

# South Downs Wood and Byter Mill Copse Woodland Management Plan

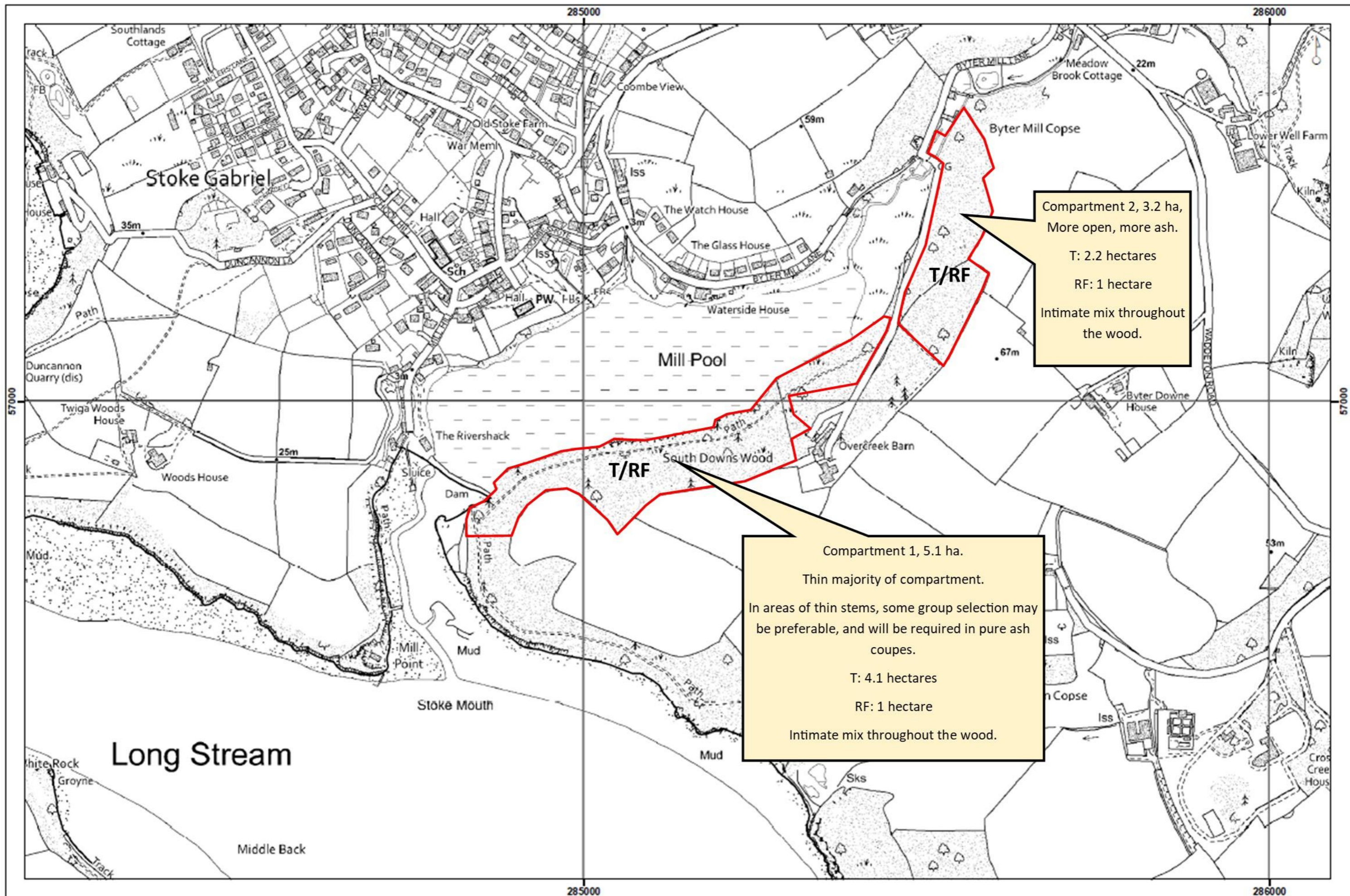


## Appendices

1. Maps
2. Compartment notes and descriptions
3. History and Heritage
4. Wildlife Records
5. Educational Use
6. Laurel Control
7. Thinning and Thinning Volumes
8. Adding Value to Produce

## Appendix 1: Maps of Wood

Map 1: Compartment Numbers (next page)  
and Thinning proposals



SX851569

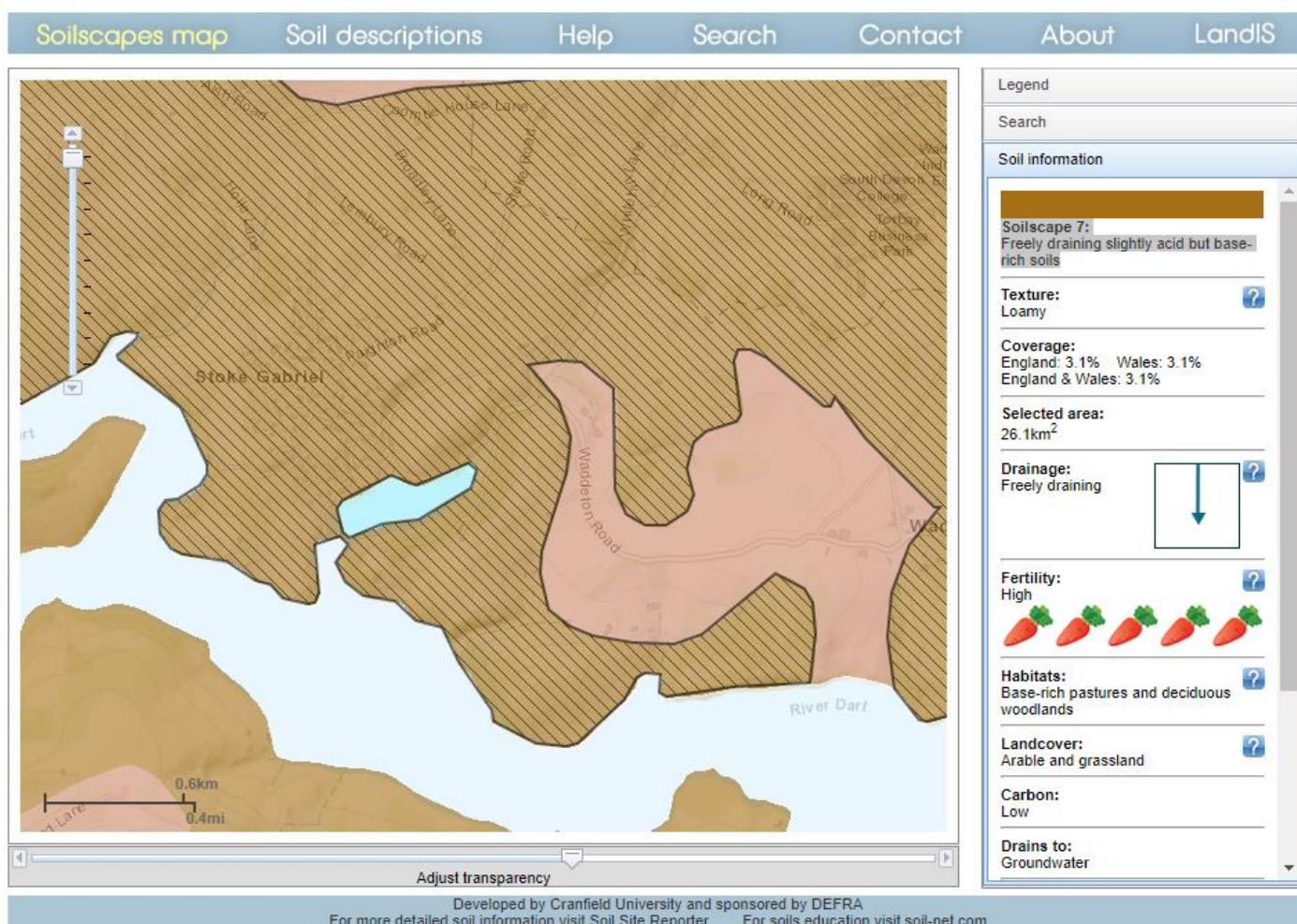
## South Downs Wood and Byter Mill Copse

