Life in our Landscape

Mid Arun Valley Environmental Survey (MAVES)

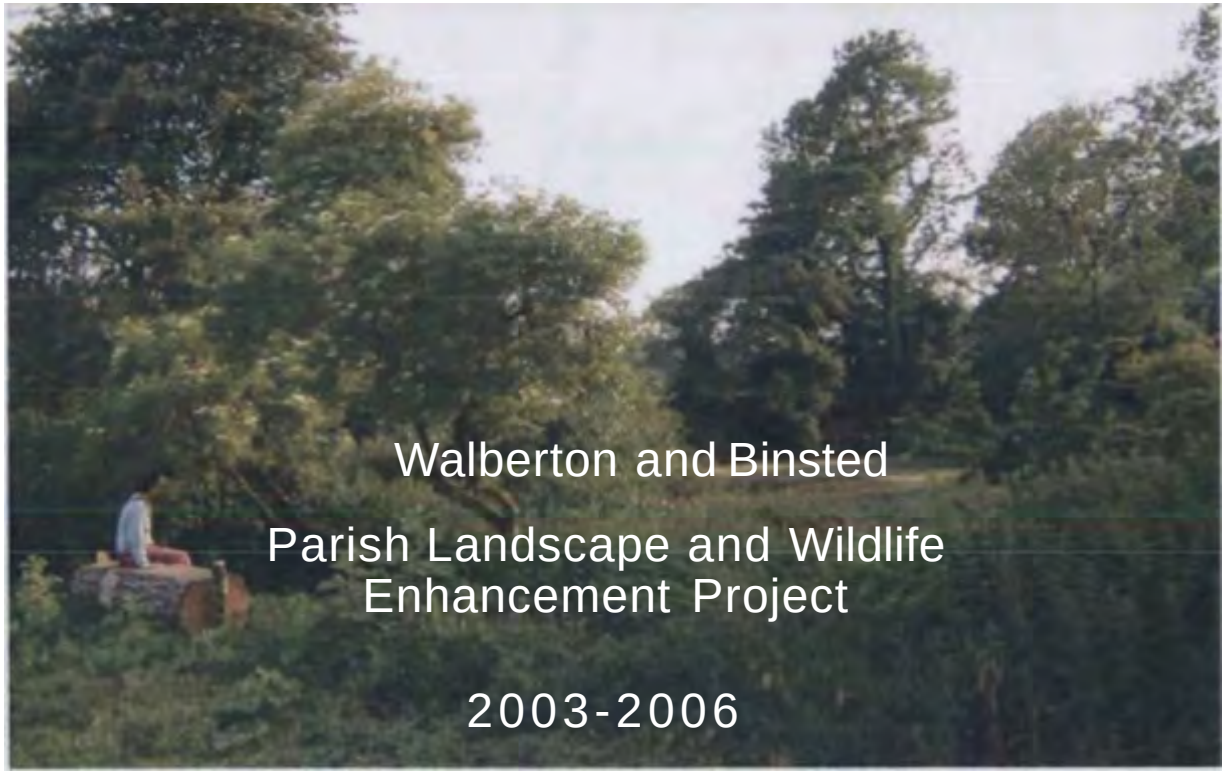
Thursday 28 February 2019

Arun Countryside Trust
Registered Charity no.1180078, incorporating
Mid Arun Valley Environmental Survey (MAVES)

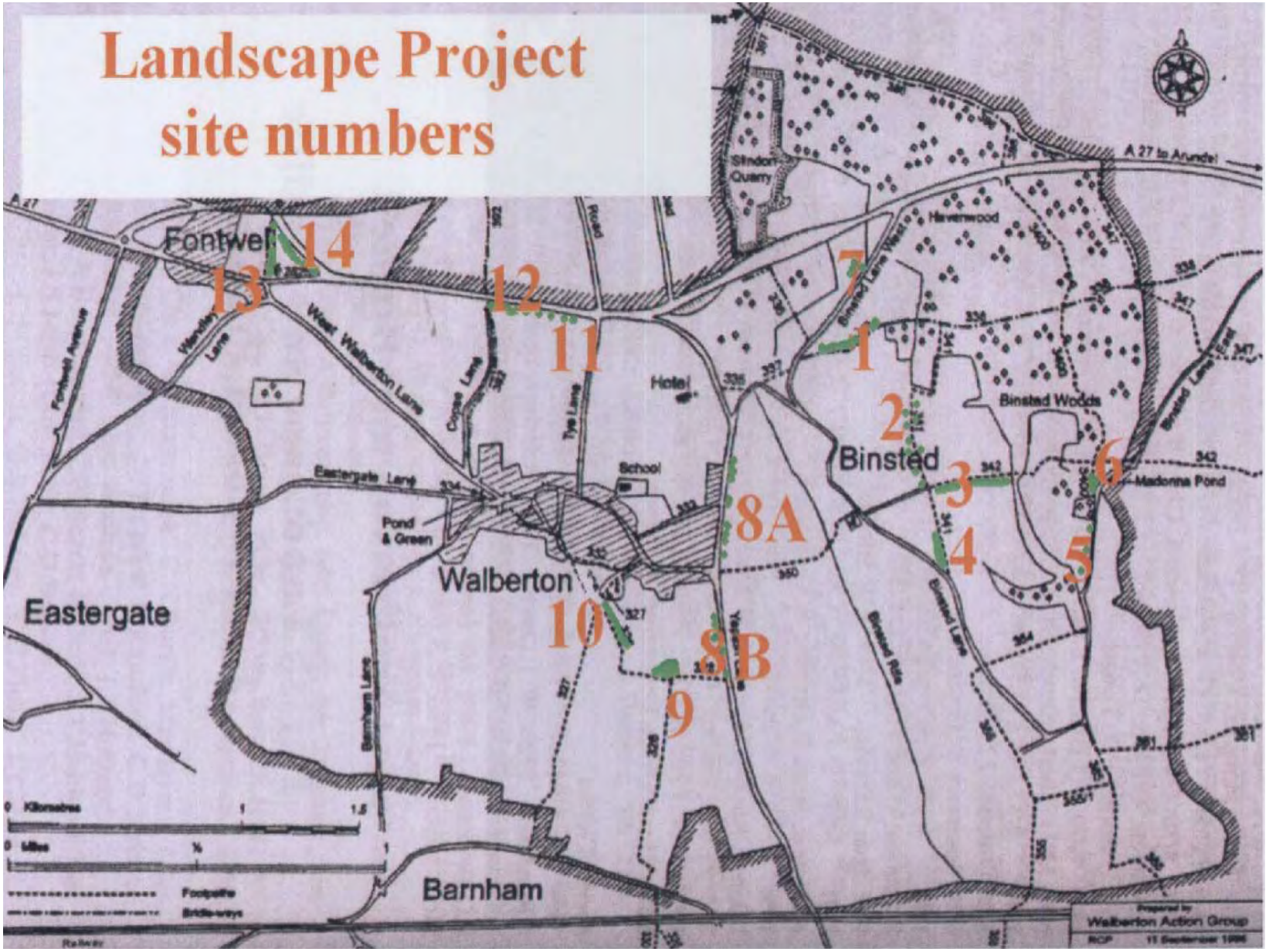

“From rolling hills to bustling market towns, the South Downs National Park’s landscapes cover 1,600 km^2 of breath-taking views and hidden gems. A rich tapestry of wildlife, landscapes, tranquillity and visitor attractions, weave together a story of people and place in harmony.”

South Downs National Park website

- Walberton Action Group – Mike Tristram
- Recent archaeological discoveries – Emma Tristram
- MAVES Surveys – Julia Plumstead
- Arun Countryside Trust – Mike Tristram



WALBERTON ACTION GROUP
MIKE TRISTRAM


Landscape Project site numbers
Fontwell
West Walberton Lane
Eastergate Lane
Pond & Green
Walberton
Eastergate
Barnham
Barnham Lane
Tye Lane
Hotel
School
Binsted
Binsted Woods
Madonna Pond
Binsted Lane
Binsted Rise
Stirdon Quarry
A 27 to Arundel
Footpaths
Bridleways
Prepared by Walberton Action Group
1
2
3
4
5
6
7
8A
8B
9
10
11
12
13
14

Hedge Planting

Site 3 Church Lane footpath

Planted with the help of the Walberton Guides

SDNP Volunteers and MAVES started laying the hedge 2017 – the last section being laid February 2019

Hedge Planting

Site 4 Mill Ball field

About 100m planted with hawthorn, blackthorn, spindle, guelder rose, wild privet , buckthom and hazel with some holm oak trees.

