fungi lists
- Weller, Kerry – facilitating meetings
- Woolley, Pam – Crowhurst – Footpath Warden for footpath data; meadow data
- Wisley / Environment Department – hedge-planting

Copyright information

[102] The CEG is also responsible for monitoring recommendations of the Neighbourhood Plan and environmental concerns. The CEG was a contributer and proposer of the CCEEWP Resolution to the PC.

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ACRONYMS

AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
CAVAT	Capital Asset Valuation of Amenity Trees
CCEEWP	Crowhurst Climate & Ecological Emergency Working Party
CEG	Crowhurst Environment Group
CPC	Crowhurst Parish Council
CVCP	Combe Valley Countryside Park
EA	Environment Agency
EU	European Union
ESCC	East Sussex County Council
GCN	Great Crested Newt
IRZ	Impact Risk Zones
LNR	Local Nature Reserve
MAGIC	Multi-Agency Geographic Information for the Countryside
MUGA	Multi-use Game Area
NT	National Trust
QR	Quarry Wood Nature Reserve
Ramsar	An international wetland site; a place in Iran where the wetland conference was held
RDB	Red Data Book
RDC	Rother District Council
RHS	Royal Horticultural Society
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SBRC	Sussex Biological Records Centre
SNCI	Site of Nature Conservation Importance
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SBRC	Sussex Biodiversity Record Centre
SWT	Sussex Wildlife Trust
TPO	Tree Protection Order
WCA	Wildlife and Countryside Act 1981

Document Audit trail

Revision	Date	Report Description	Prepared by
WM1,385	27 January 2022	Bio Audit of Crowhurst	Dr John Feltwell
WM1,385.4	22 February 2022	Bio Audit of Crowhurst , updated	Dr John Feltwell
WM1,385.5	25 Feb 2023	Bio Audit of Crowhurst , updated	Dr John Feltwell
WM1,385.6	17 July 2023	Bio Audit of Crowhurst , updated	Dr John Feltwell

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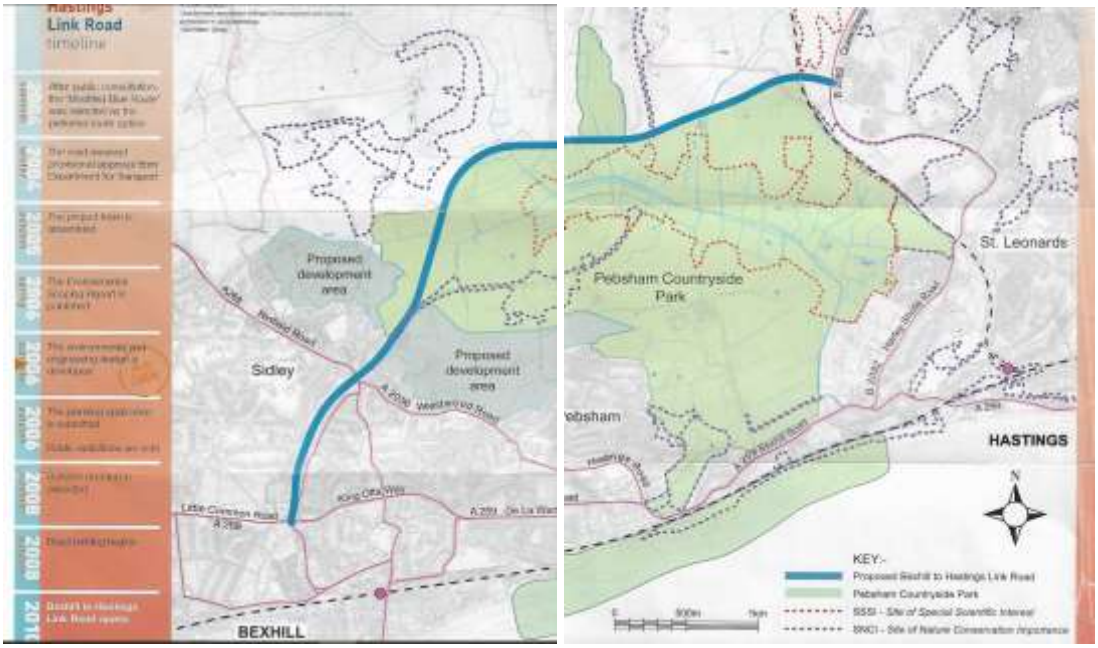
An Assessment of the Ecological Delivery of the Bexhill to Hastings Link Road (BHLR), and North Bexhill Access Road (NBAR), East Sussex, TN33 9BY

27 February 2023

How the route was chosen – and how the names changed.

Of the seven possible routes north of Bexhill the most northern one was approved by English Nature (now Natural England) (East Sussex County Council, 2009)[103]. The following plan was released in 2006 showing how the 'Hastings Link Road' (in blue) which would run from Queensway to Bexhill (Belle Hill) and it then became the 'Combe Valley Way' and was also called 'Bexhill to Hastings Link Road' (BHLR). It used the existing Crowhurst Railway Trackbed. A side branch to the west became The North Bexhill Access Road (NBAR) was added- to connect to Ninfield Road. Collectively it is all generally called 'The Link Road' which is dealt with here.

Within this initial great arc was the 'Pebsham Countryside Park' which would itself become the 'Combe Valley Countryside Park' (CVCP) extending north of the link road into Crowhurst and Bexhill.



'The Hastings Link Road' © ESCC 2006

[103] East Sussex County Council, 2009. Alternative Route Proposals. https://www.eastsussex.gov.uk/roadsandtransport/bexhillhastingslinkroad/otherroutes/ (retrieved 18 Nov 2019). Each route can be downloaded from this site

As a Crowhurst villager voice stated: Crowhurst campaigned against the development of the link road over a number of years, in an effort to protect the village and 'Marsh' from development. Early campaigns involved the Parish Council with the Crowhurst Society. Despite these representations, the route chosen of the three outlined was the one that cut across Crowhurst. Crowhurst villagers and the Parish Council were first made aware that road construction was beginning, when lorries started driving through the village causing consternation and dismay. A group of villagers set up the Road to Nowhere Group to lead the campaign. This held packed public meetings in the Village Hall and took on the fight against the depredations caused by road building in terms of the environment and historical heritage of the parish. Residents of Bexhill also affected by the development joined the group. Combe Haven Defenders from Hastings raised the stakes through direct action and were supported in their protests by many villagers.'

The Link Road as it is now in 2023

View of the eastern end of The Link Road © Google Earth, showing Queensway in the top left (accessed 9 Jan 2023).

Continuation of The Link Road to the west, showing Bexhill to the south, © Google Earth (accessed 9 Jan 2023).

Aim

The aim of this report is to put together an account of how The Link Road was created and how the ecology of the site was appraised and mitigated. This appraisal compares the works done on site with the ecological principles, UK and EU laws and guidances at the time, when 'net gain' was drawing some interest nationally as a measure of conservation success (it is still not mandatory in early 2023), and where the National Planning Policy Framework was still in its infancy. It is now on NPPF, 2021. The overall consideration is that as the development was a major infrastructure development it was subject to an Environmental Impact Assessment (EIA) the point of which is that it is always open to public scrutiny. The author of this report is an ecological and wildlife consultant with experience in over 1,400 sites in England and Wales.

Background

The main issue for the route (from the bottom of Queensway through to Bexhill) was to avoid two SSSIs, the Marline Valley SSSI and the Combe Valley SSSI. There were a number of Priority (Biodiversity Action Plan) BAP Habitats en route to be avoided or lost and mitigated. As the route was across a wetland a wide range of protected species were present.

There were objections from 'The Hastings Alliance', 'The Combe Valley Defenders' and in Crowhurst 'The Road to Nowhere Group'[104,] (below) but the Public Inquiry in Hastings went ahead and a Compulsory Purchase Order of the land was then issued.

© Crowhurst


© Hastings Alliance

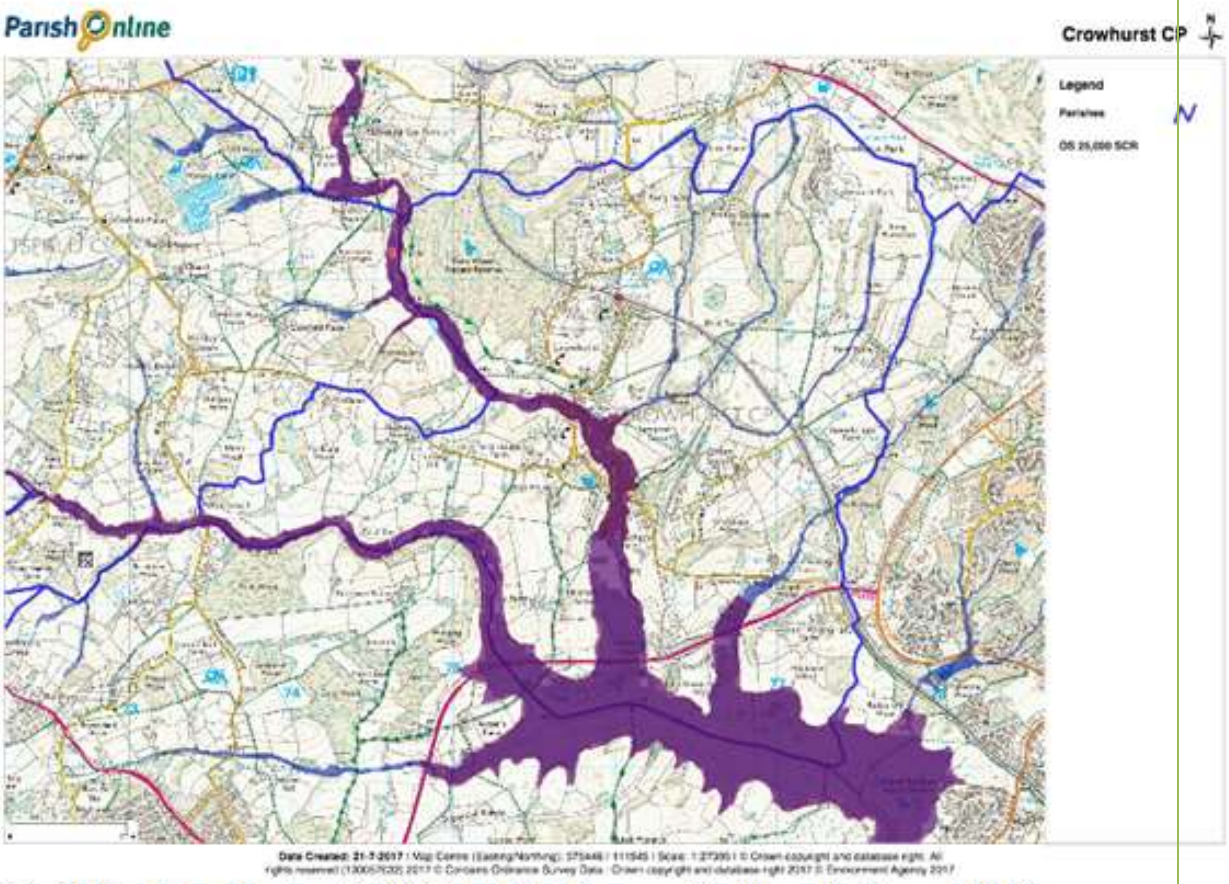
[104]**Combe Haven Defenders 2011. Dated 11 February 2011.** https://combehavendefenders.wordpress.com/2013/02/11/villagers-take-stand-against-link-road/ **(accessed 10 Jan 2023) Photographs of locals are to be seen in this link.**

The flooded valley challenge

The Combe Valley is well known to be subject to flooding, and the following photographs were taken by this consultant on 3 October 2000. The approximate route of The Link Road (Combe Valley Road) is overlaid over this photograph in red. The ecological challenge was to construct a single-carriageway across the wetland whilst conserving the wildlife and avoiding two SSSIs.

Crowhurst is to the north (top) © John Feltwell

Queensway is to the top right of the photograph © John Feltwell



Parish Online Map Centre 575446/111945, Sussex Biodiversity Report 2017.

The above map shows the main drainage channels across which the Link Road is drawn as a red line.

The following shows the areas permanently lost for each parish that the Link Road crossed.

Table WM01 Greenfield lost to parishes

Parish	Link boundary (m)	X width of 22.5m	acres	X £5K/ac
St Leonards	198	44.55	0.01	55
Crowhurst	2184	49,140	12.14	60.700
Bexhill	3818	85,905	21.27	106,350
TOTAL			**66.83**	**167,105**

Executive Summary

- Generally speaking the large project did the mitigation it was supposed to do, but there were some big omissions and mistakes.
- Wildlife did not suffer unduly, although badgers probably suffered more than any other group.
- Invertebrates (the largest group of animals) were not addressed comprehensively so there is no base line to assess damage.
- Habitats lost included Priority Habitats from the Combe Valley Countryside Park (CVWP), but all were avoided in the last section to Ninfield Road in the west.
- Some habitats were quietly removed from magic.gov.uk
- Combe Valley SSSI was avoided, with minimal impact in the buffer zone.
- Marline Wood SSSI had a small piece of habitat lost.
- 17 of 97 badger setts were permanently stopped-up.
- **Greenfield permanently lost**
- A finite amount of greenfield was lost to the road: 66.83 acres.
- Crowhurst parish lost 12.14 acres valued at £60,700
- Bexhill lost 21.27 acres valued at £106,350
- Hastings lost 0.01acres valued at £55
- **Mitigations**
- 117 nest boxes for Hazel Dormice erected
- 103K trees were planted (two for every one lost).
- Great Crested Newt (GCN) mitigation did not include set back drains to stop entrapment.
- Generous settling ponds doubled-up as GCN breeding ponds.
- 8 bat species were recorded. There were complaints of trees for bats having been lost.

Un-resolved issues

- Two cross-over areas were planted up to allow bats to cross on ‘flyways’.
- 3 new woods were meant to have been created in Crowhurst
- 5 woods in Brede were meant to have been enhanced by way of off-setting
- It is not clear that these new woods have been created yet.
- The Link Road is still not connected to the A21.

Parishes and names

The link road goes through three civil parishes, from east to west: St Leonards on Sea, Crowhurst and Bexhill. The St Leonards on Sea sector is only a few hundred metres along Crowhurst Road from the railway line to Queensway. The west end of the link is the roundabout to Ninfield Road (but it is not in Ninfield, it is in Bexhill). The distance from the Ninfield roundabout to Queensway is 4.48miles as walked along the gravel pathways; it is slightly shorter by the route for horses (which goes straight up a steep hill at the Queensway end).

The opened sections

Bexhill-Western Hastings Bypass (BHWB)

Overall the Scheme is 5.6km long from the junction from the A259 in Bexhill to its junction with the B2092 Queensway in Hastings. The first part of the 3.5 mile (5.6 km) Link Road opened on 17 December 2015. [105]

Bexhill Connection

The 'Bexhill Connection' 1.4km along the bed of the abandoned railway line opened in 2013 providing an estimated £1 billion of economic benefits to the local area.

