Sevenoaks DISTRICT COUNCIL

Kent wildlife Trust

Sevenoaks Greensand Commons Project

Sevenoaks Common

Ecological Scoping & Outline Nature Conservation Management Plan

Supported by The National Lottery® through the Heritage Lottery Fund

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Head Office: Kent Wildlife Trust, Tyland Barn, Sandling, Maidstone, Kent ME14 3BD
Tel: 01622 662012 Fax: 01622 671390 www.kentwildlifetrust.org.uk info@kentwildlife.org.uk
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1 INTRODUCTION

1.1 Background

Sevenoaks District Council, working in conjunction with Kent Wildlife Trust, has secured funding from the Heritage Lottery Fund (HLF) 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.

Sevenoaks Common is owned and managed by Sevenoaks Town Council.

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

1.2 Survey Location / Area

Sevenoaks Common lies at the southern end of Sevenoaks to the west of the Tonbridge Road and north of Gracious Lane at central OS grid reference TQ528527.

Sevenoaks Common extends to approximately 14.57ha and borders the southern fringes of Sevenoaks, separating residential parts of the town from open countryside. It is divided into nine discrete areas by a series of roads including Ashgrove Road, Weald Road, Windmill Road, Battle Wood, Beechmont Road, and Letter Box Lane.

The area of Common to the west of Windmill Road abuts broadleaved semi-natural and replanted woodland which is included on the ancient woodland inventory[1].

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 several limitations on this element of the work in terms of seasonality and time.

The site survey was undertaken at a sub-optimal time of year when many plant species that may occur on the Common will not be visible. Time constraints also meant that it was only possible to make a single site visit to the Common. The combined effect 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=ancwoodIndex,fclegbIndex,backdropDIndex,backdropIndex,europeIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=551914:152251:553584:153465&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.