Scale  
1:5,000



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## Map 2: Geology and Soils

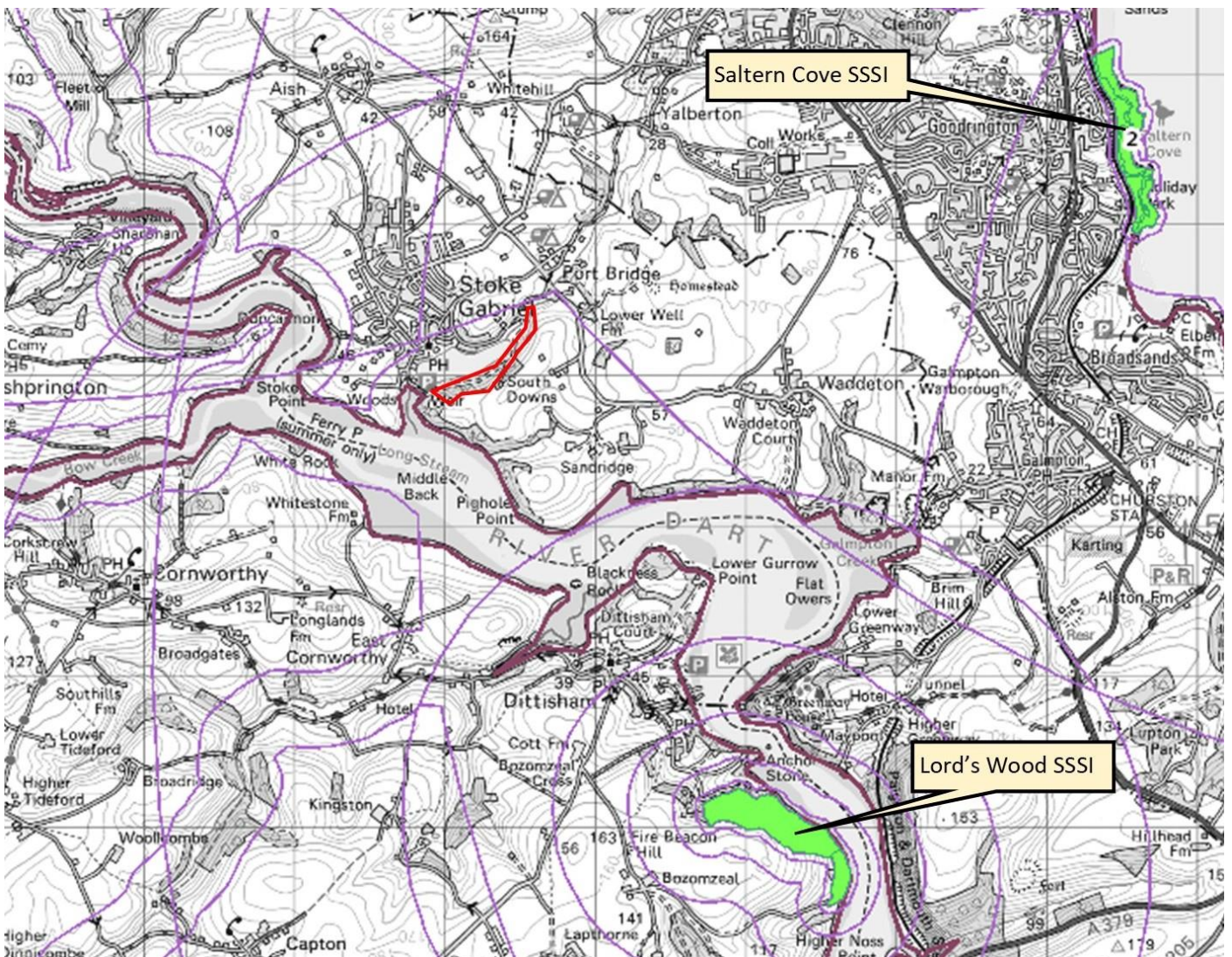


Soilscape lists the soil as freely draining slightly acidic but base rich.

<http://www.landis.org.uk/soilscape/>

Bedrock: Ashprington volcanic formation - late Devonian alkaline basaltic lava and basaltic tuff (British Geological Survey) <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

Map 3: SSSIs, within zone of influence



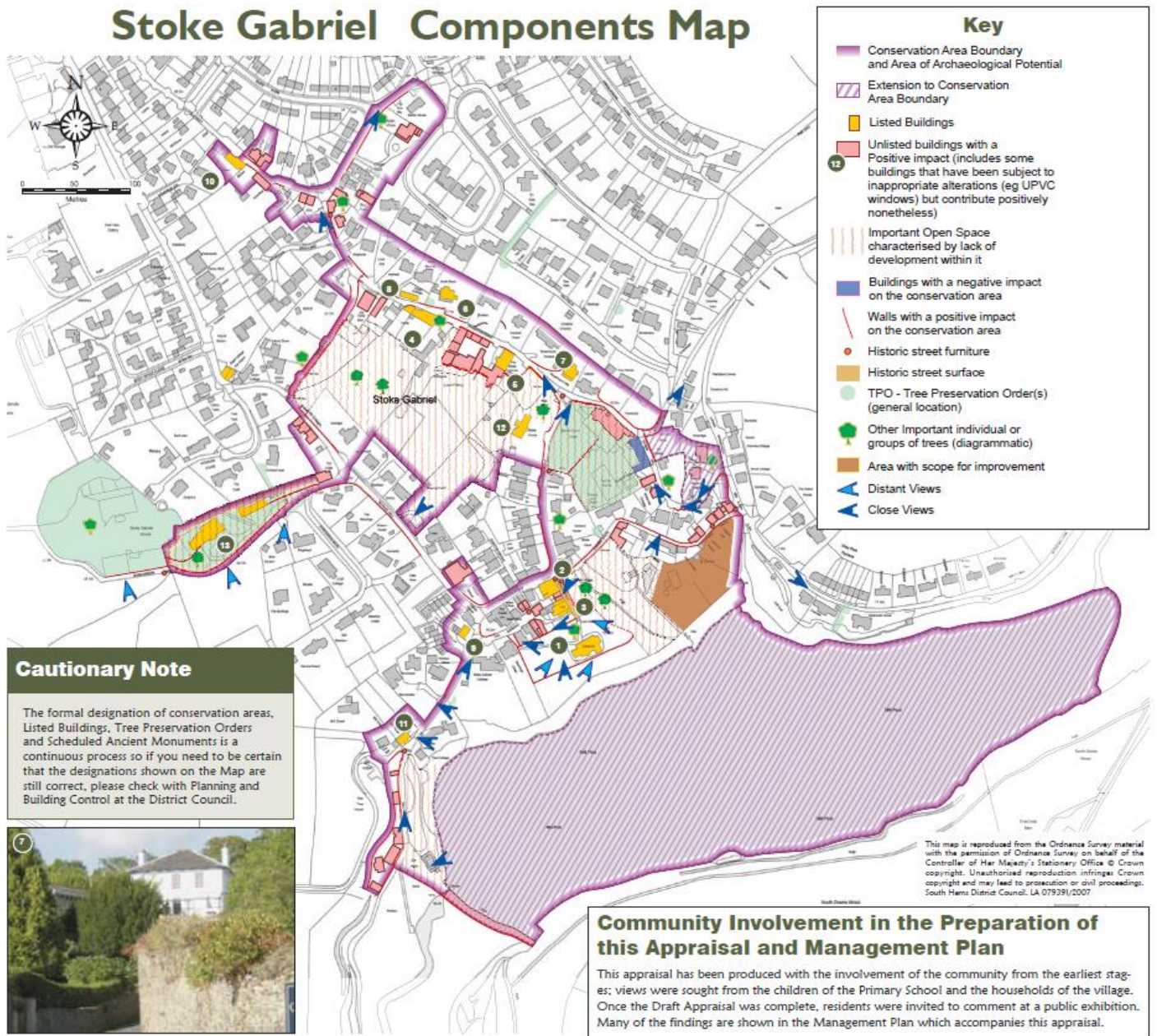
The nearest SSSI is Lords Woods, 3km to the south west of the South Downs Wood, and situated downstream and on the opposite bank of the Rover Dart. Saltern Cove , nearly 4km east, is designated for its geology and inter-tidal habitat.

