

Sevenoaks Greensand Commons Project

Seal Chart

Ecological Scoping & Outline Nature Conservation Management Plan



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Contents

1	INTRODUCTION	1
1.1	Background	1
1.2	Survey Location / Area	1
1.3	Limitations and Constraints	2
2	METHODOLOGY	6
2.1	Desktop Study	6
2.2	Site Visit	6
2.2.1	Preliminary Phase 1 Habitat Survey	7
2.2.2	Preliminary Woodland Condition Survey	7
2.2.3	Preliminary Veteran Tree Check	7
2.2.4	Preliminary Identification of Access Issues	7
3	RESULTS	8
3.1	Designated Nature Conservation Sites	8
3.2	Geology and Soils	8
3.3	Habitats	9
3.4	Preliminary Woodland Condition Survey	20
3.5	Preliminary Veteran Tree Check	28
3.6	Species	28
3.7	Identification of Access Issues	33
4	ENHANCEMENT OPPORTUNITIES	36
4.1	Site Evaluation	36
4.2	Preliminary Habitat Management	39
4.2.1	Preliminary Habitat Management Suggestions	39
4.2.1.1	Management of Existing Woodland Areas	39
4.2.1.2	Management of Heathy Areas	41
4.2.1.3	Management of Boundary Hedgerows and Woodbanks	42
4.2.1.4	Restoration of Dry Pond	42
4.2.1.5	Management of Grassland Areas	42
4.3	Additional Survey Work	44
5	REFERENCES	45
	APPENDIX A: Site Photographs	46
	APPENDIX B: SSSI Citation	69
	APPENDIX C: Preliminary Woodland Condition Survey	72

1 INTRODUCTION

1.1 Background

Sevenoaks District Council, working in conjunction with Kent Wildlife Trust, has secured funding from the Heritage Lottery Fund to enhance the natural heritage of eight Commons occurring within Sevenoaks District.

The Commons, which include - Hosey Common, Farley Common, Crockhamhill Common, Bitchet Common, Fawke Common, Seal Chart & Redhill Woods, Sevenoaks Common, and a small Common in Weald village in Sevenoaks – cover an area of nearly 300ha of varied habitats ranging from high forest to coppiced woodland and rare wooded heath. The Commons are connected to the long distance Greensand Way path which runs along the ridge and joins the National Trust properties of Chartwell, Knole and Ightham Mote. An overview map showing the location of each of the Commons is included at Figure 1.

For the purposes of this project the eight Commons are collectively known as the Sevenoaks Greensand Commons. They are some of the most beautiful wild places in the south east, but have become overgrown and undervalued.

The aim of the project is to turn the tide and reignite a sense of value and interest in the natural heritage of the Commons by recruiting and training volunteers and implementing an exciting programme of practical restoration, public participation in scientific research and heritage learning activities. It will see the landowners and stakeholders coming together to engage local people and support a shared effort to restore, protect and manage these Commons. It will also develop Friends of the Commons groups, as well as building the skills and capacity of local people to protect, manage and promote the heritage of the Commons for present and future generations.

Under-pinning this work is the provision of a series of ecological scoping and outline nature conservation management reports which will identify and evaluate the existing biodiversity features (habitats and species) known to occur on the Commons, and make outline recommendations for nature conservation management aimed at maintaining and enhancing the existing biodiversity interest of each Common.

Seal Chart is owned by the Knole Estate and managed by Sevenoaks District Council.

This report presents the findings of the desktop study and site walkover of Seal Chart Common.

1.2 Survey Location / Area

Seal Chart Common lies approximately 1km to the southeast of Seal and 3km to the southeast of Sevenoaks.

It comprises three main areas as named below:

- Seal Chart and Redhill Wood. Central OS grid ref:TQ566561/ Area: approx. 60ha
- Larchwood. Central OS grid ref: TQ574560 / Area: approx. 3.9ha
- Part of Flanes Wood. Central OS grid ref: TQ572551 / Area: approx. 1.3ha

A fourth area included within the remit for this report– St Lawrence Sandpit, located at central OS grid reference TQ76548 and covering approximately 6.8ha - is shown on the Magic website¹ as a second Common called ‘Area of land situated to the south of the Primary School’.

Redhill Wood and Larchwood, together with several other sites in the area, form part of the manorial wastes of the Knole Estate. Seal Chart, and the small area of Flanes Wood are also owned by the Knole Estate, forming part of the Outside Woods (Crichton Maitland & Co., 1993).

The largest block of Common land – Seal Chart and Redhill Wood – is bisected by the A25 Maidstone Road running in a north-east / southwest direction. This area also has seven areas which are excluded from the Registered Common / Open Access land (Figure 7).

Seal Chart Common is surrounded by a mix of broadleaved, mixed and conifer woodland, grassland and arable with some roads.

St Lawrence Sandpit is bounded by broadleaved and mixed woodland along its northern boundary, with grassland, scrub woodland and an intensively managed orchard present along its southern boundary.

A map and aerial photographic extract showing the general location and boundaries of the Common are included at Figures 2 and 3.

1.3 Limitations and Constraints

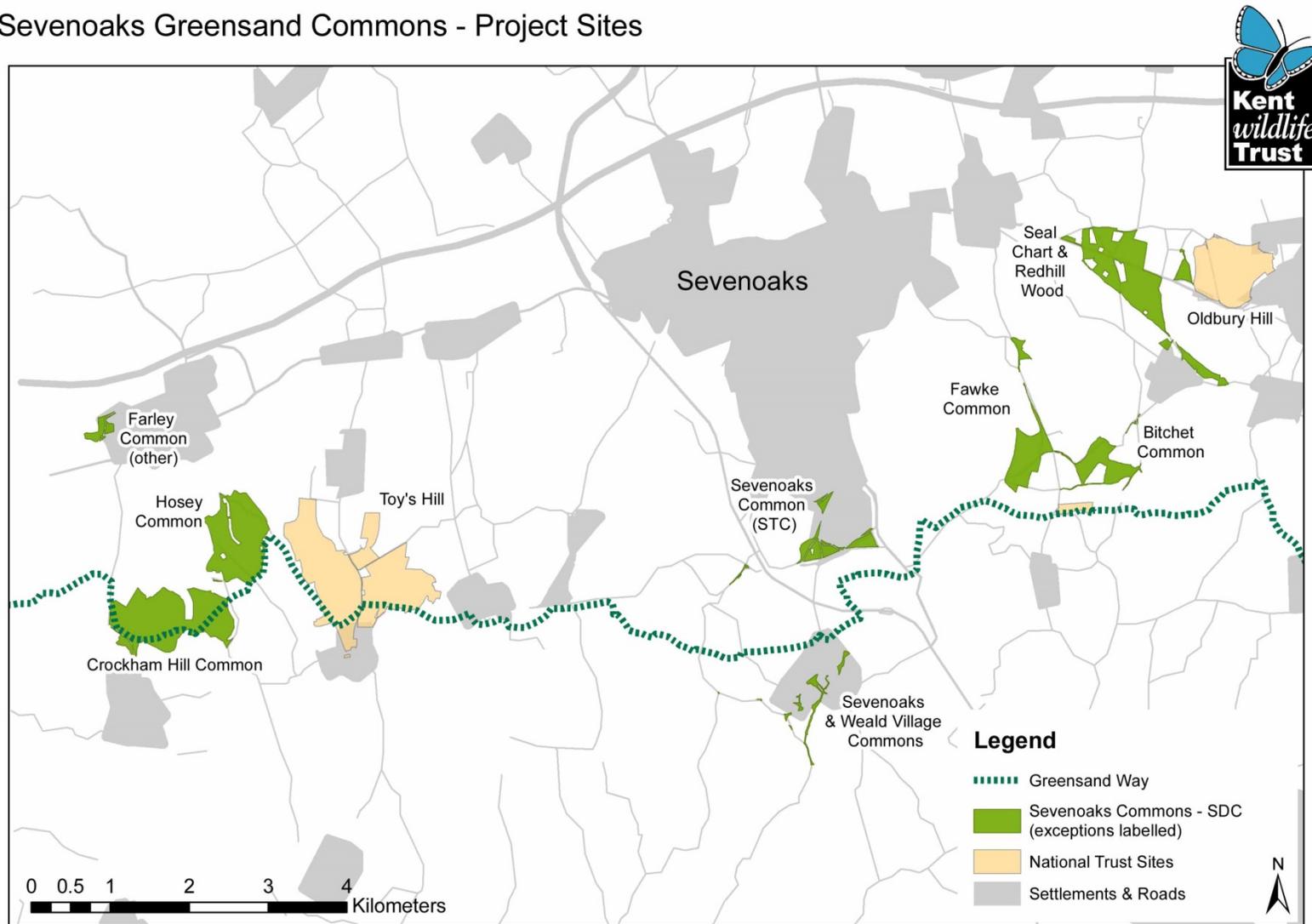
The timing for the delivery of this HLF project has imposed limitations on this element of the work in terms of time.

The time constraints have meant that it has only been possible to make a single site visit to the Common. This will have impacted the detailed recording of the site and limited the overall number of species recorded. However, it is unlikely to have impacted the identification / evaluation of important habitats or their potential to support protected species.

It should also be noted that the findings of this report represent the professional opinion of a qualified ecologist and do not constitute professional legal advice.

¹ See map at <http://www.magic.gov.uk/MagicMap.aspx?chosenLayers=commlIndex,crowlIndex,backdropDIndex,backdropIndex,europelIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=556565:154260:558236:155474&useDefaultbackgroundMapping=false>

Sevenoaks Greensand Commons - Project Sites



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Figure 1: Sevenoaks Greensand Commons. Overview Map

Sevenoaks Greensand Charts and Commons - Project Sites - Seal Chart and Redhill Wood

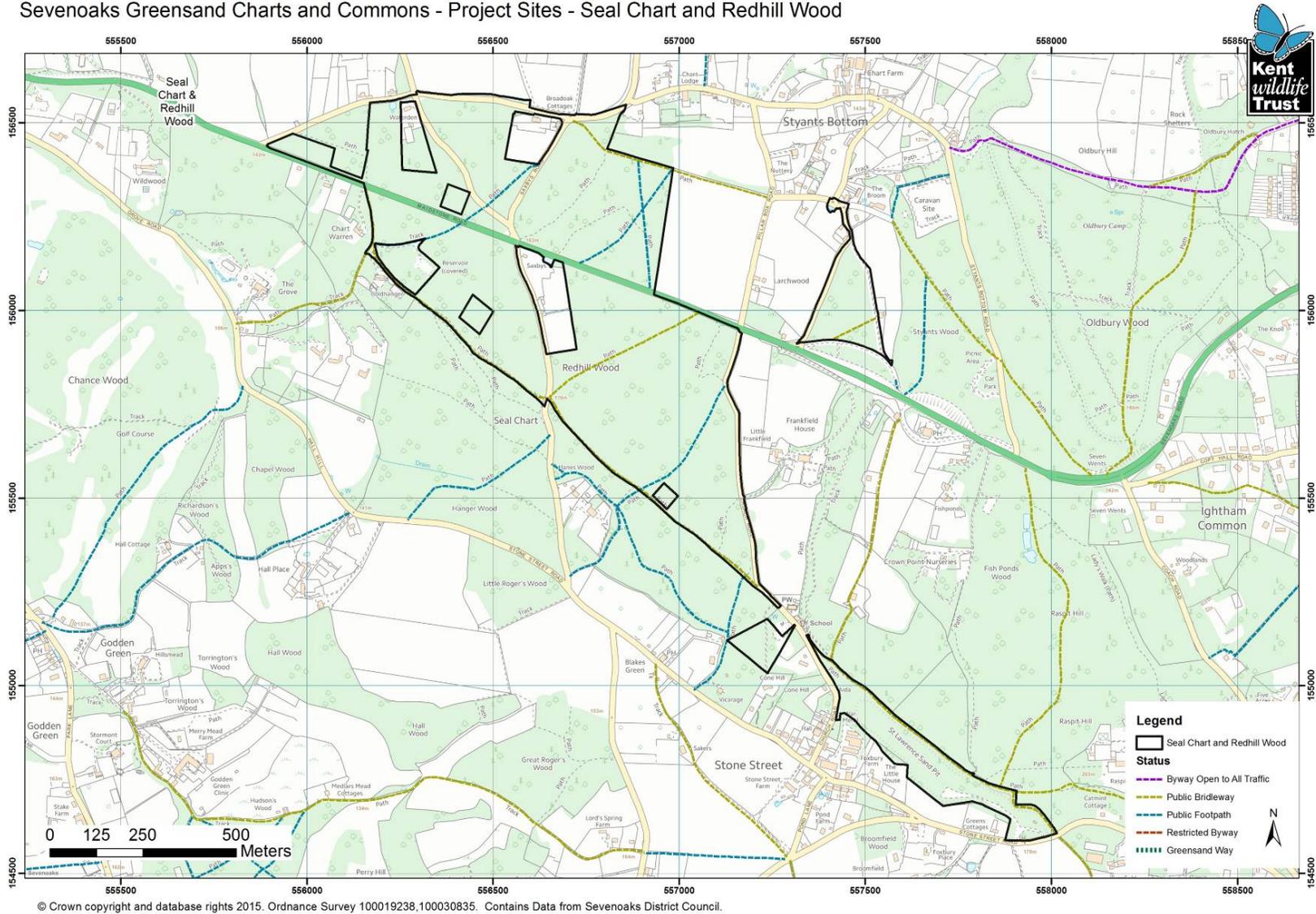


Figure 2: Seal Chart Common. Site Location and Boundary Map



Figure 3: Seal Chart Common. Google Earth Aerial photographic extract (imagery date 1 January 2008) showing the boundary of the Common (outlined in red). *All boundaries are indicative only. Do not scale*

2 METHODOLOGY

2.1 Desktop Study

A number of sources were consulted for records of statutory and non-statutory wildlife designations, notable habitats and protected / notable species. These comprised:

- Kent and Medway Biological Records Centre ² (KMBRC)
- Kent Reptile and Amphibian Group ³ (KRAG)
- Kent Wildlife Trust (KWT)

KMBRC was asked to carry out a database search of Seal Chart Common. They were asked to provide information relating to the following:

- Statutory and non-statutory designated nature conservation sites
- Identification, distribution and extent of habitats⁴
- Protected Species Inventory
- Conservation Concern Species Inventory (NERC Section 41 & BAP Priority)
- Invasive Non-native Species Inventory
- Kent Rare & Scarce Species Inventory
- Bat records from Kent Bat Group (including map of nearby roost locations)
- Bird records from Kent Ornithological Society, including an indication of breeding
- Habitat data from the Kent Integrated Habitat Survey 2012⁵
- BAP habitat data from the Kent Integrated Habitat Survey 2012

KRAG was asked to provide information relating to the following:

- Inventory of reptiles and amphibians
- Inventory of ponds

KWT utilised open source data, such as that provided by the British Geological Society⁶, for information relating to geology and the Soilscales website⁷ for information relating to soils.

2.2 Site Visit

Seal Chart Common was visited on 12th, 13th, 15th and 23rd June 2017 by Neil Coombs CEnv MCIEEM, Land Management Advisor for Kent Wildlife Trust. Weather conditions at the time of all survey visits were sunny.

The walkover survey comprised four elements: a Phase 1 Habitat Survey; a preliminary Woodland Condition Assessment; a preliminary veteran tree check; and a preliminary check for access issues.

² www.kmbrc.org.uk

³ <http://www.kentarg.org/>

⁴ Identification of habitats are based on the results of the Arch Habitat Survey of Kent – available to view at <http://www.archnature.eu/mapping-tools.html>

⁵ <http://www.archnature.eu/mapping-tools.html>

⁶ <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

⁷ <http://www.landis.org.uk/soilscales/>

2.2.1 Preliminary Phase 1 Habitat Survey

The habitat survey was undertaken in general accordance with Phase 1 Habitat Survey methodology, which provides a standardised system for classifying and mapping wildlife habitats (JNCC, 2010). The survey involved mapping vegetation types onto aerial photographs⁸, in terms of some ninety specified habitat types, using standard colour codes. Further information is gained from the use of descriptive ‘target notes’, which give a brief account of particular areas of interest.

2.2.2 Preliminary Woodland Condition Survey

The methodology used for the preliminary woodland condition survey was adapted from the Common Standards Monitoring Guidance for Woodlands⁹ (JNCC, 2004), and the Condition Assessment Monitoring Form for Woodlands¹⁰ (Essex Wildlife Trust). It targeted the woodland areas only and provided basic information relating to:

- Woodland type (i.e. native / secondary / scrub / PAWS / broadleaved / conifer)
- Main species composition and main compartments
- Stand type i.e. coppicing, maiden, plantation
- Age class
- Evidence of historic features i.e. wood banks (limited to what is noted during walkover only)
- Evidence of existing management
- General Condition Assessment i.e. actively managed, neglected, unmanaged.

2.2.3 Preliminary Veteran Tree Check

The aim of the preliminary veteran tree check was to:

- Establish presence / absence of veteran trees on site.
- Provide general location data for trees e.g. ‘veteran trees are mainly concentrated in the southern end’, or ‘scattered throughout the site’
- Provide general information about main species noted i.e. oak, hornbeam, ash, etc.

2.2.4 Preliminary Identification of Access Issues

The preliminary identification of potential access issues was based on what is evident during the site walkover. It included noting the presence of formal / informal paths, existing car parks, apparent use of site i.e. Dog walkers, families, recreation, evidence of fly-tipping or unauthorised vehicular use.

A series of photographs taken during the site visit are included at Appendix A.

⁸ Using the Phase 1 Habitat Survey Toolkit <https://www.brookes.ac.uk/bms/services/ceec/phase-one-habitat-survey-toolkit/about/>

⁹ Document available to download from http://jncc.defra.gov.uk/pdf/CSM_woodland.pdf

¹⁰ Form available to download from <http://www.essexwtrecords.org.uk/sites/default/files/surveyfiles/EWT%20woodland%20condition%20assessment%20form%20amended%2014%2003%2012.pdf>

3 RESULTS

For clarification: unless otherwise specified, Seal Chart Common and St Lawrence Sandpit are referred to collectively as Seal Chart Common.

3.1 Designated Nature Conservation Sites

With the exception of the eastern part of Compartment 13 (included within Flanes Wood, see Figure 6), the remainder of Seal Chart Common is included within Oldbury and Seal Chart SSSI¹¹ (Appendix B).

The Site Management Statement for Oldbury and Seal Chart SSSI prepared for Sevenoaks District Council by English Nature in 2001, describes the nature conservation importance of the SSSI as follows: “*Oldbury and Seal Chart SSSI includes the best remaining habitats on the Greensand Ridge. Its habitats vary according to the underlying geology and the land use history. Parts of the site, on the most acidic sands, are open heathy woodland, dominated by sessile oak Quercus petraea; others on wetter or more lime-rich soil are denser woodland. Where soils are heavier, common oak Quercus robur is the dominant tree, often with hazel Corylus avellana and planted sweet chestnut Castanea sativa. Here the ground vegetation is typical of woods in the Weald, with bluebell Hyacinthoides non-scripta, bracken Pteridium aquilinum and bramble Rubus fruticosus agg.. On the more lime-rich areas of the escarpment the woodland is dominated instead by ash Fraxinus excelsior and field maple Acer campestre and the ground vegetation includes dog’s mercury Mercurialis perennis and sweet woodruff Galium odoratum.*

Where soils are more fertile, bracken has become dominant and is suppressing the other heathy plants – in the past cattle-grazing and cutting for animal bedding would have meant bracken was more scattered. The open heathy habitats support many specialist animals, plants and fungi – for example, solitary bees and wasps, many of which nest in burrows in sandstone outcrops and on the edges of tracks where they are exposed to the sun.