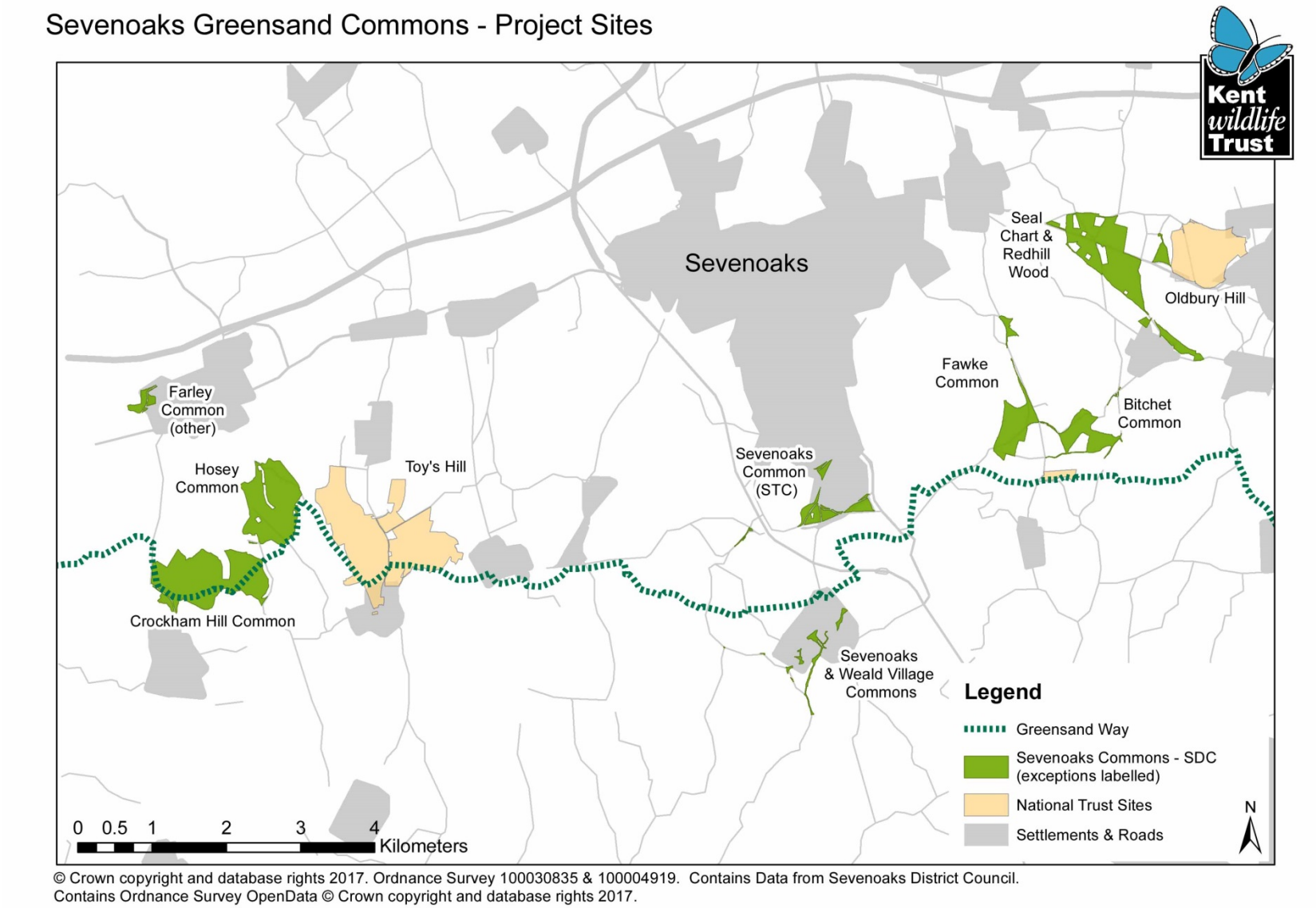

Figure 1: Sevenoaks Greensand Commons. Overview Map

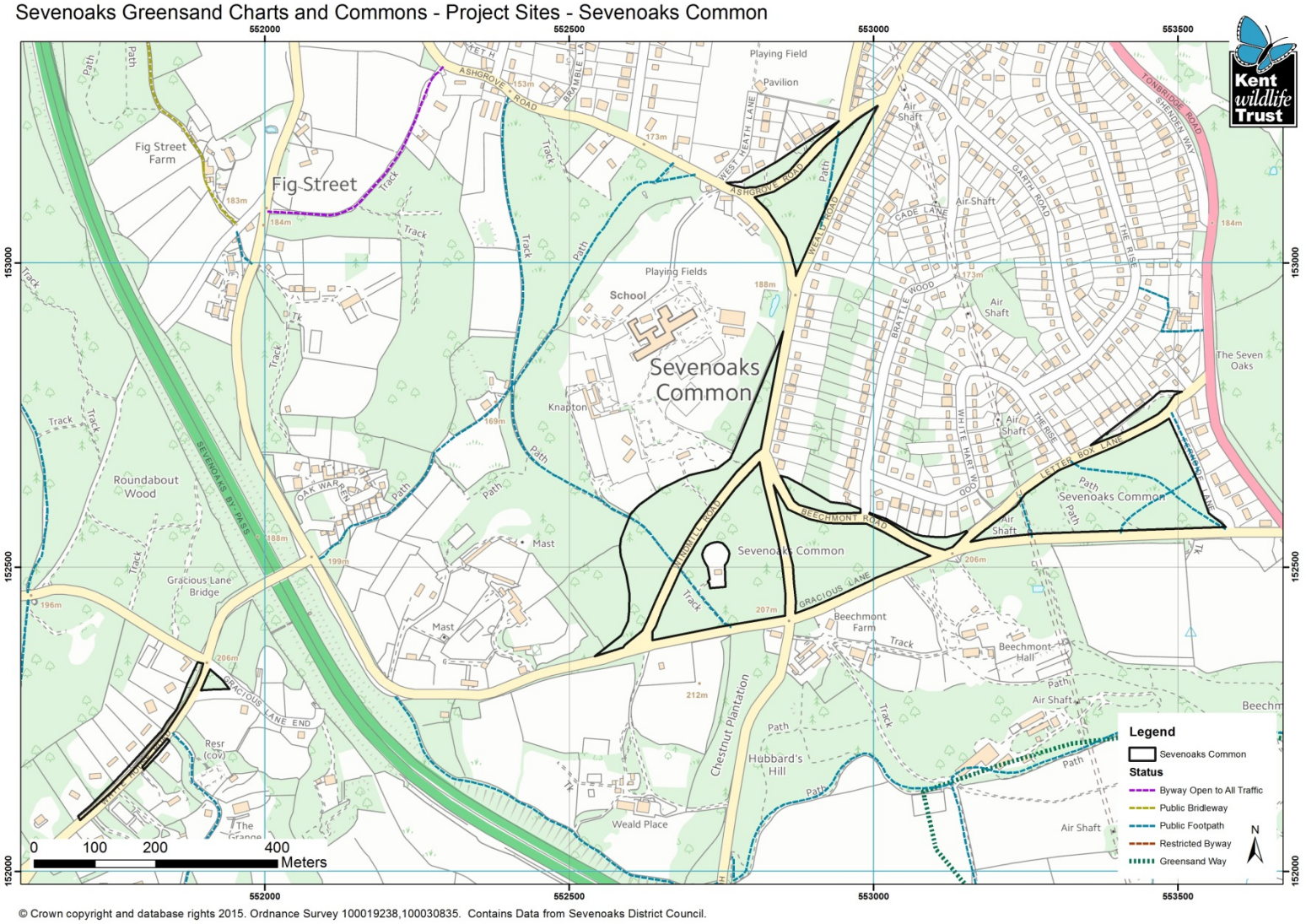

Figure 2: Sevenoaks Common. Site Location and Boundary Map

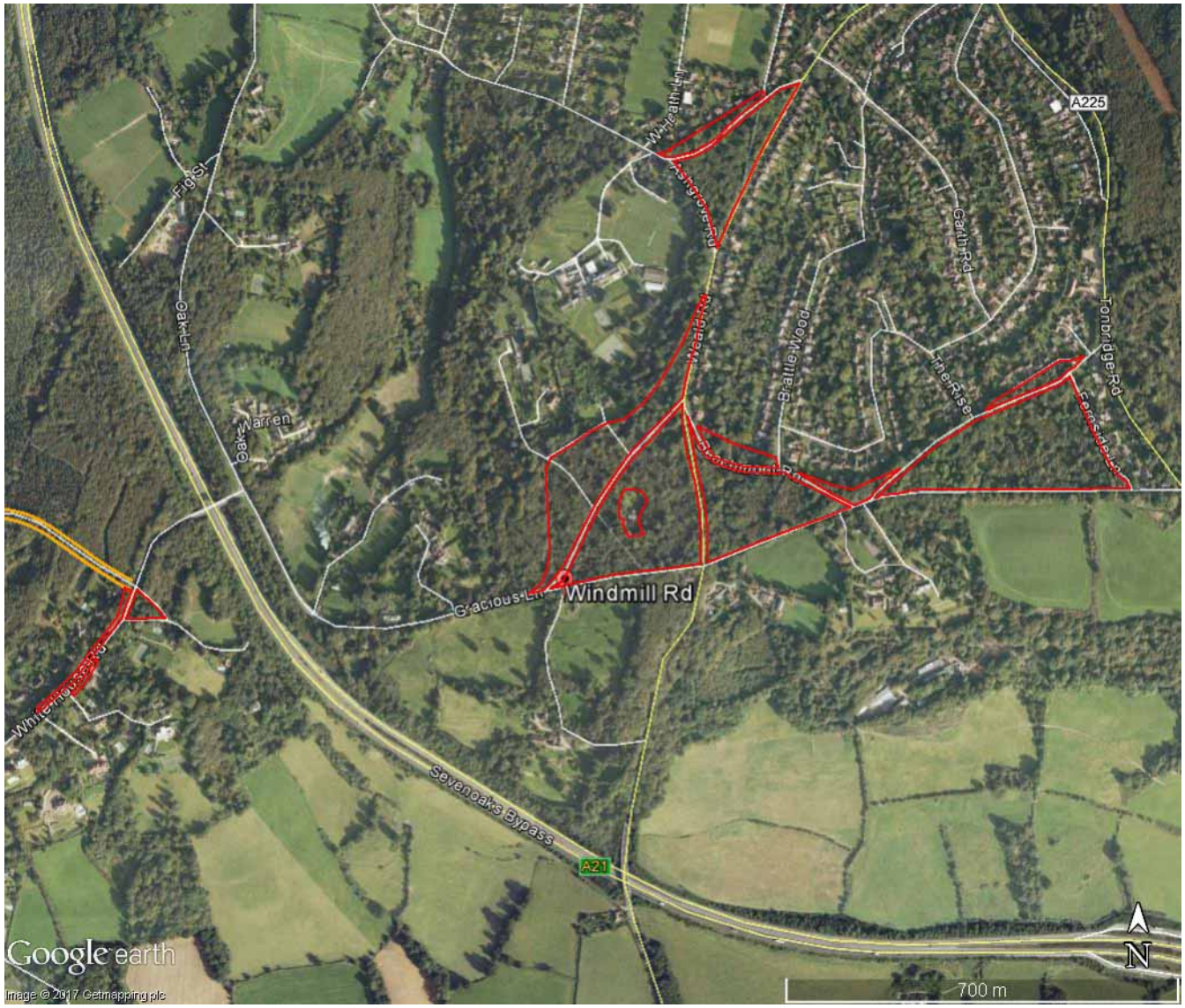

Figure 3: Sevenoaks Common. Google Earth Aerial photographic extract (imagery date 1 January 2008) showing the boundary of the Common (outlined in red). *All boundaries are indicative only. Do not scale*

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 the Sevenoaks and Weald Commons, which included Sevenoaks Common[4]. They were asked to provide information relating to the following:

- Statutory and non-statutory designated nature conservation sites
- Identification, distribution and extent of habitats[5]
- 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 2012[6]
- 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 carried out a search of its Local Wildlife Sites site files for any relevant habitat, species or management information relating to Sevenoaks Common.

In addition, KWT also utilised open source data, such as that provided by the British Geological Society[7], for information relating to geology and the Soilscapes website[8] for information relating to soils.

2.2 Site Visit

Sevenoaks Common was visited on 14th April 2017 by Neil Coombs CEnv MCIEEM, Land Management Advisor for Kent Wildlife Trust. Weather conditions at the time of the survey visit were sunny.

[2] www.kmbrc.org.uk
[3] http://www.kentarg.org/
[4] Other Commons included within the Westerham Cluster are Farley Common and Hosey Common