Natural England only require consultation on potential developments that could impact air quality: livestock & poultry units with floorspace > 500m<sup>2</sup>, slurry lagoons > 750m<sup>2</sup> & manure stores > 3500t, and combustion projects with over 50MW energy input.

The proposed woodland plan will have no impact on SSSIs.

Map 4: Stoke Gabriel Conservation Area

# Stoke Gabriel Components Map



From: Stoke Gabriel Conservation Area Appraisal (South Hams DC, undated)

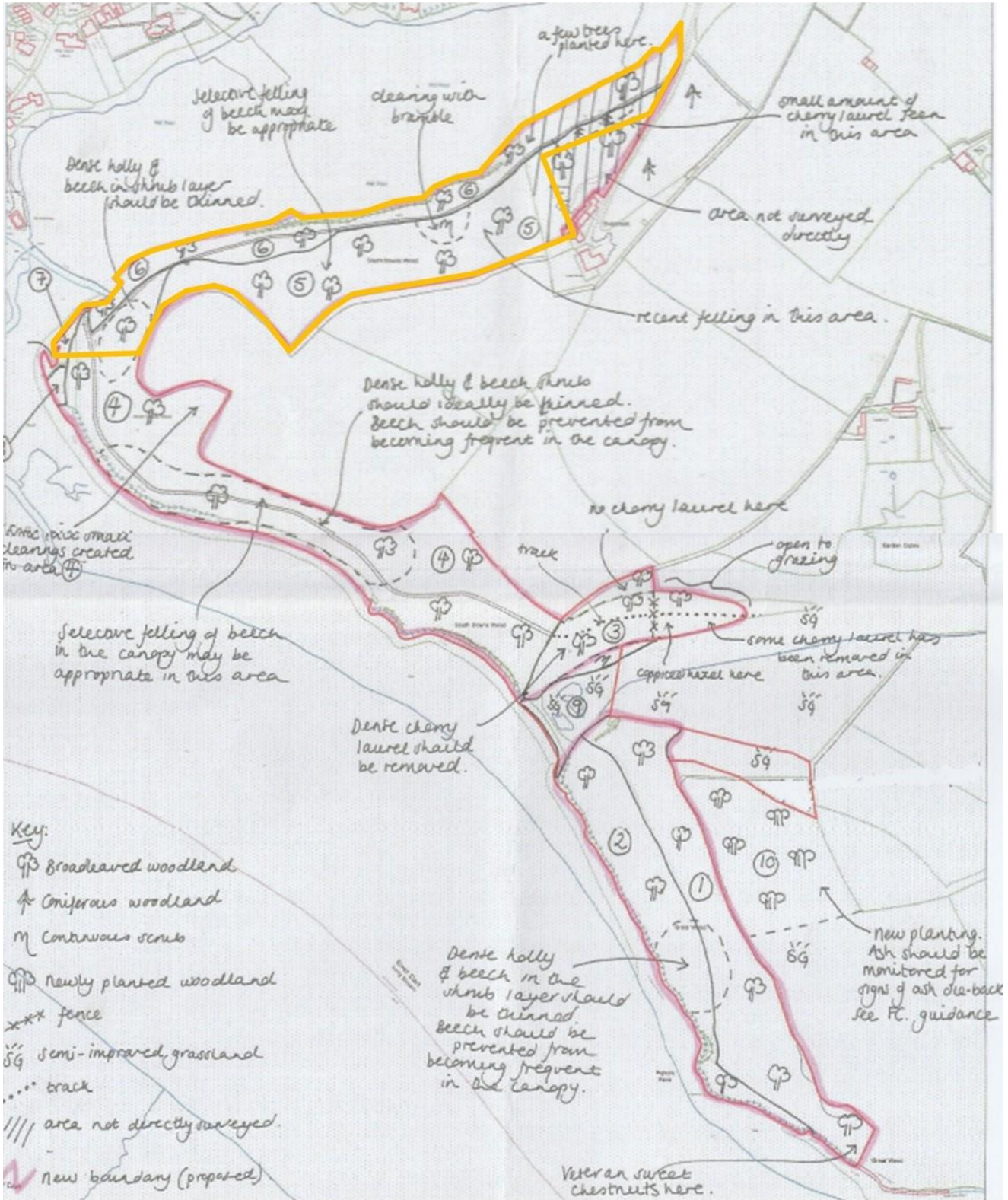
South Downs Wood lies immediately south of the Millpool, which is included in the Conservation Area.

See Map 5: Greater Horseshoe Bat Sustenance Zone



The sustenance zone relates to a very large maternity roost at Berry Head and is the major feeding area for a colony of 2000 bats. There is also a small cave circa 1km for the woodland which also has a small Greater Horseshoe bat roost.

# Map 6: County Wildlife Site



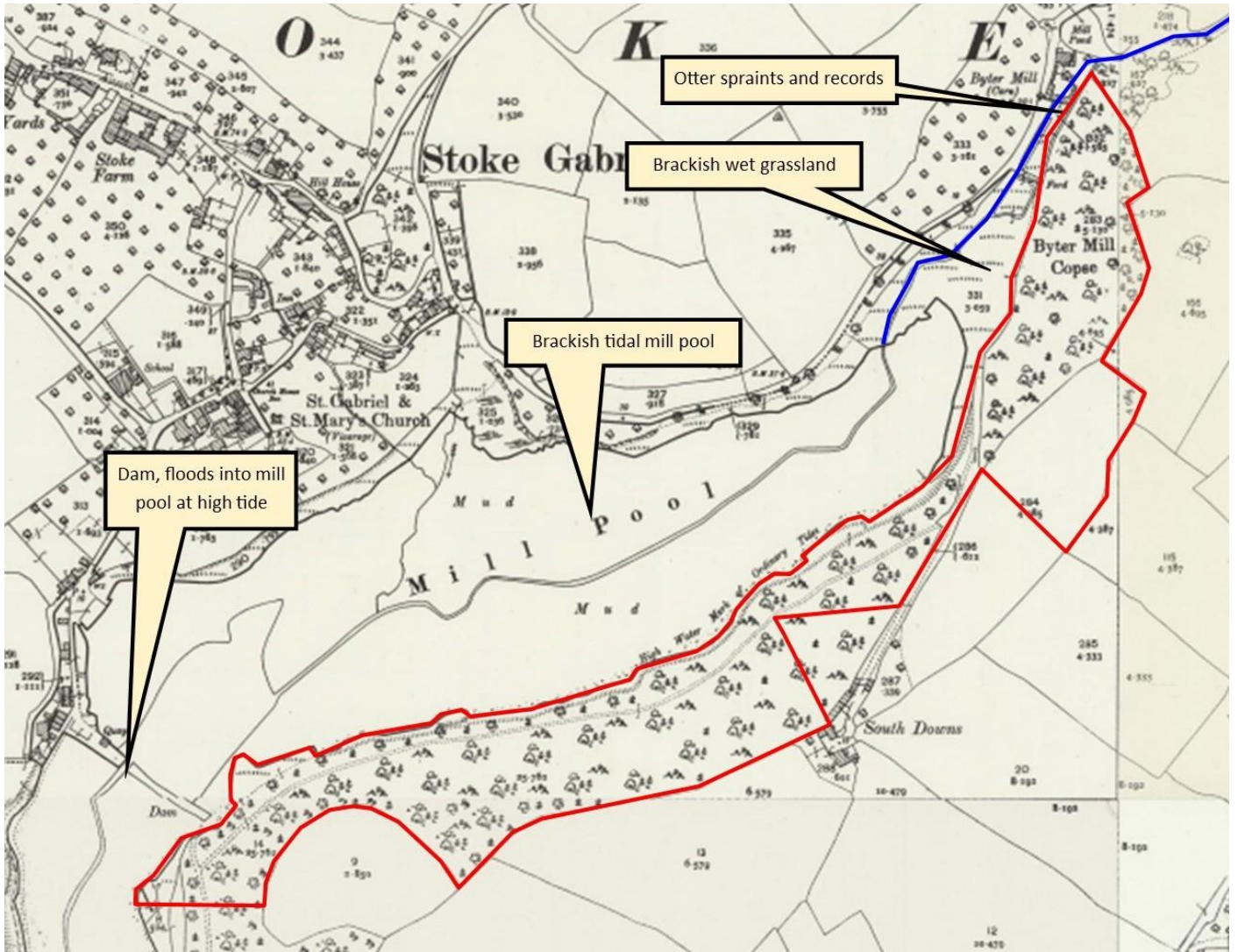
South Downs Wood County Wildlife Site (Devon WT survey, 2013)