The North Bexhill Access Road (NBAR)

The North Bexhill Access Road (NBAR), from Ninfield Road to Watermill Lane opened on 11 March 2019 (Sea Change, 2019).[106] The section from Watermill Lane to the Bexhill roundabout opened in spring 2019. The Ninfield end of NBAR was provided with fencing in February 2020.

[105] **Taylor Woodrow, 2013. East Sussex County Council, Bexhill to Hastings Link Road. Landscape and Ecological Management Plan. Ref. B1297001-PH2/3000.06a/0004. Revision 9 March 2013. 101pp. 59. https://taylorwoodrow.com/News-and-Downloads/news_article.asp?articleid=118 (accessed 7 Jan 2023).**

[106] **Sea Change, 2019 North Bexhill Access Road opens — connecting Combe Valley Way to Ninfield Road Posted on: March 11, 2019.https://www.seachangesussex.co.uk/north-bexhill-access-road-opens-connecting-combe-valley-way-to-ninfield-road/**

Table WM02 Facts and Figures of the Link Road

Facts	Detail	Further information
Planning Application	R/2374/CC (EIA)	
Public Inquiry	Nov & Dec 2009[107]	Held in Hastings
Constructions companies	Taylor-Woodrow, Hochtief,	
Construction period	2009-2016	
BHWB Bexhill-Western Hastings Bypass	first part of the 3.5 mile (5.6 km)	Opened on 17 Dec 2015
BC Bexhill Connection	1.4 km	
NBAR The North Bexhill Access Road		11 March 2019 (Sea Change, 2019
Total length	4.48 miles	4.8m (7.7lm) as walked (Ninfield Rd to Queensway)
Cost	£96m[108] £120 million[109, 110]	To deliver 2,000 new homes and 3,000 new jobs
Combe Valley Way (CVV)	3,615m	
B2691 (east) to Wrestbourne Rd	845m	
B2691 (west)	1,389m	Opened in spring 2019
Haven Brook Avenue	957m	
CVWP To Belle Hill, Bexhill	554m	
Ecology survey started	from 1990 – on-going mitigation	
SSSIs avoided	Combe Valley and Marline Wood	
Parishes involved (4)	Hastings	198m boundary
	Crowhurst	2184m boundary
	Bexhill	3818m boundary
Badger setts	97 of which 17 were stopped	
GCNs	8 ponds in two metapopulations	
Reptiles	3 species	
Birds	60 species, of which 8 red-listed	
LOSS ACCOUNT		
Crowhurst section of Link Road	2,184m long	With average of 22.5m wide
Crowhurst's lost greenfield land with Link Road	12.14ac (4.92ha)	Value £60,000 (2017)
Hedgerows lost (NBAR)	5 (0.5km)	
GAINS ACCOUNT		
Trees planted	103,000 by 2015	'*two for every one removed*'
Ponds created	ca. 10	

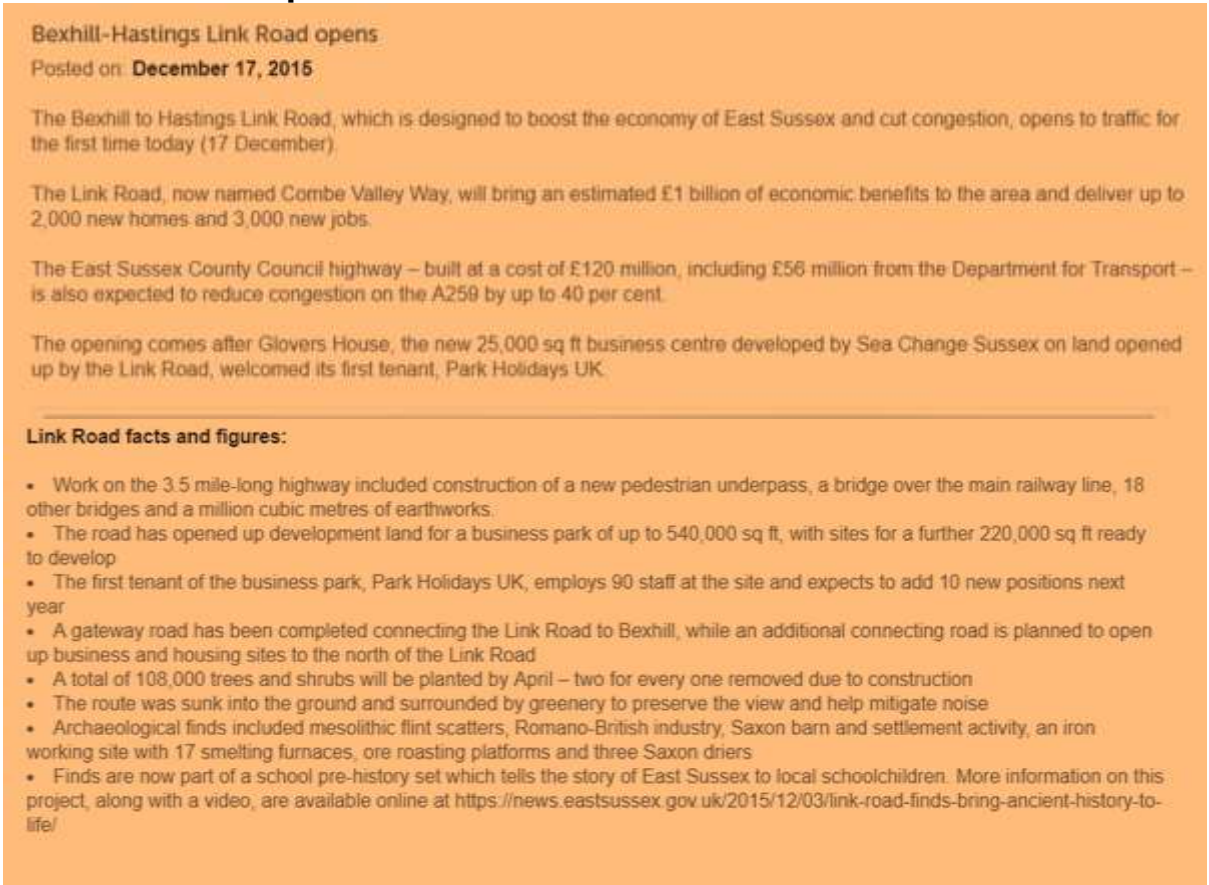
[107] **https://www.eastsussex.gov.uk/roads-transport/bexhill-hastings-link-road (accessed 06 Jan 2023)**

[108] **https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/9121/decision-letter.pdf (accessed 06 Jan 2023)**

[109] **https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/9121/decision-letter.pdf (accessed 06 Jan 2023)**

[110] **https://www.gov.uk/government/news/new-120-million-bexhill-hastings-road-opens-to-boost-east-sussex-economy (accessed 06 Jan 2023)**

These are facts posted on Dec 17 2015



Bexhill-Hastings Link Road opens

Posted on **December 17, 2015**

The Bexhill to Hastings Link Road, which is designed to boost the economy of East Sussex and cut congestion, opens to traffic for the first time today (17 December).

The Link Road, now named Combe Valley Way, will bring an estimated £1 billion of economic benefits to the area and deliver up to 2,000 new homes and 3,000 new jobs.

The East Sussex County Council highway – built at a cost of £120 million, including £56 million from the Department for Transport – is also expected to reduce congestion on the A259 by up to 40 per cent.

The opening comes after Glovers House, the new 25,000 sq ft business centre developed by Sea Change Sussex on land opened up by the Link Road, welcomed its first tenant, Park Holidays UK.

Link Road facts and figures:

- Work on the 3.5 mile-long highway included construction of a new pedestrian underpass, a bridge over the main railway line, 18 other bridges and a million cubic metres of earthworks.
- The road has opened up development land for a business park of up to 540,000 sq ft, with sites for a further 220,000 sq ft ready to develop
- The first tenant of the business park, Park Holidays UK, employs 90 staff at the site and expects to add 10 new positions next year
- A gateway road has been completed connecting the Link Road to Bexhill, while an additional connecting road is planned to open up business and housing sites to the north of the Link Road
- A total of 108,000 trees and shrubs will be planted by April – two for every one removed due to construction
- The route was sunk into the ground and surrounded by greenery to preserve the view and help mitigate noise
- Archaeological finds included mesolithic flint scatters, Romano-British industry, Saxon barn and settlement activity, an iron working site with 17 smelting furnaces, ore roasting platforms and three Saxon driers
- Finds are now part of a school pre-history set which tells the story of East Sussex to local schoolchildren. More information on this project, along with a video, are available online at https://news.eastsussex.gov.uk/2015/12/03/link-road-finds-bring-ancient-history-to-life/

The route through the East Sussex countryside

The Link Road goes through three parishes, St Leonards on Sea, Crowhurst, and the longest section Bexhill,

The single carriageway cuts through existing farmland and wetland, skirted the Combe Valley SSSI to the north, and passes close to Ancient Woodland. The whole area was once an inlet of the sea that became silted up. It has a history of being flooded. The route also passed to the south of the Marline Woods (SSSI) cutting off a little of its southern sector.

The route not only goes through Biodiversity Action Plan (BAP) habitats and areas for BAP species but through populations of Great Crested Newts (GCNs) and Hazel Dormice (both protected by EU and UK law), through habitats for badgers (UK protected only) and localities for bats (UK and EU protected) and reptiles (UK protected).

Ecological Surveys

Pre-constructions – ecological surveys

Typically, for an infrastructure development of this size several ecological reports were produced

- Phase 1 Habitats Survey
- Environmental Strategy (ES)
- Landscape and Environmental Management Plan (LEMP)
- Hydrology (ESCC, 2006).[111]

Ecological surveys along the route started in the 1990s with surveys carried out by The Highways Agency and Chris Blandford Associates for the A259 Bexhill-Western Hastings Bypass (BHWB) (ESCC, (undated).[112]

An Environmental Statement was published by ESCC (undated) which surveys for all groups of flora and fauna, and assessed the habitats that the route would pass through. European protected species (EPS) were found on site, and the EU regulations necessitated that EPS Licences had to be obtained before any movement of Great Crested Newts (GCN) and Hazel Dormice were translocated.

For those who like to delve into the planning history of this project then ESCC published their Chapter 1 Introduction to the Bexhill to Hastings Link Road, Environmental Statement (ES) (undated!). 23pp, which can be read at [113]

[111] **East Sussex County Council, 2006. Bexhill to Hastings Link Road, Timeline. Map, published by ESCC. Ref. 100019601 2006).**

[112] **East Sussex County Council (undated). Bexhill to Hastings Link Road, ES – Chapter 11 Nature Conservation and Biodiversity. 123pp. Ref. 224548/030/A.(NB. This is also stated on the front cover as being Chapter 12). https://apps.eastsussex.gov.uk/environment/planning/applications/register/documents/datawright%20saved%20documents/scannedinfo/rr2474cceia/chapter%2012%20nature%20conservation%20and%20biodiversity/section%201/bhlr.ch12natconbiod.vol1.pdf (accessed 15 November 2019)**

[113] **https://apps.eastsussex.gov.uk/environment/planning/applications/register/documents/datawright%20saved%20documents/scannedinfo/rr2474cceia/chapter%2001%20introduction/bhlr.ch1introduction.pdf**

1.1 Context

1.1.1 This Environmental Statement has been prepared for the proposed Bexhill to Hastings Link Road (BHLR) promoted by East Sussex County Council (ESCC) in compliance with the requirements of the European Community Directive 85/337/EEC as amended by Directive 97/11/EC on, *The assessment of certain public and private projects on the environment* and the Town and Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999.

1.1.2 The Environmental Statement reports the findings of the environmental impact assessment for the Scheme and forms part of a detailed planning application for the Scheme prepared by ESCC Transport and Environment Department. The following documents have been submitted to the Development, Minerals and Waste Group of ESCC in their capacity as the determining authority for the Scheme under Regulation 3 of the Town and Country Planning General Regulations 1992:

- Environmental Statement;
- Non-Technical Summary (NTS);
- Traffic and Transport Report;
- Regeneration Statement;
- Design and Access Statement;
- Project-level Sustainability Appraisal;
- Waste Management Strategy; and,
- Scheme Design Drawings and associated supporting information.

The ES, as they stated above was a requirement of EU Directive 85/337/EC. The LEMP (Landscape and Environmental Management Plan) was published by Taylor Woodrow in May 2013 (Taylor Woodrow, 2013). It addressed four Planning Conditions, viz 5, 7, 14, 23, and each had an ecological commitment.

The ecological issues pertaining to each of these included are summarised here:

- The watercourses beneath the bridges should have '*a bank width of 3 metres, and a soft bank solution beneath….with shade tolerant planting'*… (Condition 5.)
- A scheme for the free passage and/or protection of animals by means of highway underpasses, bridges and any other means has been submitted…before development commences (Condition 7).
- Hard and soft landscaping must be approved beforehand (Condition 14).
- 'Development cannot start until and 'Environmental Statement and subsequent addenda, for mitigation and compensatory habitat creation/restoration (including connectivity between habitats)' has been approved. (Condition 23).

On 5 May 2005 a meeting was convened to discuss what sorts of wildlife should be surveyed. Six attended, Kristoffer Hewitt (NE), three from

ESCC, one from SWT and Philip Masters (PM). Topics included botanical (including rare and uncommon submerged plants), Badgers, Bats, Dormice, Water Voles, Water Shrews, Otters, Birds, Reptiles, Amphibians, Invertebrates (Wildlife Issues, 2005).[114]

Planning condition reference	LEMP section reference
Planning condition 5: Notwithstanding the details already submitted, no development shall commence, except mitigation and compensation works and archaeological evaluation, until details of the design and materials for the construction of the railway crossing and all under-bridges and over-bridges, including railings, parapets, surface finishes, fencing together with the reuse of any materials salvaged from the demolished existing railway bridges, have been submitted to and approved in writing by the Head of Planning. Bridge structures over water shall include a clear span, with abutments set back from the watercourse on both banks to provide a bank width of 2 metres beneath the bridge, and a soft bank solution beneath the bridges with shade tolerant planting, as outlined in the submitted Figure 3 Indicative sketch of soft bank engineering solution Revision A dated September 2008. The bridges shall be carried out in accordance with the approved details unless otherwise agreed in writing by the Head of Planning.	3.3, 3.4.1, Appendix A - Appendix B - Appendix C - Appendix D - Appendix E -
Planning condition 7: Development shall not commence until details of a scheme for the free passage and/or protection of animals by means of highway underpasses, bridges and any other means has been submitted to and approved in writing by the Head of Planning and the link road shall not be brought into public use until the approved scheme has been fully implemented unless otherwise agreed in writing by the Head of Planning.	3.3, 3.4.1, Appendix A - Appendix B - Appendix C - Appendix D - Appendix E -
Planning condition 14: Before the commencement of each phase of the development, plans and full details of both hard and soft landscaping works, substantially in accordance with the details shown on planting plans 208:31:21; 208:31:22; 208:31:23; 208:31:24; 208:31:25; 208:31:26 and 208:31 :27 dated April 2007, shall have been submitted to and approved in writing by the Head of Planning. These details shall include:	3.64, Appendix B - Appendix J -
Planning condition 23: Development shall not commence until there has been submitted to and approved in writing by the Head of Planning a detailed scheme, to include the proposals in the Environmental Statement and subsequent addenda, for mitigation and compensatory habitat creation/restoration (including connectivity between habitats) and these works shall be carried out as approved. The details of the scheme shall include:	

[114] Wildlife Issues (2005). Notes on Surveys for ES for Bexhill-Hastings Link Road 2005. Note of meeting of 10.5.05. (3pp) https://apps.eastsussex.gov.uk/environment/planning/applications/register/documents/datawright%20saved%20documents/scannedinfo/rr2474cceia/appendix%20i/appendix%20i.3/notes%20of%20a%20meeting%20of%2010%205%2005%20-%20surveys%202.pdf

Assessment of potential impact on UK & EU protected species.