In some parts of the site invasive rhododendron Rhododendron ponticum scrub is threatening both the open and the wooded habitats by smothering the ground with dense shade.

Among the species which have been recorded from this acidic SSSI are some which are more usually found in the north and west of Britain, where acidic habitats are more common. They include several of the 250 or so species of fungi found here, and a solitary bee Andrena lapponica. Other scarce or rare species are known only from the warmer southern part of Britain – such as a snail Phenacolumax major. Some birds of open heathy habitats, such as the redstart, still occur here – but the nightjar is now extinct on the site.

3.2 Geology and Soils

The British Geological Survey website¹² indicates that the bedrock geology underlying the Common comprises, “Folkestone Formation – Sandstone. Sedimentary Bedrock formed

¹¹ SSSIs are the country’s very best wildlife and geological sites. They hold some of our rarest and most threatened wildlife and geology. SSSIs are legally protected under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CROW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006.

approximately 100 to 125 million years ago in the Cretaceous Period. Local environment previously dominated by shallow seas.”

Superficial deposits are present across some, but not all of the Common and are described as, “Head - Clay, Silt, Sand And Gravel. Superficial Deposits formed up to 3 million years ago in the Quaternary Period. Local environment previously dominated by subaerial slopes.”

The Soilscales website¹³ has identified the soils across Seal Chart as being ‘Freely draining slightly acid loamy soils’¹⁴. These soils are described as giving rise to neutral and acid pastures and deciduous woodlands.

Geology and soil maps are available to view on the British Geological Survey and Soilscales websites. Owing to copyright restrictions it is not possible to include map extracts within this report.

There is one Kent Regionally Important Geological and Geomorphological Site (RIGS)¹⁵ located immediately to the east of Larchwood – Oldbury Hill, Ightham (Site No: T&M 6 RIGS). The reason given for designation is that, “*This is an important site for appreciating the relationship between geology/geomorphology archaeological and present land-use/natural (plant and animal) habitats, etc. A number of the outcrops have overhanging ledges formed by the hard Oldbury Stone and these were apparently used as Palaeolithic cave and rock shelters. Oldbury Stone and Ightham Stone was also used as strengthening ballast for the earthworks of the fort and as a local building stone, particularly well seen in Oldbury village.*”¹⁶

3.3 Habitats

The 2012 Kent Habitat Survey shows Seal Chart Common as being dominated by ‘WB3 broadleaved woodland’¹⁷ with a significant block of ‘WB31Z beech and yew woodland’¹⁸, and discrete areas of ‘WB1 Mixed Woodland’¹⁹ and ‘HE11 European dry heath’²⁰. The habitat map provided by KMBRC is attached at Figure 5.

The woodland areas are considered to be of ancient origin as evidenced by their inclusion on the ancient woodland inventory²¹. The Kent Habitat Survey also identified that the

¹² <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

¹³ <http://www.landis.org.uk/soilscales/#>

¹⁴ Soilscale 6

¹⁵ RIGS are geological sites that are important for historical, scientific research or educational reasons. The Kent RIGS Group, Natural England and Local Authorities work together to protect and maintain them for these purposes.

¹⁶ The citation and map is available to view on the GeoConservation in Kent website at http://www.kentrigs.org.uk/index.php?option=com_content&view=article&id=29&Itemid=21

¹⁷ WB3: ‘Dry’ woods predominantly composed of broadleaf and yew species (i.e. with >80% broadleaves and yew (*Taxus baccata*) in the canopy).

¹⁸ WB331Z: Includes woods where beech is not considered native; and woods on acid soils where beech is native but the wood is not rich in epiphytes, or does not contain other ‘old growth’ characteristics

¹⁹ WB1: 20-80% of either broadleaved or conifer in the canopy. The canopy is not necessarily intimately intermixed

²⁰ HE11: Heather dominated or co-dominated dry heath vegetation.

²¹ See map at

<http://www.magic.gov.uk/MagicMap.aspx?chosenLayers=ancwoodIndex,backdropDIndex,backdropIndex,europeIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=554861:154489:558202:156918&useDefaultBackgroundMapping=false>. Ancient woodland in England is defined as an area that has been wooded continuously since at least 1600 AD. Woodlands classed as ancient are irreplaceable, with ancient woodland being considered important for its wildlife, soils, recreation, cultural value, history and contribution to landscapes.

broadleaved woodland and beech and yew woodland areas of Seal Chart Common are included on Natural England's Priority Habitat Inventory as 'Lowland mixed deciduous woodland'. This is further confirmed by the Magic website.

A woodland management plan (Crichton Maitland & Co. September 1993), describes the historic development of the Knole Manorial Waste Woodlands (which includes Seal Chart Common) as appearing to, *"have been wooded in prehistoric times, although grazing animals may have created and maintained transient grades. Clearing by man and grazing by domestic stock seems to have been completed by the time that the Domesday Book was compiled with the stand types varying from woodland to open heath with varying amounts of trees."*

A Site Management Statement prepared by English Nature in 2001²² provides the following description of the areas of land within the SSSI owned by Knole Estate and managed by Sevenoaks District Council (Figure 4):

"Seal Chart comprises largely acidic habitats. The area to the north of the A25 is more densely wooded and primarily managed as high forest. It is dominated by sessile oak with some beech Fagus sylvatica and Scots pine Pinus sylvestris with an understorey of silver and downy birch Betula pendula and B. pubescens, gorse Ulex europaeus, whitebeam Sorbus aria, rowan Sorbus aucuparia, elder Sambucus nigra, goat willow Salix caprea, alder buckthorn Frangula alnus and occasional hazel Corylus avellana. There is abundant natural regeneration of sessile oak. The ground flora comprises bracken, bilberry Vaccinium myrtillus and bramble, with heather Calluna vulgaris, common cow-wheat Melampyrum pratense, honeysuckle Lonicera periclymenum and wavy hair-grass Deschampsia flexuosa in the more open areas. The western area has suffered storm and fire damage and has a more grassy ground flora. Pine Pinus sp. has been planted into the eastern part of the site. Sycamore Acer pseudoplatanus and rhododendron occur sporadically. There is a heathy glade and several rides / paths through the site.

The area to the south of the A25 is much more open with relatively few mature trees, although there is an area of sessile oak coppice in the north east. The area has heathy vegetation with great potential for enhancement. Part of this area has been planted up."

²² English Nature. 24 April 2001. Site Management Statement: One Tree Hill and Bitchet Common SSSI

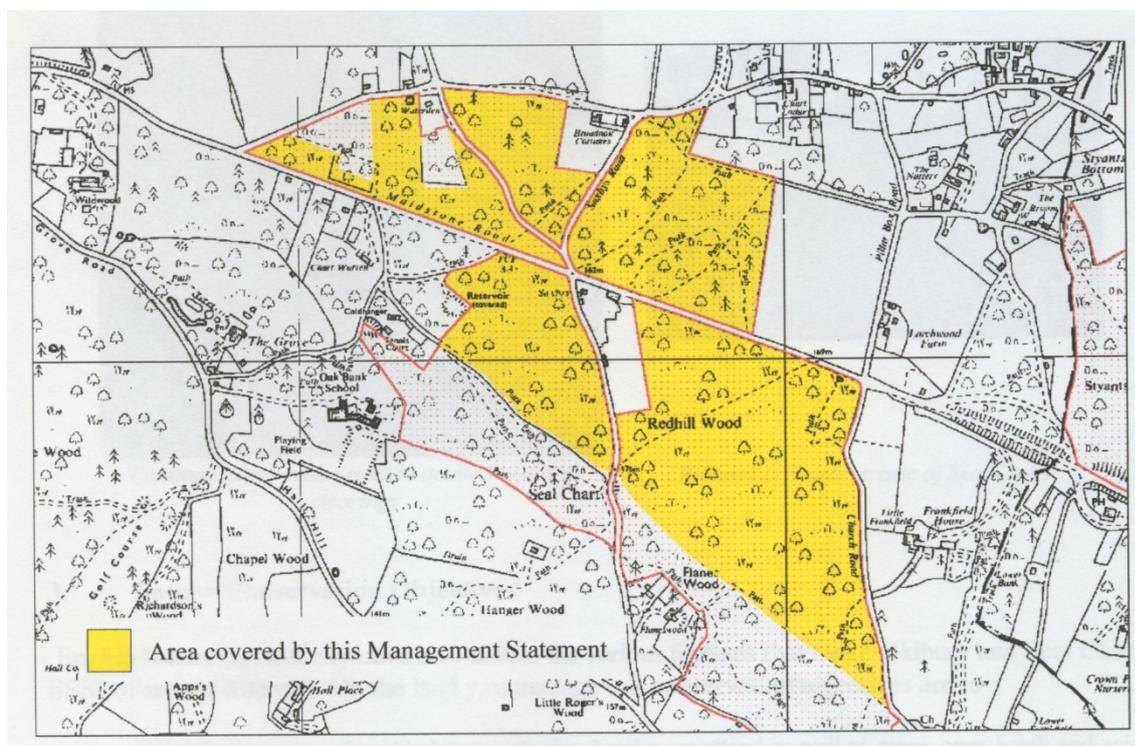


Figure 4: Oldbury and Seal Chart SSSI. Map showing area owned by Knole Estate and managed by Sevenoaks DC (Map extracted from English Nature Site Management Statement, 2001)

Seal Chart Common has been managed previously under several Woodland Grant Schemes²³. The Magic website indicates that only Compartment 13 is currently being managed under any Forestry / Agri-Environment Scheme, where it is included within a much larger area currently being managed under Entry Level plus Higher Level Stewardship (Agreement Ref No: AG00351070. Start Date 1 June 2011²⁴).

There is no evidence to suggest that St Lawrence Sandpit has been managed under any Forestry / Agri-Environment Scheme.

The 2017 Phase 1 Habitat Survey results were broadly similar to previous descriptions of the site, confirming that Seal Chart Common is dominated by broadleaved semi-natural woodland with discrete areas of heathy vegetation and a little improved grassland. The site walkover also identified one habitat not previously mentioned - a dry pond located at the northern end of Larchwood.

St Lawrence Sandpit comprised a steep-sided quarry dominated by tall pine and fringed by broadleaved woodland along its northern boundary with broadleaved woodland.

²³

<http://www.magic.gov.uk/MagicMap.aspx?chosenLayers=ewgsPIndex,ewgsIndex,backdropDIndex,backdropIndex,europeIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=554496:154402:557837:156831&useDefaultbackgroundMapping=false>

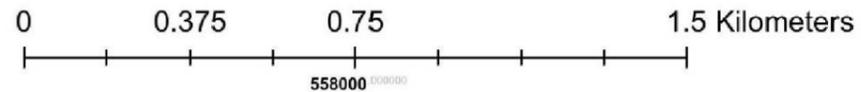
²⁴

<http://www.magic.gov.uk/MagicMap.aspx?chosenLayers=esagIndex,backdropDIndex,backdropIndex,europeIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=554718:154063:558060:156492&useDefaultbackgroundMapping=false>

The Phase 1 Habitat map is enclosed at Figure 6.

Compartments 1 – 15 and Target Notes 1 – 23, included at Table 1, provide descriptions of the habitats and other features encountered during the site walkover. Photograph numbers referred to are included at Appendix A.

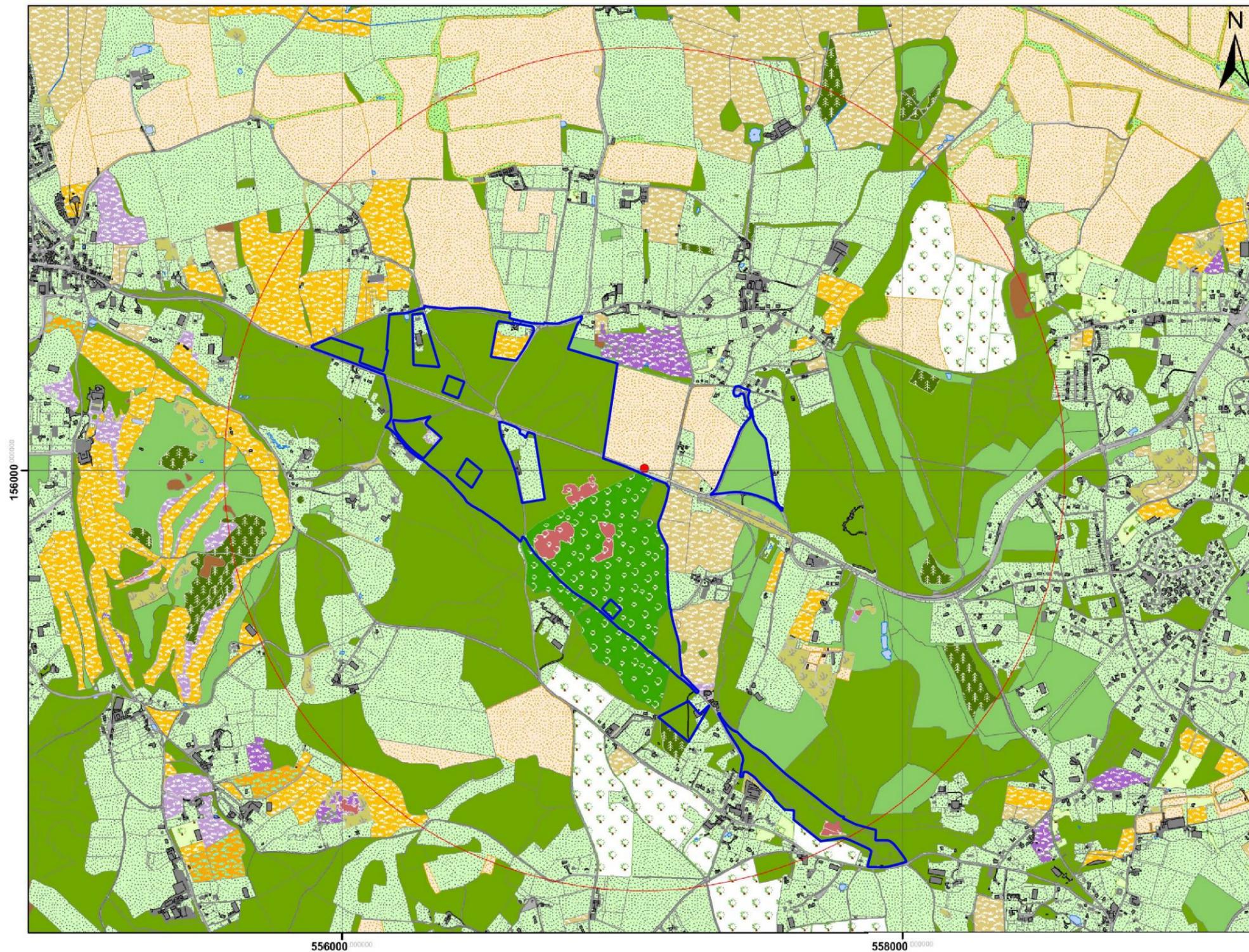
Kent & Medway Biological Records Centre
 Map showing the habitats recorded by the Kent Habitat Survey 2012 at
 Seal Chart & Redhill
 Anne Waite, Kent Wildlife Trust
 ENQ/17/128 27/03/2017



KMBRC would like to acknowledge Kent County Council and the Kent Habitat Survey 2012 for the habitat data used in this map. See www.archnature.eu/ for more information

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KEY

- Study Area
- Site Point
- Kent Habitat Survey 2012**
- Urban and industrial environment (LF, UR, RE)**
 - Transport network
 - Built road verge
 - Buildings or general built surface
- Agriculture and improved grassland (GI, CR, FT)**
 - Improved grassland
 - Arable
 - Arable field margin
 - Intensively managed orchard
 - Traditional orchard
- Neutral grassland (GN)**
 - Semi-improved lowland meadow
 - Coarse neutral grassland
 - Semi-improved neutral grassland
- Acid grassland (GA)**
 - Lowland dry acid grassland
 - Semi-improved lowland dry acid grassland
- Woodland (WB, WC)**
 - Mixed woodland
 - Scrub woodland
 - Broad leaved woodland
 - Beech and yew woodland
 - Plantation coniferous woodland
- Heath and bracken (HE, BR)**
 - European dry heath
 - Continuous bracken
- Water (AS, AR)**
 - Open standing water, fresh
 - Rivers and streams, fresh

Figure 5: Seal Chart Common. Kent Habitat Survey, 2012. For ease of reference Seal Chart is shown outlined in blue

Table 1: Seal Chart Common Compartment Descriptions / Target Notes

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR ²⁵)) during 2017 walkover
Cmpt 1	Broadleaved semi-natural woodland (0.14ha)	<p>A linear woodland feature with a relict woodbank to the northern field boundary (Photo 1). The eastern end is a woodland shaw > 5m wide, which narrows to a hedgerow at the western end.</p> <p>The understorey is dominated by coppiced hazel with some beech and oak as standards. Coppiced oak and beech (some of the coppiced beech may qualify as veterans) (Photo 4), and holly are present on the woodbank (Photo 3).</p> <p>The hedgerow comprises 100% native broadleaved species and therefore qualifies as S41 Habitat of Principal Importance (formerly UKBAP Priority Habitat)^{26, 27} (Photo 2).</p>	Bracken <i>Pteridium aquilinum</i> , bramble <i>Rubus fruticosus</i> agg., common nettle <i>Urtica dioica</i> .
Cmpt 2	Broadleaved semi-natural woodland (4.86ha)	<p>This compartment has features typical of former wood pasture / wooded heath with mostly even-aged, recently established high canopy woodland. The woodland is comprised of mostly oak with some beech standards over bilberry and bracken (Photo 5 and 6).</p> <p>Common cow-wheat <i>Melampyrum pratense</i> is present.</p> <p>There is little understorey present as would be expected in a traditional worked woodland, suggesting the area may once have been more open, possibly managed with grazing (Photo 7). There are mature beech and oak to Styants Bottom Road (Photo 8).</p> <p>Cherry laurel <i>Prunus laurocerasus</i> is present in this compartment.</p>	Bilberry (A); bracken (F); common cow-wheat, false brome <i>Brachypodium sylvaticum</i> , ivy <i>Hedera helix</i> , bramble, gorse.
Cmpt 3	Broadleaved semi-natural woodland (4.48ha)	<p>Broadleaved woodland dominated by oak and beech standards with occasional pollards; there are also a few examples of coppiced trees (Photo's 9 & 10).</p> <p>There is much evidence of natural regeneration with younger oak and beech becoming established, along with birch (Photo1534).</p> <p>Ground flora is generally sparse with some bracken as well as bilberry, which was locally abundant particularly</p>	Bilberry, bracken.