County Wildlife Site area edged red

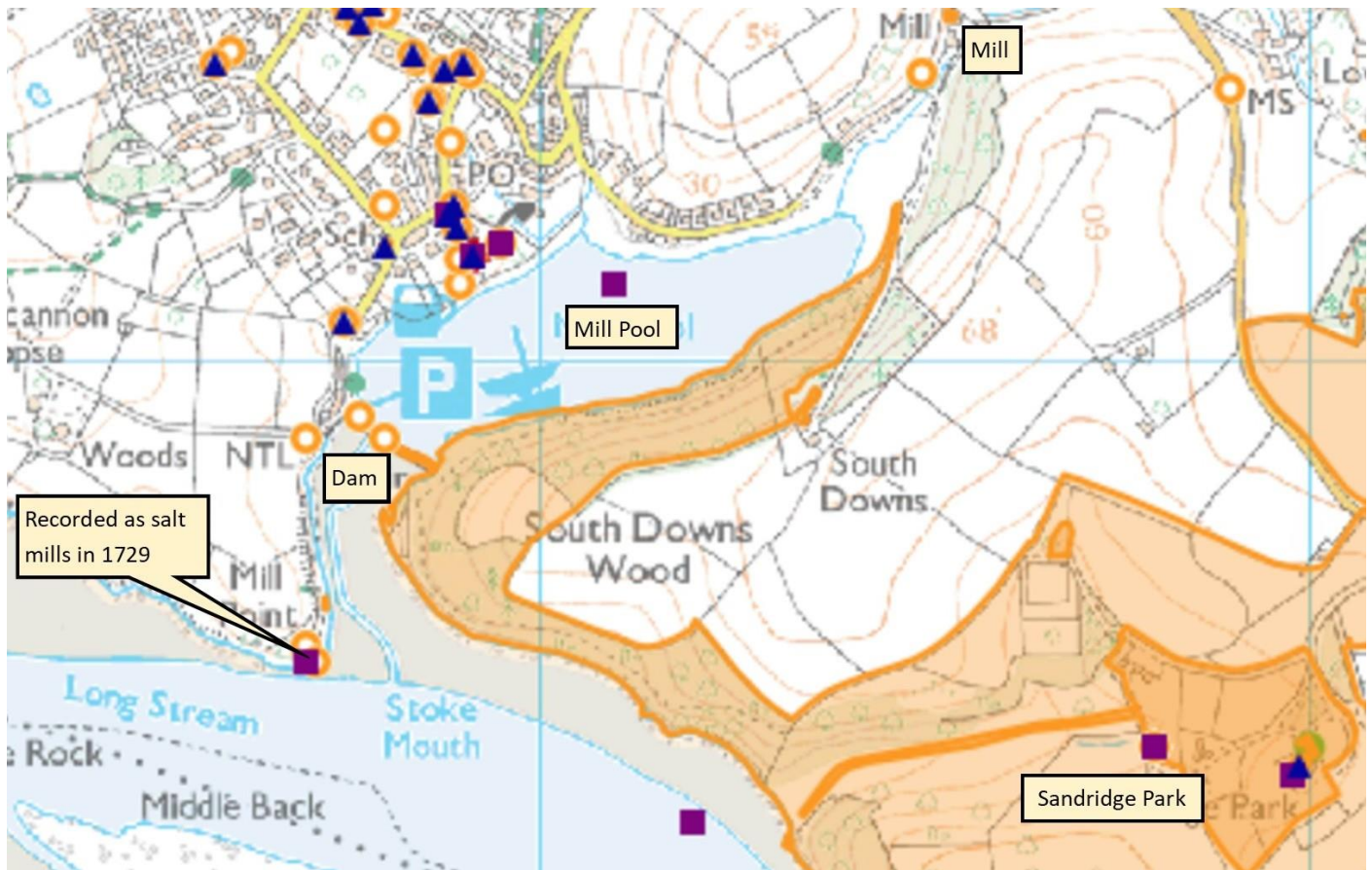
Within current woodland plan area edged yellow



Map 7: Wetland Habitats



Map 8: Historic Buildings, Sites and Monuments (HERS)