The hedge defines the footpath and restores the ancient landscape: a hedge with trees along this line was shown on a 16th century map.

This hedge will be laid in 2020.

Hedge Planting

Site 12 Verge of the A27 east of Copse Lane

About 80m of hawthorn were planted which will improve noise and visual screening for Copse Lane and the village.

Tree Planting

Site 13, NT Triangle Field, Fontwell

A shelter about 250m long was planted with species eg holly, hazel, oak and beech to screen noise and enhance the landscape.

Tree Planting

Site 10 Footpath south of St Mary's Church, Walberton

About 200 trees were planted to form a shelter belt. This will grow up to eventually replace the decaying macrocarpus which line this edge of the ha-ha of Walberton Park.

A lot of holly was planted as their evergreen foliage would be in keeping. Also field maple, oak, hawthorn, beech, hornbeam and poplar.

Ponds

Site 6 Madonna Pond

An ecological survey was carried following which a large quantity of a non-native invasive weed, Parrots Feather, was removed and a log bench provided.

Ponds

Site 9 Lazy W pond

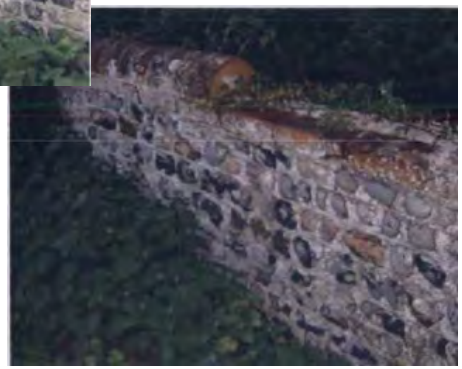
Some dead elms next to the pond and footpath were felled and replaced with 12 trees: oak, alder and ash.

An ecological survey of the pond was carried out which found the presence of the nationally rare Great Crested Newts; this species is protected under UK and European Law.

Flint Walls

Site 8b Yapton Lane

The former estate boundary wall along Yapton Lane stands as the gateway to the village. It defines the village as part of the downland area where flints picked off the fields were traditionally used in building.



It was under threat of ruin due to theft of the attractive half-round capping bricks whose mortar had become soft.

New Footpath

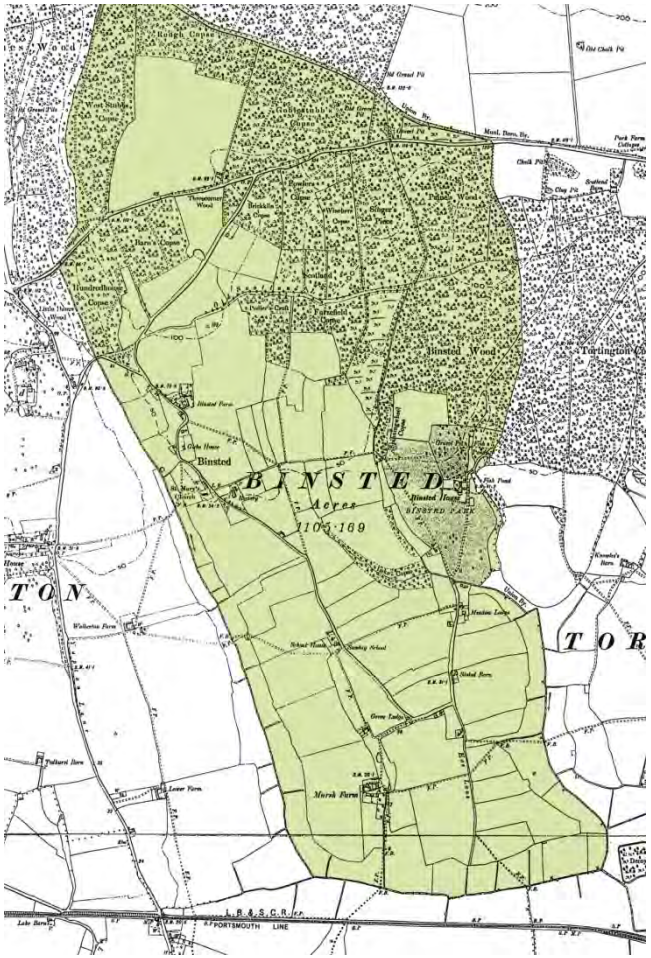
Site 8b Yapton Lane

This footpath was created within the Shaw on the other side of the flint wall to allow safe passage off Yapton Lane along to footpath 328, making an attractive circular walk accessible to the village again.

Surveys

WAG was among the first parish groups to carry out a Phase I habitat survey. The Sussex Wildlife Trust had asked parish groups to survey the wood species growing in hedges and their condition. WAG also surveyed the flowers growing in the base of hedges.

WAG also surveyed the flora of Walberton churchyard in conjunction with a new wildlife friendly mowing regime “God’s acre”.



RECENT ARCHAEOLOGICAL DISCOVERIES

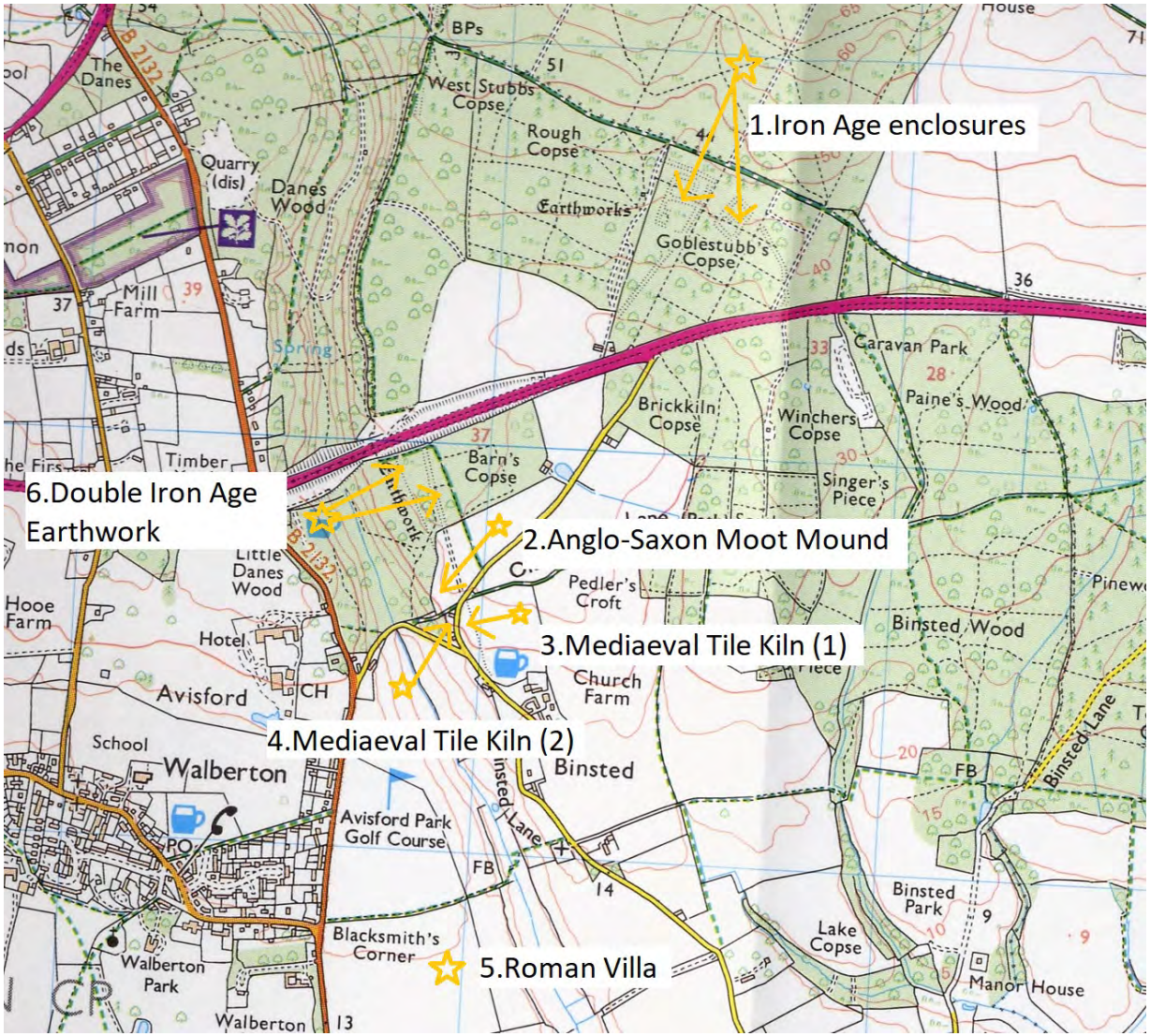
EMMA TRISTRAM

Secrets of the High Woods – Roman Road

Site 1: Iron Age enclosures in Gobblestubbs Copse (2016 site map)
Site 2: Anglo-saxon ‘hundred’ Moot Mound
Site 3: Medieval tile kiln
Site 4: Medieval tile kiln
Site 5: Walberton Roman Villa
Site 6: Iron Age earthworks