[5] 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
[6] http://www.archnature.eu/mapping-tools.html
[7] http://mapapps.bgs.ac.uk/geologyofbritain/home.html
[8] http://www.landis.org.uk/soilscapes/

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.

2.2.1 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 photographs[9], 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 Woodlands[10] (JNCC, 2004), and the Condition Assessment Monitoring Form for Woodlands[11] (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. under active management, 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.

[9] Using the Phase 1 Habitat Survey Toolkit https://www.brookes.ac.uk/bms/services/ceec/phase-one-habitat-survey-toolkit/about/
[10] Document available to download from http://jncc.defra.gov.uk/pdf/CSM_woodland.pdf
[11] Form available to download from http://www.essexwtrecords.org.uk/sites/default/files/surveyfiles/EWT%20woodland%20condition%20assessment%20form%20amended%2014%2003%2012.pdf

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.

3 RESULTS

3.1 Designated Nature Conservation Sites

Sevenoaks Common is not included within any statutory nature conservation sites. Parts of the Common are however included within a larger Local Wildlife Site[12] (SE14: Sevenoaks Common, Hubbard's Hill and Beechmont Bank). The reason for designation is that the whole Local Wildlife Site includes, *"…around 6 hectares of ancient woodland (excluding ancient replanted woodland) to the west of Windmill Road. The remainder of the site consist primarily of secondary woodland on Sevenoaks