Surveys indicated that the following UK and EU protected species were present along the route: a summary follows.

Table WM03 Protected Species found along the route

Species	What was found
Bats	at least eight species were identified along the route, and that a roost was identified in Adams Farm (had to be demolished; it was moved to other side of the farmhouse to allow room for the new road) and Ninfield bridge had been a roost site as early as 2008 and possible 2012.
Hazel Dormice	known localities for this species, or ancient woodland and hedgerows, as well as foraging areas would have to be removed and severing potential dispersal routes
Water voles	No evidence of them.
Badgers	97 setts were recorded along the route and 17 of these had to be stopped because they were in the line of the route. Permanent loss of foraging area was believed to be addressed by comprehensive habitat creation.
GCNs	Eight ponds were identified in surveys carried out from 2005-2012 which carried small populations of GCNs, in two separate metapopulations.
Reptiles	Three common reptile species were found in 2008 to existing in small populations. Their habitat would be lost by the development.
Birds	Sixty bird species were found along the route corridor, 11 of which are on the IUCN Red List of threatened species, and 13 are on the IUCN Amber list. It is recognised that The Combe Haven Valley is a regionally important site for spring and autumn birds of passage.
Fish	Ten species of fish were recorded in the watercourses crossed by the route.
Invertebrates	The native White-Clawed crayfish was not recorded in watercourses crossed by the route. Fifteen species of dragonflies and damselflies (Odonata) were recorded in 2005, with 17 species considered to have bred within the study area and Combe Haven Valley since 1988. It would appear that invertebrates, other than crayfish, and Odonata were not surveyed for. This amounts to most of the faunal species of the UK.

Pre-construction assessment of potential Impact on habitats

The ESCC (2006) scaled ‘timeline map’ (as shown on page one) clearly showed that the route would be passing through

i) a small part of Marline Woods (SSSI)
ii) Site of Interest for Nature Conservation (SINC)
iii) Site of Nature Conservation Interest (SNCI)
iv) Pebsham Countryside Park

The red dot (in the roadway plan) in the following plan shows how the road was proposed to go through the most southerly part of the Marline Woods SSSI, as shown below; the reasons for going through the SSSI were not given, even though there appeared to be potential for bringing the road to the south a few metres.

Impact on Habitats

Construction and delivery

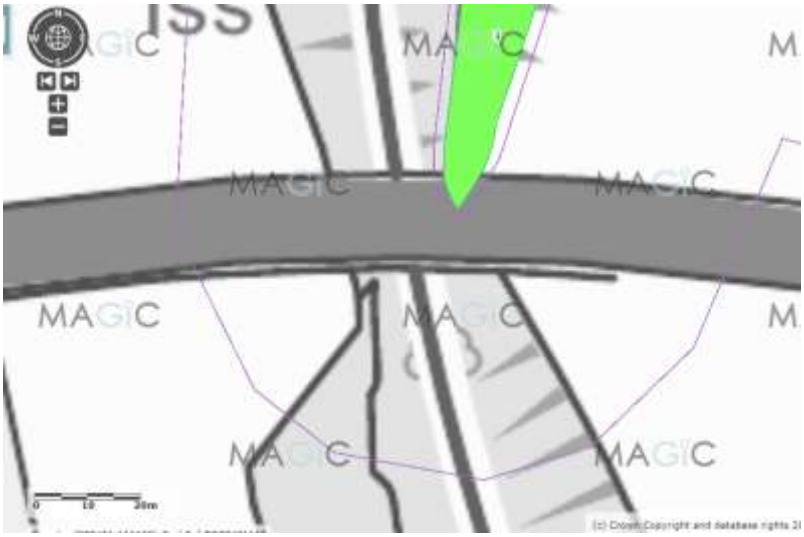
The construction company Hochtief delivered the 5.6km single carriageway between 2009-2016 for £96 million '*spanning both greenfield and urban environments'* with *'17 structures, 6 overbridges, 7 underbridges, 2 underpasses, and 2 box culverts*.' This included 10km of drainage as well as sustainable drainage. In contrast, the ESCC (2006) scaled 'timeline map also showed that the route would miss the northern part of Combe Valley SSSI.

A greenway for walkers, cyclists and equestrians was created together with substantial environmental mitigation works, extensive planting and habitat creation and landscaping and ground improvement, according to their on-line statement (Hochtief, 2019). They also stated:

> As the link road passes through green belt land with diverse ecology, it initially attracted strong opposition. In response, we developed environmental mitigation measures, including providing new wildlife habitats, that eased fears about the contract and led to a successful Public Inquiry outcome. We worked hard to minimise the scheme's impact on the countryside, managing 47 environmental consents and creating a green corridor for walkers and cyclists.

The Link Road joining Queensway with Marline Valley SSSI shown as red dots (left)
The Link Road passing the Combe Valley SSSI (right)

Another way of looking at the loss of 40m over the Marline Wood SSSI, is by the following from *magic.gov.uk.*



(accessed 15 November 2019)

At the time NE were more concerned with maintaining the microclimate of this part of the SSSI, and maintaining connectivity with habitat, whilst not opposing the bridge over the SSSI at this point.

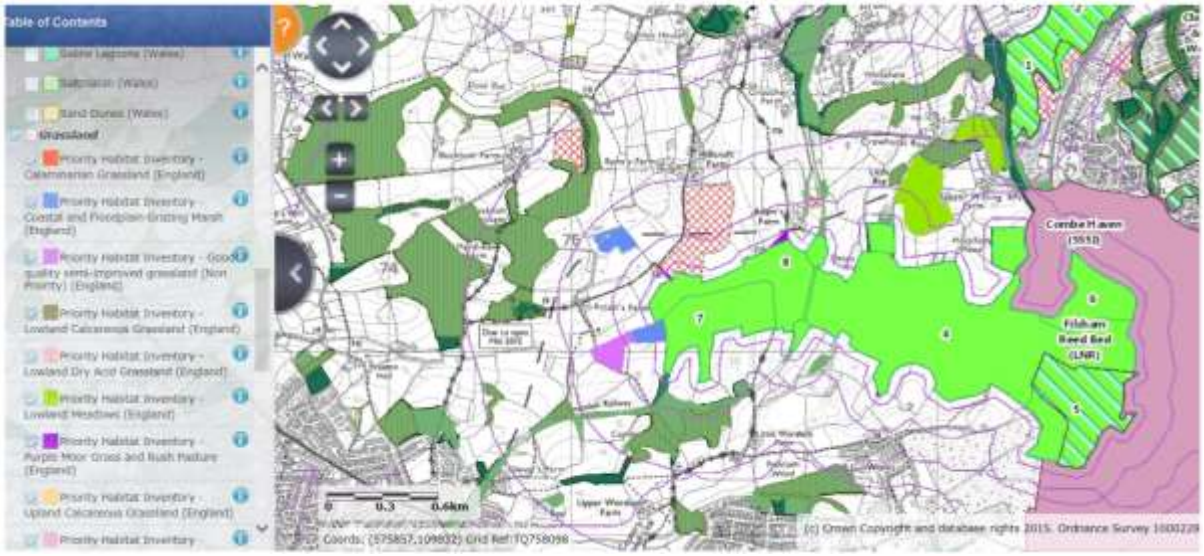
5.0 Confirmation that the Additional Comments raised by Natural England have been addressed	**5.1 Marline Woods SSSI:** **5.1.1 Shading –** At the point where a bridge is proposed over the southern tip of Marline Woods SSSI, NE would like to see shading contours to show the extent of the shading from this bridge. MM will produce an illustrative Figure to show the bridge with extent of shading in relation to plant communities present. NE concerned that alterations to the microclimate caused by the bridge will affect habitat connectivity. Mitigation may include introducing another link elsewhere in the Scheme or by replacement habitat. The under-bridge planting should also be reviewed. In addition the connectivity of the woods in general and mitigation for that connectivity will be reviewed (where this is not addressed elsewhere this will be addressed). MM will therefore explore alternative ways to provide linking habitat and maintain the ecological functionality of the corridor. Cross reference to mitigation elsewhere in the Scheme will be made, such as existing plans for linking habitat across the road. Whilst NE reserve their position until they review the final submission, NE expressed agreement to this approach.	**MM** **MM**

The BAP habitats crossed and lost

BAP habitats and BAP species, refers to both habitats and species that have been noted for their biodiversity, as in Biodiversity Action Plan (BAP), or BAPs.

The Link Road was proposed to go through a number of BAP habitats that were present in the valley. These included various UK Biodiversity Action Plan (BAP) habitats such as those listed in Table WM02.

The situation in May 2015 (see plan below) showed the route of the Link Road indicated with a dashed line. Each of the different colours are protected habitats. Note, that from the Queensway it goes through i) a small patch of light green ii) a larger patch of light green, iii) a triangle of purple, iv) a patch of hatched pink, v) a blue patch. These are listed below with a note on whether they were retained or not.



HISTORIC SCREENSHOT!

The was the disposition of protected habitats BEFORE the Link Road was constructed (accessed May 2015). Note the different coloured habitat areas that the dashed line is proposed to go through (and did go through). These are Priority Habitats that have now gone.

<u>The Blue, Red Hatched and light Green BAP habitats have now gone.</u>

Table WM04 BAP Habitats through which the Link Road crossed

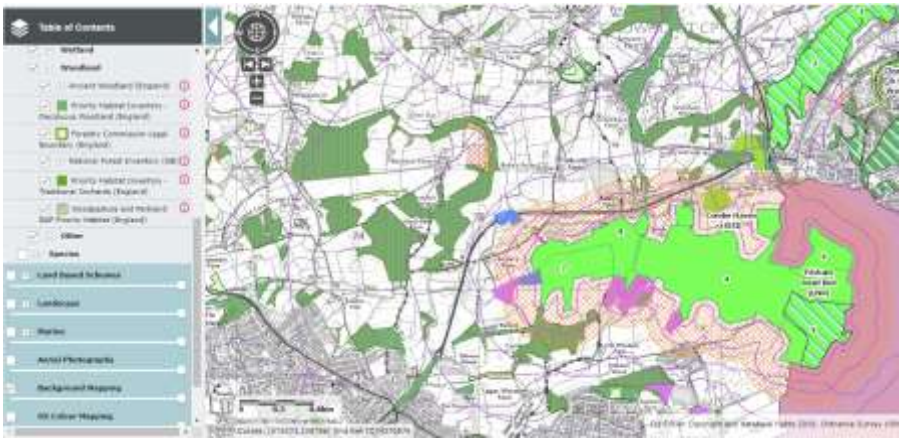
	BAP Habitat	Size	Area lost
i)	UK Priority Lowland Meadows		All removed
ii)	UK Priority Lowland Meadows		Apparently still present with the Link Road through it.
iii)	Purple Moor Grass and Rush Pasture		All gone
iv)	(hatched)		All gone
v)	Coastal and Floodplain grassland	Blue	UK Priority Lowland Meadows

It is clear that, at least in Crowhurst, various sections of UK BAP habitats have been lost.

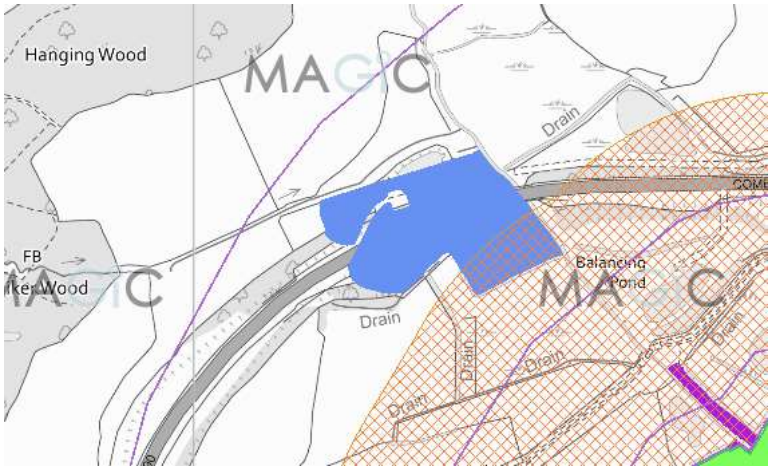
The Link Road works were carried out before National Planning Policy Framework (NPPF) was published in July 2018 and before its conservation role was strengthened by the updated 2019 edition.

The following screen-shot is four years later (2019) when the route of the Link Road is shown as a continuous black line (the link to Ninfield has yet to be added). Notice how some of the ecological features are not in shown on the plan of protected area.

Notice also how the route goes through the blue area (Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh) and how a lot of the new route skirting the north of the SSSI is now within a buffer area.



HISTORIC SCREENSHOT!