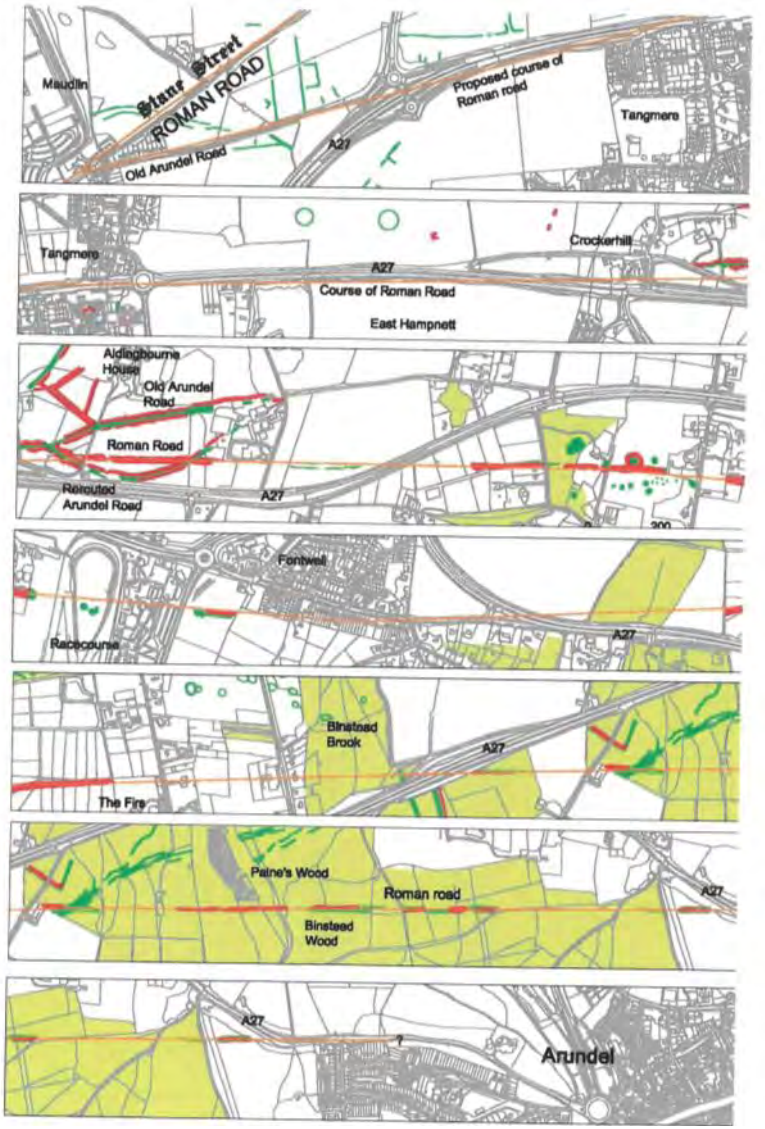
Binsted Art
Lorna Wishart’s garden in Binsted Woods

Archaeological Sites

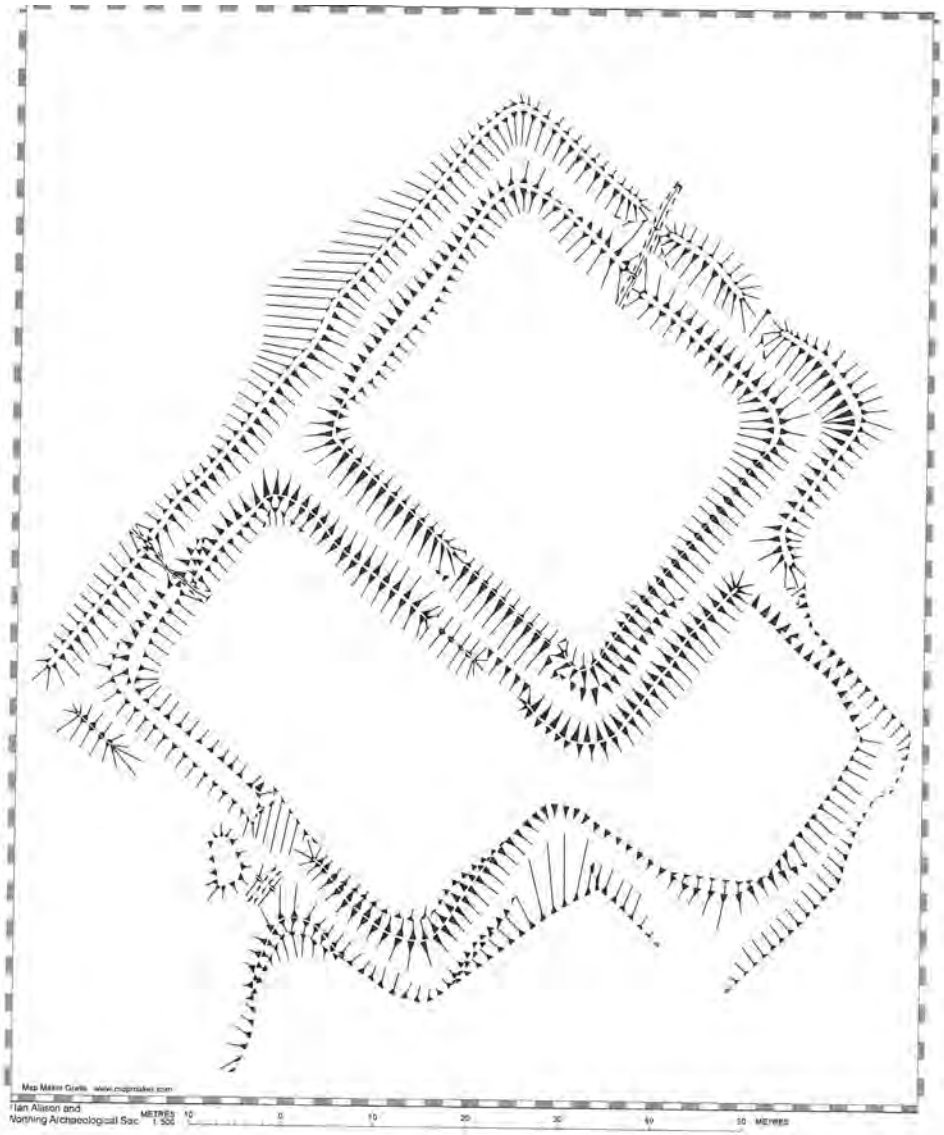


Secret of the High Woods

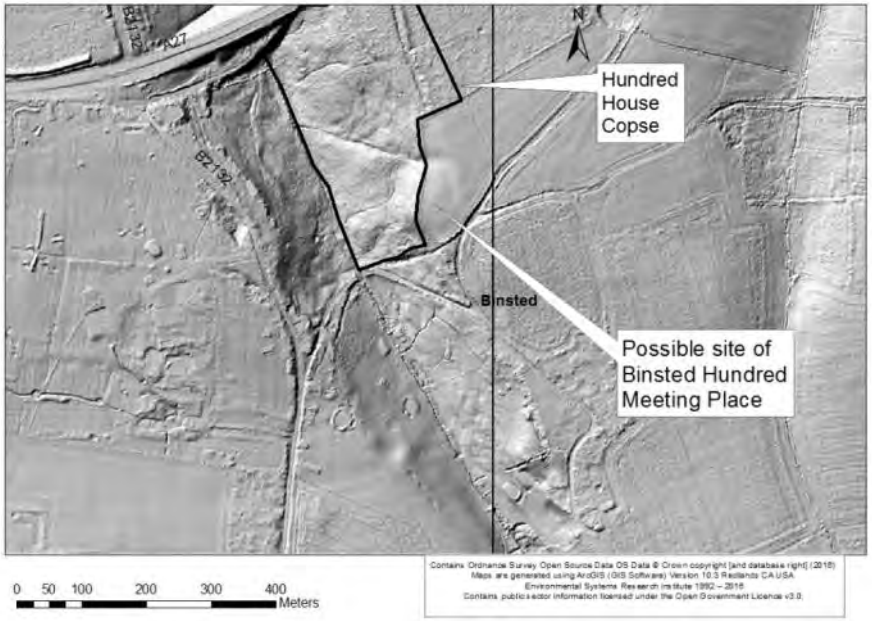
- Roman Road to Arundel revealed through LiDAR