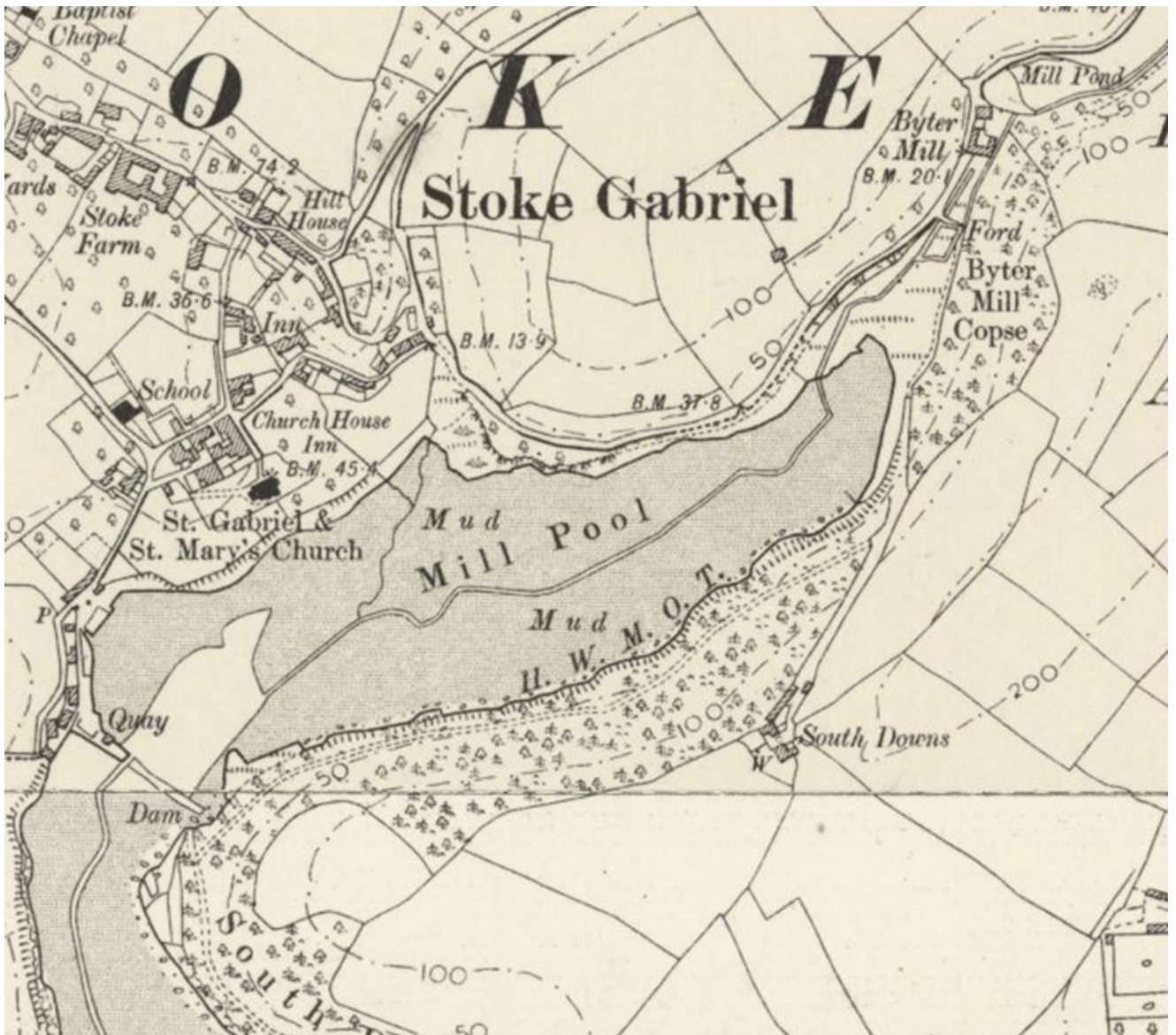
- The mill pond is recorded as post medieval, with 18th and 19th century documentary sources referring to a corn mill, a tide mill and a watermill.
- Sandridge is a Grade II\* country house in landscaped grounds, hidden away above the east bank of the river Dart. The house is stuccoed, with deep eaves. It is an excellent example of Nash's informal villa rustica style. Sandridge was built in 1805 by John Nash for the widowed Lady Ashburton, near the site of Captain John Davis' house of the 16th century. The designated grounds include South Down Wood.  
<https://historicengland.org.uk/listing/the-list/list-entry/1108493>
- The Mill Pool Dam is recorded on Heritage Gateway as being present in 1880, but in fact it is also on the 1840 tithe map.
- Apart from being within the landscaped grounds of Sandridge Park there are no heritage records within the woodland management plan area, at either national or county level.