²⁵ DAFOR = **D**ominant; **A**bundant; **F**requent; **O**ccasional; **R**are

²⁶ There are 56 "habitats of principal importance" on the S41 list. These are the habitats in England identified in the UK Biodiversity Action Plan which continued to be priorities in the new UK Post-2010 Biodiversity Framework

²⁷ All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are considered to be UKBAP priority habitat jncc.defra.gov.uk/Docs/UKBAP_BAPHabitats-17-Hedgerows.doc

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR ²⁵)) during 2017 walkover
		<p>in the western section, between the excluded area and the road.</p> <p>A woodbank can be seen close to the smaller excluded area (Photo 11).</p> <p>A large holly bank is present leading up to excluded area (Photo 12).</p> <p>Towards the west of the compartment the woodland appears slightly older; bilberry is still present (Photo 13).</p> <p>Rhododendron was recorded in this compartment.</p>	
Cmpt 4	Broadleaved semi-natural woodland (0.96 ha)	<p>Dense broadleaved woodland (Photo 16) with considerable fallen wood, possibly as a result of storm damage. Few, if any, characteristics to indicate that the woodland has been traditionally managed, and it is possible it is former wood pasture / wooded heath.</p>	Gorse (O); bracken, bramble.
Cmpt 5	Broadleaved semi-natural woodland (12.31 ha)	<p>A diverse woodland compartment that changes in character at various points, and could easily be divided into sub-compartments according to age, species and structure.</p> <p>There are areas dominated by high forest (Photo 17), some with a holly understory and some with abundant bilberry.</p> <p>Some areas have considerable natural regeneration under a high forest canopy (Photo 18).</p> <p>Sweet chestnut dominates in some areas, especially around track South East from Watery Lane (Photo 19).</p> <p>Various historic workings were observed around the track / path from Watery Lane (Photo 20).</p>	Honeysuckle, bracken, bramble, bilberry.
Cmpt 6	Earth bank (0.31 ha)	<p>A fine earth bank with associated ditch (Photo 23). Coppiced beech with occasional oak is present on the bank (Photo 24); some of the coppiced oak / beech may qualify as veterans (Photo's 24 & 25).</p> <p>Holly understory is frequent.</p> <p>As bank approaches main road it grades to coppiced hazel with holly.</p>	
Cmpt 7	Broadleaved semi-natural woodland (3.03 ha)	<p>An area of high forest dominated by oak, with some beech and occasional Scots pine (Photos 27 & 28).</p> <p>A high holly understory is present (Photo 29).</p> <p>Ground cover is sparse and there are numerous undulations which may be historical features.</p> <p>Cotoneaster and cherry laurel was recorded in this compartment.</p>	Honeysuckle, bracken, bilberry.

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR ²⁵)) during 2017 walkover
Cmpt 8	Broadleaved semi-natural woodland (0.04ha)	Small area of secondary woodland sloping down towards and around a dry pond with a domestic hedge and associated dry ditch (Photo 32).	Cow parsley <i>Anthriscus sylvestris</i> , bramble, docks and sorrels <i>Rumex</i> spp., common nettle.
Cmpt 9	Improved grassland (0.01ha)	Two small closely mown triangular grassland areas situated at road junction (Photo 34). Both areas are grass-dominated with few flowering plants; areas are managed by mowing.	
Cmpt 10	Broadleaved semi-natural woodland (25.08 ha)	Plateau woodland that could be easily divided into smaller compartments based on woodland structure. In places the woodland structure is very characteristic of open wood pasture/wooded heath (Photo 35). Towards the western boundary heather is frequent (Photo 36). Common cow-wheat, food plant of the rare heath fritillary butterfly was recorded. A woodbank is a feature of this compartment and is orientated roughly northwest / southeast.	Pendulous sedge <i>Carex pendula</i> , heather, common cow-wheat, bracken.
Cmpt 11	Acid dry dwarf shrub heath (0.19 ha)	An area of heather, bilberry and bracken, where mixed woodland, including conifers is establishing (Photo 38).	Heather, bilberry, bracken.
Cmpt 12	Broadleaved semi-natural woodland (11 ha)	Broadleaved semi-natural woodland dominated by oak standards with established and semi-established birch frequent over bracken, bramble and bilberry which in places is abundant (Photo 39). There are few if any signs of traditional woodland management such as coppicing and the presence of so much birch, together with the nature of the ground flora suggest that perhaps this area may once have been former wood pasture / wooded heath.	Common cow-wheat, wood sage <i>Teucrium scorodonia</i> , sorrels and docks <i>Rumex</i> spp. pendulous sedge, honeysuckle.
Cmpt 13	Broadleaved semi-natural woodland (1.14 ha)	A difficult compartment to survey as boundaries are indeterminate. Ground is very steep and compartment leads to a private property. Mature beech seems to be the dominant tree with some oak, holly and occasional yew <i>Taxus baccata</i> . Rhododendron was recorded in this compartment.	
Cmpt 14	Quarry (4.38ha)	St Lawrence Sandpit. Area is fenced off. Surveyed from adjacent PROW. Very steep-sided former sand pit now apparently dominated by tall pines (Photo 41).	
Cmpt 15	Broadleaved semi-natural woodland (1.14 ha)	Broadleaved semi-natural woodland encompassing a PROW that follows	Heather, holly, bracken, gorse, bilberry.

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR²⁵)) during 2017 walkover
	ha)	northeastern boundary of St Lawrence Sandpit (Photo 42). Standard oaks dominate with bilberry and heather present along the perimeter of the sand pit. In places there is an earth bank and associated ditch which supports bilberry and moss (Photo 43). Cherry laurel was recorded in this compartment.	
TN1	-	Compartment 3. TQ 563 563. Beech to boundary (Photo 14).	
TN2	-	Compartment 3. TQ 564 562. Oak pollard (Photo 15).	
TN3	-	Compartment 5. TQ 567 564. Trackway with sparse ground flora (Photo 21).	
TN4	-	Compartment 5. TQ 569 563. Wood bank with mature oak and beech (Photo 22).	
TN5	-	Compartment 6. TQ 574 561. Veteran coppiced oak, multi-stemmed (Photo 25).	
TN6	-	Compartment 6. TQ 574 561. Boundary oak, girth 1m dbh. (Photo 26).	
TN7	-	Compartment 7. TQ 575 560. Scots pine is frequent in this area.	
TN8	-	Compartment 7. TQ 575 561. Intact native species-rich hedgerow – S41 Habitat – which appears to be flail cut. The hedgerow is sparse in places and includes a number of trees (Photo 30). There is also a woodbank (Photo 31).	
TN9	-	Compartment 8. TQ 574 562. Dry pond (Photo 33).	
TN10	-	Compartment 8. TQ 574 562. Hedge with trees – native species –rich. S41 Habitat.	
TN11	-	Compartment 10. TQ 570 558. Woodbank.	
TN12	-	Compartment 10. TQ 568 556. Earth bank following bridleway (Photo 37).	
TN13	-	Compartment 12. TQ 565 558. Continuation of Earth bank following bridleway from TN12.	
TN14	-	Compartment 12. TQ 563 560. Notable beech (Photo 40).	
TN15	-	Compartment 12. TQ 562 562. Scots pine frequent in this area.	
TN16	-	Compartment 15. TQ 574 549. Pine which appears to be standing deadwood leaning towards bridleway (Photo 44).	

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR²⁵)) during 2017 walkover
TN17	-	Compartment 15. TQ 575 549. Boundary coppice (Photo 45).	
TN18	-	Compartment 15. TQ 576549. Fallen beech (Photo 46).	
TN19	-	Compartment 15. TQ 576 548. Beech with occluded fork (Photo 47).	
TN20	-	Compartment 15. TQ 577 548. Sweet chestnut coppice (Photo 48).	
TN21	-	Compartment 15. TQ 577 547. Beech coppice.	
TN22	-	Compartment 15. TQ 578 547. Earth bank and ditch along boundary (Photo 49 and 50).	
TN23	-	Compartment 15. TQ 579 546. St Lawrence Sandpit.	

Sevenoaks Greensand Charts and Commons - Seal Chart: Phase 1 Habitat Survey Map

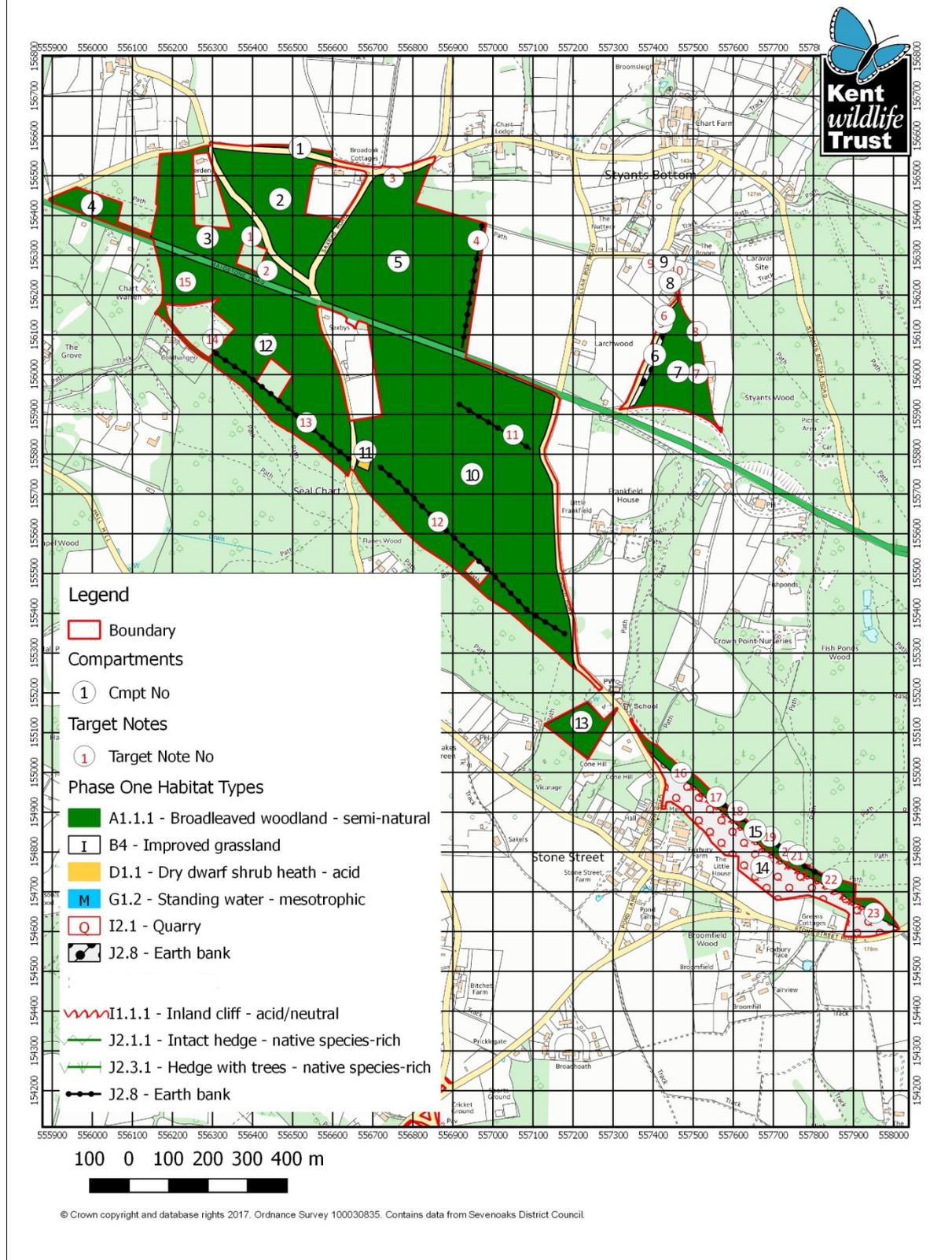


Figure 6: Seal Chart Common. Phase 1 Habitat Map, based on site walkover survey June 2017

3.4 Preliminary Woodland Condition Survey

A preliminary woodland condition survey was undertaken for the main wooded compartments 1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 13 and 15 (Figure 6). The results are presented in Tables 2 - 13 below. The Species / Structure / Age Class data has also been presented in a series of bar charts, attached at Appendix C.

Table 2: Seal Chart Common Compartment 1. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved Semi-natural Woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	Very old coppice to woodbank and Section 41 hedgerow.
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Oak STA 50 cms dbh 30 Beech STA 30 cms dbh 10 Poplar STA 40 cms dbh 10 Veteran Beech COP 10 Hazel COP 50 Oak COP 10 Sweet Chestnut COP 4/50 cms dbh 10 Hawthorn US 10 Holly US 10 Elder US 10
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	
Decaying Wood: Standing: Fallen:	>5%
Invasive Species:	
Deer Damage:	
Historic Features:	Boundary bank.
General Comments:	Linear woodland with a relict woodbank to northern boundary. To the eastern end it is a >5m woodland shaw which then narrows westward to a hedgerow.

Table 3: Seal Chart Common Compartment 2. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved Semi-natural Woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA)	Oak STA MAT 1m dbh 1% Oak STA 20-30 cms dbh 50% Beech STA MAT 1m dbh 1% Beech STA 30 cms dbh 20% Birch STA 30 cms dbh 10%

Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Aspen STA 15 cms dbh 10% Sweet Chestnut STA 30 cms dbh 10% Sweet Chestnut STA 20 cms dbh 10% Whitebeam COP 4/15 cms dbh 10% Beech SAP 30% Holly SAP 20% Sweet Chestnut SAP 10% Rowan SAP 10% Oak SAP 10%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	
Decaying Wood: Standing: Fallen:	>5%
Invasive Species:	Cherry laurel is occasional.
Deer Damage:	
Historic Features:	Possible workings TQ565564.
General Comments:	Generally even-aged, recently established high canopy woodland comprising mainly oak with some beech standards over bilberry and bracken. Possibly former wood pasture / wooded heath.

Table 4: Seal Chart Common Compartment 3. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural Woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Scots Pine STA 40 cms dbh 10% Oak STA 70 cms dbh 10% Oak STA 50 cms dbh 20% Beech STA 30 cms dbh 20% Beech STA 20 cms dbh 20% Birch STA 20 cms dbh 20% Holly SET 20% Beech SET 20% Birch SET 20% Oak SET 10% Oak Pollard 10% Oak COP 4/60 cms dbh 10% Beech COP 2/25 cms dbh 10% Sweet Chestnut COP 10% Hazel SAP 20% Beech SAP 10% Sweet Chestnut SAP 10% Oak SAP 10% Rowan SAP 10%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	
Decaying Wood: Standing: Fallen:	
Invasive Species:	Rhododendron.
Deer Damage:	

Historic Features:	Woodbank.
General Comments:	Woodland dominated by oak and beech standards with occasional pollards; there are also a few examples of coppiced trees. There is much evidence of natural regeneration with younger oak and beech becoming established, along with birch.

Table 5: Seal Chart Common Compartment 4. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Oak STA 50 cms dbh 20% Birch SET 30% Oak SET 10% Birch COP 20/2cms dbh 10% Sweet Chestnut COP 4/15 cms dbh 10% Sycamore SAP 20%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	
Decaying Wood:	>25%
Standing:	
Fallen:	100%
Invasive Species:	
Deer Damage:	
Historic Features:	
General Comments:	Dense broadleaved woodland with considerable fallen wood, possibly as a result of storm damage. Few, if any, characteristics to indicate that the woodland has been traditionally managed, and it is possible it is former wood pasture / wooded heath.

Table 6: Seal Chart Common Compartment 5. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET)	Beech STA 80 cms dbh 10% Beech STA 50 cms dbh 10% Beech STA 30 cms dbh 30% Beech STA 20 cms dbh 20% Oak STA 70 cms dbh 5% Oak STA 50 cms dbh 30%

Established (EST)	Oak STA 20 cms dbh 30%
Mature (MAT)	Sweet Chestnut STA 70 cms dbh 5%
Standard (STA)	Sweet Chestnut STA 40 cms dbh 10%
Shrub layer/Understorey (SL/US)	Sweet Chestnut STA 30 cms dbh 10%
Over mature	Birch STA 20cms dbh 10%
Veteran (V)	Scots Pine STA 40cms dbh 15%
Coppice <5 years	Austrian Pine STA 50 cms dbh 15%
Scrub height	Oak SET 30%
Mature (for species)	Birch SET 30%
Percentages where given are rough percentages of that feature	Holly SET 30%
	Beech SET 20%
	Norway Maple SET 5%
	Yew SET 5%
	Sweet Chestnut COP 4/30 cms dbh 5%
	Beech COP 4/30 cms dbh 5%
	Oak COP 2/70 cms dbh 5%
	Sycamore SAP 5%
	Norway Maple SAP 5%
	Beech SAP 30%
	Beech SAP planted 10%
	Holly US 30%
	Hazel US 30%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	
Decaying Wood:	<5%
Standing:	95%
Fallen:	>5%
Invasive Species:	
Deer Damage:	
Historic Features:	Workings around track/path from Watery Lane.
General Comments:	A diverse woodland compartment that changes in character at various points, and could easily be divided into sub- compartments according to woodland structure. There are areas dominated by high forest, areas with considerable natural regeneration and areas where sweet chestnut is locally dominant.

Table 7: Seal Chart Common Compartment 6. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species)	Birch STA 40 cms dbh 10% Oak STA 1 m dbh 5% Oak STA 30 cms dbh 10% Wild Cherry STA 30 cms dbh 5% Beech VET COP 50% Oak VET COP 5% Oak SET 10% Holly US 30% Hazel US 10%

Percentages where given are rough percentages of that feature	
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	
Decaying Wood:	
Standing:	
Fallen:	
Invasive Species:	
Deer Damage:	
Historic Features:	
General Comments:	A fine earth bank / ditch, with coppice beech.

Table 8: Seal Chart Common Compartment 7. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Oak STA 50 cms dbh 30% Oak STA 20 cms dbh 15% Beech STA 60 cms dbh 10% Aspen STA 50 cms dbh 5% Birch STA 30 cms dbh 10% Beech STA 20 cms dbh 15% Birch STA 20 cms dbh 10% Holly STA 20 cms dbh 5% Oak SET 10% Beech SET 10% Oak COP 2/70 cms dbh 5% Oak COP 2/60 cms dbh 5% Whitebeam SAP 5% Beech SAP 15% Rowan SAP 5% Sycamore SAP 5% Sweet Chestnut SAP 5% Holly US 50%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	
Decaying Wood:	
Standing:	
Fallen:	
Invasive Species:	Cotoneaster, cherry laurel.
Deer Damage:	
Historic Features:	Numerous undulations which might be historical features.
General Comments:	An area of high forest dominated by oak, with some beech and occasional Scots pine in close plantings. A high holly understorey is present. In places beech standards are partially suppressed by oak and pine canopy.