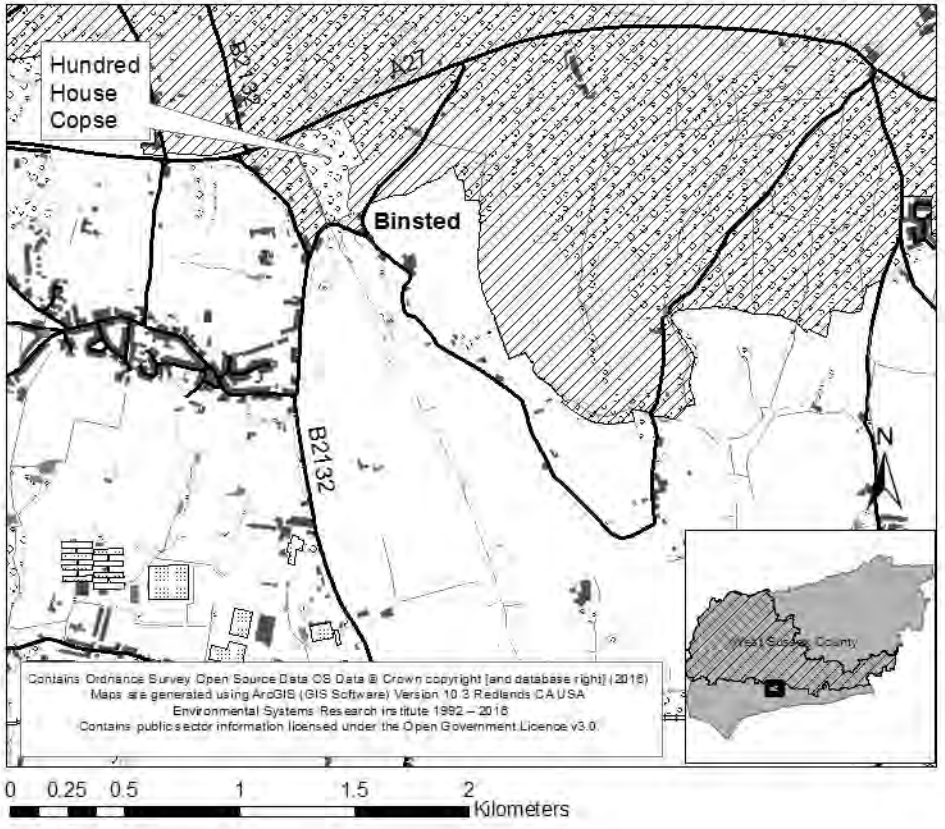


Site 1: Gobblestubbs Site Plan



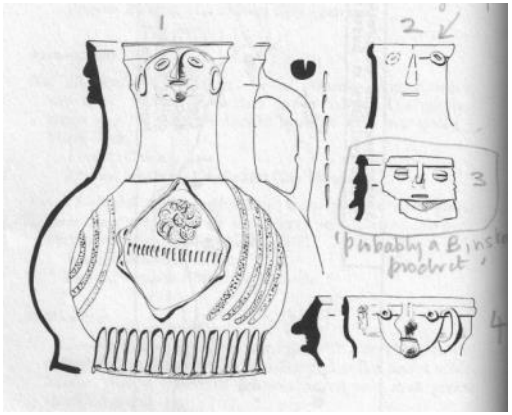
Site 2: Hundred Moot Mound





Site 3: Medieval Tile Kiln

- Kiln dated 14th Century
- Site also produced pottery



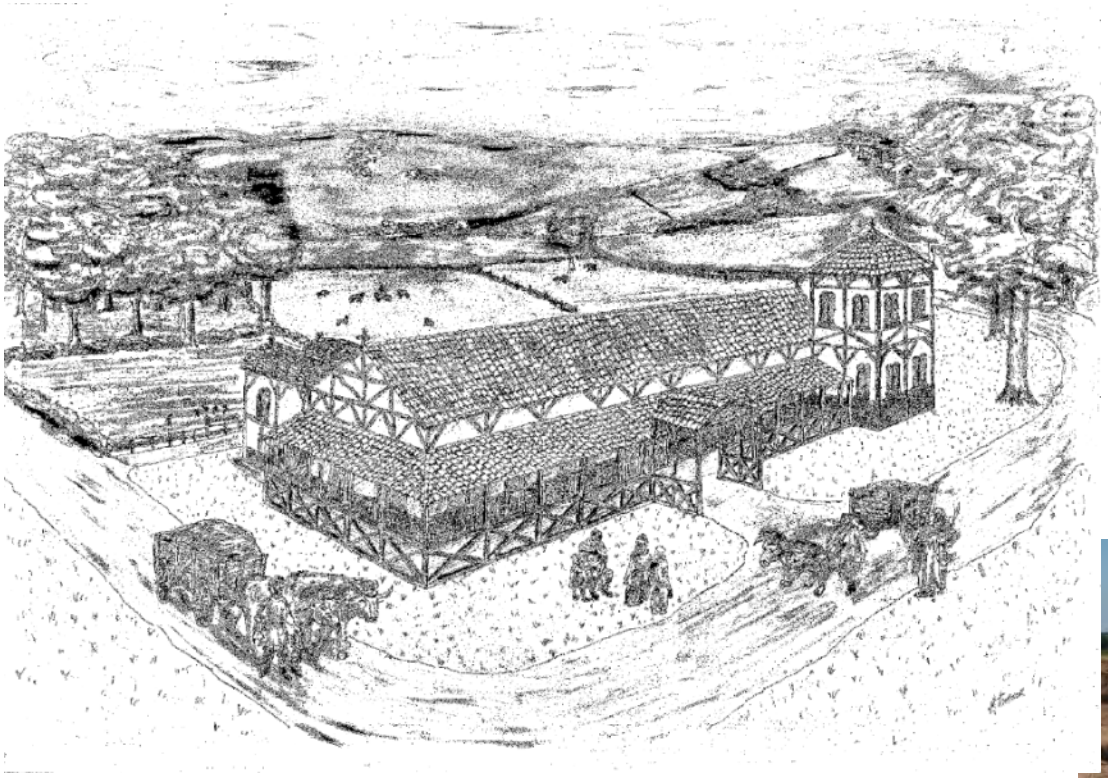
Site 4: Medieval Tile Kiln

Excavation 1963-65 by Con Ainsworth

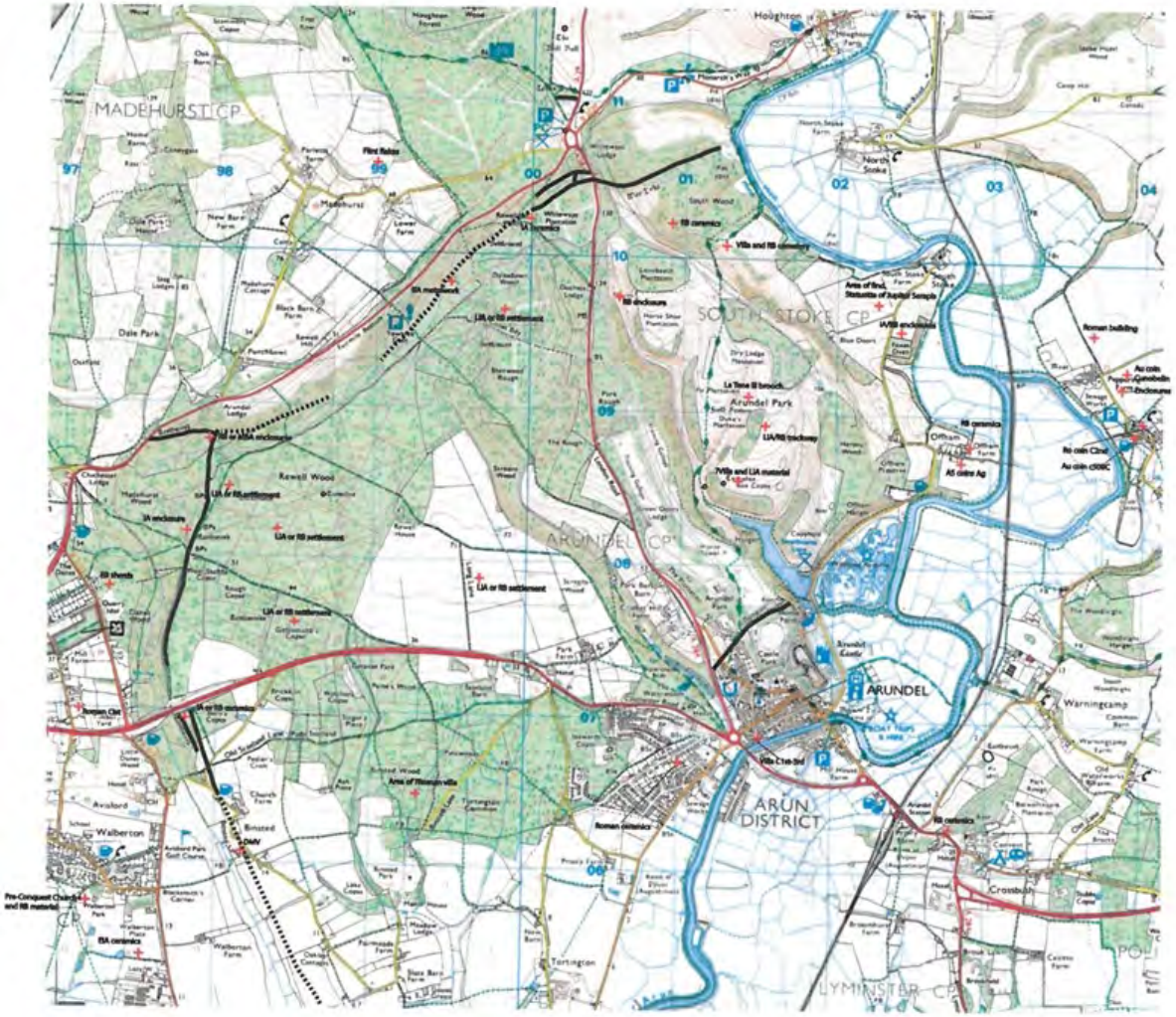
Aerial view of the Medieval kiln, Moot Mound and Iron Age Earthworks

1960’s aerial photo of the kiln, moot mound and earthworks

Site 5: Walberton Roman Villa



Site 6: Iron Age Earthworks



Site 6: Iron Age Earthworks

From the top of the mound into the trench south

Parallel with the earthworks looking south

Binsted Artists

Binsted Park Oak by RGE

Binsted Park 1937 by Rogers

Kents Cottage by Michael Wishart

Lorna Wishart's Garden

MID ARUN VALLEY ENVIRONMENTAL SURVEYS (MAVES)

JULIA PLUMSTEAD

“Over the last 50 years 56% of our species have declined, while 15% are at risk of disappearing from the UK altogether. Here in Sussex, many of our wildlife populations have fallen dramatically...”

2016 State of Nature Report

In June 2018, Chris Packham warned that *“UK wildlife is in catastrophic decline…”* and that *“our generation is presiding over an ecological apocalypse and we’ve somehow or other normalised it”*

Who are we?

- Formed in 2015 by members of local communities in and around Arundel.