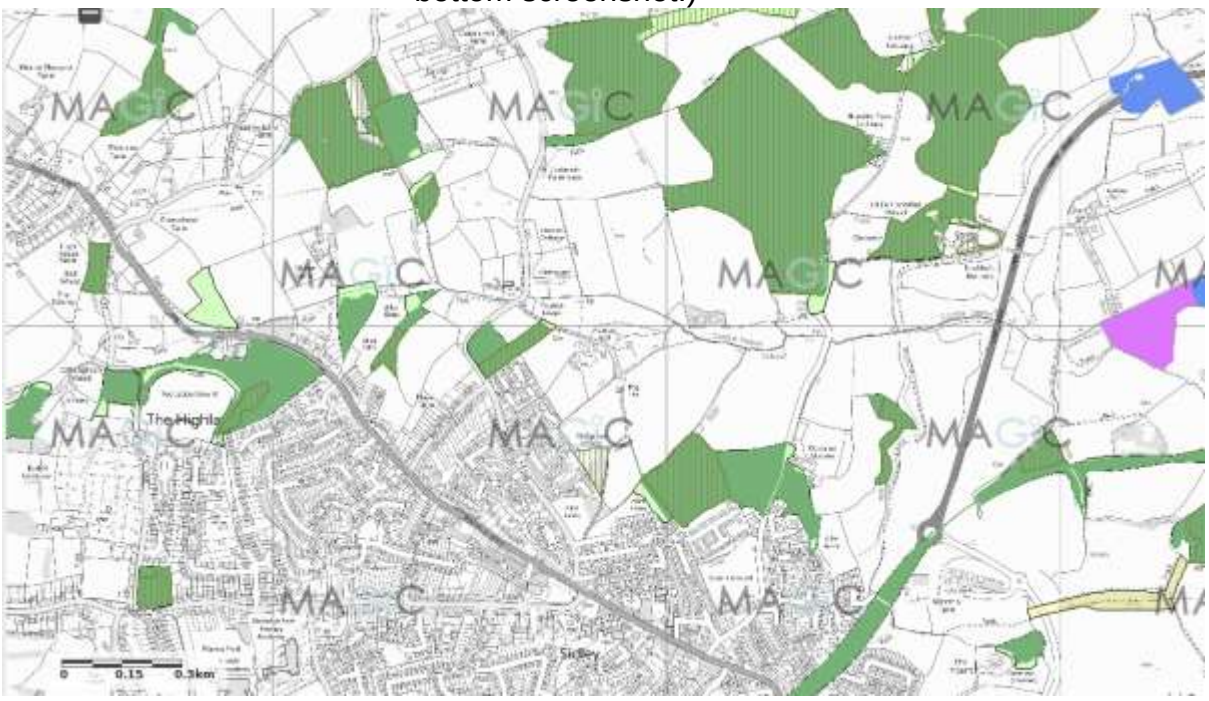


HISTORIC SCREENSHOT!
Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England) Accessed 16 Feb 2020

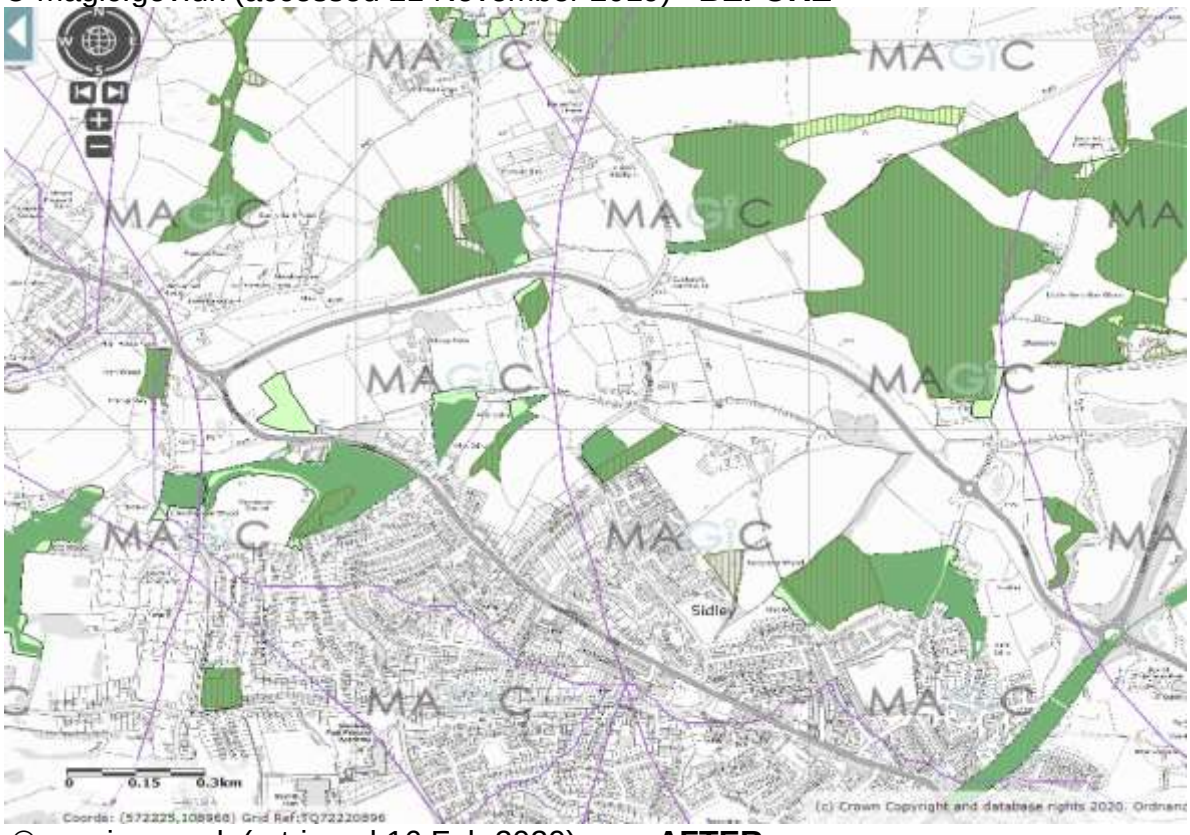
The Priority Habitat (blue) has now been removed (accessed 3 January 2023)
AFTER the Link Road was constructed. (accessed 11 Nov 2019)

Successful avoidance of Section 41 Priority Habitats[115]

The following two screenshots from magic.gov.uk show before and after the Bexhill Link was constructed through to the Ninfield road (2019 – 2020). The green areas are the Priority habitats, which were successfully avoided (see bottom screenshot.)



© magic.gov.uk (accessed 21 November 2019) **BEFORE**



© magic.gov.uk (retrieved 16 Feb 2020) **AFTER**

[115] S41 Priority Habitats are afforded protection through lots of Biodiversity legislation and NERC 2006.

Construction phase (by satellite)

Environmental Impact – short-term environmental impact

The following satellite photographs, dated 2015, are from the ESCC definitive rights of way website. They show the various construction works for most of The Link Road, and the Public Rights of Way being shown as purple. East to West sequentially:

The Link Road in Crowhurst parish, between Queensway (top right) and off to Bexhill (bottom left). The FP in the middle is the #1066 Country Walk. Where it crosses The Link Road it is at TQ76311067.

Queenway and railway (top right), showing a large amount of impact abutting Chapel Wood and directly also abutting Little Bog wood.

 A very wide section of land excavated to make way for the Combe Valley Way at TQ76431075. The works are dangerously close to the Decoy Pond Wood (the rectangular parcel of woodland) which is all within the Combe Valley SSSI. Adam's Farm is towards the left of the photo. A large pond midway between Little Bog and Decoy Pond Wood was filled in. By way of mitigation four other ponds were created (see Mitigation later in

thisreport)

Above: Adam's Farm (top right at TQ75821066) Road bridge over the Link road under construction (shown in green).

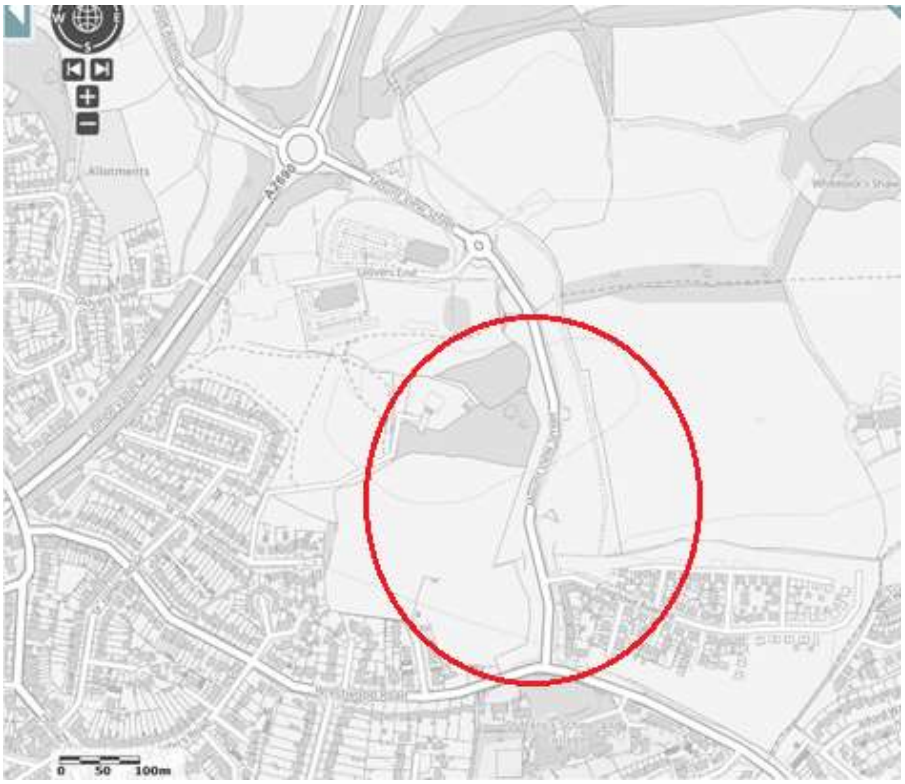
TQ75281044 with Hanging Wood (in Catsfield) to the top left.

 The large area under excavation is the lake to the east of Adam's Farm, adjacent to the footpath shown in purple. The large lake is actually a 'settling pond' to take excess water off the road, and it doubles-up as for nature conservation, e.g. avifauna. The dark vegetation shows the course of the old railway line coming down from the north, and continuing in the bottom of the photograph.

 Excavation works to the south of the wooded hamnlet of Little Henniker at TQ74771002

TQ74640952 location of the four-way roundabout connecting Haven Brook Avenue (W) with Mount View Street (W) and Combe Valley Way (N&S). nr. Glover's Farm. Note the curved railway line from bottom left to top right showing dark vegetation.

TQ74099110 This is the spur road from the roundabout, across arable fields: location as seen below.



Construction phase (on the ground)

Before and Afters

Looking west

‘Combe Valley Way’ (TQ76311067) on bridge looking west, 2015

‘Combe Valley Way’ (TQ76311067) on Road / Footpath bridge looking west 21 January 2016 Looking west

‘Combe Valley Way’ (TQ76311067) on bridge looking WEST 02 May 2019

‘Combe Valley Way’ (TQ76311067) on bridge looking WEST 18 Jan 2015 Looking east

‘Combe Valley Way’ (TQ76311067) on bridge looking EAST **17 April 2015**

Combe Valley Way’ (TQ76311067) on bridge looking EAST
07 August 2015 Looking east

Combe Valley Way' (TQ76311067) on bridge looking east 21 Jan 2016

Combe Valley Way' (TQ76311067) on bridge looking WEST towards
18 Jan 2015

Mitigation

The mitigation that had to be carried out was the following:

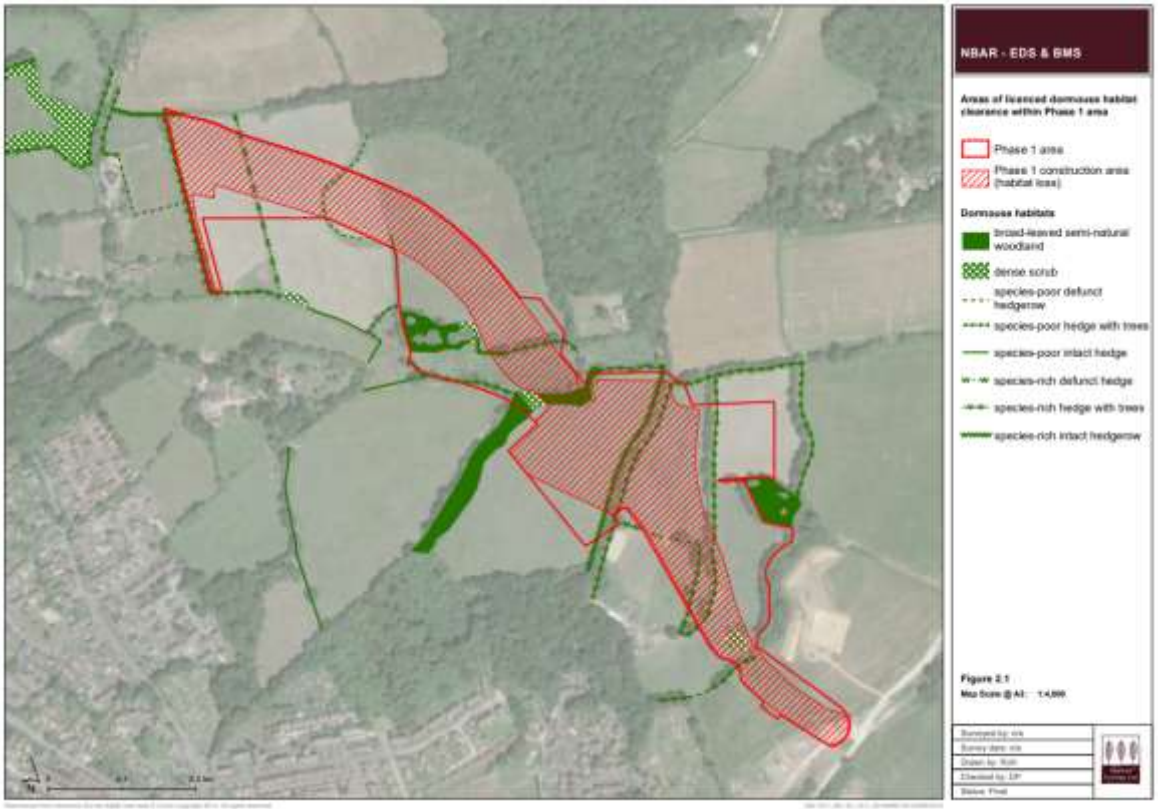
- Construction of two artificial badger setts to relocate the home-base of the social groups of Main setts 24 and 55, which will be closed. Construction of the artificial sett to replace sett 24 was completed in August 2012. Construction of the artificial sett to replace sett 55 will be undertaken in early 2013. Setts 24 and 55 will be closed in July 2013;
- Closure of fifteen other setts comprising one subsidiary, one Annex and thirteen outlying setts;
- Monitoring of all closed setts by the Ecological Clerk of Works (EcoW) between completion of closure and dismantling of the setts prior to construction (there may be a time lag between these events);
- Where necessary setting up exclusion zones around setts to be retained but lying within the CPO boundary (potentially 48 setts) including monitoring by the EcoW. The EcoW will assess the need for exclusion zones for all works located within 30m of a sett;
- Badger fencing along the whole route of the Scheme to channel badgers to crossing points (tunnels and overpasses) and to avoid road traffic mortalities. Where noise barriers and bunding are planned, the badger fencing will be incorporated into this;
- One way badger gates will be installed within the badger fencing to allow badgers to exit (but not enter) the road corridor in the unlikely event that they find themselves on the road side of the badger fencing. These gates will be spaced at 500m intervals along the fence line;
- CPO/highways standard boundary fencing will incorporate badger gates to allow access to the hinterland around the road scheme;
- The construction of underpasses and overpass features incorporated into the bridge structures along the 5.6km route to enable social groups to integrate and continue to use traditional commuting routes and foraging areas away from the road corridor (see the Environmental Master Plan in Appendix B);
- Generic construction phase mitigation measures to protect individual animals.