Table 9: Seal Chart Common Compartment 8. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	Secondary woodland.
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Beech STA 30 cms dbh 10% Ash STA 60 cms dbh 10% Sycamore STA 50 cms dbh 5% Oak STA 50 cms dbh 15% Ash STA 30 cms dbh 10% Sycamore STA 30 cms dbh 10% Yew STA 30 cms dbh 15% Oak COP 20/30 cms dbh 5% Hazel COP 30% Ash COP 10% Cherry COP 20% Willow US 5% Hazel US 15% Holly US 60% Hawthorn US 15%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None.
Decaying Wood: Standing: Fallen:	None.
Invasive Species:	
Deer Damage:	
Historic Features:	
General Comments:	Small area of secondary woodland sloping down to and around a dry pond.

Table 10: Seal Chart Common Compartment 10. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height	Sessile Oak STA 20 cms dbh 30% Oak STA 30 cms dbh 15% Oak STA 20 cms dbh 15% Scots Pine STA 30 cms dbh 5% Birch STA 50 cms dbh 5% Birch STA 30 cms dbh 15% Beech STA 20 cms dbh 15% Silver Birch STA 20cms dbh 15% Beech EST 15% Beech SET 15% Birch SET 15% Beech POL 90 cms 5% Oak COP 3/50 cms dbh 5% Beech COP 5/40 cms dbh 5% Beech SAP 15%

Mature (for species) Percentages where given are rough percentages of that feature	Holly SAP 15% Holly US 15%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	
Decaying Wood:	5%
Standing:	
Fallen:	100%
Invasive Species:	
Deer Damage:	
Historic Features:	Woodbank.
General Comments:	Plateau woodland that could be divided into smaller compartments based on woodland structure. In places the woodland structure is very characteristic of open wood pasture / wooded heath. It is possible that this area could be restored to wood pasture / wooded heath.

Table 11: Seal Chart Common Compartment 12. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Oak STA 90 cms dbh 5% Oak STA 50 cms dbh 15% Oak STA 30 cms dbh 15% Beech STA 30 cms dbh 5% Scots Pine STA 30 cms dbh 5% Birch STA 20 cms dbh 5% Birch EST 30% Whitebeam SET 1% Yew SET 1% Birch SET 30% Beech SET 15% Sweet Chestnut SET 5% Rowan SET 5% Oak COP 2/20 cms dbh 5% Beech SAP 15% Planted Oaks SAP 5% Rowan SAP 5%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None
Decaying Wood:	5%
Standing:	100%
Fallen:	
Invasive Species:	None.
Deer Damage:	
Historic Features:	Assarts (enclosed areas excluded from Common). Linear earth bank to boundary.
General Comments:	Broadleaved semi-natural woodland, more densely wooded than Compartment 10, dominated by oak standards with established and semi-established birch frequent over bracken, bramble and bilberry which in places is abundant. Scot's pine in present in the northwest corner of the Compartment. Few signs of traditional woodland management, possibly suggesting a

	more open wood pasture / wooded heath habitat in the past.
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Table 12: Seal Chart Common Compartment 13. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Beech MAT STA 1.2 m dbh 1% Beech STA 80 cms dbh 3% Beech STA 60 cms dbh 25% Oak STA 70 cms dbh 10% Oak STA 40 cms dbh 10% Oak STA 20 cms dbh 10% Holly STA 20 cms dbh 10% Yew STA 30 cms dbh 5% Birch STA 20 cms dbh 10% Holly US 5%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None.
Decaying Wood: Standing: Fallen:	10% 100%
Invasive Species:	Rhododendron.
Deer Damage:	
Historic Features:	
General Comments:	Steep compartment adjoining private properties. Dominated by mature beech with some oak, holly and occasional yew.

Table 13: Seal Chart Common Compartment 15. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Broadleaved semi-natural woodland.
Habitat Type: e.g. Coppice woodland; Ride; Glade; Wood Pasture:	
Species / Structure / Age Class: Key to abbreviations Seedling (SE) Sapling (SA) Semi-established (SET) Established (EST) Mature (MAT) Standard (STA) Shrub layer/Understorey (SL/US) Over mature	Oak STA 70 cms dbh 2% Oak STA 30 cms dbh 1% Sessile Oak STA 40 cms dbh 1% Sessile Oak STA 20 cms dbh 20% Sweet Chestnut STA 40 cms dbh 5% Austrian Pine STA 70 cms dbh 20% Scots Pine STA 40 cms dbh 10% Birch STA 40 cms (at fork) dbh 1% Silver Birch STA 20 cms dbh 1% Sessile Oak EST 1% Silver Birch EST 20% Sessile Oak SET 15%

Veteran (V) Coppice <5 years Scrub height Mature (for species) Percentages where given are rough percentages of that feature	Beech SET 2% Oak Coppice 2/40 cms dbh 10% Sweet Chestnut SAP 1% Beech SAP 10% Rowan SAP 1% Sessile Oak SAP 1%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None.
Decaying Wood: Standing: Fallen:	5% 100%
Invasive Species:	Cherry laurel.
Deer Damage:	
Historic Features:	Boundary earth bank and ditch.
General Comments:	Linear broadleaved woodland that follows PROW. Dominated by oak standards.

3.5 Veteran Tree Survey

Veteran trees were observed within Compartments 1 and 6. Further details are given in Table 14 below:

Table 14: Seal Chart Common. Preliminary Veteran Tree Check

Species	Type	Location	Approx DBH	Photo	Comments
Beech	Coppice/ hedgerow/ boundary	Compartment 1		4	Good woodland boundary feature.
Beech	Coppice and former laid hedge	Compartment 6		23	
Oak	Coppice; multi- stemmed	Compartment 6		25	

3.6 Species

Table 15 below provides a summary of the species information obtained as part of the desktop study.

Table 15: Seal Chart Common. Protected / notable species which either occur within, or have the potential to occur within or close to Seal Chart Common

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
Vascular Plants	KMBRC has records of one protected plant species on Seal Chart Common – bluebell <i>Hyacinthoides non-scripta</i> .	Bluebell	Bluebell: listed on Schedule 8 of the Wildlife & Countryside Act (as amended). Protection is limited to 'sale' only. ²⁸

²⁸ <http://naturenet.net/law/sched8.html>

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
	<p>Heathy vegetation including bilberry, heather and gorse are present in more open areas of the woodland particularly in Compartments 10, 11 and 15. Bracken was also observed to be locally dominant, particularly in the more open woodland conditions within Compartments 6 and 8.</p> <p>Common cow-wheat, the food plant of the rare heath fritillary butterfly, was recorded in Compartments 2, 10 & 12.</p>		
Lower Plants	<p>KMBRC has records of two protected species of mosses occurring on the Common – bog moss <i>Sphagnum</i> sp. and large white moss <i>Leucobryum glaucum</i>.</p> <p>There is also a record of a county important species – common apple-moss <i>Bartramia pomiformis</i>.</p>	<p>Bog moss ^{ECH_V}</p> <p>Large white moss ^{ECH_V}</p> <p>Common apple-moss ^K</p>	<p>'ECH_V'. Protected under Annex V of the European Communities Council Directive of the Conservation of Natural Habitats and Wild Fauna and Flora (Habitats Directive).</p> <p>'K' = included in the Kent Red Data Book.</p>
Fungi	<p>The SSSI schedule indicates that the whole SSSI supports an outstanding assemblage of lower plants, particularly fungi with over 250 recorded species, including 10 species which are regarded as rare or scarce in Britain. Seal Chart Common is well known to Joyce Pitt, a local fungi expert, who is of the opinion that it is of significant value for its fungi (J Pitt pers. comm).</p> <p>KMBRC has records attributed to Seal Chart Common of 12 fungi that are either county important or listed on the conservation Concern Species Inventory.</p>	<p>Destroying Angel <i>Amanita virosa</i> ^K</p> <p>Scaly webcap <i>Cortinarius pholideus</i> ^K</p> <p><i>Pterula multifida</i> ^K</p> <p><i>Boletus declivatum</i> ^K</p> <p>Greyshank bolete <i>Leccinum cyaneobasileucum</i> ^K</p> <p>Slate bolete <i>Leccinum sduriusculum</i> ^K</p> <p>Brown birch bolete <i>Leccinum scabrum</i> ^K</p> <p>Spongy mazegill <i>Spongipellis delectans</i> ^K</p> <p>Fishy milkcap <i>Lactarius volemus</i> ^K</p> <p>Velvet tooth <i>Hydnellum spongiosipes</i> ^{K S41}</p> <p><i>Sarcodon scabrosus</i> ^{S41}</p> <p>Trunk pawwort <i>Barbilophozia attenuate</i> ^K</p>	<p>'K' = included in the Kent Red Data Book</p> <p>Those species marked with 'S'41' are Species of Principal Importance (formerly UKBAP Priority Species).</p>
Birds	<p>The data search has two breeding bird records attributed to 'Seal Chart' (TQ5656) – woodcock (June</p>	<p>Woodcock ^{RL}</p> <p>Cuckoo ^{RL}</p>	<p>All species of bird whilst actively nesting are afforded legal protection under the Wildlife &</p>

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
	<p>1995) and cuckoo (April 1991).</p> <p>The SSSI schedule suggests that the whole SSSI, 'supports many woodland birds, including redstart...'</p> <p>The site walkover confirmed that Seal Chart Common is likely to support a range of nesting common woodland birds.</p>		<p>Countryside Act 1981 (as amended)²⁹.</p> <p>Those species marked with 'RL' are included on the Red List of BTOs Birds of Conservation Concern³⁰.</p>
Bats	<p>Eleven species of bat, of the 15 species recorded in Kent, have been recorded within the search area. There are records of two flying bats within the Common: one just to the south of the A25 off Saxbys Road at approx. grid ref TQ565560; the second just to the north of the A25 off Saxby's Road at approx. grid ref TQ566563.</p> <p>The nearest identified roost (unknown type) is located approximately 80m to the south of the Common at approx. grid ref TQ566556. There are at least four other roosts (unknown type) within about 500m of the Common.</p> <p>Bats are likely to use the Common for foraging and commuting and it is likely that some of the mature trees may have bat roost potential.</p>	<p>Serotine, Alcatheo, Daubenton's, Whiskered, Natterer's, Leisler's, Noctule*, Nathusius' pipistrelle, Pipistrelle (45kHz), Pipistrelle (55kHz)*, Brown long-eared*</p>	<p>Afforded full legal protection under Schedule 5 of the WCA 1981 (as amended). Also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010³¹ and are therefore "European Protected Species".</p> <p>Those species marked with "**" are considered to be Species of Principal Importance in England (formerly UKBAP)³².</p>
Badgers	<p>No records and no evidence observed during the site walkover.</p> <p>The nearest records relate to Ightham Common, approximately 1km to the east. The Common contains suitable foraging habitat and has good links to the wider countryside. They are</p>	Badgers	<p>Badgers and their setts are protected by the Protection of Badgers Act 1992³³.</p>

²⁹ Further information about the Wildlife & Countryside Act 1981 (as amended) is available at <http://jncc.defra.gov.uk/page-1377>

³⁰ The UK's birds can be split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. For further information refer to <https://www.bto.org/science/monitoring/psob>

³¹ Further details about the Conservation of Habitats and Species Regulations 2010 is available at <http://jncc.defra.gov.uk/page-1379>

³² <http://webarchive.nationalarchives.gov.uk/20140605090108/http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

³³ A summary of the Protection of Badgers Act is available at <http://adlib.eversite.co.uk/adlib/defra/content.aspx?doc=18122&id=18124>

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
	considered likely to be present.		
Hazel Dormouse	<p>There are no records directly attributable to Seal Chart Common.</p> <p>The nearest KMBRC records relate to a 2001 dormouse sighting at Oldbury Hill, approximately 750m northeast of Larchwood. There is a second, historic, record (1975) from Ivy Hatch, approximately 500m to the southeast of St Lawrence Sandpit.</p> <p>Seal Chart Common has good links to extensive areas of woodland incorporating Raspitt Hill and Oldbury Wood and their presence should not be discounted.</p>	Hazel Dormouse	<p>Afforded full legal protection under Schedule 5 of the WCA 1981 (as amended). Also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010³⁴ and therefore a "European Protected Species".</p> <p>A Species of Principal Importance in England (formerly UKBAP) and is included on Schedule 5 of the WCA 1981 (as amended)³⁵.</p>
Reptiles	<p>The data search has no records of reptiles occurring on the Common itself. Three reptile species have been identified within the wider search area, with the closest recorded observation being grass snake, located at Oldbury Hill, 1.2km to the east.</p> <p>There are areas of the Common – such as woodland edges, rides, clearings and heathy areas which may be suitable for reptiles – and KRAG considers that grass snake is likely to occur on the Common, and that it is possible that viviparous lizard, slow-worm and adder may also occur.</p>	<p>Grass snake</p> <p>Slow-worm</p> <p>Adder</p> <p>Viviparous lizard</p>	<p>All reptile species likely to be encountered at Bitchet Common are protected against killing & injury under Schedule 5 of the WCA 1981 (as amended) and are also Species of Principal Importance (formerly UKBAP Priority Species).</p>
Amphibians	<p>The data search has no records of amphibians occurring on the Common itself. Four amphibian species have been identified within the wider search area – common frog, common toad, palmate newt and great</p>	<p>Common frog</p> <p>Common toad</p> <p>Palmate newt</p> <p>Great crested newt</p>	<p>Great crested newts are afforded full legal protection under Schedule 5 of the WCA 1981 (as amended)³⁶. Also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010³⁷ and therefore a</p>

³⁴ Further details about the Conservation of Habitats and Species Regulations 2010 is available at <http://jncc.defra.gov.uk/page-1379>

³⁵ Further information about the Wildlife & Countryside Act 1981 (as amended) is available at <http://jncc.defra.gov.uk/page-1377>

³⁶ Further information about the Wildlife & Countryside Act 1981 (as amended) is available at <http://jncc.defra.gov.uk/page-1377>

³⁷ Further details about the Conservation of Habitats and Species Regulations 2010 is available at <http://jncc.defra.gov.uk/page-1379>

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
	<p>crested newt.</p> <p>The closest recorded great crested newt observation is a historical recorded located at Seal, 0.42km to the southwest.</p> <p>One dry pond was recorded within Larchwood; KRAG has records of 17 ponds within a 1km-radius. KRAG has assessed that common toad and palmate newt are highly likely to occur on site; they also consider that common frog, smooth newt and great crested newt may occur.</p> <p>Amphibians may use the Common for foraging, sheltering and commuting and their potential presence should not be discounted.</p>		<p>“European Protected Species”.</p> <p>Great crested newts and common toads are Species of Principal Importance in England (formerly UKBAP).</p>
Invertebrates	<p>The NE SSSI citation (Appendix B) says that the combination of ancient woodland, heathy vegetation and sandy soils supports a characteristic range of invertebrates. Records include a colony of the solitary bee <i>Andrena lapponica</i> found here at the only locality known for this species in Kent. It is considered to be a northern species and forages particularly on bilberry blossom. Many of the invertebrates are restricted to ancient woodland sites including two species of mollusc: the slug <i>Limax tenellus</i>, which is scarce in Britain and the snail <i>Phenacolumax major</i> which is rare and confined to southern England and South Wales.</p> <p>The KMBRC data search has an extensive list of moths of Conservation Concern. Most of these however are located to tetrad level only, and it is uncertain as to how many of these may occur within the Common itself. Further work is therefore required.</p> <p>There is a record of lemon slug <i>Malacolimax tenellus</i> directly attributed to the</p>	Lemon slug ^K	‘K’ = included in the Kent Red Data Book.

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
	Common.		

The site walkover identified three non-native invasive vascular plant species occurring on the Common. These are:

- Rhododendron, recorded in Compartments 3 and 13
- Cherry laurel, recorded in Compartments 2, 7 and 15
- Cotoneaster, recorded in Compartment 7

The 1993 management plan (Crichton Maitland & Co) made reference to the presence of Japanese knotweed *Fallopia japonica* within Larchwood (Compartment 7); this species was not encountered during the 2017 walkover survey.

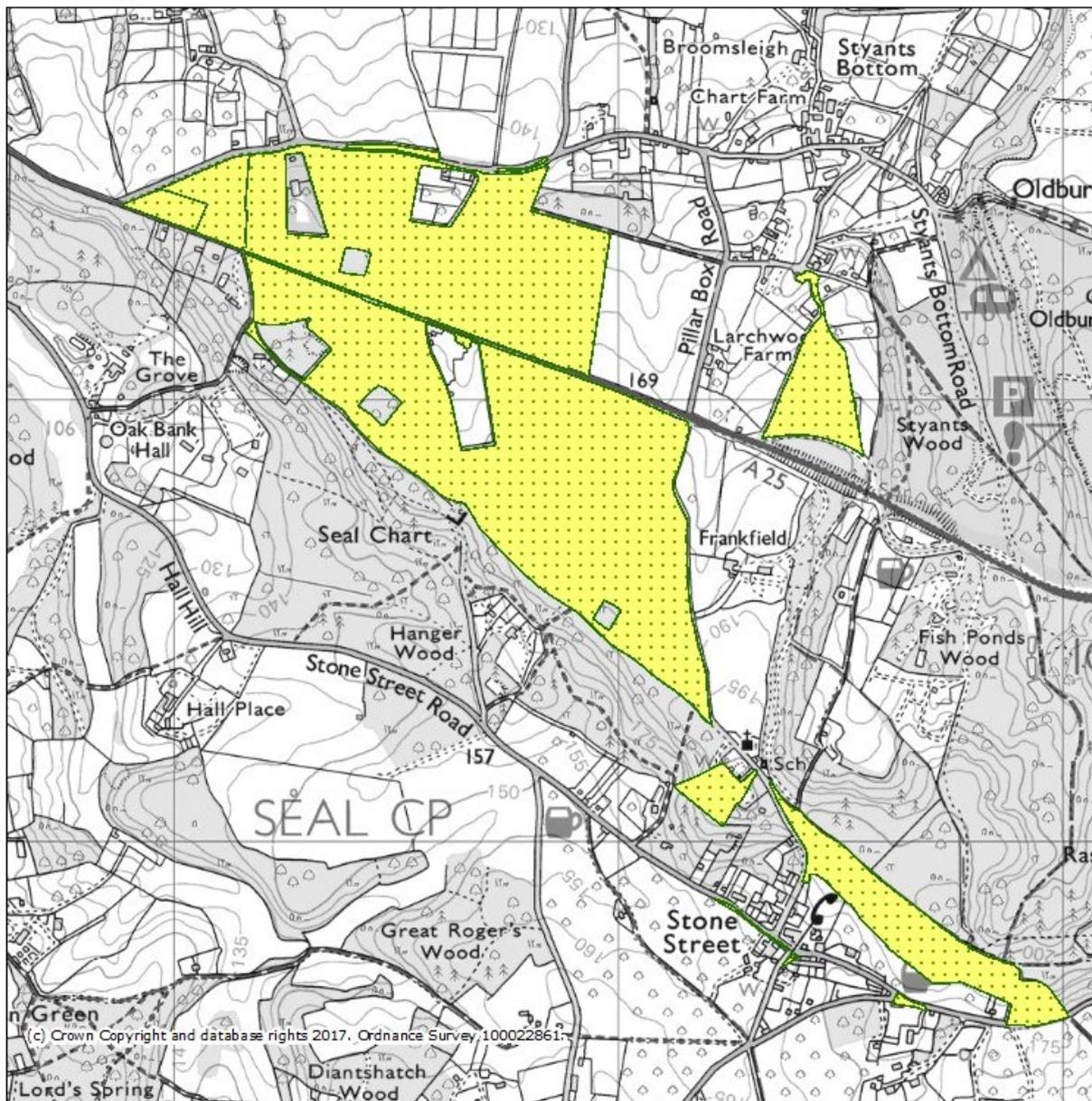
Rhododendron and Japanese knotweed are included on Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended). It is also possible, though not certain, that the cotoneaster may be one of the four cotoneaster species also listed on Schedule 9. It is illegal to ‘plant or otherwise cause any species listed on Schedule 9 to grow in the wild’.