- In 2018 MAVES became incorporated within the Arun Countryside Trust.
- We consist entirely of volunteers with one paid professional ecological consultant and occasional contracted surveyors.
- We work with a wide number of partner organisations such as the Sussex Wildlife Trust, South Downs National Park Authority.


MAVES seeks to understand, conserve
and protect the wildlife in this area for
future generations to enjoy

Where are we?

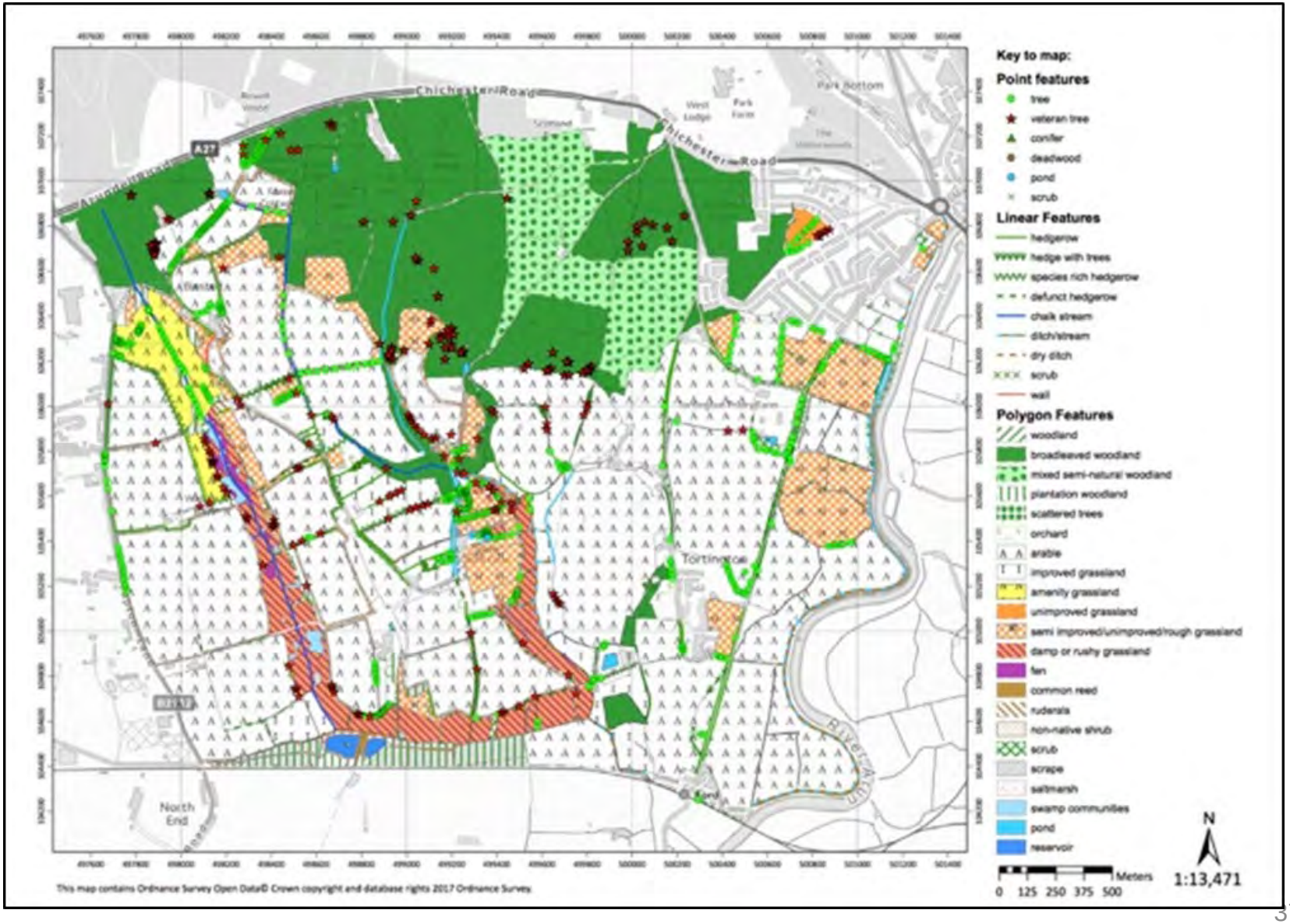

Mid Arun Valley Ecological Surveys (MAVES) areas
Trout Fishery
A27
Arundel
Arundel
Arundel Rd
Arundel By-Pass
The Causeway
Cros
Walberton
Binsted
Tortington
Ford Rd
Yapton Ln
North End
B2132
A284
Lyminster
1
2
3
4
5
6
7
8
Image © 2015 Bluesky
Google
Imagery Date: 8/31/2012 50°50'54.72" N 0°36'07.15" W elev 22 m eye alt 6.01 k

How have we been doing this?

- Researching and collating all the known ecological records for this area.
- Updating this data through field surveys, with the help of volunteers, surveyors and students from Brighton and Sussex Universities. These surveys are ongoing……
- Our results have been published in a series of reports since October 2016 all of which can be downloaded from our website: www.aruncountryside.org.
- We will be releasing our next report with 2018 results shortly.

What have we found?
A snap shot…..