North Bexhill Access Road (NBAR)

This is the section from the roundabout to Bexhill to the Sidley-Ninfield (A269). It is made of two parts, Phase 1 from the roundabout to Watermill Lane, and Phase 2 from Watermill Lane to the A269.

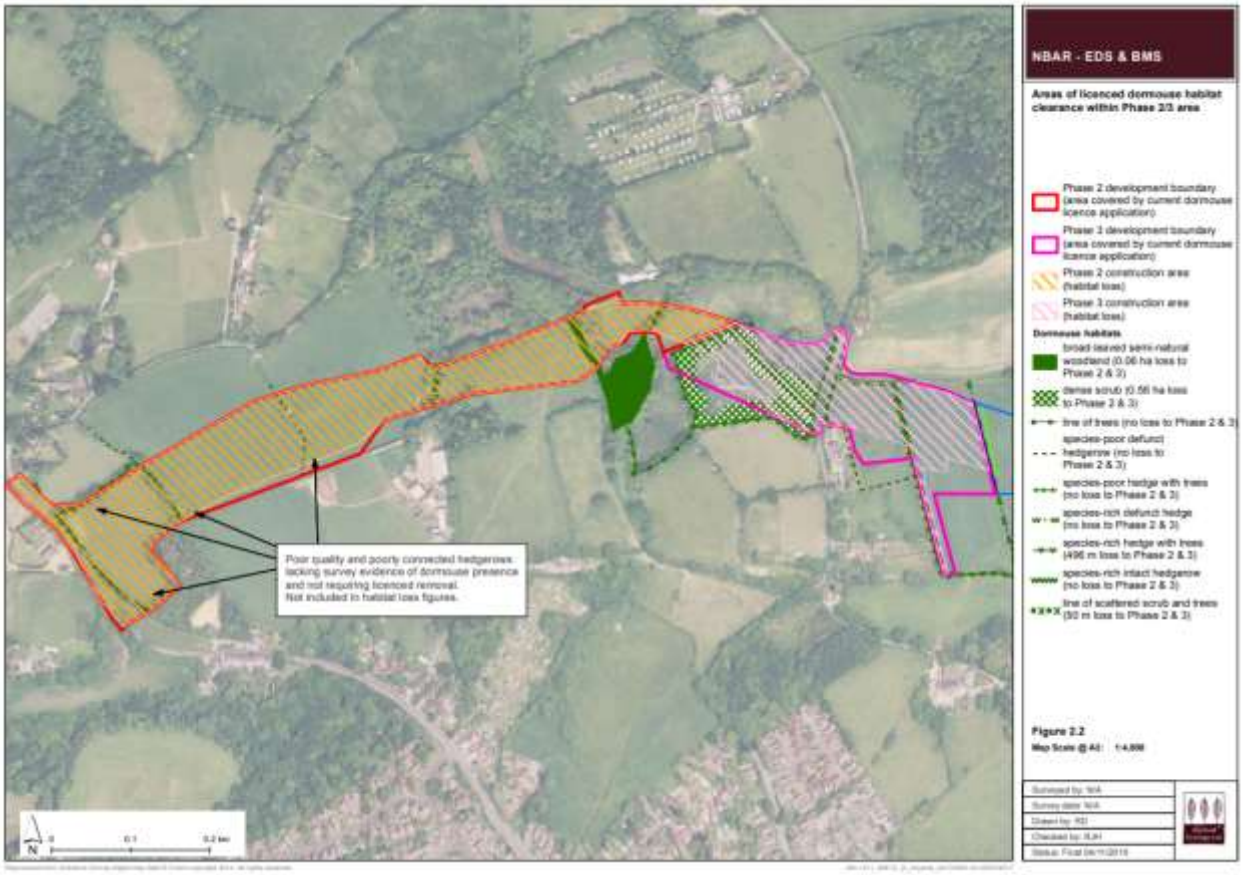
Habitats Lost by the NBAR

The habitats that Phase 1 & 2 went through were woodlands, hedgerows, scrubland and agricultural fields, as shown below



Ten sections of hedgerows were removed, and one block of broad-leaved semi-
natural woodland was removed (see above plan).

In Phase 2/3 areas (above) Five hedgerows (as shown above) of ca.0.5km in length were removed. These were described as 'species-poor defunct hedgerows' (defunct hedgerows are not in the glossary – there is no glossary).
The caption above states that these hedgerow lost were '*not included in the habitat loss figures'*. One small piece of woodland connecting woodland to the north with woodland to the south was lost (0.06ha). The large area with orange hatching was also lost, but its area is not given.



Species Impacted by the NBAR

The species that the route went through included Hazel Dormice, GCNS, Bats and reptiles. The first three animals listed are European Protected Species (EPS) and licences were issued on 26 Feb 2016 and 29 Nov 2016 for hazel dormouse work on the Phase 1 and 2 mitigation areas.

Hazel Dormice

Phase 1. Before the route was cleared 60 dormouse nest-boxes were put in 'unaffected areas of woodland' within and adjoining the Phase 1 area so that any emerging dormice in spring 2017 could find them. In the Phase 2/3 areas 30 dormouse nest-boxes were installed in Feb 2017 and having progressed clearance no dormice were found.

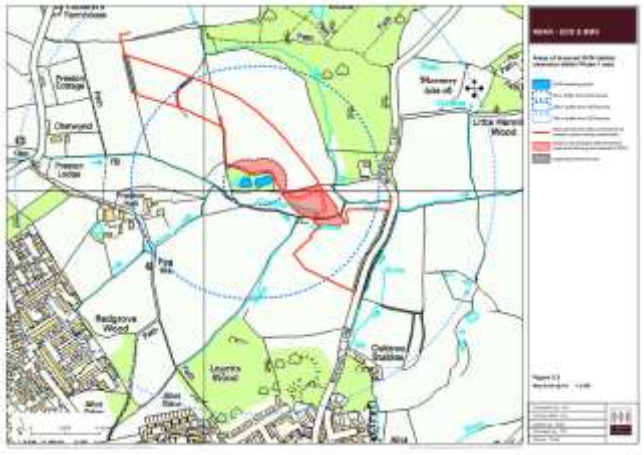
The dormouse license allowed for two dormouse crossings, i) a wide and open bridge for the Combe Valley stream to pass through 'to enable re-instatement of a continuous woodland / scrub corridor' for easy movement of dormice and ii) a dormouse bridge at the eastern end of the NBAR.

A retro-fitted dormouse cage would be fitted to the wall of a below road culvert. Another 62 dormouse nest boxes will be installed…*'following sufficient establishment'*. Monitoring of the 112 nest boxes will occur annually for five year. Covert cameras would monitor the dormouse crossing. No dormice were found in the Phase 1 clearance.

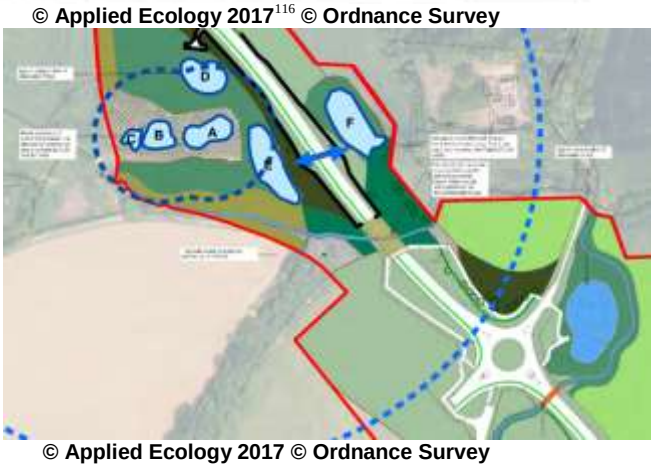
Great Crested Newts (GCNs)

GCNs were found in ponds to the east of Preston Farm off Watermill Lane. Dedicated ponds were created and close to the Link Road carriageway,

whose areas were cleared of GCNs before construction. New GCN ponds were created either side of the road and an 'amphibian tunnel' was constructed under the road.

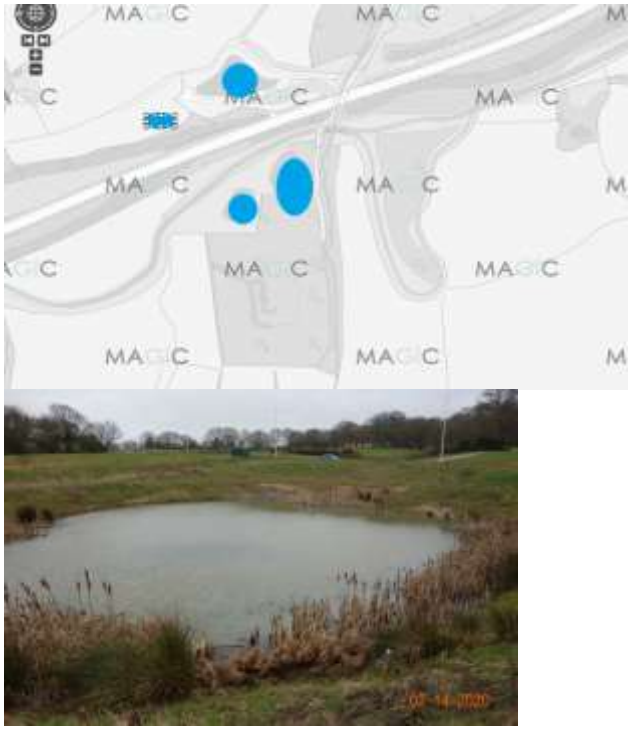


© Applied Ecology 2017[116] © Ordnance Survey



© Applied Ecology 2017 © Ordnance Survey

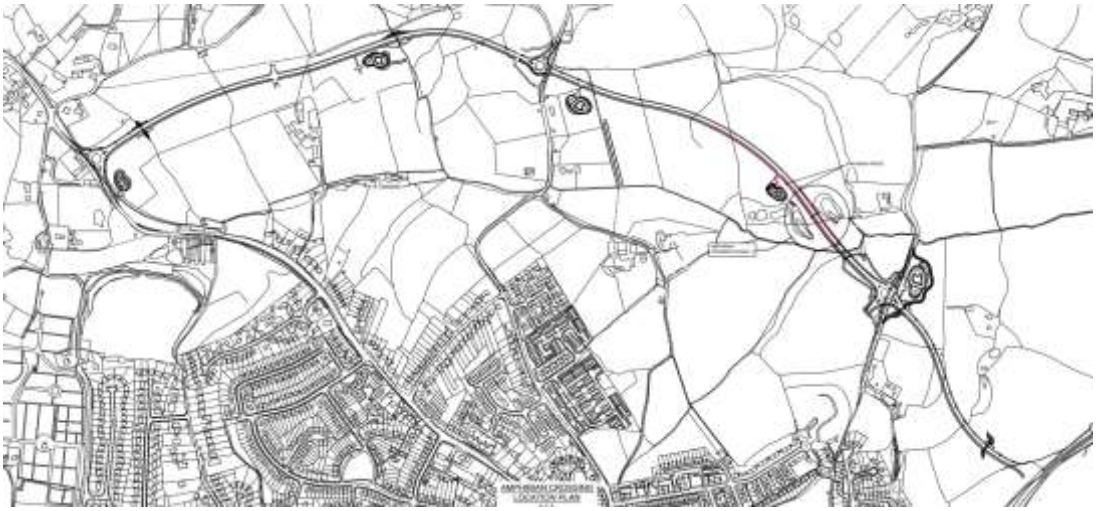
[116] Applied Ecology Ltd., 2017. North Bexhill Access Road, Ecological Design Strategy & Biodiversity Monitoring Strategy. March 2017. 48pp. This is on the RDC website, RR/2015/2260/P.

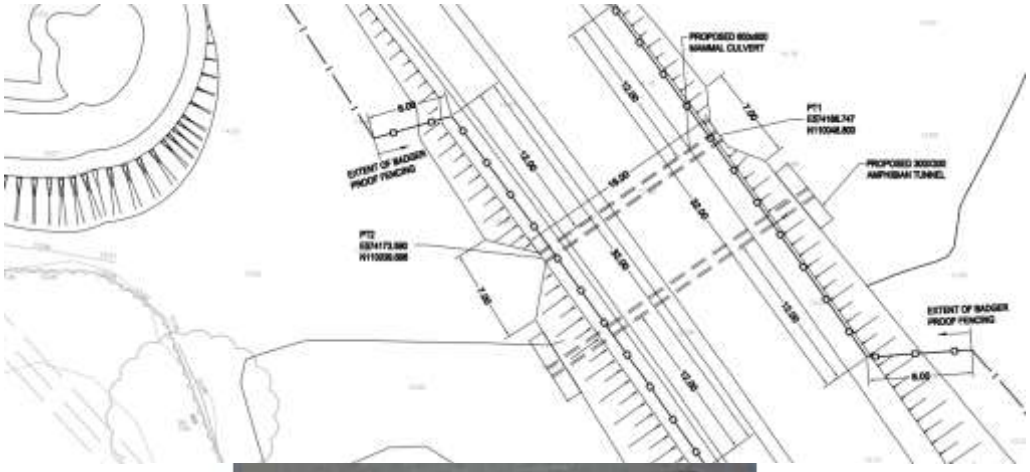


Left: Four new waterbodies were created for the loss of one at this location. Annotation by the author.

Amphibian tunnels

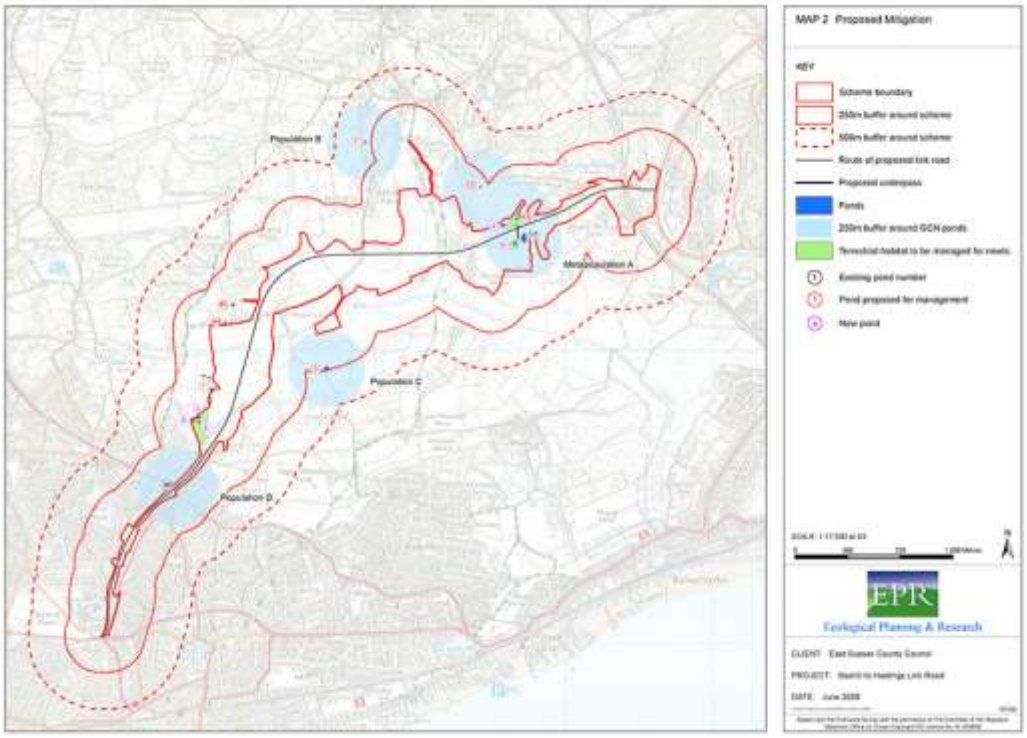
Four amphibian tunnels were to be integrated into the NBAR route, as shown in the following plans: The plan below shows the western end of the Link Road where it joins the road from Ninfield into Sidley. The design of the tunnel is also shown below.