Common itself. This secondary woodland links the ancient woodland part of the site within the SSSI parkland of Knole Park. The site as a whole is considered valuable not just in its own right but as an important link in an extensive complex of woodlands, wood pasture and grassland […] between Westerham and Ightham."* A copy of the LWS citation is included at Appendix B.

Two SSSIs[13] lie within 100m of Sevenoaks Common. Hubbard's Hill SSSI, is located to the south of Gracious Lane, while Knole Park SSSI is located to the east of Fernside Lane.

Hubbards Hill SSSI is a geological SSSI designated because it is, "… *an important locality for Quaternary periglacial deposits and landforms, particularly solifluction features*" [14].

Knole Park SSSI is designated because it, *"…includes areas of acidic grassland, parkland, woodland and several ponds. It was a dead wood and ancient woodland invertebrate fauna which is regarded as the finest in Kent, and supports a rich fungus flora."*[15]

3.2 Geology and Soils

The British Geological Survey website[16] indicates that Sevenoaks Common lies on two different types of bedrock. The bedrock geology underlying much of the Common is described as, "Sandgate Formation – Sandstone and Mudstone. Sedimentary bedrock formed approximately 112 – 125 million years ago in the Cretaceous Period." The geology underlying the southernmost areas of the Common is described as "Hythe Formation - Sandstone And [subequal/subordinate] Limestone, Interbedded. Sedimentary Bedrock formed approximately 112 to 125 million years ago in the Cretaceous Period."