Phase 1 Habitat Survey Map



Binsted Woods Complex

- One of the largest blocks of woodland south of the A27.
- The Complex supports a rich diverse habitat which with the geology has resulted in extremely diverse flora hence its Local Wildlife Site designation.
- Typical trees include oak, ash, coppiced hazel and Sweet Chestnut.
- There are patches of wet woodland with Common Alder, Ash and Yellow Pimpernel.
- There are ancient woodland indicators eg English Bluebells, Butcher's Broom, Pignut & Primrose.

Copses & Shaws

- Wooded corridors radiate out from Binsted Woods – the Shaw & The Lag are remnants of ancient woodland

- They support many notable and veteran trees.

Hedgerows

- The fields south of the Complex are dissected by hedgerows.
  - A third of the hedgerows surveyed qualify as ‘Ancient and / or species-rich hedgerows’ of which at least half would classify as ‘important’.
  - They include notable and veteran trees; often hazel stools, dog and field roses.

Notable / Veteran Trees

The majority are found in the Binsted Woods Complex which includes Hundred House Copse and Tortington Common

To date we have surveyed: 193 Notable, 30 Veteran and 25 Ancient trees.
We are still counting……

Binsted Woods Complex

Ash Stool, Hundred House Copse

The most common species are oak, ash, sweet chestnut, hazel and field maple – and uncommonly, a wild cherry.

Field Margins

- These are just as important as the woods and hedges.

Harvest Mice

- Priority Species – numbers nationally declining and they are rare.
  - In 2016, a survey found 11 nests in a field of tall wetland and meadow species.
  - In 2017, a nest was found in a privet hedge and also in the Arun water meadows.


Photo by I Powell 2016

Hazel Dormouse

- A Priority Species, rare and vulnerable to extinction.
  - The Dormice rely on the interconnecting woods and hedges to disperse across the landscape.
  - There are 4 registered sites in the parish, with further sites pending.
  - The sites are monitored monthly and the results submitted to the PTES.
  - In September, 16 dormice were recorded in 1 box – this is a new record!
  - They can only be handled by a licenced Dormouse Handler.

Anyone spot the dormouse?

Bats

- AEWC have been commissioned to carry out bat trapping and radio tagging over the last 3 years.
- In 2016, 13 species were recorded in 1 night alone including 2 Annex II species: Bechstein and Barbestelle.
- A 14th species was recorded last year.
- Radiotagging located a Bechstein maternity colony in southern Tortington Common.
- Alcothoe roost sites were also located in Tortington Common and Binsted Woods.
- The bats rely on the tree lines and hedges as “flight lines” for commuting.
- WSP Bat Surveys – declared this an area of National Importance

Butterflies

- The diverse landscape consisting of the woodland rides, wayleaves and open glades and the field margins makes it ideal for butterfiles.
- 179 records (28 species) have been submitted over the last 2 years.

Purple Emperor
Red Listed – Near Threatened

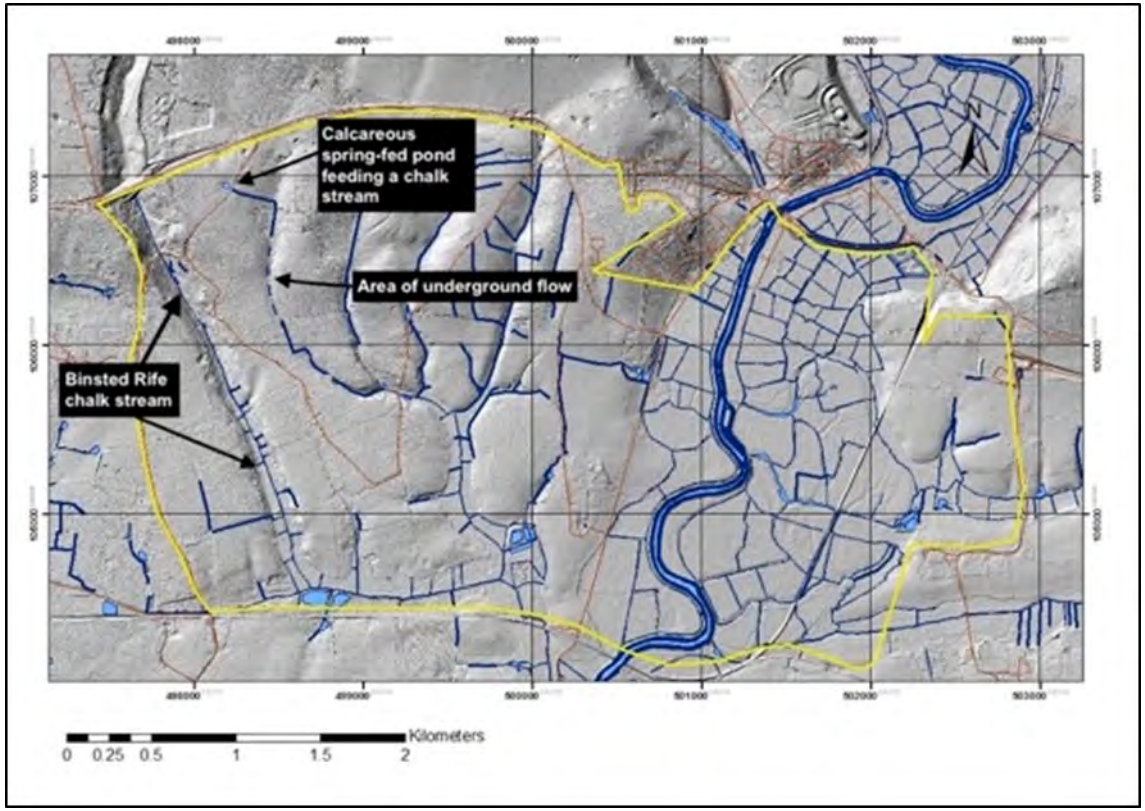
Dingy Skipper
Species of Principal Importance

White Admiral
Species of Principal Importance

Chalk Streams

- Chalk streams and their integrated surrounding habitats are Section 41 Habitats of Principal Importance and are irreplaceable.

- 2 Chalk-fed streams: Binsted Rife & Sandy Hole Pond.
- The Rife's wetland habitat supports unusual plants eg Flowering Rush, Mare's Tail, Fan-leaved Water Crowfoot.



Common Toad

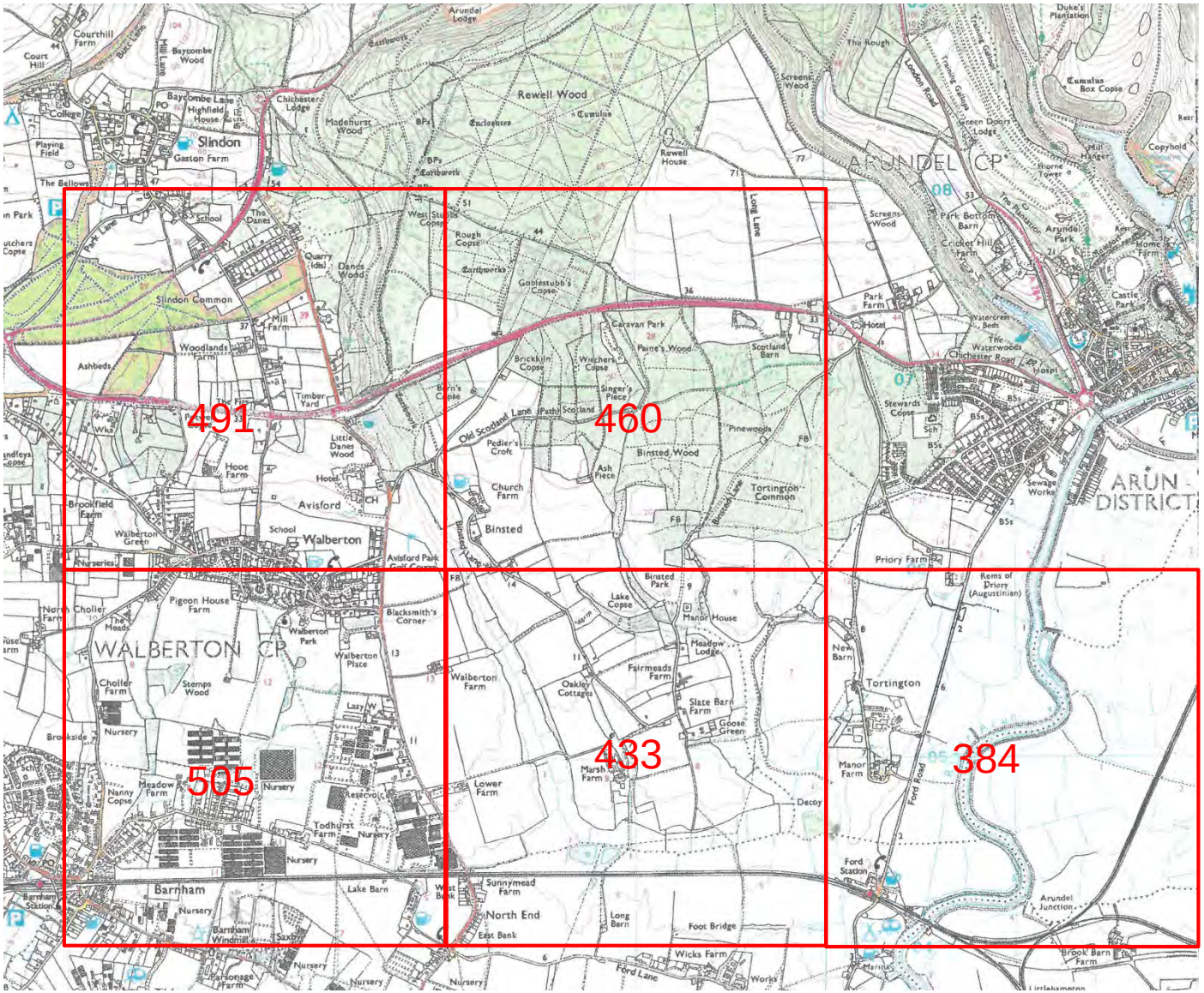
- UK BAP Priority Species
- They are widespread throughout the MAVES area.
- They habitually migrate to ancestral breeding ponds each year following the same route, regardless of what gets in their way.
- In Spring 2018, it is estimated 5000 toads use Madonna Pond as a breeding site.
- In 2019 Madonna Pond was registered as a Toad breeding site.