The Link Road verges and ponds play host to a large population of GCNs. What the mitigation omitted was dropped kerbs (to allow GCNs to cross, and not face a high kerb keeping them in the carriageway), Also it is customary to have the drains set back 5cm from the edge so that GCNs can walk along the kerbside without falling into the drains. Both omissions means avoidable mortality of GCNs.

The ecology company EPS were commissioned by ESCC to carry out various surveys along the route so that this could inform the ES (Environment Statement) as well as assist in detailing mitigation packages to obtain protected species licences (EPS, 2019).
With regard to GCNs, the company identified four populations of GCNs (A,B,C,D – one of which was a metapopulation) as shown in their map. The map below shows the route of the Link Road with juxtaposition of the GCN ponds and the relative distances from these breeding ponds, so as to inform mitigation.



©

EPS

It was considered that the construction of the Link Road would *not be significant*.

It was regarded that there were would be *minor disturbance* to various wildlife and that overall there would be an ecological gain. GCNs and badgers would have to be moved and hazel dormouse accommodated.

The principal of twice as many trees to be planted as removed was adopted resulting in 108,000 trees to be planted by April 2015.

2.1.9 It is anticipated that the combination of open water and marginal mosaic of habitats grading into adjacent wet grassland communities around the perimeter would not only be of wildlife benefit. The existing arable fields which are of low biodiversity status would be improved by increasing UKBAP habitat types of high biodiversity value. This would encourage UKBAP species such as the bittern to potentially inhabit the locality.

COMPENSATION & OFFSETTING

for lost habitats along The Link Road

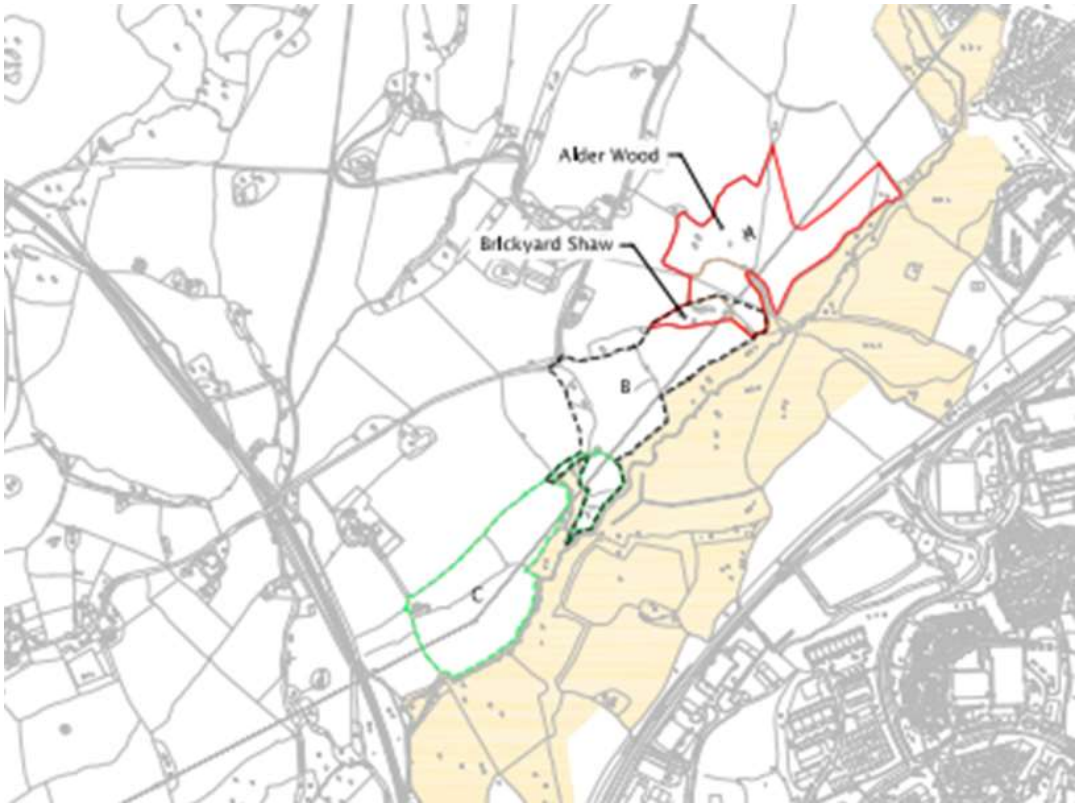
Not currently delivered

Compensation

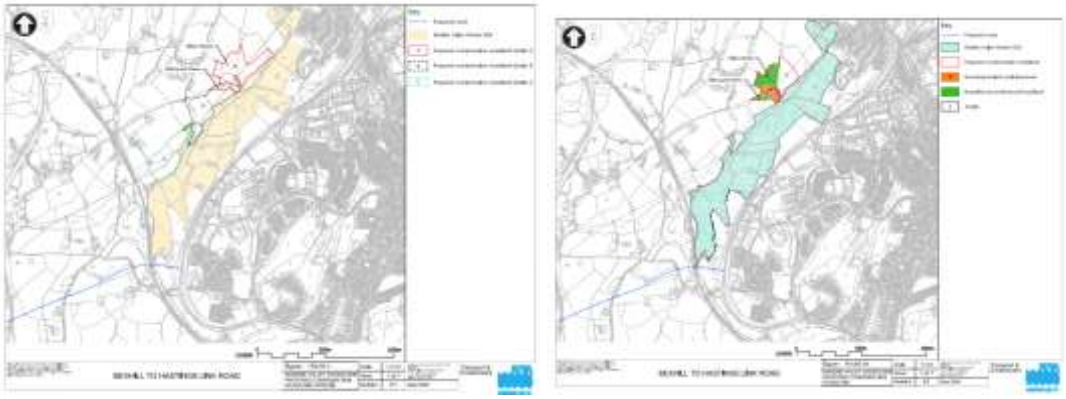
It is customary to compensate for the loss of habitats either on site or off-site. It is often the case that compensation is done locally, such as this one where three areas adjacent to the Marline Valley SSSI were chosen, as shown in the map below.

- Alder Wood
- Brickyard Wood
- Un-named Wood

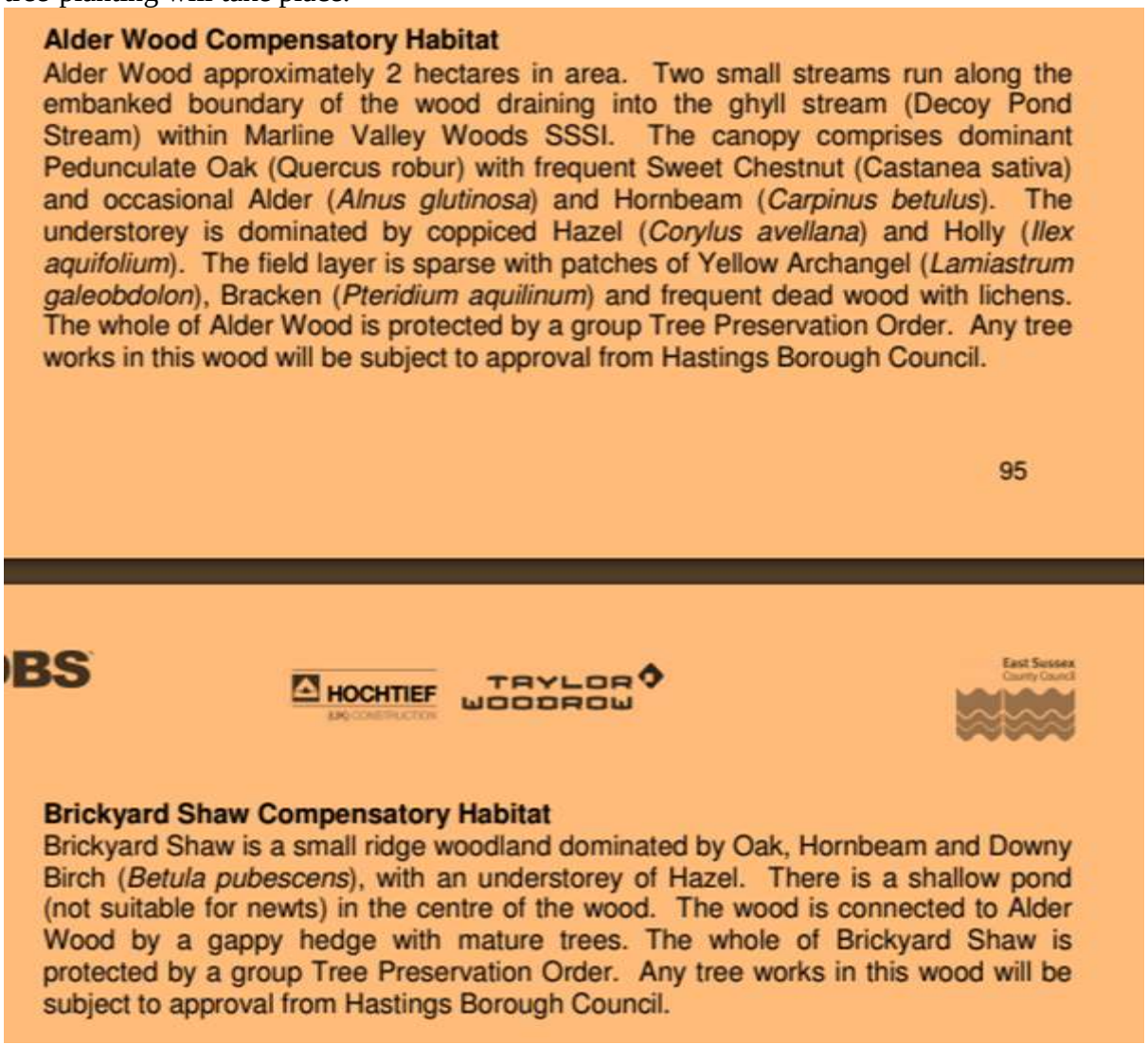
These are all woodlands that are to the east of Beardsall Lane in Crowhurst parish.



Detail (above) from the larger plan below



The existing ecological details of the woods are shown below: The outline of the areas concerned cover areas that do not currently have woodlands, so it is presumed that tree-planting will take place.



Alder Wood Compensatory Habitat

Alder Wood approximately 2 hectares in area. Two small streams run along the embanked boundary of the wood draining into the ghyll stream (Decoy Pond Stream) within Marline Valley Woods SSSI. The canopy comprises dominant Pedunculate Oak (Quercus robur) with frequent Sweet Chestnut (Castanea sativa) and occasional Alder (*Alnus glutinosa*) and Hornbeam (*Carpinus betulus*). The understorey is dominated by coppiced Hazel (*Corylus avellana*) and Holly (*Ilex aquifolium*). The field layer is sparse with patches of Yellow Archangel (*Lamiastrum galeobdolon*), Bracken (*Pteridium aquilinum*) and frequent dead wood with lichens. The whole of Alder Wood is protected by a group Tree Preservation Order. Any tree works in this wood will be subject to approval from Hastings Borough Council.

95

BS

HOCHTIEF

TAYLOR WOODROW

East Sussex County Council

Brickyard Shaw Compensatory Habitat

Brickyard Shaw is a small ridge woodland dominated by Oak, Hornbeam and Downy Birch (*Betula pubescens*), with an understorey of Hazel. There is a shallow pond (not suitable for newts) in the centre of the wood. The wood is connected to Alder Wood by a gappy hedge with mature trees. The whole of Brickyard Shaw is protected by a group Tree Preservation Order. Any tree works in this wood will be subject to approval from Hastings Borough Council.

The creation of the Combe Valley Countryside Park was originally proposed as the Pebsham Countryside Park with lots of wildlife interest as shown by their early plan. The Combe Valley always had plenty of wildlife interest before any works commenced.

The scheme would avoid direct impact upon the Combe Haven Site of Special Scientific Interest (SSSI) and the Marline Valley Woods SSSI but there would be some impact upon wildlife habitats.

Consequently, the scheme incorporates areas of habitat creation (on the ratio of 2 for 1) as replacement of those areas to be lost.

Footpaths

Combe Valley Countryside Park, 2019. http://combevalleycountrysidepark.com/footpaths (accessed 4 May 2019)

Off-setting

ESCC announced in the autumn of 2014 that Paul Cobb (an independent farm environment advisor) would liaise with 12 landowners and farmers in the Brede Valley to advise on farm habitat creation and improvement works (ESCC, 2014), to co-ordinate the Brede Valley Farm Habitat Project.

East Sussex County Council

BEXHILL TO HASTINGS LINK ROAD

Additional offsetting environmental and biodiversity measures set out in Annex 11 of the Final Funding Bid (December 2012)

Progress Update 30th September 2014

Landscape Partnership Scheme
Paul Cobb, an independent farm environment advisor has been contracted to co-ordinate the Brede Valley Farm Habitat Project and work with landowners and farmers in the Brede Valley to advise on and implement farm habitat creation and improvement works. Individual projects can be simple one-off actions, more complex improvements or even a series of linked works and although the overall aim is to encourage the conservation and improvement of habitats, works that support local species populations will be looked on very favourably e.g. tree sparrow, turtle dove, barn owl, water vole, brown trout, and bumblebees.

Paul Cobb's role to date has been to contact 12 individual landowners and farmers within the Brede Valley offering to undertake farm visits to discuss potential project ideas, to help with the application for a grant towards the works, and generally guide the farmer through the process. So far four farms have submitted a completed application form and a project budget requesting funds to support habitat improvement works and these works have been approved (with some changes) by a grants award panel and it's expected that the approved works will be completed by next spring.

Four further farms have expressed an interest in the Project and Paul Cobb is due to visit these and discuss their ideas before the end of September.

Design of the "Green Bridge" – Structure S13 Adams Farm Overbridge

The design of the "green" bridge has been completed and documents submitted to and approved by Planners pursuant to Planning Condition 5.

The drawings have been progressed to Construction Issue and construction of the Green Bridge structure commenced in March 2014 with earthworks excavations for the structural foundations for the abutments as planned.