3.7 Identification of Access Issues

Seal Chart Common is designated as Registered Common Land and has been mapped as Access Land under the Countryside and Rights of Way Act 2000 (Figure 7).

There are a number of Public Footpaths and Public Bridleways crossing Seal Chart Common (Figure 8). Walkers, with and without dogs, were observed during the walkover survey.

Seal Chart Access Map



Legend

-  Registered Common Land (England)
-  Countryside and Rights of Way Act 2000 - Access Layer (England)

Projection = OSGB36

xmin = 554700

ymin = 154100

xmax = 559000

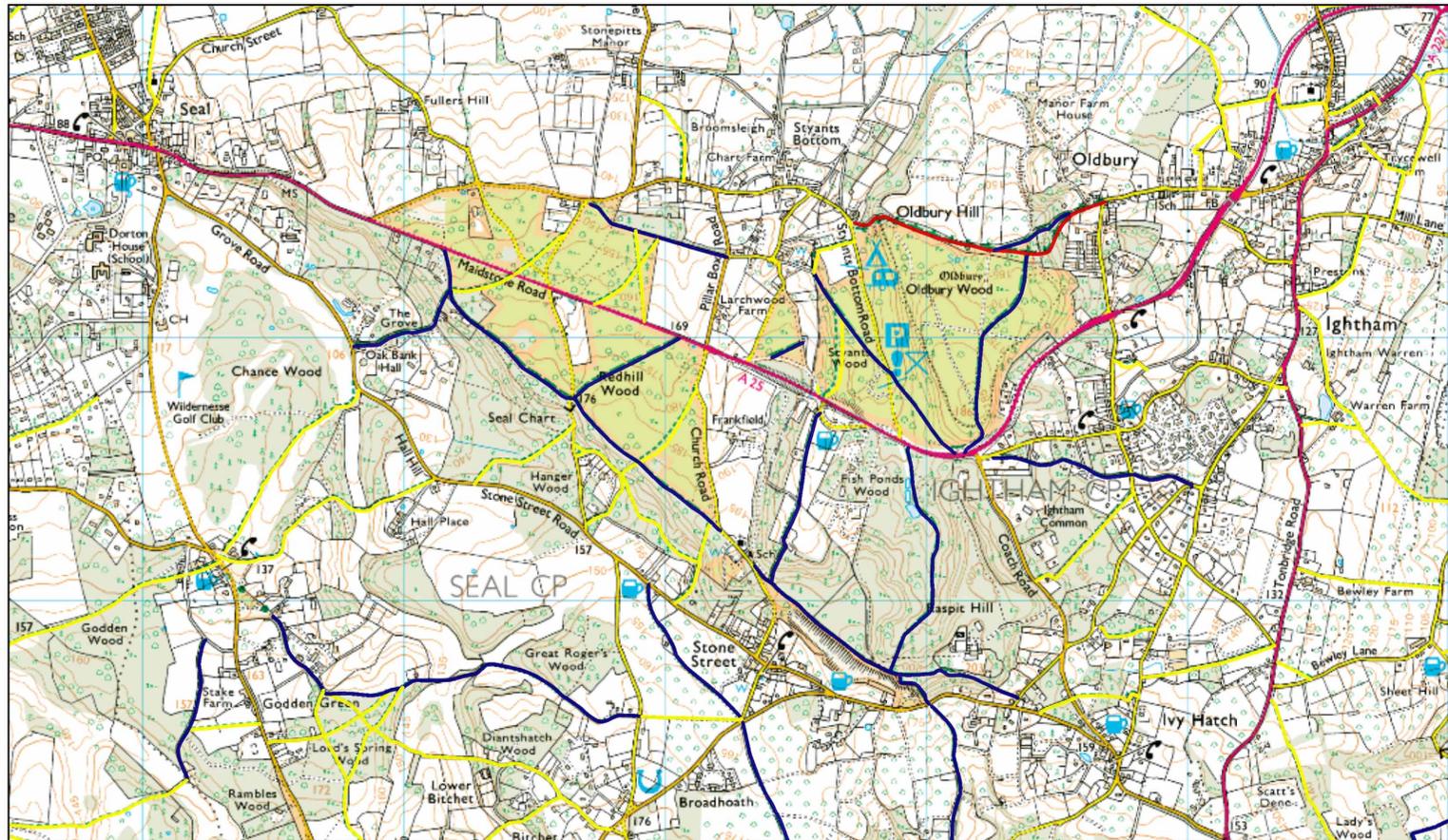
ymax = 157200

Map produced by MAGIC on 24 July, 2017.

Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

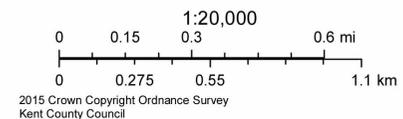
Figure 7: Seal Chart Common. Access Land

Seal Chart PROW



July 24, 2017

- | | |
|--|---|
| Public Rights of Way | — Public Footpath |
| — Byway open to all traffic | — Restricted Byway |
| — Public Bridleway | |



Produced by: KCC GIS Development Team
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Figure 8: Seal Chart Common. Public Rights of Way Map.

4 ENHANCEMENT OPPORTUNITIES

4.1 Site Evaluation

Seal Chart Common is a large and diverse area mostly dominated by woodland, with discrete areas of heathy vegetation, improved grassland and a dry pond.

It is designated as an SSSI and, with the exception of St Lawrence Sandpit, is categorised by Natural England as ‘Broadleaved, Mixed and Yew Woodland – Lowland’. The most recent condition assessments found that parts of the Common were in ‘Favourable’ condition, with other areas in ‘Unfavourable – Recovering’ condition³⁸.

All of the woodland has been identified as lowland mixed deciduous woodland, a Priority Habitat i.e. listed on S41 as a habitat of Principal Importance in England (formerly UK BAP Priority Habitat). The woodland is also included on the ancient woodland inventory. However, although woodland has been present on the site over an extended period of time this walkover survey and previous studies have concluded that Seal Chart Common may once have been a more open mosaic of woodland, heath, wooded heath and possibly wood pasture.

Oak was observed to be often the dominant tree across the Common, with pioneering tree species such as birch present through various age classes as would be expected where woodland has established over more open habitat. The 1993 management plan (Crichton Maitland & Co) highlighted that Seal Chart lost 11% of its tree cover in the 1987 storm and, along with natural regeneration, there was evidence of tree-planting³⁹ including pine in Compartment 14.

The Arch Habitat Survey (Figure 5) identified three significant blocks of heathy vegetation within Redhill Wood (Compartments 10 & 11 (Figure 6)), a very rare but important habitat type in Kent, covering just 71.5ha or 0.02% of the county (Kent Habitat Survey, 2012) and also considered to be a Priority Habitat. The site walkover confirmed the presence of heathy species such as heather and bilberry within Compartments 10, 11 and 15, with the heathy vegetation within Compartment 11 covering a sufficient area to be mapped as a separate habitat. Although outside the survey area, it was also observed that the area immediately to the southwest of Compartment 10 supported habitat very characteristic of woodland pasture / heathland dominated by birch trees and with a ground flora characteristic of lowland dry acid heath.

There are a number of woodbanks and enclosures throughout the site which may indicate management of grazing animals or traditional woodland management such as coppicing necessitating the exclusion of livestock.

In places the site is now taking on characteristics of high forest. This may be the response to storm damage, particularly in Compartments 3 & 4 but the age class distribution of trees in many compartments suggests that this is an established process which often follows the

³⁸ The SSSI Condition Assessments are available to view at <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000279&SiteName=Oldbury%20and%20Seal%20Chart&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

³⁹ It is not known whether the tree planting was directly related to the post-1987 storm damage

cessation of typical commons management involving the grazing of animals which suppresses the natural regeneration of tree species. It may well be that Seal Chart Common has gone through various cycles of management where the semi-natural vegetation mosaic of open heath woodland maintained by grazing animals has developed into woodland in the absence of grazing pressure.

The English Nature Site Management Statement (2001) for Oldbury and Seal Chart SSSI recognised the importance of both the woodland and heathy vegetation and stated that one of their conservation objectives was to, “*Maintain the range of acid habitats including heathy woodland as well as more open heath and acid grassland.*” It is recommended that consideration should be given to continuing this objective, aiming to maintain areas of woodland and existing heathy vegetation, whilst exploring the feasibility for extending the development of wooded heath through a process of path and ride management and creation of linked glades. The Site Management Statement identified a number of areas considered suitable for management ‘partially or wholly’ as heathland (Figure 9) and it is recommended that these should form the basis for future consultation. Ideally consultation will also consider using targeted grazing as a potential management tool to create and maintain the desired open structure.

It should be noted that given its status as an SSSI, any discussions relating to changes in management must involve Natural England.

Several veteran trees – beech and oak – were identified in Compartments 1 and 6 during the site walkover, although it is considered likely that there are more. The survey also identified a number of mature / very mature trees, some of which are likely to have bat roost potential. Any management to these trees should consider the potential for bat roosts to be present.

Ash is a component within the broadleaved woodland areas. Although no evidence of ash dieback was observed during the walkover survey, the Forestry Commission has confirmed that ash dieback disease was confirmed in TQ55 in 2014⁴⁰. Ongoing monitoring will therefore be required.

Several boundary hedgerows were recorded in Compartments 1, 7 and 8 (Table 1 Ch 3.3). These hedgerows comprised more than 80% native species and are therefore considered to meet the criteria for being considered a S41 Habitat of Principal Importance in England (formerly UKBAP Priority Habitat). Consultation could include the possibility of traditional hedgerow management here.

The discrete areas of grassland were recorded in Compartment 9 and relate to two small closely mown triangles of improved grassland situated at a road junction. Improved grassland is an extremely common habitat type in Kent, occupying 29.7% of the County (Kent Habitat Survey, 2012). The grassland was found to be grass-dominated, supporting a restricted range of common herbaceous plant species. No notable species were recorded within the grassland and it is not a Priority Habitat. The grassland is currently managed by mowing, and it is recommended that it should continue to be cut as required in order to maintain the existing sward structure.

⁴⁰ <http://chalamap.fera.defra.gov.uk/>

The dry pond was observed at the northern end of Larchwood (Compartment 8). No characteristic marginal or emergent vegetation was noted and its current status with regards to whether or not it holds water at any time of the year is unknown. Ponds provide a valuable source of freshwater for drinking, foraging and breeding, and may provide potentially suitable habitat for protected species such as the great crested newt which has been recorded within 500m of the site. It is recommended that consideration could be given to exploring the feasibility of pond restoration.

The data search indicated that Japanese knotweed, a Schedule 9 species, has been recorded within Larchwood (Compartment 7). It was not observed during the site walkover and it is considered likely that the control programme recommended within the 1993 management plan (Crichton Maitland & Co) was successful in eradicating Japanese knotweed from this site. However it is recommended that Larchwood should be monitored for this species and steps taken to eradicate it if necessary.

The site walkover identified two non-native invasive species listed on Schedule 9 – rhododendron (Compartments 3, & 13) and cotoneaster (Compartment 7) – along with a third invasive species, cherry laurel (Compartments 2, 7 and 15).

Rhododendron is an extremely invasive species and may form dense, impenetrable thickets with the resulting deep shade and toxic leaf litter suppressing growth of native plants. It is also of limited value to wildlife and may negatively impact some groups e.g. research has shown that bird numbers are lower in mature oak woodlands dominated by rhododendron⁴¹. According it is recommended that steps are taken to eradicate or control the spread of rhododendron at this site.

Cotoneaster was recorded in Compartment 7. This is most likely a garden escape, but it is popular with birds who enjoy the berries and spread the seed, which encourages its spread where it can damage native vegetation and be difficult to eradicate. It is recommended that the Common should be monitored and appropriate action taken to eradicate cotoneaster from this site.

Cherry laurel poses problems similar to rhododendron: it is evergreen and shade-tolerant and has adapted well to our climate. It is unpalatable to stock and tends to grow unchecked with the result that in time it will shade out any woodland understorey and prevent woodland regeneration. As with the rhododendron, it is recommended that steps are taken to eradicate or control its spread.

The acidic nature of this Common and the mosaic of habitats including ancient woodland, veteran trees and heathy vegetation it supports, combined with its geography, location and good links with adjacent areas of high biodiversity has led to the development of a specialist range of species, some of which are more usually found in the north and west of Britain where acidic habitats are more common.

The data search suggests that Seal Chart Common is likely to be of significant interest for fungi and lower plants and one of the nature conservation objectives provided by English

⁴¹ www.nonnativespecies.org/downloadDocument.cfm?id=1018

Nature (2001) is to, “*maintain the assemblage of lower plants associated with the site*”. The SSSI schedule suggests it may also be of interest for its invertebrates although, with the database search revealing few records directly attributed to the Common, this would need to be established through targeted survey work.

It may also be of potential interest for bats, where eleven species have been recorded in the search area and may also support other protected species such as breeding birds, badgers, hazel dormice, and reptiles. Survey work to establish the presence / absence of protected species within the Common should be undertaken as their presence will need to be taken into account when planning any management works in order to ensure compliance with all relevant legal obligations with regards to protected species.

4.2 Preliminary Habitat Management

4.2.1 Preliminary Habitat Management Suggestions

The objective of this report is to provide a series of outline nature conservation management recommendations aimed at maintaining and enhancing the main habitats and species of nature conservation interest identified within this report. It is anticipated that these initial recommendations will form the basis of additional consultation with the landowners and other stakeholders, prior to the preparation of a bespoke management plan for the Common, which is likely to happen during the delivery phase of this project.

It should be noted at the outset that any work undertaken within the SSSI will require prior consultation with Natural England

Further details are provided below.

4.2.1.1 Management of Existing Woodland Areas

- Promote and maintain the structural diversity of the woodland habitat with a good variety of trees and shrubs at different ages and habit. This will be beneficial to species known to inhabit the Common, or which may have the potential to be present, such as breeding birds, invertebrates, mammals such as hazel dormouse and bats, and reptiles. This should also promote resilience and sustainability to climate change.
- Maintain mature high forest such as beech woodland in Compartment 13.
- Identify existing areas of coppiced woodland and maintain on rotation of up to 25 years.
- Maintain all traditional woodland features such as internal woodbanks.
- Maintain boundary features especially where they provide connectivity with blocks of habitat, support veteran and mature trees and where woodland edge and structurally diverse habitat can be created and maintained.
- Retain all existing veteran / mature trees wherever possible. These are considered to be features of the former wood pasture / wooded heath habitat, and often would have grown in more open canopy conditions. Such trees

would have supported different invertebrate species from those growing in closed canopy woodland, and ideally there will be a continuum of trees standing in the open, especially mature and ancient trees. This may involve selectively thinning some younger trees in areas where denser woodland is developing especially where completion and stress may be placed on the mature trees. The process of haloing around older trees may be considered if sudden and dramatic changes to the local micro climate can be avoided.

- Consider opportunities for increasing the number of potential veteran trees by selecting standards for bespoke management which may include so called ‘veteranisation’, i.e. creating features associated with trees of some antiquity.
- Maintain a range of both standing and fallen dead wood. A continuity of dead wood at all stages of decay is vital in providing optimal habitats for species groups already highlighted as being of importance within the Common such as fungi and invertebrates, and potentially also roosting bats.
- Enhance the overall percentage of open areas within the Common. As well as restoring open glades of heathland, the creation of further sheltered and sunny open areas, such as along ride edges, and in scallops or glades, would also support a greater abundance and variety of flowering plants and shrubs, providing valuable nectar and pollen sources for invertebrates. These would be of particular value close to existing heathy areas with the aim of providing connecting habitat and encouraging spread of heathland plants and animals.
- Undertake consultation on whether the introduction of light grazing may be feasible within the Common. The results of this consultation will inform the decisions for the future management objectives for the Common.
- Rhododendron & Cherry Laurel Eradication / Control. The following recommendations are taken from the Kent Wildlife Trust Woodland Management Advice Sheet relating to the control of rhododendron and cherry laurel⁴²:
 - Cut during the winter (September to March), focussing on older, seed-bearing bushes first, and follow up with stump treatment immediately. Seeds dispersal tends to be very low, generally within a few metres of the bush, and research shows that destroying the oldest/core plant is more effective than starting at the edge of the infested area and dealing with younger plants and seedlings.
 - Pull up any seedlings if they come out easily and dig out any plants manually where feasible (don’t leave any roots behind).
 - Treat young bushes, any regrowth from stumps and any remaining seedlings with a foliar spray mixed with an adjuvant (this breaks down the waxy layer on the surface of the leaf) between May to October. Research seems to show that these sprays are most effective on younger bushes that are less than 1.3m tall.

⁴² http://www.kentwildlifetrust.org.uk/sites/default/files/kwt_land_mgt_advice_sheet_9_-_woodland_management_-_control_of_rhododendron.pdf

- Treat mature bushes with a stem injection treatment, if available. If not, then apply a foliar spray as for other younger bushes.
- Burn the cuttings but make sure the number of fire sites are limited since any bare ground created will result in more sites being available for the seeds to take hold.
- Some removal of toxic leaf litter may be required since nothing else will grow there.
- **Cotoneaster Eradication / Control.** Recent research⁴³ indicates that the best control method involves cutting and painting the cut stumps with glyphosate:
 - Young plants can be mechanically removed by pulling or grubbing at any time of year, taking care to remove the roots to avoid re-sprouting.
 - More established plants should either be controlled using the herbicides glyphosate or triclopyr, either as a wiper or a handheld sprayer when plants are actively growing between spring and autumn. Alternatively, these herbicides can be applied to cut stumps or to abraded bark.
- **Ash die-back disease.** All woodland areas should be monitored annually for the presence of ash dieback and if any disease is found steps should be taken according to the most up-to-date advice available⁴⁴.
- **Species listed on Schedule 9.** All woodland areas should be monitored annually for the presence of species listed on Schedule 9 which are known to have been recorded on the Common (Ch 3.6). The location / extent of any such species should be reported to appropriate personnel and an eradication / control programme undertaken following current best practice guidance⁴⁵.