Photos by Paul Stevens

Vascular Plant Species

researched and compiled by the Sussex Botanical Recording Society

Walberton & Binsted Tetrads



Walberton North

- This tetrad has 491 vascular plant species of which 13 are rare or scarce south of the Downs (mainly found in Rewell Woods).
- There are 2 very rare species:

Heath Cudweed
(Gnaphalium sylvaticum)

White Mullein
(Verbascum lychnitis)

Binsted, Binsted Woods and Tortington

- The Binsted Woods Complex is a relic of the woodland which once covered a large part of the coastal plain of this end of West Sussex
- What makes the Binsted Woods/Tortington tetrad remarkable?

  - 460 species of vascular plants is remarkable as practically the entire area comprises woodland; the high score reflects the richness of a large and complex area of ancient woodland.

  - The species list for this tetrad includes no less than 54 ancient woodland indicator species – a very high score.

Binsted, Binsted Woods and Tortington

Many of these species are rare or absent south of the Downs:

Greater Butterfly Orchid

Small Teasel

Heath Cudweed

Violet Helleborine

Orpine

Lesser Skullcap

There are a further 20 rare or notable species found in this tetrad

South Walberton

Tetrad recorded 505 species – the high number reflects the high diversity of the habitat.

19 species were recorded which are either scarce (5), rare (1), unusual (2) or ancient woodland indicators (2) – and 1 indicative of pure water.

Anacamptis pyramidalis	Scarce off the chalk
Berula erecta	Declining and indicative of purity of water
Carex disticha	Scarce sedge of fens
Carex leporine	Unusual S of Downs
Dactylorhiza praetermissa	Scarce
Daphne laureola	Ancient Woodland Indicator
Euphorbia platyphyllos	Rare arable weed
Galium verum	Unusual S of Downs
Malva neglecta	Scarce casual
Montia fontana	Scarce S of Downs
Myosoton aquaticum	A river valley species not often seen S of Downs
Petroselinum segetum	Rare arable weed
Ribes nigrum	Ancient Woodland Indicator
Rumex pulcher	Scattered on coastal plain
Silaum silaus	Old meadow species in decline
Stellaria pallida	Spring annual more frequent on coast
Trifolium fragiferum	Unimproved grassland
Trifolium subterraneum	Unimproved grassland
Trifolium subterraneum	Unimproved grassland

S Binsted, Tortington, R Arun Floodplain – scarce or notable species

SU90X South Binsted	TQ00C Tortington, R Arun	TQ00H Broomhurst, Lyminster
Arum italicum subsp. neglectum Asplenium ceterach *Butomus umbellatus* *Carex acuta* *Carex disticha* *Carex leporina* *Carex panicea* *Carex vesicaria* *Dipsacus pilosus* *Glyceria notata* *Glyceria x pedicellata* *Hippuris vulgaris* *Juncus subnodulosus* Malva sylvestris Osmunda regalis Petroselinum segetum Potamogeton pusillus Ranunculus circinatus *Schedonorus pratensis* *Silaum silaus* ***Fen and old meadow species important***	*Atriplex portulacoides* *Beta vulgaris subsp. maritima* *Carex divisa* Chenopodium glaucum Crataegus x media Dipsacus pilosus *Elytrigia atherica* Glyceria declinata Juncus gerardii Malva sylvestris Petroselinum segetum *Plantago maritima* *Puccinellia rupestris* Senecio viscosus ***Maritime species extending up the Arun important***	Arum italicum subsp. neglectum Chenopodium glaucum Crataegus x media Umbilicus rupestris

Conservation and enhancement

Hedgelaying

Old Scotland Lane

- The hedge was planted under the WAG project.
- Laid by the SDNP Volunteers in 2015-2016.

What else?

- Removing non-native invasive species
- Planting primroses & cowslips
- Enhancing habitats
- Litter picking

Talks and Walks

- Run a series of winter talks with speakers such as:
  - Neil Hulme on butterflies
  - Nick Sturt – wild flowers
  - Tony Whitbread – ancient woodland
- Spring walks:
  - Richard Williams – nature walk
  - Nick Sturt and Frances Abraham - Wildflowers

Talks and Walks

Sensitivity to Change

- In 2018, the Mammal Society released a comprehensive review of UK mammals.

"*nearly 1 in 5 of our mammal species are at risk from extinction within the next 10 years*"

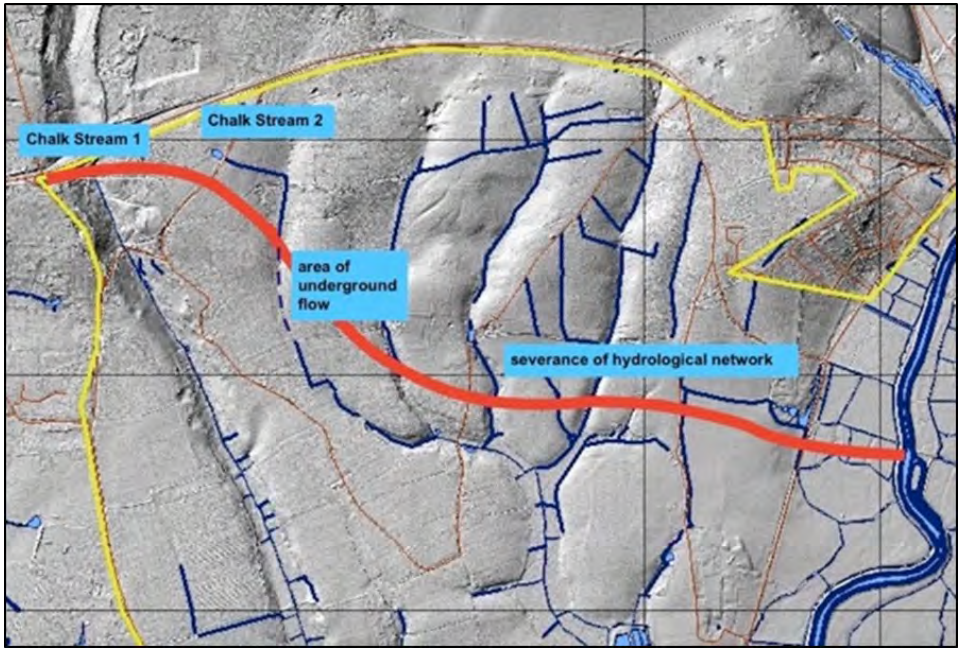
- Damage to a habitat or community can easily be caused by changes to the surrounding environment eg a linear corridor such as a road will result in changes:
  - Drainage
  - Noise levels
  - Air quality
  - Run-off of pollutants.