Delivery of the bridge deck beams from the fabrication yard in Chepstow, Gwent was undertaken during July with the load being taken along the A27 and through the A259 Belle Hill junction site access and along the haul road through the site.

The current situation is that each of the abutments are nearing completion sufficient to lift in the braced pair of steel bridge beams onto their bearings during October. Deck construction will follow thereafter.

East Sussex County Council

BEXHILL TO HASTINGS LINK ROAD

Additional offsetting environmental and biodiversity measures set out in Annex 11 of the Final Funding Bid (December 2012)

Progress Update 31st March 2015

Landscape Partnership Scheme

Paul Cobb, an independent farm environment advisor contracted to co-ordinate the Brede Valley Farm Habitat Project made contact with 12 individual landowners and farmers during the late summer of 2014 to provide 'hands-on' advice on the implementation of habitat creation and improvement works. Five farms submitted an application requesting funds to support habitat improvement works and following approval by the grants award panel, just over £35,000 of grant money was awarded. The conservation works were completed during the winter 2014/15 and include wetland and ditch restorations, pond restoration, and the enhancement of a wildflower grassland.

A further five applications have been received in March (three of which are new applicants and two are previous applicants proposing new works) and these will be assessed by the grants award panel on the 20th March.

Design of the "Green Bridge" – Structure S13 Adams Farm Overbridge

The design of the "green" bridge has been completed and documents submitted to and approved by Planners pursuant to Planning Condition 5.

Construction of the Green Bridge structure commenced in March 2014 and is now almost structurally complete. Remaining works comprises the northern wing wall extensions, bridge deck waterproofing, metal parapets, class 6N structural backfill to abutments and wing walls and other minor finishes. The planting across the bridge deck will be undertaken during the next landscape planting season which starts in Autumn 2015.

https://www.eastsussex.gov.uk/media/2450/150331-dft-progress-reports-annex-11-additional-biodiversity-measures.pdf (retrieved 16 Feb 2020)
https://www.youtube.com/watch?v=eE_jFqmaGK8

Mott MacDonald, Highways Agency, 2008. Bexhill Link Road, Extended Phase 1 Ecological Assessment. October 2008. 31pp

5.1 Conclusions

The site comprises a mosaic of habitats to include ancient semi-natural woodlands and species rich hedgerows which are of high ecological value in terms of the connective corridors, areas for shelter and an abundant source of food they provide for wildlife. The poor semi-improved grasslands field margins exhibit increased grassland species richness and areas of scattered scrub which are of moderate value for invertebrates, reptiles and birds.

The site walkover has identified that badgers are likely to utilise the site as evidence was found within the broadleaved woodland copses. Records suggest that dormice are present within the semi natural ancient woodland and the native species rich hedgerows have high potential for dormice to utilise as wildlife corridors. Previous surveys have identified great crested newts in the nearby ponds and the wet woodlands provide ideal terrestrial habitat for these species. The veteran trees, semi-natural ancient woodland copses and hedgerows provide ideal habitat for bat roosts and the linear features would be used for foraging and navigation. Therefore it can be concluded that this site is of high ecological value in terms of locally important habitats and protected species.

The Marline Valley Woods SSSI designated for its nationally uncommon woodland type and its steep sided stream valley (ghyll), contains plants that have an Atlantic distribution including a number of rare and important bryophytes.

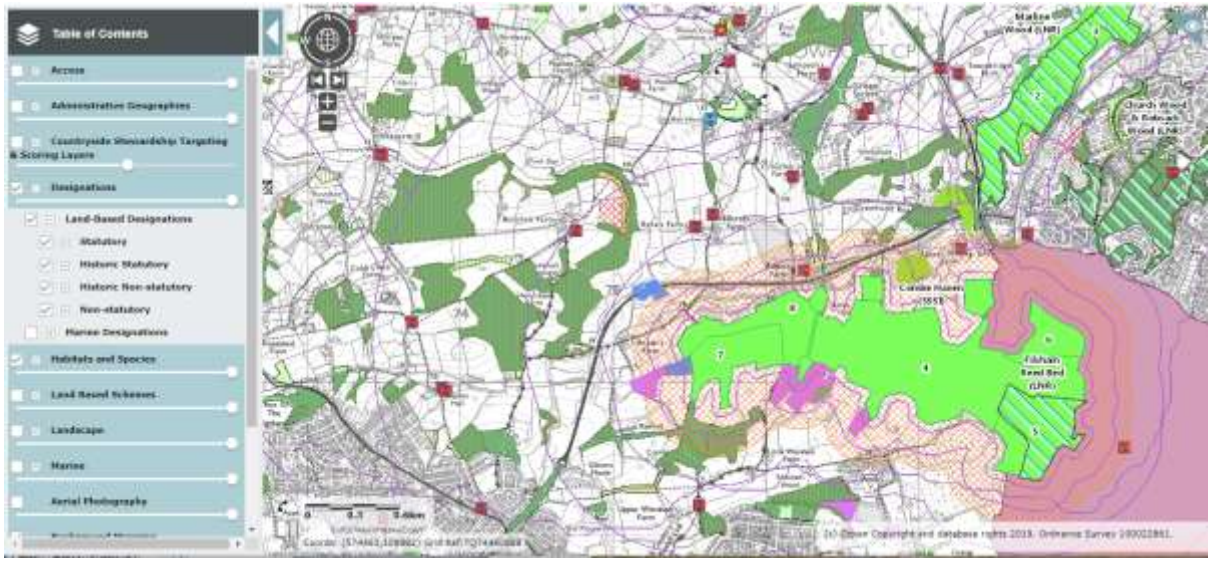
The semi-improved grassland throughout the site is of varying quality although a number of meadows represent a slightly species rich neutral sward and therefore a key ecological feature for invertebrates.

The connecting hedgerows throughout the site are native species-rich with veteran trees and provide connective corridors, shelter and foraging habitat for a variety of species which may include dormice. The majority of hedgerows on site would be considered important under the Hedgerow Regulations 1997.

Planning application RR/2474/CC(EIA) at A259 Belle Hill, Bexhill on Sea to B2092 Queensway, St Leonards on Sea. (Known as Link Road) – East Sussex County Council

All the documents related to the BHLR are available here: Planning application RR/2474/CC(EIA) at A259 Belle Hill, Bexhill on Sea to B2092 Queensway, St Leonards on Sea. (Known as Link Road) – East Sussex County Council

It's quite difficult to find what you want I'm afraid, but the Addendum to the Environmental Statement Vol 1 (attached) refers to the 2:1 compensation at paragraph 12.5.25. My predecessor was involved in the agreeing the mitigation ratio.



Background from Taylor Woodrow 2013.

> The Bexhill to Hastings Link Road (BHLR) aims to improve access to and within Hastings and Bexhill and to open up the north Bexhill and Hastings area for development, boosting the local economy and promoting regeneration.
>
> The Scheme is 5.6 km long from its junction with the A259 in Bexhill to its junction with the B2092 Queensway in Hastings. The first 1.4km of the road (the Bexhill connection) will be located along the bed of an abandoned railway line passing through the built up area of Bexhill, constructed to a single two lane carriageway standard. The remainder of the road will be constructed to a wide two lane single carriageway standard.
>
> The BHLR is seen as part of a "green" access corridor between Bexhill and Hastings and will be accompanied by a Greenway to accommodate recreational activities such as cycling, walking and horse riding. This has been designed as a fenced and gated corridor with a hard surface cycle way/footpath and a soft horse track plus safety margins running along the south side of the Main Scheme.

The BHLR is seen as a 'green' access corridor between Bexhill and Hastings' and is accompanied by a 'Greenway' (Taylor Woodrow, 2013.)

To FP……

Tree and shrub planting

21 January 2015

The Green Bridge carrying a Public Footpath (above and below)

WILDLIFE CROSSINGS AND CORRIDORS

The following crossings and corridors were proposed by Applied Ecology 2017.

- **Below bridge animal corridor** - a wide span bridge will be provided over the Combe Haven stream (within the Phase 1 development area) in order to allow the planting of native woody scrub beneath the bridge crossing and reinstate habitat continuity along the Combe Haven stream. However, the feasibility of delivering this bridge is currently under discussion, and other potential options are being considered.
- **Dormouse crossings** – three dormouse bridges will be provided, and a below road culvert will be fitted with a wall mounted dormouse cage walkway. Details of the dormouse bridge crossings are provided in **Appendix 4**.
- **Badger crossings** – three culverts will be designed with badger shelves and two below road badger pipes will be provided combined with appropriate badger guide fencing in line with the Design Manual for Roads and Bridges (Mitigating against effects on badgers). Details of the badger crossings are provided in **Appendix 5**.
- **Amphibian crossing** – a below road amphibian crossing will be provided within the Phase 1 area combined with appropriate amphibian guide fencing. Details of the amphibian crossing are provided in **Appendix 6**.
- **Bat crossings** – two locations will be designed as bat hop-overs (one within the Phase 1 area) with minimal lighting and planting of roadside semi-mature oaks.

Crossings	Delivered or not
Wide span bridge over the Combe Haven stream	Yes
Dormouse bridges (x 3)	One seen
Dormouse below road culvert	Yes
Dormouse: wall mounted dormouse cage walkway	Yes, see below
Badger crossing, culverts (x3)	Yes
Amphibian crossing (x1) in Phase 1 area	Yes
Bat crossing fly-overs (x2) in Phase 1 area With minimal lighting, and roadside semi-mature oaks.	Needs to be checked

Technical Appendix WM03
Bridges over streams

02 May 2019

Hazel Dormouse bridge specifications:

02 May 2019 The 'dormouse bridge' underneath the carriageway (above)

The 'dormouse bridge' underneath the carriageway (above)

- Substantial new habitat creation, where possible designed to connect retained and newly created habitats will be provided, including new woodland, scrub and hedgerows.
- The current licence includes the provision of a high and wide span bridge over the Combe Haven stream to enable reinstatement of a continuous woodland / scrub corridor allowing movement of dormice and other species beneath the bridge. However, the feasibility of delivering this bridge is currently under discussion, and other potential options are being considered.
- A dormouse bridge will be provided at the eastern end of NBAR. As an additional measure a retro-fitted dormouse cage will be fitted to the wall of a below road culvert.
- A further 62 dormouse nest boxes will be installed in new woodland / scrub post-construction following sufficient establishment.
- Post-development dormouse monitoring (112 nest-boxes) will be undertaken annually while development is on-going and for 5 years after completion of habitat clearance.
- Dormouse crossings will be monitored using motion sensitive wildlife cameras.

2.13 The first stage winter clearance of dormice habitats within the NBAR Phase 1 area was undertaken in February-March 2016. Fifty dormouse boxes were installed in agreed locations in May 2016, and summer clearance of areas not subject to GCN mitigation followed in May 2016. Areas subject to GCN mitigation were cleared in late July-early August 2016 following completion of the GCN translocation. No dormice were found during the licenced works undertaken within the Phase 1 area.

Badger Underpasses and Amphibian Underpasses

Badger underpasses were to created at the following locations: Ch780, Ch1200, Ch1550, Ch2900, Ch4300, Ch5100 (p66 in TWood..)

02 May 2019

Badger One-Way gates – escape routes

Badger one-way gates were to be integrated into the fencework every 500m along the road, as per:

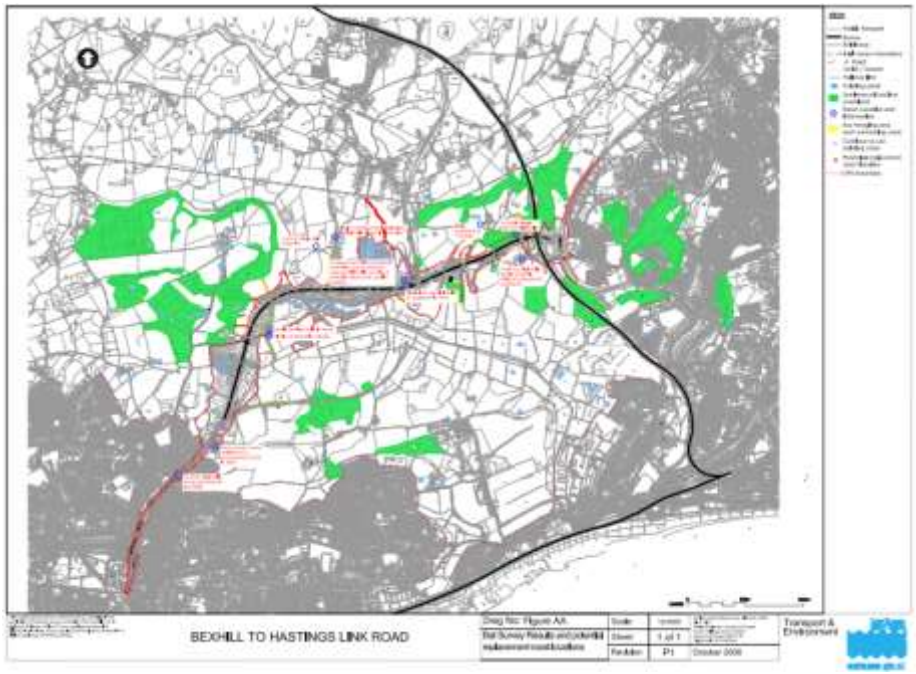
- One way badger gates will be installed within the badger fencing to allow badgers to exit (but not enter) the road corridor in the unlikely event that they find themselves on the road side of the badger fencing. These gates will be spaced at 500m intervals along the fence line;

Here is one closest to the Queensway end on the north side of the road.

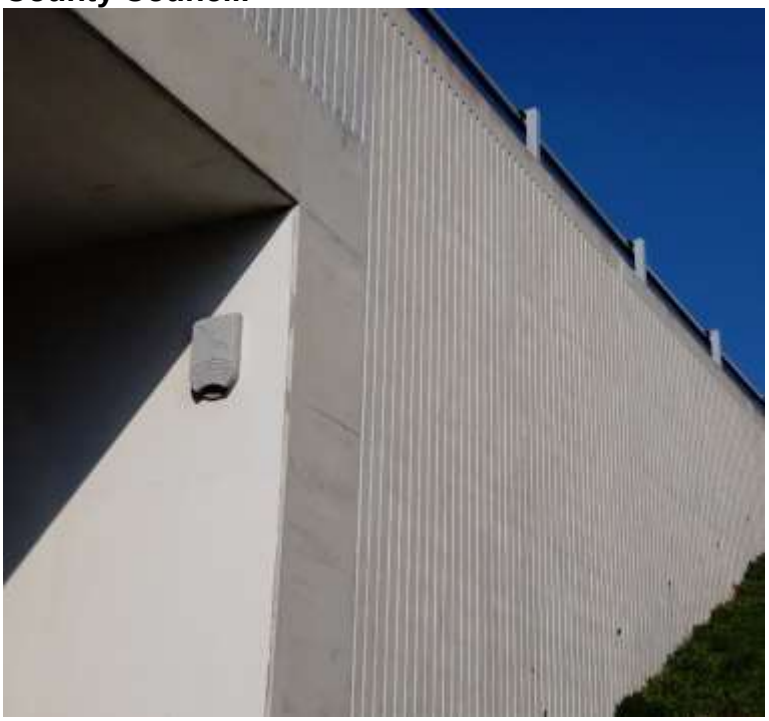
However, badgers still get onto the carriageway. Their chance of finding an escape route via a one-way gate is slim. Furthermore there are fences close to the bridges (as well as on top of the embankments) and they are trapped in a killing zone.