4.2.1.2 Management of Heathy Areas

- Undertake consultation on whether the introduction of light grazing may be feasible within the Common, particularly within compartments where restoration to wooded heath / wood pasture could be considered (Figure 9). The results of this consultation will inform the decisions relating to the feasibility for restoration of wood pasture / wooded heath across the Common.
- If it is not possible to establish grazing on areas of the Common, then the existing heathy vegetation will need to be maintained by mechanical or other physical management. This is likely to include, but not necessarily be limited to:
 - Maintenance of the existing mosaic of heather and bilberry.
 - Where heather is present try to maintain a range of age classes from seedling through to over mature by occasional cutting, perhaps scarification and seeding through placing arising's on the prepared areas.

⁴³ <http://www.cabi.org/isc/datasheet/16870>

⁴⁴ <http://www.forestry.gov.uk/forestry/infid-92pjlx>

⁴⁵ Such as that provided by websites including the GB non-native species secretariat <http://www.nonnativespecies.org/home/index.cfm>

- Small patches of bare ground managed to encourage colonisation by heather and to prevent colonisation by trees and scrub.
- Control of birch seedlings / saplings within heathy areas to prevent succession to secondary woodland, although the presence of occasional birch of varying ages to maintain an open wooded heath-type habitat would be appropriate.
- Control of bracken in heathy areas where on-site monitoring indicates it may become the dominant species, out-competing the heather, bilberry and other more delicate heathy vegetation.

4.2.1.3 Management of Boundary Hedgerows and Woodbanks

Consider consultation to maintain and enhance boundary hedgerows and woodbanks with particular reference to coppiced beech with veteran tree features.

4.2.1.4 Restoration of Dry Pond

- Explore feasibility of restoring dry pond at northern end of Larchwood.
- Establish whether the pond holds water at any time of year. If so, then an initial survey should be undertaken to establish presence / absence of great crested newts. The results of the survey work will be used to determine whether or not the work will require a method statement / conservation licence.
- Any management works such as removal of leaves and rubbish or de-silting should be undertaken during autumn / winter

4.2.1.5 Management of Grassland Areas

Manage by cutting as-and-when necessary in order to maintain current sward structure.

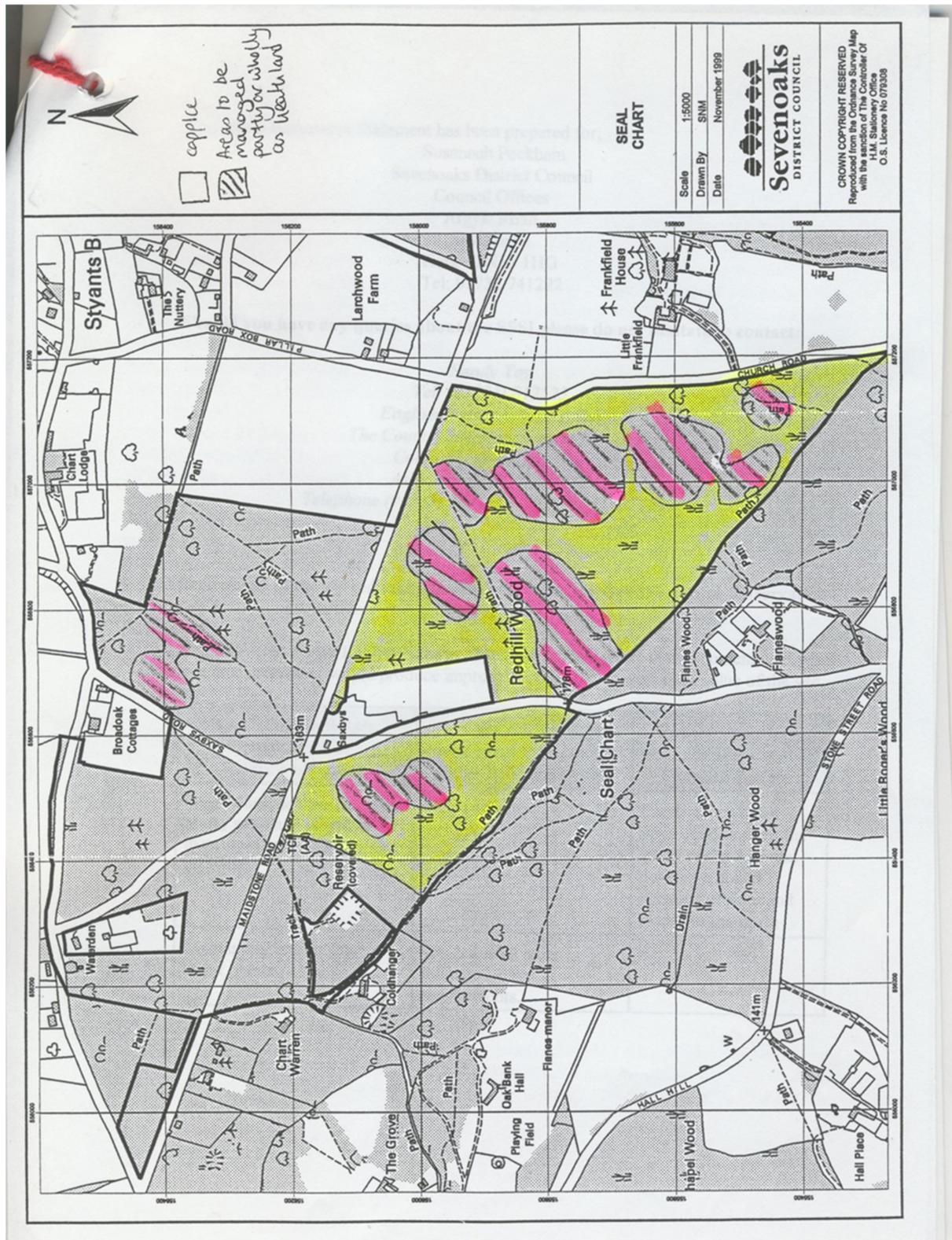


Figure 9: Seal Chart Common. Informal drawing showing areas which could be 'partly or wholly' managed for heathland. Drawing taken from Site Management Statement (English Nature, 2001)

4.3 Additional Survey Work

The ecological scoping survey has highlighted that Seal Chart Common has a number of features and species which may merit further investigation.

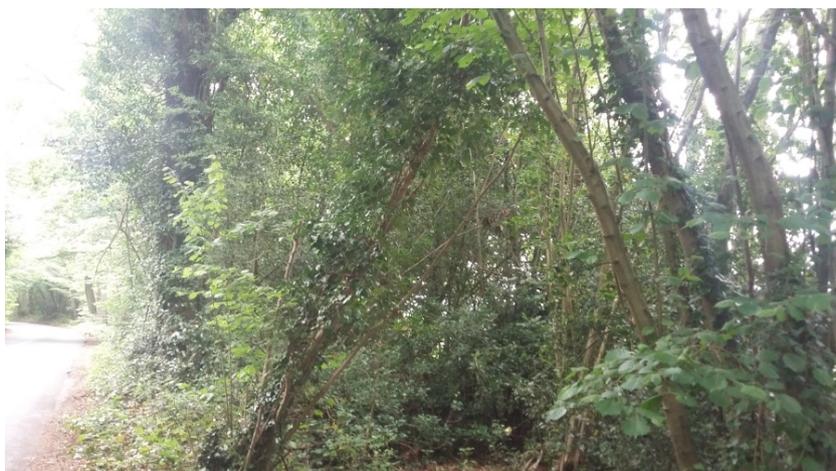
A number of surveys are therefore recommended:

- A preliminary, broad brush-stroke NVC survey of the site to establish the main vegetation communities; the results may help to determine the direction of future management, particularly with identification of areas for future wood pasture / wooded heath restoration.
- Bat Survey. Surveys are recommended in order to establish the bat roost potential of the veteran trees and other mature trees within the Common. Survey work should also establish how bats are using the Common for foraging and for commuting. The results of the survey work should be used to inform management work and the requirement for any EPS licencing.
- Hazel dormouse Survey. Undertake a preliminary nut / nest search to establish whether dormice may be present within the Common. The results should be used to determine whether more detailed survey work may be required with relation to future management / EPS licencing.
- Reptile Survey. To establish current status of reptiles (and amphibians) within the Common. The results of the survey work should be used to inform management aimed at enhancing the Common for these species.
- Invertebrates. Consult local invertebrate experts to establish whether a series of targeted survey work would be considered a priority on this site in order to establish the importance of Seal Chart Common for this species group. The results of any survey work should be used to inform management aimed at enhancing the Common for this group.
- Lower Plant Survey. Undertake a targeted fungi / lower plant survey to establish current status of fungi / lower plants within Seal Chart Common. The results of the survey work should be used to inform management aimed at enhancing the Common for these groups.

5 REFERENCES

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Appendix A: Photographs taken during the site visits June 2017



1. Compartment 1: Photograph showing woodland shaw



2. Compartment 1: Photograph showing hedgerow at western end of compartment



3. Compartment 1: Photograph showing oak coppice on woodbank



4. Compartment 1: Photograph showing veteran beech coppice on woodbank



5. Compartment 2: Photograph showing bilberry evident in the understorey



6. Compartment 2: Photograph showing bracken evident in the understorey



7. Compartment 2: Photograph showing sparse understorey suggesting this area may once have been more open



8. Compartment 2: Photograph showing mature oak



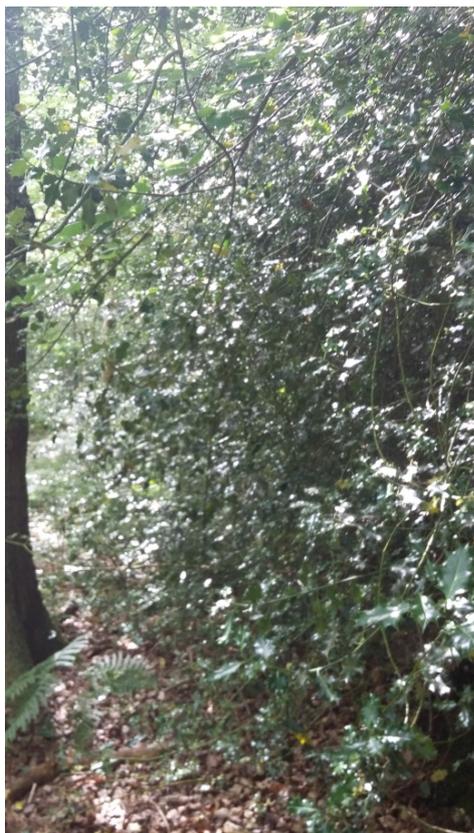
9. Compartment 3: Photograph showing general view of compartment



10. Compartment 3: Photograph showing coppiced beech to boundary



11. Compartment 3: Photograph showing woodbank



12. Compartment 3: Photograph showing holly bank



13. Compartment 3: Photograph showing more established woodland.



14. Compartment 3 (TN1): Photograph showing boundary beech



15. Compartment 3 (TN2): Photograph showing oak pollard



16. Compartment 4: Photograph showing general view of compartment



17. Compartment 5: Photograph showing area of high forest



18. Compartment 5: Photograph showing area of natural regeneration with bilberry understory



19. Compartment 5: Photograph showing area of sweet chestnut coppice



20. Compartment 5: Photograph showing example of the historic workings observed around the track / path from Watery Lane



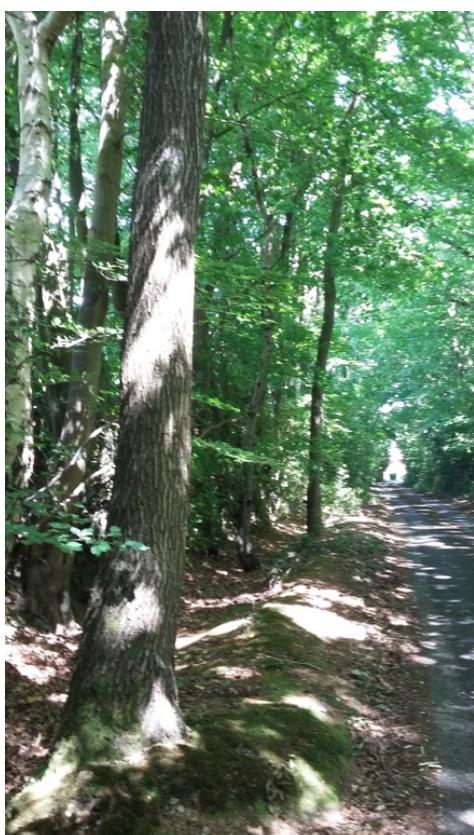
21. Compartment 5 (TN3): Photograph 1629 showing trackway with sparse ground flora



22. Compartment 5 (TN4): Photograph showing woodbank with mature beech



23. Compartment 6: Photograph showing earthbank with veteran beech coppice



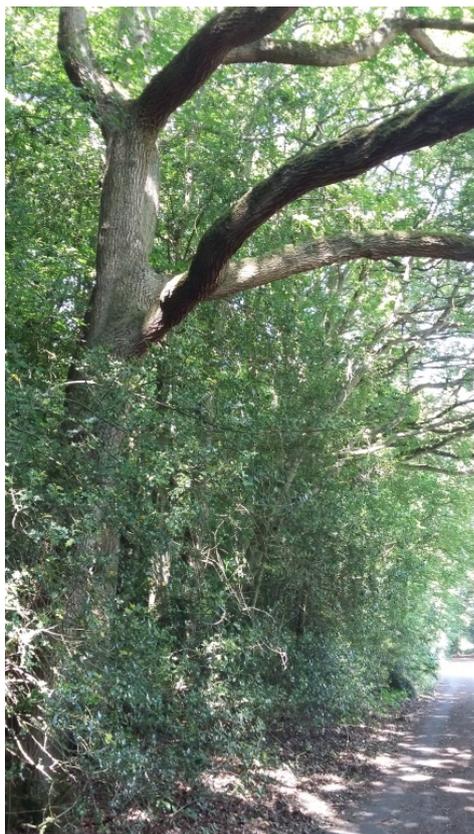
24. Compartment 6: Photograph showing oaks on earth bank



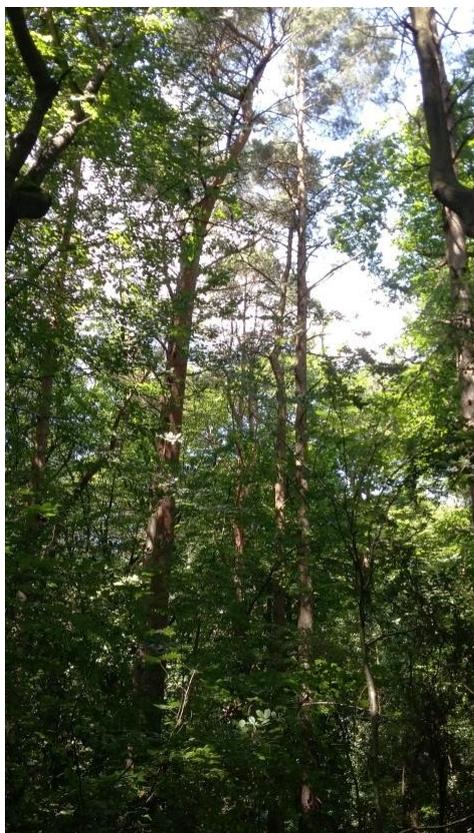
25. Compartment 6 (TN5): Photograph showing veteran oak



26. Compartment 6 (TN6): Photograph showing boundary oak



27. Compartment 7: Photograph showing boundary of compartment with mature oak



28. Compartment 7: Photograph showing scots pine



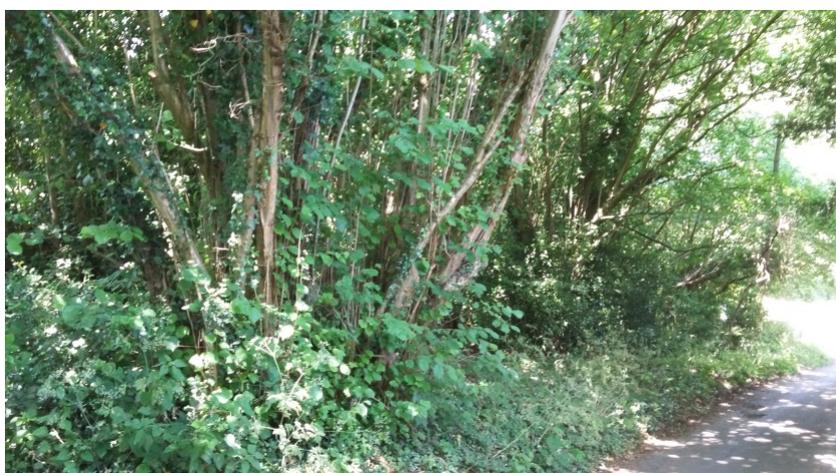
29. Compartment 7: Photograph showing oak with holly understory



30. Compartment 7 (TN8): Photograph showing large coppice beech in boundary hedge



31. Compartment 7 (TN8): Photograph showing woodbank



32. Compartment 8: Photograph showing view of compartment



33. Compartment 8 (TN9): Photograph showing dry pond



34. Compartment 9: Photograph showing improved grassland at road junction



35. Compartment 10: Photograph showing woodland structure characteristic of wood pasture / wooded heath



36. Compartment 10: Photograph showing heather present to western boundary



37. Compartment 10 (TN12): Photograph showing bridleway with associated earth bank



38. Compartment 11: Photograph showing area of heather, bilberry and bracken now being colonised by mixed woodland



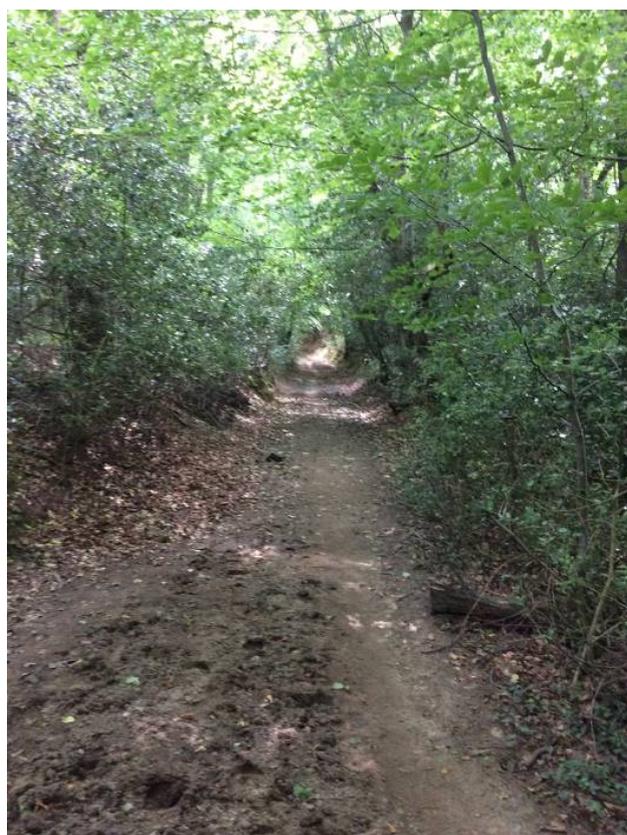
39. Compartment 12: Photograph showing frequency of bilberry within compartment