## Map 9: Tithe Map

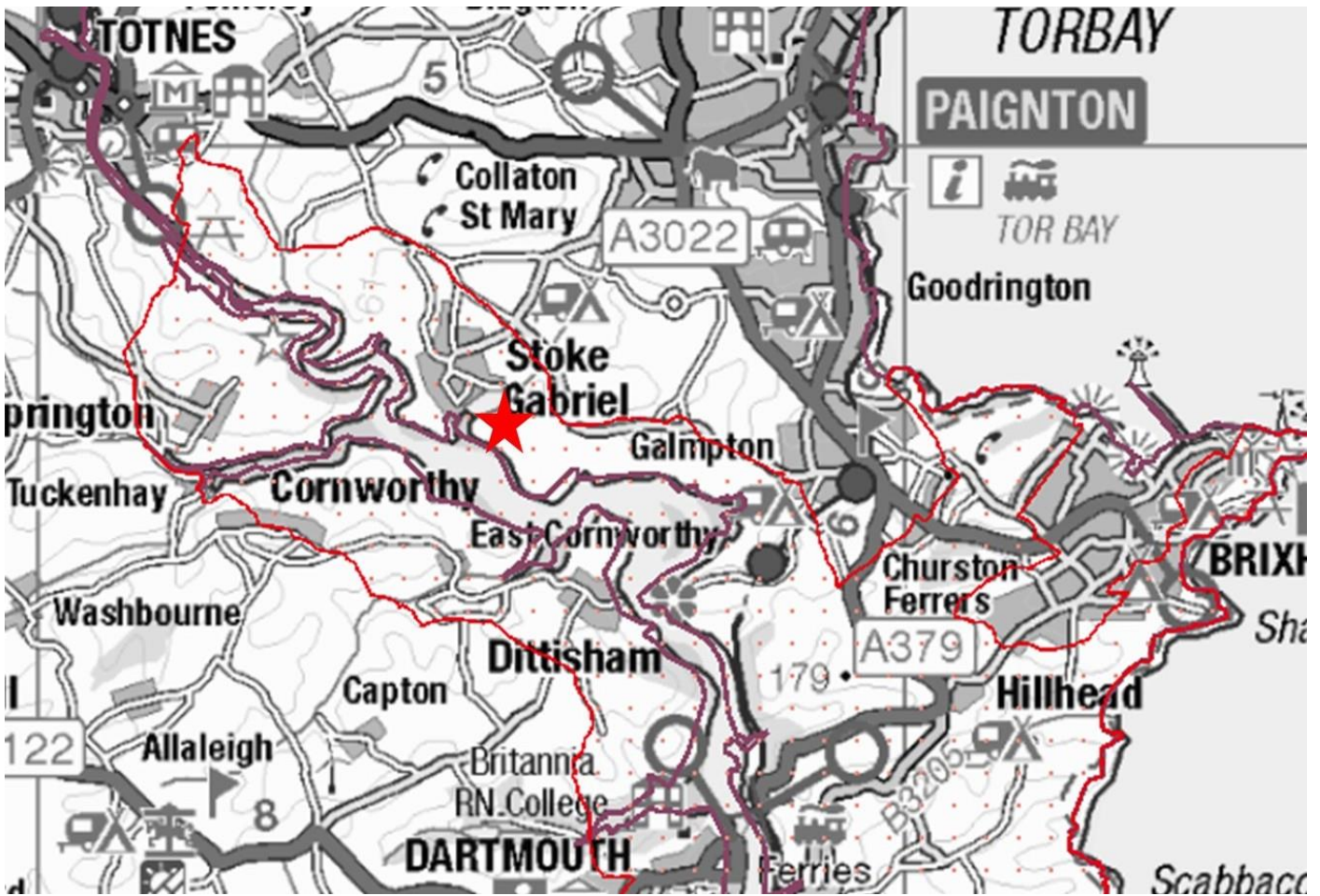


Source: <https://www.devon.gov.uk/historicenvironment/tithe-map/stoke-gabriel/>

Map 10: Woodland circa 1900

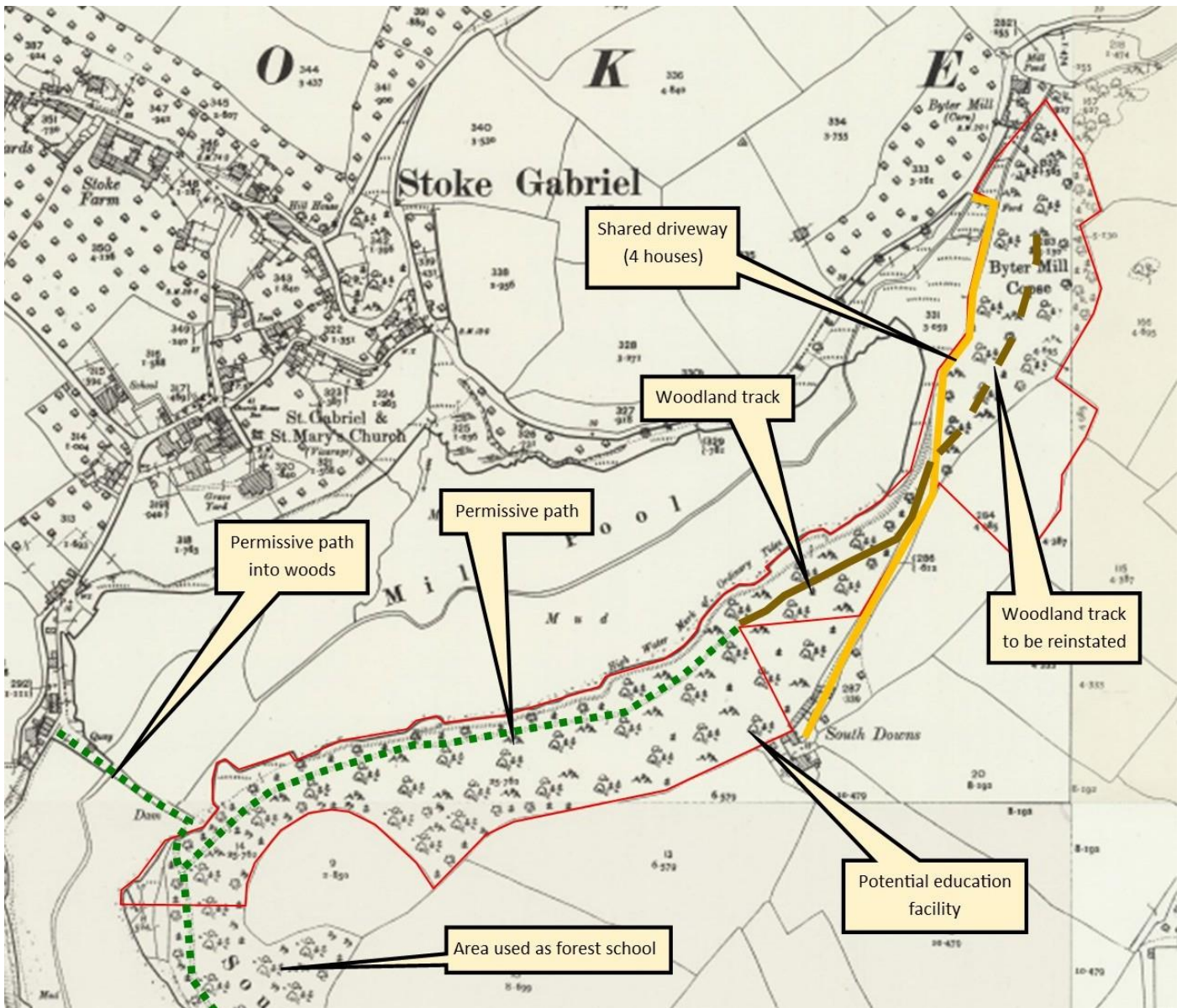


Map 11: AONB



From MAGIC Mapping, woodland starred.

# Map 12: Access



## Appendix 2: Compartment notes and descriptions

### General description

The woodland is located on the banks of the Rover Dart, with a tidal mill pool running along much of the northern bank. The woodland has been described as secondary wood, but could be ancient in origin, but heavily modified by management while part of the Sandridge Park Estate.

The landscape setting of the wood is very important locally, sloping steeply down to the river and forming a backdrop to the village of Stoke Gabriel immediately to the north. There is limited access permissive for local residents who cross the mill pool dam and walk the main woodland track through compartment 1.

The woodland is almost entirely broadleaved in character although one small area of mature Douglas Fir remains, a remnant of what was formerly mapped as mixed deciduous and conifer woodland. The woodland groundflora is quite diverse and more detailed survey could help indicate whether the woodland is ancient or secondary in origin.

There has been relatively little management of the wood in recent years, and it is now generally overstocked, with a dense canopy and even-aged trees. Some are clearly of a coppice origin and it is possible that the current crop dates from regrowth following clearance in the First World War, or possibly the Second World War.

Ash forms a major component of the woodland and will be the immediate challenge for management over the ten year period of this management plan.

### Future Management Principles

- Maintain as an important local landscape feature
- Seek to cover management costs as far as possible from a combination of timber and firewood sales and available sources of grant aid.
- Improve woodland health, selecting against ash and favouring other species and natural regeneration
- Manage on a continuous cover basis by regular thinning, and small scale group felling of diseased ash.
- Consider under-planting or replanting in local areas of heavy ash loss.



**Woodland viewed from Stoke Gabriel**



**Ash dieback disease (compartment 2)**



## Compartment 1: South Downs Wood, 5.1 hectares

### General description

This compartment runs broadly east west, with the mill pond to the north of the wood. A good track runs along a lower contour through the wood and provides sufficient access for harvesting most of the wood. Options are likely to be winching to the track, or possibly horse extraction.

The woodland is generally even aged and heavily stocked. Western sections have a higher proportion of beech and the eastern and central sections have more ash. There is a small fine stand of mature Douglas Fir in the compartment, which would benefit from a very light thin. Retain the mature Douglas Fir for amenity and diversity.



Area dominated by even-aged beech



**Western section for thinning**



**Area dominated by ash**



**A small stand of Douglas Fir**



**An area of thinned woodland, showing natural regeneration of hazel and sycamore**



The main access track

## Future Management

- Ash is the major issue for the next plan period. Options are to thin selecting against the ash, or "hit" the wood harder and take out nearly all ash on the first major intervention. The latter may be netter for both commercial and safety reasons, as ash dieback disease causes trees to become very brittle.
- Most of the compartment can be managed by thinning, selecting against ash, whenever possible. See appendix 7. In places where stems are particularly tall and thin a limited amount of group selection may be referred. But the objective remains to let in light and encourage a mix of coppice and natural regeneration.
- A small part of the site with pure ash will leave small open coupes in the woodland. These will be relatively small and have been estimated at circa 20% of the woodland. In felled coupes natural regeneration is the objective. This will include young ash, which will succumb to disease, but is also expected to include beech, sycamore hazel and other minor species.
- Estimated volume of timber to be removed: 350 cubic metres.
- Sample areas can be marked prior to harvesting work.
- Leave riverside trees and trees on the edge of the Mill Pool unthinned.
- Undertake annual safety inspection of the main track, to manage risk from public use of the site. Plan any necessary safety works into the annual thinning regime.
- If ash is thinned, rather than largely felled at the first intervention, regular monitoring of ash dieback disease will be essential for safety reasons and planning annual thinning work.

## Compartment 2: Byter Mill Copse, 3.2 hectares

### General description

This compartment is more open and is dominated by ash, but also with a few larch remaining from an earlier timber crop. Old maps indicate the southern part was open land and farmed around the turn of the century, but the woodland structure and vegetation is similar throughout.

As well as open ground there are some areas of young planting, notably ash (see photograph below). There are also some woodland shrubs remaining in 30 years old tree shelters, indicating a more active period of woodland management around that time. Older ash trees are interspersed throughout the compartment. Older ash trees are generally more resilient to ash dieback disease, and also have greater wildlife value (ivy for insects, bats and birds and hollows for potential bat roosts and nesting birds). Older trees should therefore be retained as long as possible, and a small number kept as standing dead timber in due course.

An old track through the wood has become overgrown, and the intention is to clean it out and reinstate it to enable better access for future management.



Young ash planting, circa 30 years old



**Retain older ash trees for habitat / wildlife value**



**Woodland track for upgrading / reinstatement**

## Future management

- Restore woodland track
- Thin to favour non-ash species. Some areas of pure ash will require selective felling, with an element of replanting.
- Retain a few ash. Older ash trees with veteran characteristics (ivy and dead wood in branches) have a particular value for wildlife, and are more resistant to ash dieback disease, tending to survive longer. A few healthier trees away from public access may also be retained.
- Replanting is estimated at 1 hectare, or approximately 30% of the area. Restock at 2.5 metres spacing, with the following species in 1.2metre tree shelters:
  - 30% sessile oak
  - 30% wild cherry
  - 10% beech
  - 30% mixed broadleaves
- Leave a corridor along the northern edge unmanaged, to protect otter habitat.
- Relocate any bat boxes at risk from thinning or other felling work.
- Monitor ash dieback disease in any retained trees.