- All these can have profound effects on the plant species over a much wider area than just the zone of change or construction.

Impact on chalk streams/drainage

- Massive severance and disruption of the natural drainage from the Downs.

- Deterioration of surrounding ditches and streams.
- Lake Copse – in 2016, 96 beetle species recorded: 1 Red Data Book listed, 8 Nationally Scarce/Notable.
- Swamp communities of Tortington Rife – harvest mice, watervole, Marsh Tit, rare Rushes and Fens
- Cuts across the migrating route of Toads



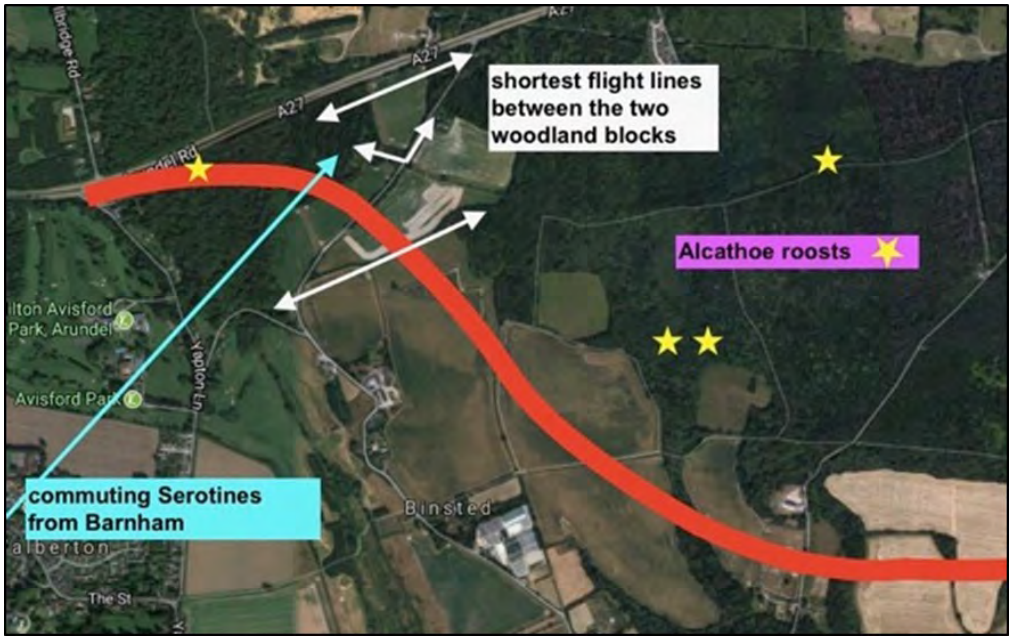
Dormice and Bats

- Binsted Woods Complex is the biggest and only continuous and sizable block of woodland along the coastal plain to the south of the A27
- It will separate major breeding dormice population from the smaller surrounding populations leaving them small and isolated.
- Dormice rely on treelines and hedges to disperse across the landscape – these will be severed.

Bats

- Bats also use treelines and hedges as flight lines.

- Bechstein - loss of foraging habitat – prefer mature oak woodland
- Barbestelles – loss of foraging habitat – woodland, farmland and floodplain.
- Serotines – cut off from their foraging grounds.



Map showing Alcothoe roosts and flight lines

Professor Fiona Mathews, Chair of the Mammal Society, said:

“This is happening on our own doorstep so it falls upon all of us to try and do what we can to ensure that our threatened species do not go the way of the lynx, wolf and elk and disappear from our shores forever.”

There is hope…..

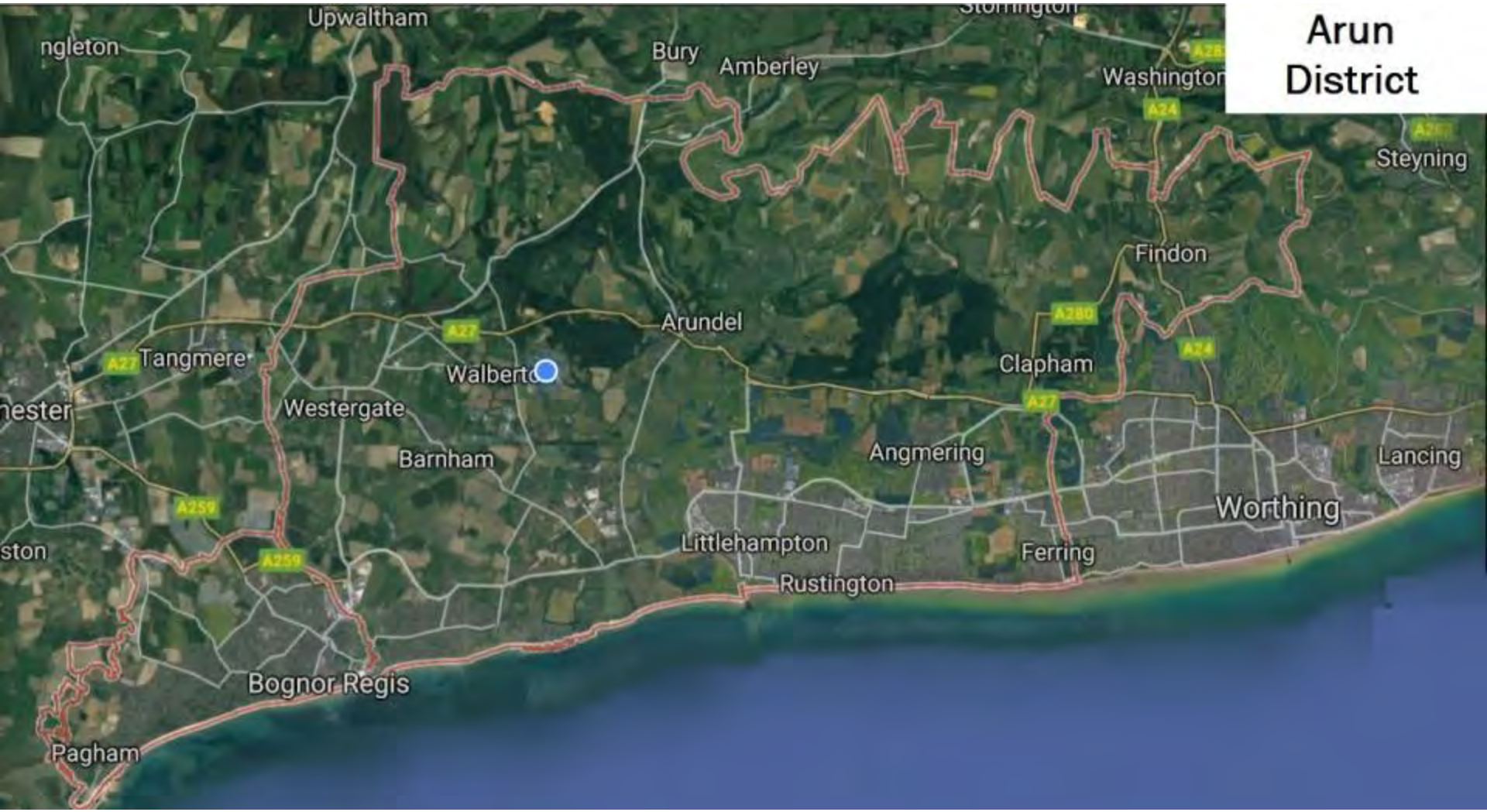
- At a local “stakeholder”meeting on the Arundel bypass in December 2018, Highways England admitted this was a very environmentally sensitive area.

- The bat survey report for Highways England, stated that this area was Nationally Important.

ARUN COUNTRYSIDE TRUST

MIKE TRISTRAM


Storrington
Wiston
Upwaltham
Singleton
East Dean
Bury
Amberley
Washington
A24
A283
Steyning
Findon
A280
Arundel
Fontwell
A27
Tangmere
Walberton
Clapham
A24
Chichester
Westergate
A27
Barnham
Angmering
Lancing
A259
Worthing
Hunston
A259
Littlehampton
East Preston
Ferring
Rustington
Bognor Regis
Arun District
Pagham


Arun
District
Upwaltham
Bury
Amberley
Washington
Steyning
Findon
Arundel
Tangmere
Walberton
Clapham
Westergate
Barnham
Angmering
Lancing
Worthing
Littlehampton
Ferring
Rustington
Bognor Regis
Pagham
A27
A259
A280
A24

River Arun Catchment