40. Compartment 12 (TN14): Photograph showing notable beech



41. Compartment 14: Photograph showing view down into St Lawrence Sandpit



42. Compartment 15: Photograph showing wooded PROW running adjacent to St Lawrence Sandpit



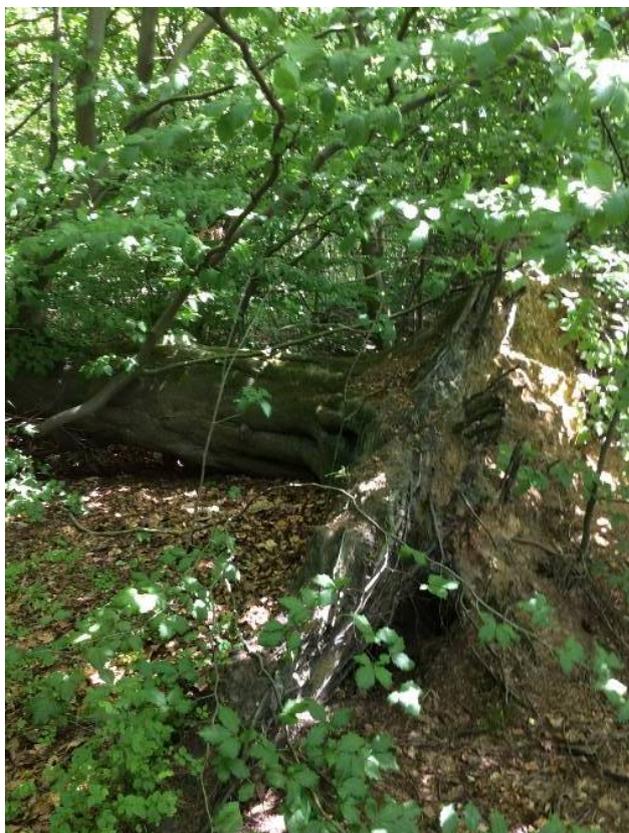
43. Compartment 15: Photograph showing earthbank supporting bilberry and moss



44. Compartment 15 (TN 16): Photograph showing standing deadwood



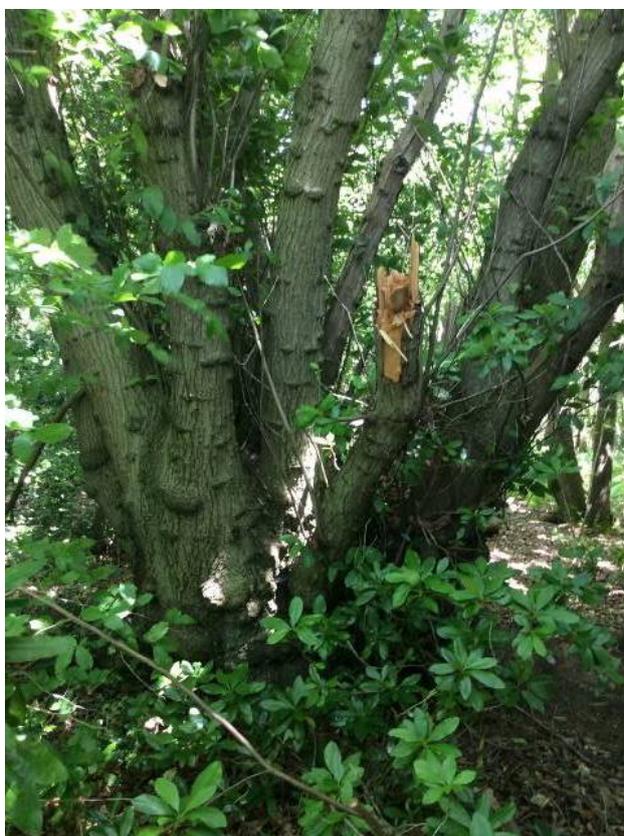
45. Compartment 15 (TN 17): Photograph showing boundary coppice



46. Compartment 15 (TN 18): Photograph showing fallen beech



47. Compartment 15 (TN19): Photograph showing beech with occluded fork



48. Compartment 15 (TN 20): Photograph showing sweet chestnut coppice



49. Compartment 15 (TN 22): Photograph showing boundary earth bank



50. Compartment 15 (TN 22): Photograph showing boundary earth bank

Appendix B: Oldbury and Seal Chart SSSI Citation

COUNTY: KENT SITE NAME: OLDBURY AND SEAL CHART

DISTRICTS: TONBRIDGE AND MALLING; SEVENOAKS

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

Local Planning Authorities: Tonbridge and Malling District Council, Sevenoaks District Council

National Grid Reference: TQ 571558 Area: 173.93 (ha.) 429.77 (ac.)

Ordnance Survey Sheet 1:50,000: 188 1:10,000: TQ 188

Date Notified (Under 1949 Act): 1951 Date of Last Revision: 1981

Date Notified (Under 1981 Act): 1990

Other Information:

The site lies within the Kent Downs Area of Outstanding Natural Beauty. Part of the site is owned by the National Trust. The boundary has been amended at renotification by several extensions and deletions.

Description:

This site lies on the Lower Greensand ridge to the east of Sevenoaks. It contains acidic sessile oak woodland of ancient origin, more typical of northern and western Britain, together with relict heathland communities and more recently-derived secondary woodland. An outstanding assemblage of fungi is present, numbering over 250 species and including several that are rare* or scarce** in Britain. Characteristic communities of invertebrates and bryophytes (mosses and liverworts) also occur.

Most of the woodland on the Lower Greensand in Kent is of recent secondary origin, often having developed over former heathland. The fact that much of the woodland on this site is ancient makes it of particular interest. The composition of the woodland varies considerably: towards the north and east of the site sessile oak *Quercus petraea* coppice is widespread with beech *Fagus sylvatica* and sessile oak standards. Other tree species found here include birch *Betula sp.*, rowan *Sorbus aucuparia*, whitebeam *S. aria* and aspen *Populus tremula*. Towards the south and east the woodland is more open with much birch, sessile oak and Scots pine *Pinus sylvestris*. Further west, on the flatter ground, sessile oak and silver birch *B. pendula* predominate as both mature trees and coppice whilst beech is more frequent on the steeper ground. Coppiced sweet chestnut *Castanea sativa* is scattered throughout the site as are shrub and scrub species such as hazel *Corylus avellana*, holly *Ilex aquifolium* and gorse *Ulex europaeus*.

The ground flora reflects the acidic nature of the soils: bilberry *Vaccinium myrtillus* is often dominant in the north of the site, whilst bracken *Pteridium aquilinum* is abundant to the south-east. Other species widespread on the site include ling *Calluna vulgaris*, wavy-hair grass *Deschampsia flexuosa* and heath bedstraw *Galium saxatile*. Two other plants found are heath dog-violet *Viola canina* which is rare* in Kent and climbing corydalis *Corydalis claviculata* which is scarce** in Kent. The latter was first recorded here after the 1987 storm growing on the acidic sandy soils exposed by fallen trees.

The woodland supports an outstanding assemblage of lower plants, particularly fungi with over 250 recorded species including 10 species which are regarded as rare or scarce in Britain. Of these two are considered to be species predominantly of the Scottish Highlands: *Collybia distorta* and *Suillus fluryi*. Of the mosses found on the site many are associated with the outcrops of Oldbury stone, a hard siliceous sandstone. Species of interest include a sandrock speciality *Calypogeia integristipula*, a species associated more with Western Britain *Scaparia umbrosa* and the rare *Lophocia ventineosa var confertifolia*.

The combination of ancient woodland, heathy vegetation and sandy soils supports a characteristic range of invertebrates. Amongst the bees and wasps recorded is a colony of the solitary bee *Andrena lapponica* found here at the only locality known for this species in Kent. It is considered to be a northern species and forages particularly on bilberry blossom. Many of the invertebrates are restricted to ancient woodland sites including two species of mollusc: the slug *Limax tenellus* is scarce in Britain and the snail *Phenacolumax major* is rare and confined to southern England and South Wales.

The site also supports many woodland birds including redstart found here at one of its few Kent sites.

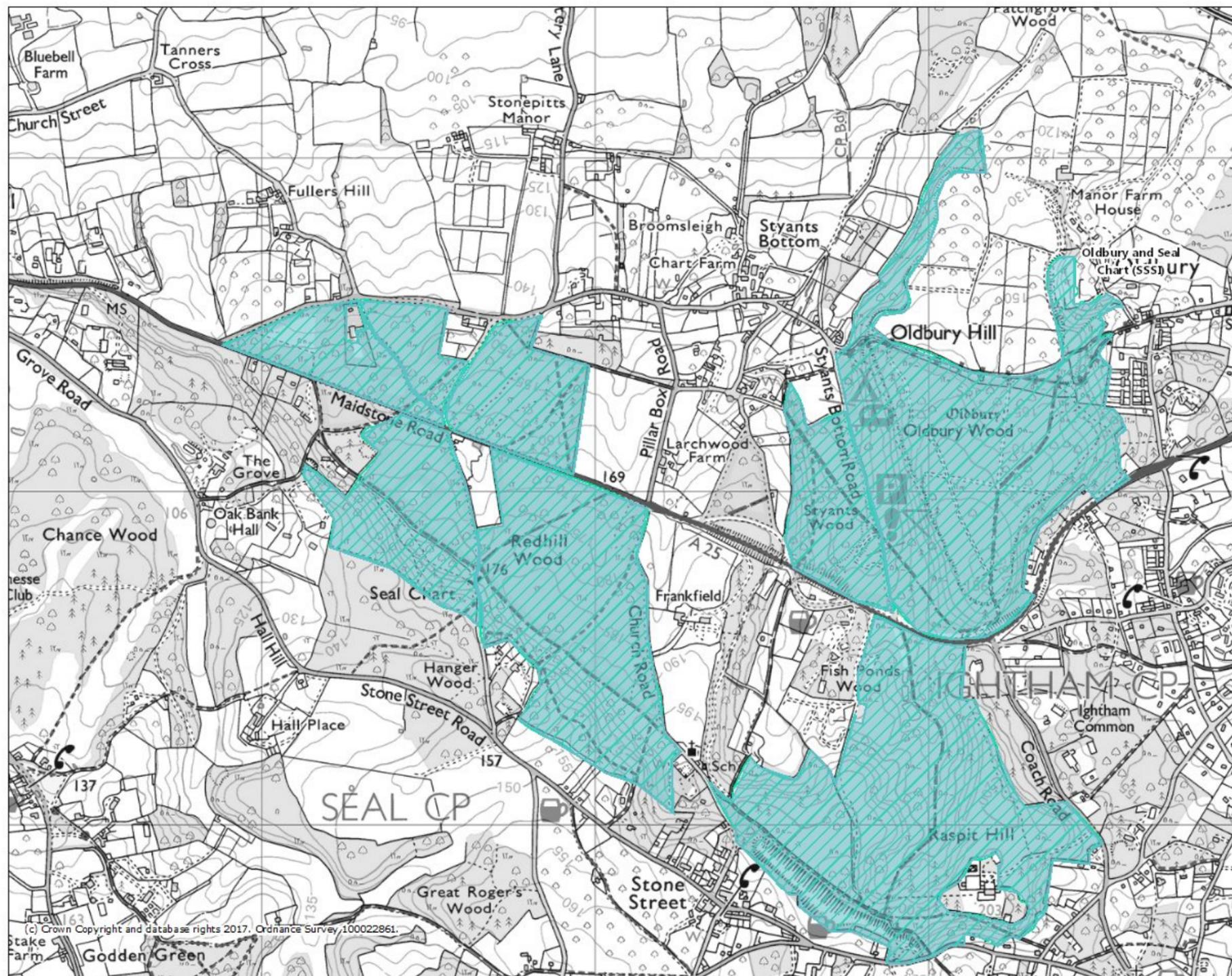
* rare: in Kent: recorded from 1% or fewer of the 2 x 2km squares in Kent.

in Britain: recorded from 15 or fewer of the 10 x 10km squares in Britain.

** scarce: in Kent: recorded from 1--5% 2 x 2km squares in Kent.
in Britain: recorded from 15--100 10 x 10km squares in Britain.



Oldbury and Seal Chart SSSI



Legend

- Sites of Special Scientific Interest (England)

Projection = OSGB36
 xmin = 555100
 ymin = 154600
 xmax = 559000
 ymax = 157400
 Map produced by MAGIC on 7 August, 2017.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

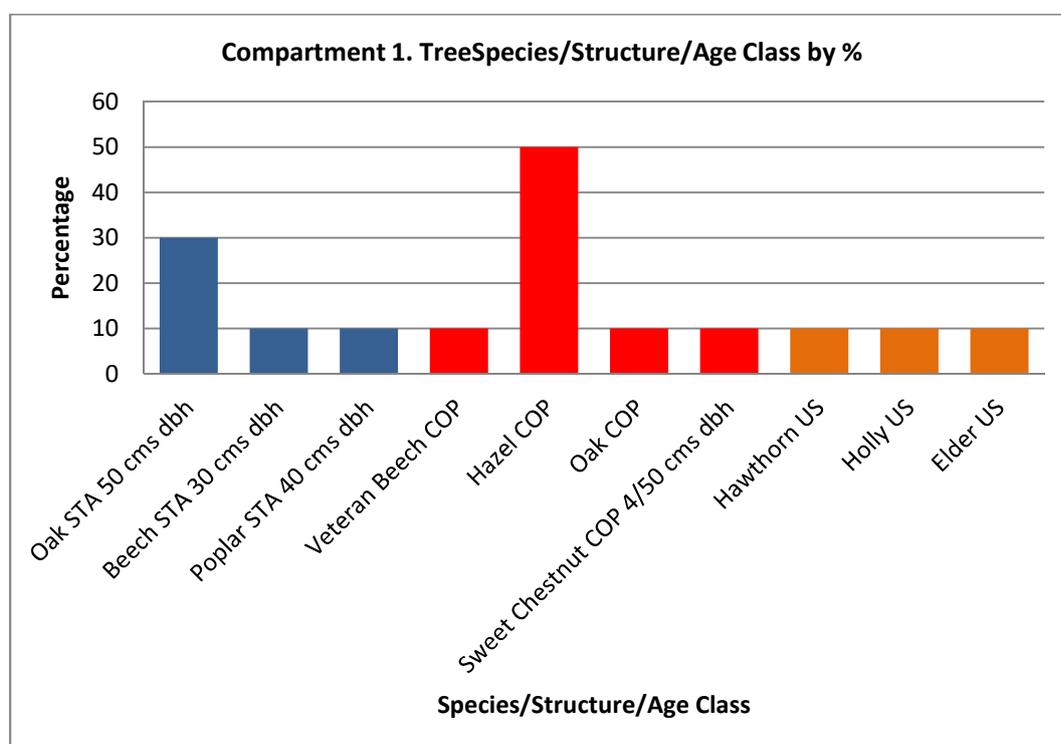
Appendix C: Preliminary Woodland Condition Survey

The Species / Structure / Age Class data presented in tabular format within Chapter 3.4 is represented here in a series of bar charts to better illustrate the current structure of the woodland habitat

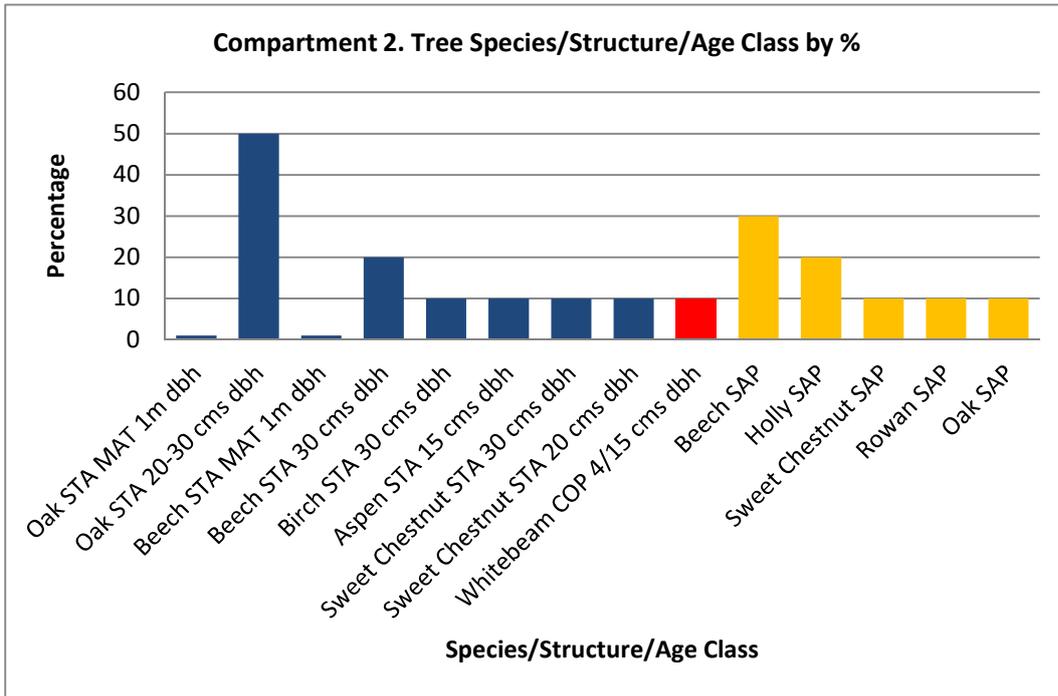
KEY

DBH	Diameter at Breast Height, used with STA & figure e.g. 40cm
EST	Established
MAT	Mature
PLAN	Plantation
POL	Pollard
SA	Sapling
SE	Seedling
SET	Semi-established
SL	Shrub Layer
STA	Standard
US	Understorey
V	Veteran