## Appendix 3: History and Heritage

### Past Management

- Believed secondary woodland and not listed on MAGIC as either ancient semi-natural woodland or plantation on an ancient woodland site. But see below.
- The woodland forms part of the Sandridge Estate (see map 9, appendix 1). The earliest recorded occupant of the estate was the *de Sandridge* family, which as was usual took its surname from its seat. Stephan Sandrigge, who during the reign of King Henry II (1154-1189) held it from the Bishop of Exeter as overlord. Following the de Sandridge family was the de Pomeroy family, feudal barons of Berry Pomeroy. Sandridge was purchased by John Dunning (1731–1783), from the 1st Baron Ashburton, and the current house was built in 1805, to designs by Nash for John Dunning's widow. By 1822 it had been leased to Sir Robert Newman.
- 1840s tithe map (see map 4, appendix 1):
  - Plot 511 is described as timber plantation owned by Sir Robert Newman and occupied by Richard Hunt.
  - Plot 510 is listed as owned by Sir Robert Newman and occupied by Richard Hunt and is listed as Alter Wood
  - Plot 509 is described as fir owned and occupied by Sir Robert Newman.
- Plot 510, which covers part of Compartment 2 and an adjacent larch plantation, is shown as non-woodland on early OS maps, circa 1900. Other areas are shown as mixed conifer and broadleaved. (See map 5).
- Previous owner has a photograph from around circa 1900 with slopes much barer and with few trees. This probably relates to tithe plot 510.
- Sycamore and sweet chestnut support secondary designation. However, it could equally be the result of timber management by the Sandridge Park Estate. Given the steep riverside nature of the ground on balance it seems more likely that the main block of woodland is PAWS - a plantation on an ancient woodland site.
- The current dense canopy, with many trees of coppice origin is typical of a woodland where management has ceased. It is quite likely that timber was harvested during the First World War and the wood then left to natural regeneration, in part due to shortages of labour on the land.
- Some felling and replanting work has been undertaken in compartment 2 about thirty years ago. Old Tubex tree shelters found on site have a flared rim, but no laser line to enable the shelters to split as the tree grows. Laser lines were introduced at around 1992, so the planting predates that.
- A felling licence was granted to thin the wood in 2009, with permission to harvest 128 cubic metres. While a small amount of work was undertaken the volume harvested is well under this, and the area thinned significantly less than 10% of compartment 1.
- It is quite likely that more information on the woodlands could be gleaned by research into the Sandridge Park Estate records.



## Appendix 4: Wildlife Records

- DWT survey 2013: The site has long held interest with locals, and one of the current landowners has recently allowed DBRC a copy of an interesting pamphlet containing information about the wildlife recorded at the site in the 1940s by a local resident - Henry Jardine Owen.
- Otters: Detailed otter survey winter 2005 / 2006 revealed regular spraints around the mill pond, in the marshy grassland and on the feeder stream (Devon WT).
- Bat records: not available yet
- Current groundflora includes *Primula veris* (Primrose) *Hyacinthoides non-scripta* (Bluebell), *Mercurialis perennis* (Dog's Mercury), Wild Garlic (*Allium ursinum*) and *Ruscus aculeatus* (Butchers Broom).
- DWT 2013 survey of the wider County Wildlife noted that there are patches where the ground layer is quite bare, with a lot of leaf litter (particularly where beech is frequent in the canopy). Elsewhere, ramsons, bluebell, hart's-tongue and ivy are locally abundant. Soft shield Fern is frequent. Common nettle, bramble, ivy-leaved speedwell, cleavers, lesser celandine, moschatel, navelwort and enchanter's nightshade are locally frequent. Male fern, primrose, hard fern, pignut, broad buckler-fern, butcher's broom and lords-and-ladies have an occasional distribution. Garlic mustard and stinking iris have a rare distribution.
- Tree species
  - *Fraxinus excelsior* Ash Locally dominant
  - *Fagus sylvatica* Beech Second most common species
  - *Castanea sativa* Sweet Chestnut Scattered in compartment 1
  - *Acer pseudoplatanus* Sycamore Uncommon, more frequent western end
  - *Carpinus betulus* Hornbeam Scattered
  - *Prunus avium* Wild Cherry Occasional
  - *Betula pendula* Silver Birch Rare
  - *Pseudotsuga menzii* Douglas Fir One group in compartment 1
  - *Ulmus sp* Elm More common in compartment 2
  - *Quercus petraea* Sessile Oak Local, on drive and at edge of river
  - *Larix kaempferi* Japanese Larch Occasional, compartment 2 only.
- Shrub species
  - *Corylus avellana* Hazel
  - *Ilex aquifolium* Holly
  - *Crataegus monogyna* Hawthorn
  - *Sambucus nigra* Elder
  - *Taxus baccata* Yew Rare
  - *Euonymus europaeus* Spindle Compartment 2
  - *Buddleia davidii* Buddleia Compartment 2

## Appendix 5: Educational Use and Public Access

The following use of the site is current

- Permissive path. The owners allow the general public use of the main carriageway track through much of compartment 1 (see map 13). Access is generally over the tidal mill pool dam.
- A forest school operates in the neighbouring woodland and use the above access through this wood to access their site. <http://www.stokegabrielpreschool.co.uk/forest-and-farm-school>
- A series of ecology surveys have been undertaken over a number of years. Devon Wildlife Trust surveyed the wood in 2013, as part of work to designate a series of County Wildlife Sites. A local bat specialist, Peter Chapman, MCIEEM, has also monitored bats in the wood for a number of years. This includes regular monitoring of a series of bat boxes largely located in the northern sections of the wood. Otter records are also held covering activity along the northern boundary of the site.
- Stoke Gabriel Wildlife Group
- The current and new owners have plans to further develop the use of the woodland on a low key basis for local and specialist wildlife groups.
- Plans for a potential classroom / office are in early stages of preparation.

## Appendix 6: Laurel and Rhododendron Control

There are very small pockets of laurel within the woodland. Laurel was often planted as game cover for young pheasants but is very invasive and if left will spread and smother groundflora. It will also prevent natural regeneration of trees. It is therefore recommended that management steps are taken to eliminate laurel from the woodland.

### Recommendations

- Cut / fell laurel. Branches can be left on the ground to rot, or burnt or chipped if large quantities.
- Treat freshly cut stumps with 20% solution of glyphosate (at 360g/l of active ingredient), for example Round-up Pro-Biactive
- Spray regrowth in September after one growing season, with glyphosate (500ml in 15 litre tank) and preferably with a wetting agent e.g. Mixture B.
- Repeat in subsequent years if needed, until regrowth eliminated.

<https://www.agrigem.co.uk/mixture-b-5l>

<https://www.agrigem.co.uk/roundup-pro-active-360-5l>

<https://www.agrigem.co.uk/clinic-up-5l-weedkiller>

## Appendix 7: Thinning and Thinning Volumes

Thinning to promote timber growth is a regular process that is normally repeated every 5 to ten years. Sufficient light is allowed in to enable trees to increase girth, with a ring of light around each tree. Looking up the aim is for generally 30% sky and 70% tree canopy.

Halo thinning, to promote growth around selected retained trees, focusses on freeing up particular trees to enable them to flourish and develop into mature timber, or for conservation reasons, eventually into veteran trees. This system should be adopted for all trees of particular note, or that are under-represented in the canopy. Use it particularly for oak and also good specimens of wild cherry.