This badger was killed (14 Feb 2020) 45m from a badger tunnel, apparently hemmed in by sheep netting and reptile fencing with no escape

Bat mitigation – boxes, and two road crossings overhead



The plan above shows the survey data of the activity of bats along the route (shown in red). The mitigation included bat boxes, and two road crossing where the vegetation (green) either side of the road was use as a sort of 'vegetation bridge' to allow bats to commute over the road. This was to be re-inforced with plantings of reasonably large trees and shrubs. One of these places was by Kiteye Wood in the west. © East Sussex County Council.



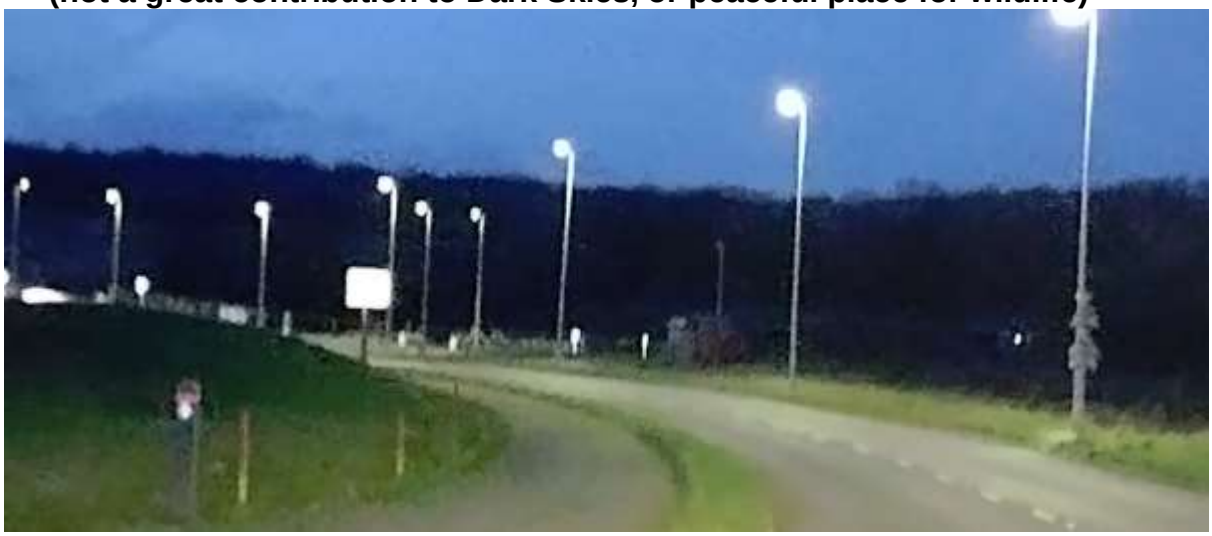
A bat box on the bridge near to Queensway.

The new built environment is a far cry from a sheltered hollow tree for bats.
Let's hope that bats do not roast in the searing sunshine

Light pollution

RDC's Dark Skies Policy is emerging during early 2023, so it was doubtful whether any restrictions on light pollution were in place for the Queensway to Ninfield Road. Photographs taken in January 2023 (below) confirms that lights are present at the six intersections, and that lighting is along much of the carriageway between roundabouts in the central part. No detail of light mitigation can be found.

Light pollution on the Link Road at the Bexhill junction
(not a great contribution to Dark Skies, or peaceful place for wildlife)



Carriageway lights between roundabouts

Noise pollution

Potential noise pollution was dealt with in the EIA[117]. For pedestrians it was stated that the further one was away from the road the quieter it would be (!) as per:

> *Public footpaths and bridleways*
>
> 11.6.70 The area of the route which passes through the river valley is traversed by the 1066 Country Walk and other footpaths and bridleways. Currently users of these routes are remote from the noises and activities associated with road traffic. With the implementation of the Scheme the users of these paths would become subject to traffic noise from the new road, the level of traffic noise being dependant on distance from the new road and the degree of attenuation offered by any incorporated mitigation. Figure 11.31 shows the traffic noise level contours for the Scheme. The effects are discussed in detail in Chapter 15A: Pedestrians, Cyclists and Recreational Users.

I have not aware of any mitigation for noise reduction.
However, the noise from the Link Road can be heard along the Crowhurst Road in Crowhurst parish, at the nearest place in the AONB, being 480m from the Link Road, and the rush of traffic (particularly motorbikes) can be heard over 2km away from the new Haven Brook Road in the AONB at Henley's Down, Catsfield.

117 https://apps.eastsussex.gov.uk/environment/planning/applications/register/documents/datawright%20saved%20documents/scannedinfo/rr2474cceia/chapter%2011%20noise%20and%20vibration/section%201/bhlr.ch11noisevib.vol1.pdf (accessed 23 Jan 2023)

Settling ponds double up as Amphibian breeding ponds

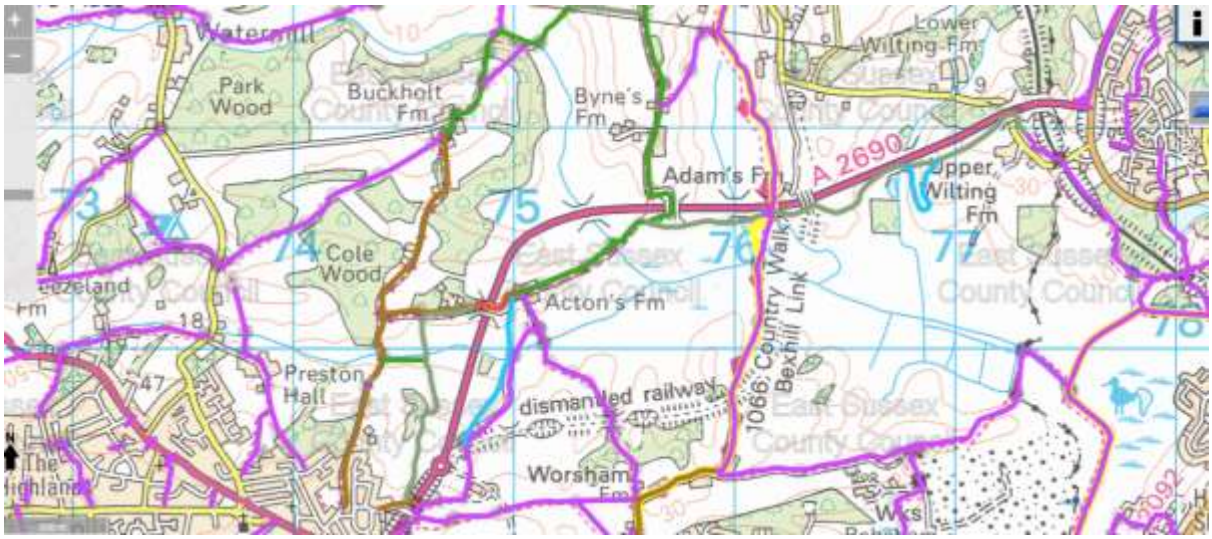
Small pond south side of Ninfield roundabout **03 May 2019**

Great Crested Newt (GCN) ponds on site (west to east)

Pond on south side of Link Road

Public Rights of Way (PRoW)

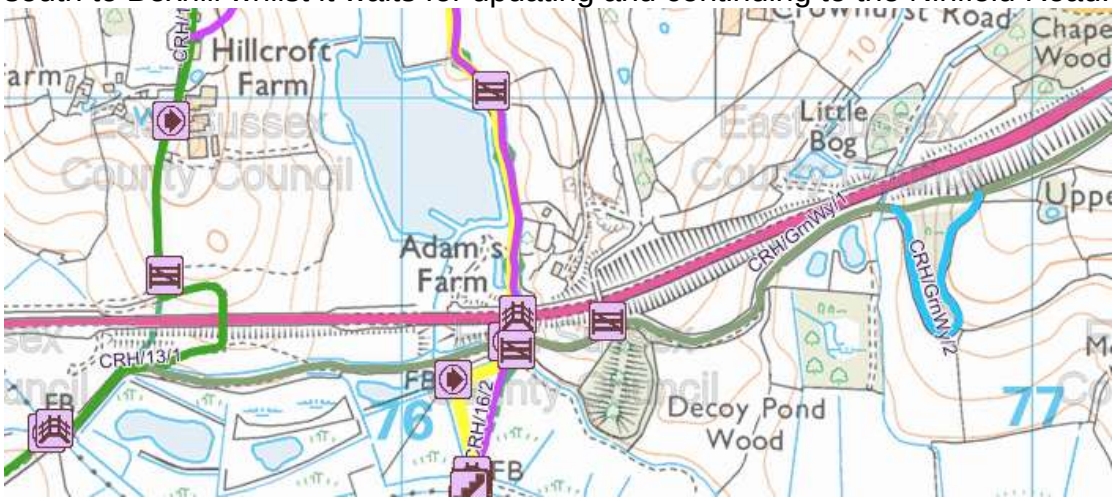
This section deals with the PRoW and how they have been affected by the construction and whether the rights of pedestrians on PRoW have been inconvenienced to such an extent that they cannot continue to enjoy the environment.



The above map needs to be updated with the Bexhill to Ninfield Road extension amongst others; it only shows the Link Road. (accessed 10 Jan 2023)

The '1066 County Walk Bexhill Link' is the PRoW which cuts north-south over the Link Road to the east of Adam's Farm. It is BEX/1/1 south of the large watercourse south of the Link Road, and CRH/16/2 going north up to Crowhurst.

The Greenway #GRH/GmWy1 becomes CRH/GmW/2 as is progresses eastwards around a small hill (shown in blue). To the west it progresses south to Bexhill whilst it waits for updating and continuing to the Ninfield Road.



See notes on Noise Pollution re. walkers in previous section.

The ‘Greenway to Hastings’ is a part tarmac, part gravel path and is used by walkers, cyclists, dog-walkers and horses. It is mostly on south side of the Link Road, from the Ninfield Road to Queensway.

There is a middle section which is from the large Roundabout via a long loop away from the road which then crosses over the Link Road and progresses as the **‘Greenway to Hastings’ from Actons Farm.**

Greenway No. ’Bexhill GrnWy/1’ with water splash – a rare section that is not adjacent to the Link Road, and which has nature conservation borders

Greenway No.'Bexhill GrnWy/1' under construction. 18 January 2015

Bexhill 16/2 02 May 2019

Battle Ramblers were not deterred south of the Link Road during construction at CRH/13/1

Summary: Walkers were generally not adversely affected by the construction. Footpaths near Watermill Lane were closed for a period, but the main north-south footpath over the central part of the Link Road was kept open, and made good viewpoints to view progress. Signage was good.

The Future

Sea Change[118] are developing Enterprise areas either side of the B2691 with a £1.9million grant [119]

Sea Change used to be called Sea Space until 2011. According to their website their '*development programme focuses on the Hasting, Bexhill and Eastbourne areas of East Sussex*', and '*our programme builds on the initiative regeneration company Sea Space*.' They are '*undertaking commercial development through five main schemes, one of which affects the new road system*.'[120] They are an investment company, an un-elected company and a not-for-profit company. They reside in the High Weald House seen in a few of the photographs in this report, where they are currently (Jan. 2023) hoping to recruit 6,000 new jobs.

Sea Change in their Economic Fact Sheet[121] are correct in that the Link Road does not cross the AONB, but it does adversely affect the 'natural beauty' of the AONB with noise pollution. It does however cross a small piece of SSSI (Marline Valley) and Section 41 BAP Priority habitats.

Environmental aspects: The Link Road route and associated business sites have been carefully chosen to respect the environment:

- These are the only potential business development sites not affected by statutory designations
- The Link Road route is similarly unaffected by statutory designations: it does not cross areas of outstanding natural beauty (AONB), sites of special scientific interest (SSSI), designated ancient woodland nor designated sites of historic interest

References

[118] https://www.seachangesussex.co.uk/our-programme/ (accessed 23 Jan 2023).
[119] https://www.seachangesussex.co.uk/1-9m-government-funding-set-to-extend-bexhill-business-park/ (accessed 9 Jan 2023).
[120] https://www.seachangesussex.co.uk/our-programme/ (accessed 23 Jan 2023).
[121] Bexhill-Hastings Link Road - Economic Fact Sheet https://www.seachangesussex.co.uk/our-programme/bexhill-hastings-link-road/ (accessed 23 Jan 2023).

East Sussex County Council, 2007. Bexhill to Hastings Link Road Environmental Statement Non-Technical Summary April 2007. East Sussex County Council. 24pp. https://www.eastsussex.gov.uk/media/2458/bhlr_env_statement_non_tech_summary.pdf (01 May 2019).

East Sussex County Council, August 2008. Bexhill to Hastings Link Road. Addendum to the Environmental Statement. Supplementary Information – Hydrology. Ref. 2444424CA012/A 14 August 2008. 58pp. https://apps.eastsussex.gov.uk/environment/planning/applications/register/documents/datawright%20saved%20documents/scannedinfo/rr2474cceia/bhlr%20aes%20supplementary%20report%20-%20hydrology%20(aug%2008).pdf (accessed 15 Nov 2019).

East Sussex County Council, 2014. Bexhill to Hasting Link Road, Additional offsetting environmental and biodiversity measures set out in Annex 11 of th Final Funding Bid (December 2012), Progress update 30 September 2014. https://www.eastsussex.gov.uk/media/2449/141112-dft-progress-reports-30092014-annex-11.pdf (accessed 18 Nov 2019)

ESCC, 2014, to co-ordinate the Brede Valley Farm Habitat Project.

Ecological Planning and Research, 2019. http://www.epr.uk.com/road---infrastructure.html (accessed 18 Nov 2019)

HOCHTIEF, 2019. Bexhill to Hastings Link Road ' Solutions for Infrastructure' https://hochtief.co.uk/project/bexhill-to-hastings-link-road/ (accessed 18 Nov 2019)

Acronyms

BAP	Biodiversity Action Plan
BC	Bexhill Connection
BHLR	Bexhill to Hastings Link Road
CVCP	Combe Valley Countryside Park
EPS	European Protected Species
ESCC	East Sussex County Council
HLR	Hastings Link Road
NBAR	North Bexhill Access Road
NE	Natural England
NPPF	National Planning Policy Framework, 2021
PCP	Pebsham Countryside Park
PRoW	Public Rights of Way
RDC	Rother District Council
SSSI	Site of Special Scientific Interest
SNCI	Site of Nature Conservation Importance

View westwards from the Queensway end of the Link Road

ENDS

Comments to john@wildlifematters.com