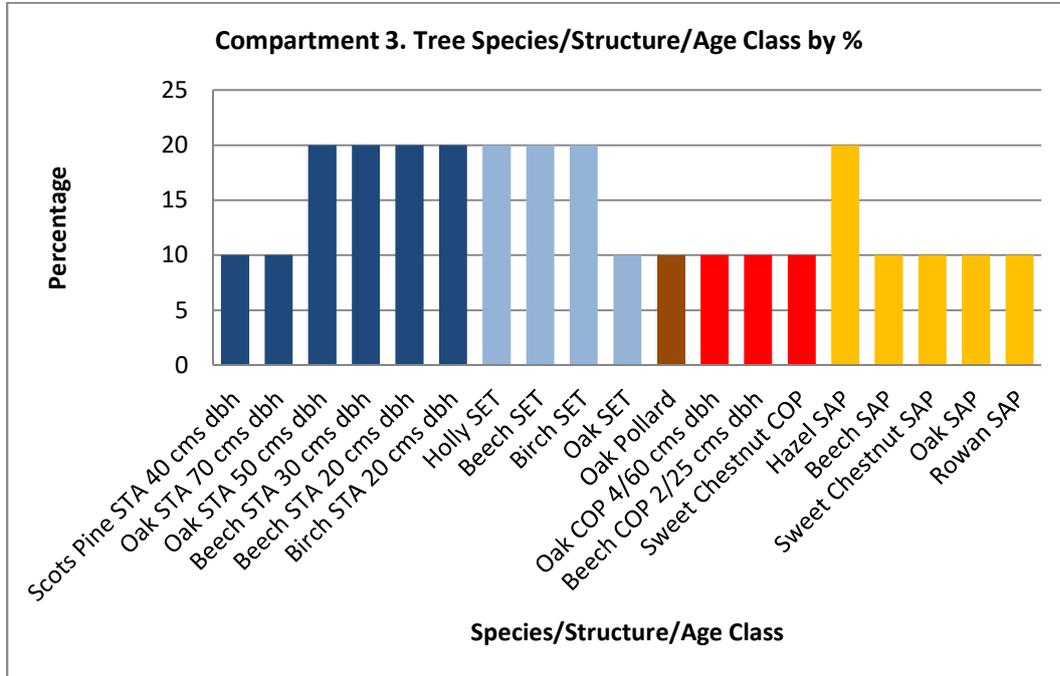
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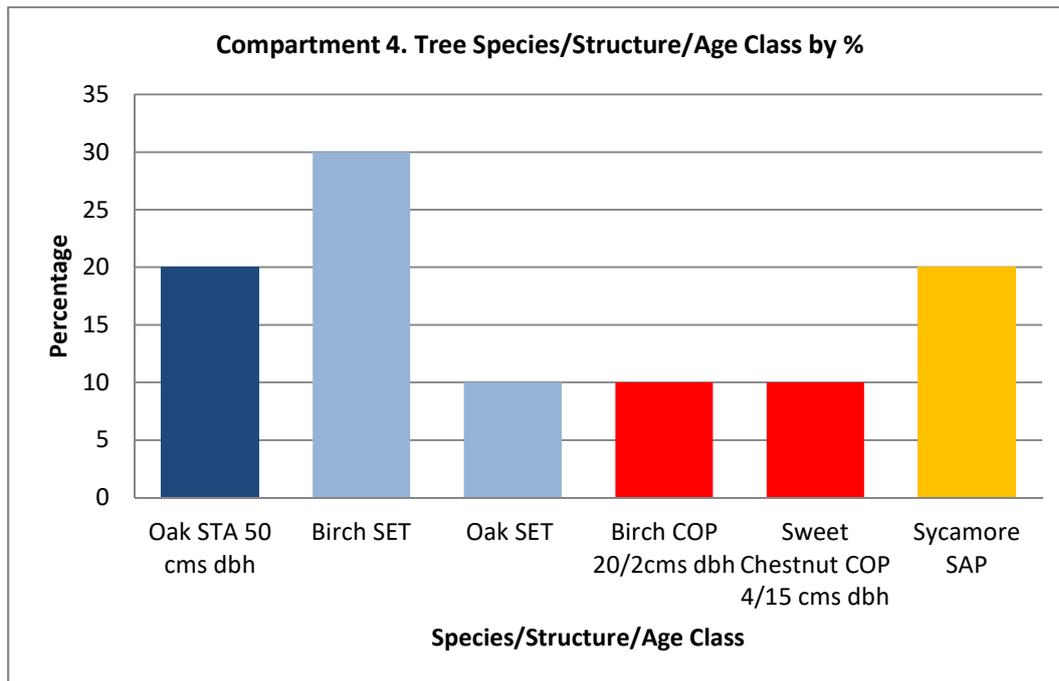
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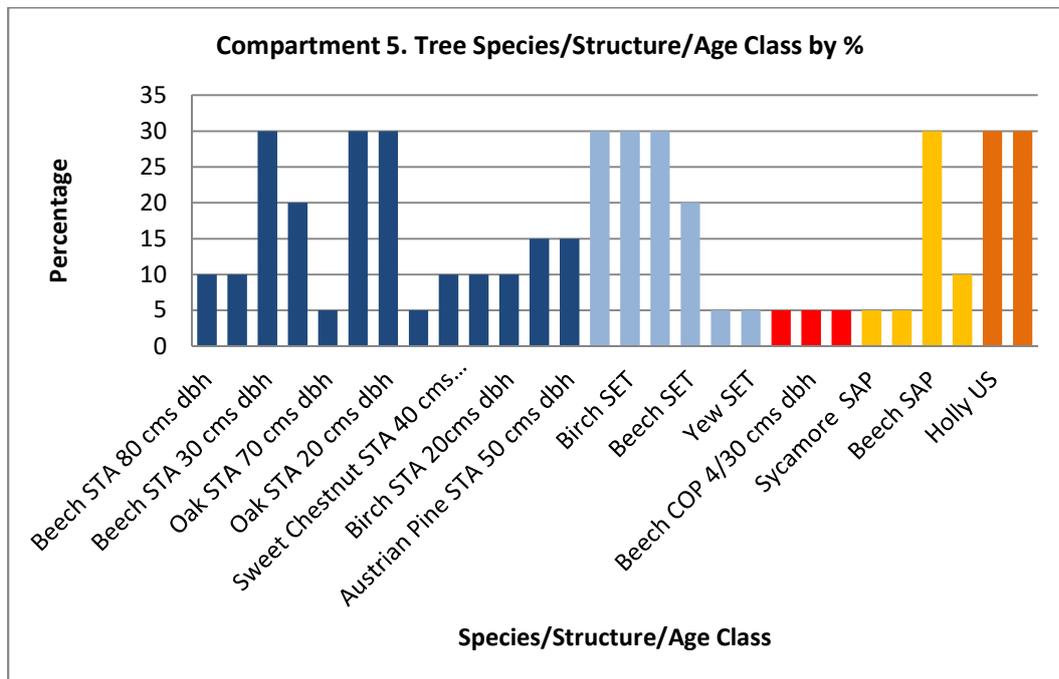
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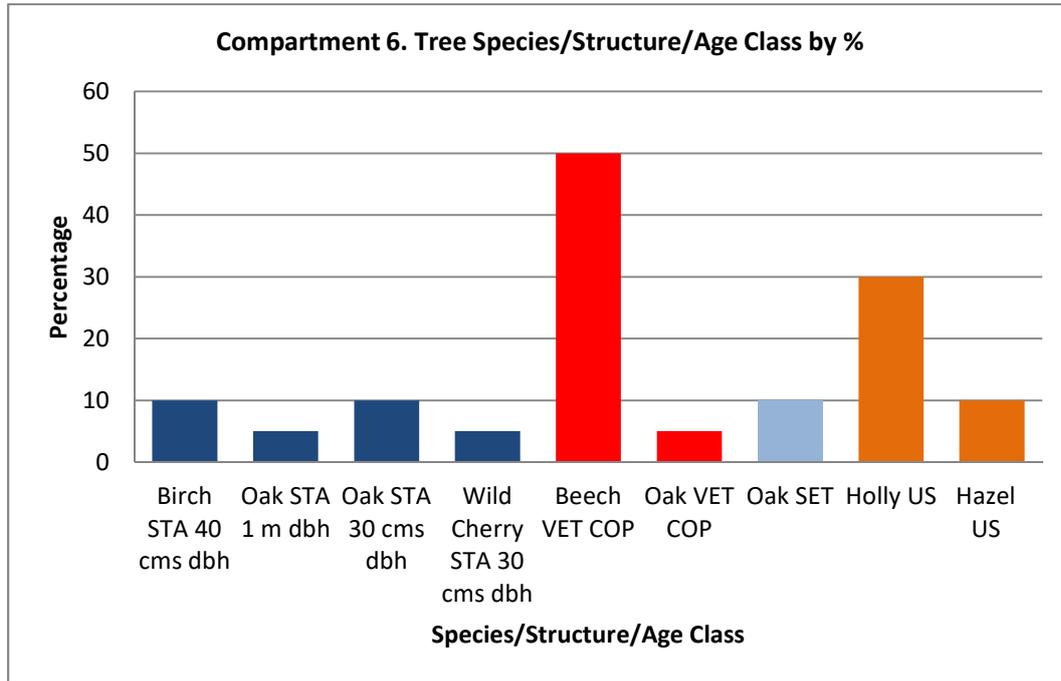
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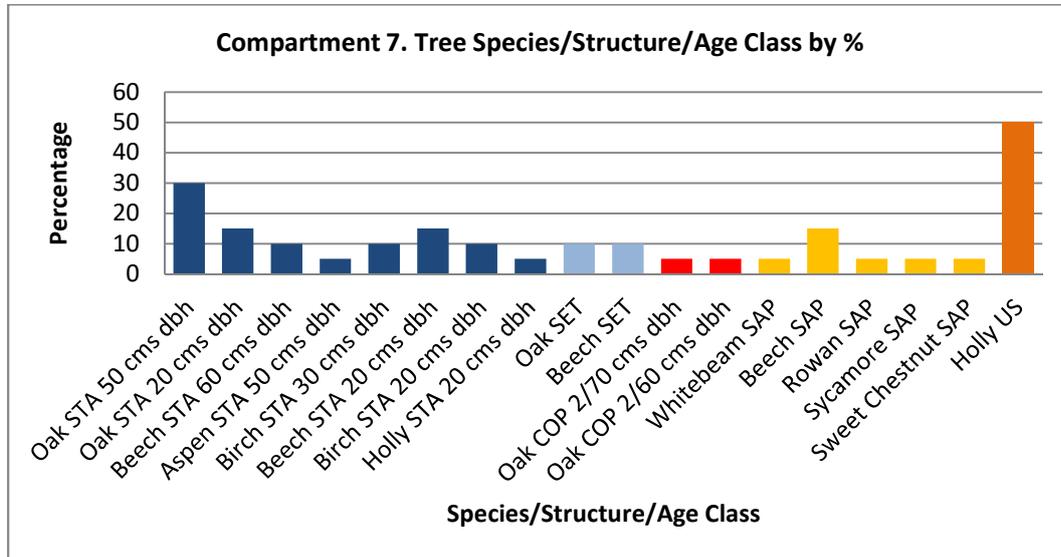
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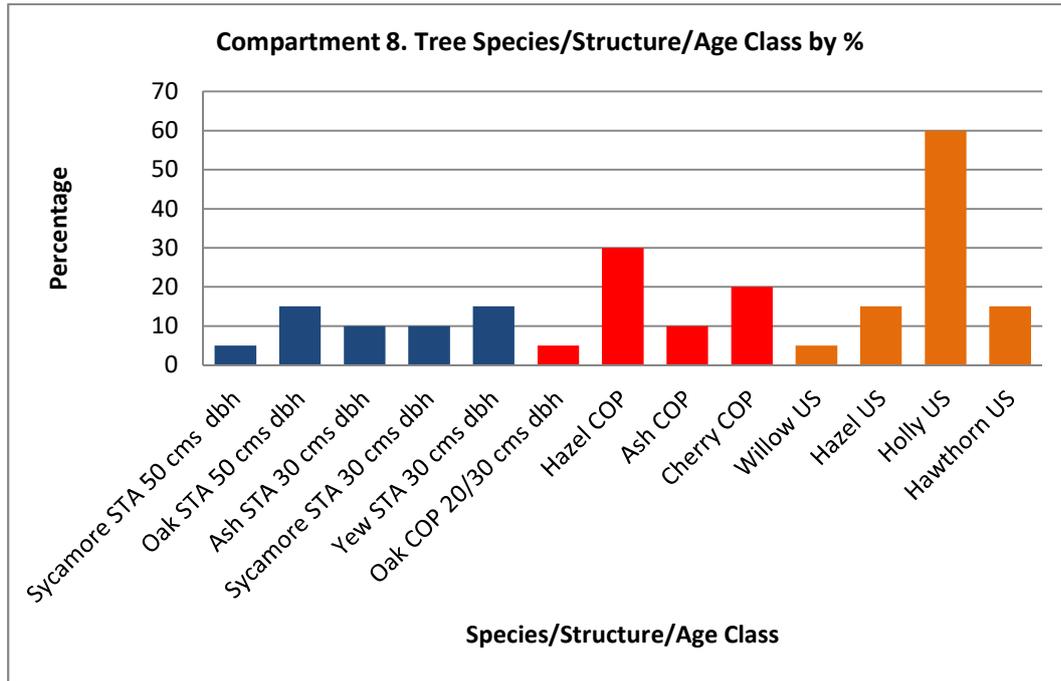
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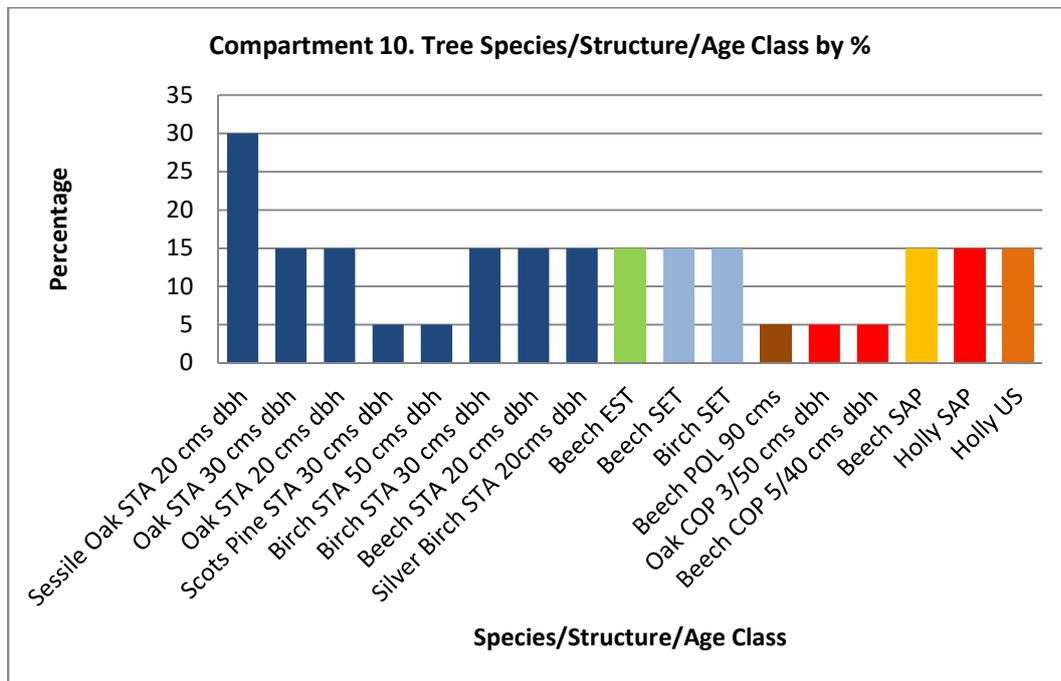
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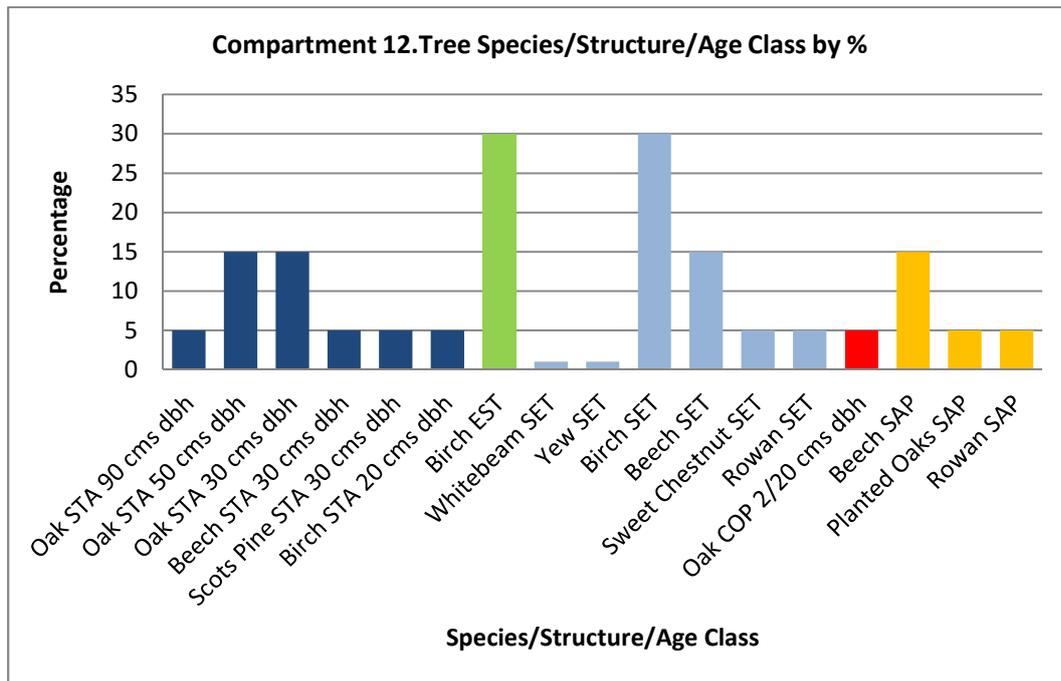
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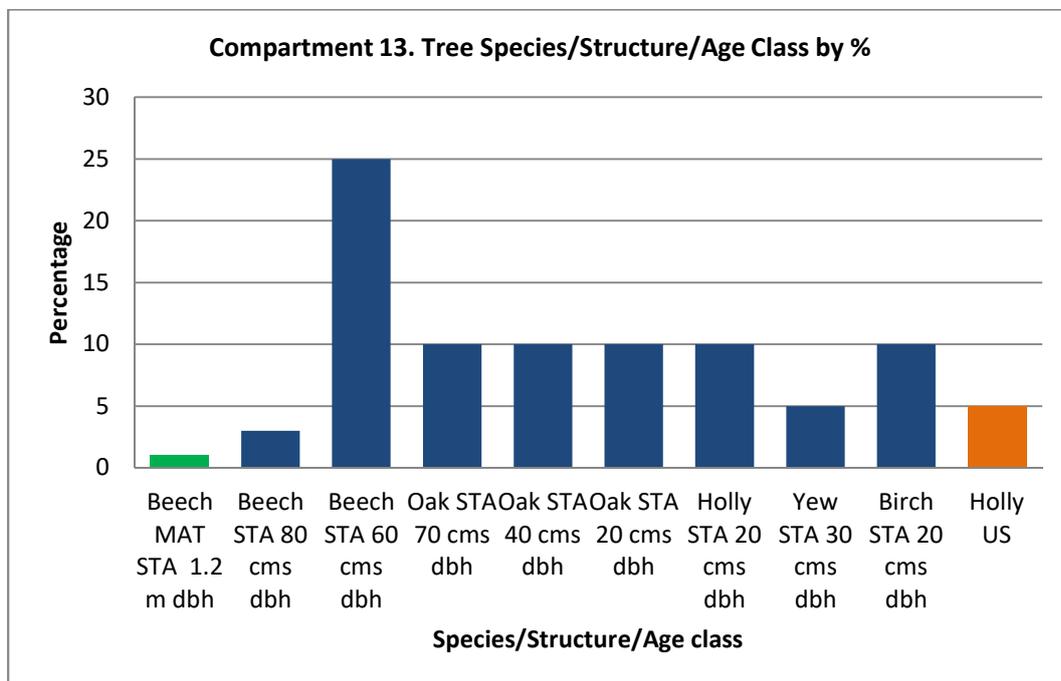
Compartment 10



Compartment 12



Compartment 13



Compartment15