Thinning for conservation can consider opening up the canopy more than 30%. The objective is to not just allow the retained trees to increase girth, but allow in sufficient light for natural regeneration of trees, or the growth of young trees already present, but stunted through competition and a lack of light. A diverse woodland structure with a mixed age of trees and a mix of both timber trees and woodland shrubs is good for wildlife.

This woodland has a particular problem with the very likely loss of large areas of ash due to ash dieback disease (*Hymenoscyphus fraxineus*). In this areas group selection may involve removal of a small coupe of pure ash, creating a small clearing where natural regeneration of other species (beech, sycamore, hazel most commonly) should be encouraged.

In general, aim to thin in favour of

- Oak
- Wild Cherry
- The best Douglas Fir
- Sweet Chestnut (but consider thinning or singling multi-stemmed old coppice stools)
- Hornbeam (probably introduce here, but adds diversity)
- Beech (beech does have a dense canopy and poor groundflora, so only favour over ash or when thinning groups of beech).
- In general select against ash. Crown thinning from ash dieback disease is already present. Over 90% of trees, perhaps 99% are expected to eventually die. Thin most heavily diseased trees first. Felling small coupes, where there is little else, will let in more light and encourage natural regeneration. This could include sycamore and beech, but is also very likely to encourage woodland shrubs and diversify the woodland structure.

NOTE: standing dead timber is also good for wildlife and can be left in areas of the woodland where it is safe to do so. There is no legal obligation to clear diseased ash, but safety reasons dictate felling it near public access routes. If left standing dead it becomes brittle and increases risks felling by chain-saw, with risks from major limbs breaking during work. Therefore timely felling is important.

<https://www.forestresearch.gov.uk/tools-and-resources/pest-and-disease-resources/ash-dieback-hymenoscyphus-fraxineus/>

<https://www.rfs.org.uk/media/441708/2-improving-your-woodland.pdf>

<https://www.woodlands.co.uk/owning-a-wood/managing-your-woodland-for-wildlife/managing-your-woodland-for-wildlife.pdf>

## Volume of Wood to be thinned

The volume of wood to be removed will be significantly affected by the volume of Ash affected by ash dieback disease.

- The timber is growing at perhaps 8 cubic metres per hectare per annum (yield class 6 to 8).
- The theoretical maximum sustainable yield is therefore perhaps 65 cubic metres per annum.
- However, compartment 2 is under-stocked, and riverside sections of the wood require less intervention. Therefore a realistic yield for the wood is perhaps 40 cubic metres per annum.
- There is backlog of work, with a very dense canopy, which will increase initial thinning volumes.
- The likely group felling of ash will also provide larger volumes while ash dieback disease is managed.
- Area of woodland:
  - Compartment 1, 5.13 hectares, thin say 4 hectares, leaving 1 hectare along riverside unthinned. **Estimated volume 350 cubic metres of timber.**
  - Compartment 2, 3.3 hectares, lighter thin, but more coupes, **estimated volume 150 cubic metres.**
  - **Total volume for felling licence: 500 cubic metres**
- Note this compares with a previous volume on the felling licence of only 128 cubic metres, and that volume was never harvested. This emphasises the need to work with a local contractor with good firewood outlets to achieve the desired level of management.
- It may be necessary to undertake some group felling and replanting of ash areas, to be reviewed as the plan evolves. If group felling is undertaken, then initially leave for two years to assess levels of natural regeneration. This is likely to include woodland shrubs as well as tree species, which is fine for a woodland managed for conservation.

## Restocking

- A thinning licence does not require restocking.
- With ash dieback disease small coupes are likely to open up in the woodland, and may be larger in compartment 2, which is more open and has a high percentage of ash. These coupes may need restocking.
- The first choice for restocking within small coupes will be natural regeneration. Ash does seed prolifically, but young ash is particularly susceptible to ash dieback disease, and therefore all other species should be encouraged. Based on current woodland conditions, it is likely that a range of woody shrubs will seed in, but also beech and sycamore are likely. Wild cherry may seed or spread by suckers, where it is present. Elm is also present, especially in compartment 2, and is worth persevering with, despite Dutch Elm Disease.
- Oak, and to a lesser extent sweet chestnut, are less likely to seed in.

## Appendix 16: Adding Value

### Firewood

Firewood will be the main crop from this woodland. Access is limited, with tracks not suitable for a forestry forwarder or for timber lorries to reach the site. Therefore a local firewood contractor selling into local markets is desirable. Seasoning will increase value of firewood. This can be undertaken by storing on site in stacked cordwood lengths, or some may be processed, cut and split and stored under cover in the proposed forestry barn.

### Harvesting

**Andrew Harvey.** Recommended by Rob Biss, has recently worked for National Trust near Kingswear and has a medium sized business capable of handling the work. He does sell firewood.

Telephone 07966 040893.

[andrew.hartley33@hotmail.com](mailto:andrew.hartley33@hotmail.com)

Based at Kingkerswell, Newton Abbot

[https://www.facebook.com/Hartleys-1702246473235706/?ref=py\\_c](https://www.facebook.com/Hartleys-1702246473235706/?ref=py_c)

**Doug King-Smith, Hillyfields Woodland.** Doug is based in Totnes. He is looking to expand beyond Hillyfields with a network of associates. Doug does operate a mobile bandsaw at his own woodland. Doug: I am planning to set up a Hillyfield Woodland-work team with a few good guys in our network. Remember Paul Tyler (planning expert?). We've been working closely together since the inquiry and hope to take on local woodlands for management. Also a couple of others with lots of woodland management / tree surgery experience (Ally Loze - Wood Done Good, and Richard Kleinjans who was a Hillyfield team member for over a year). Willing to come and have a look.

<https://www.thehillyfield.co.uk/contact>

[dougekingsmith@yahoo.co.uk](mailto:dougekingsmith@yahoo.co.uk)

Telephone 07976 589927

### Mobile saw-milling

All hardwoods have potential for mobile milling, although many mobile services charge to process the wood and do not buy or sell on the produce. There is a risk of having a huge volume of planked timber to store on site and then having to look for markets. You may be able to negotiate a deal to share the produce. The limited Douglas Fir thinnings would also be worth milling.

#### **Devon Sawmills Mobile Sawmill Hire**

With operator £385 per day; this includes 2 blades and diesel.

*Contact:* Rob Biss. Currently based in Ivybridge

*T:* 01803 526966

*M:* 07973 543585

✉ [devonsawmills@yahoo.co.uk](mailto:devonsawmills@yahoo.co.uk)

Rob is willing to undertake a site visit no obligation. Interested in hardwoods. Works closely with Andrew Harvey.

<http://www.anton-coaker.co.uk/mobsaw.htm> Dartmoor based.

## Ash for Hurling Sticks

The base of medium and small sized ash has a potential market for hurley sticks. Trees must be cut very low, to retain the curve at the base where the root buttresses sweep into the main trunk. The price can be from £50 to £190 per cubic metre, although markets may be affected by ash dieback disease.

See <https://lockhart-garratt.co.uk/lucrative-market-ash-part-2/>

However ash dieback disease is likely to discolour and weaken the timber, reducing the potential for this end use.

## Other Contacts from South West Woodland Directory

[https://www.woodland-directory.org.uk/?select=Forestry+Contractor&lp\\_s\\_loc=41&lp\\_s\\_tag=&lp\\_s\\_cat=54&s=home&post\\_type=listing](https://www.woodland-directory.org.uk/?select=Forestry+Contractor&lp_s_loc=41&lp_s_tag=&lp_s_cat=54&s=home&post_type=listing)

<https://ecsherecontracting.co.uk/>

<http://www.dartmoorhorseloggers.co.uk/> Potential for extracting difficult sites, but more expensive than forestry winching.