The superficial geology is described as, "Head - Clay, Silt, Sand And Gravel. Superficial Deposits formed up to 3 million years ago in the Quaternary Period."

[12] Local Wildlife Sites are considered to be of county wildlife importance. They can contain important, distinctive and threatened habitats and species. Further information is available at http://www.wildlifetrusts.org/localwildlifesites
[13] 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.
[14] The Hubbard's Hill SSSI citation may be viewed at https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000062
[15] The Knole Park SSSI citation may be viewed at https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1004530&SiteName=Knole%20Park&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
[16] http://mapapps.bgs.ac.uk/geologyofbritain/home.html

The Soilscapes website[17] has identified the soils on Sevenoaks Common as being 'Freely draining slightly acid loamy soils' [18]. 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 Soilscapes websites. Owing to copyright restrictions it is not possible to include map extracts within this report.

3.3 Habitats

The 2012 Kent Habitat Survey shows the site as comprising 'WB3 broadleaved woodland'[19] with fragments of improved grassland along the verges either side of White House Road.[20] However these actually lie outside of Sevenoaks Town Common and Sevenoaks Town Council's responsibilities.

The Kent Habitat Survey has also identified that the broadleaved woodland areas of the site are included on Natural England's Priority Habitat Inventory as 'Lowland mixed deciduous woodland', whilst the Magic website identifies the areas of Sevenoaks Common which abut the northern boundary of Gracious Lane (i.e. Compartments 1, 2, 3 & 4) as Wood Pasture [21].

The habitat map provided by KMBRC is attached at Figure 5.

The LWS citation states that Sevenoaks Common was, "*Formerly more open Common with occasional mature oak* Quercus sp., *beech* Fagus sylvatica *and holly* Ilex aquifolium*, the area is now developing into secondary woodland with little ground flora and much birch* Betula sp.*, beech and sycamore* Acer pseudoplatanus *regeneration into what were once open areas. Bracken is locally dominant. Small, damp hollows are slightly richer, with pendulous sedge* Carex pendula*, ragged-robin* Lychnis flos-cuculi *and grey willow* Salix cinerea*."*

A woodland management plan (Esus Forestry and Woodlands, 1996), describes the Common as comprising mixed broadleaved high forest, semi-natural secondary and planted woodland. It goes on to say, "*Formerly covered by mature beech, oak* Quercus sp., *and Scots pine* Pinus sylvestris*, after the 1987 Storm approximately 70% was cleared and replanted with beech, oak, ash* Fraxinus excelsior*, field maple* Acer campestre, *lime* Tilia sp., *larch* Larix sp., *plane* Platanus sp., *and Scots pine. These trees are now well-established with many of their crowns restricted due to mutual competition.*

The mature trees are scattered across the Common, though there are a few areas where stocking is more significant.[22] *Due to the current age class structure the woodland is relatively homogenous. Shrub species present on the site include holly, gorse* Ulex europaeus, *rhododendron* Rhododendron ponticum *and laurel* Prunus sp."

[17] http://www.landis.org.uk/soilscapes/#
[18] Soilscape 6
[19] WB3: 'Dry' woods predominantly composed of broadleaf and yew species (i.e. with >80% broadleaves and yew (Taxus baccata) in the canopy).
[20] Improved grassland is characterised by vegetation dominated by a few fast-growing grasses on fertile, neutral soils. It is frequently characterised by an abundance of rye-grass (Lolium) spp. and white clover (Trifolium repens).
[21] Shown on Magic website at http://www.magic.gov.uk/MagicMap.aspx?chosenLayers=ancwoodIndex,bapwoodIndex,backdropDIndex,backdropIndex,europeIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=551956:152245:553627:153460&useDefaultbackgroundMapping=false
[22] Looking at the description, this would equate particularly to the western end of Compartment 4.

The Esus management plan also flagged up the presence of a TPO on a block of woodland to the west of Letter Box Lane; the area of which is shown by the hatching on the map extract taken from the management plan and presented below (Figure 4).

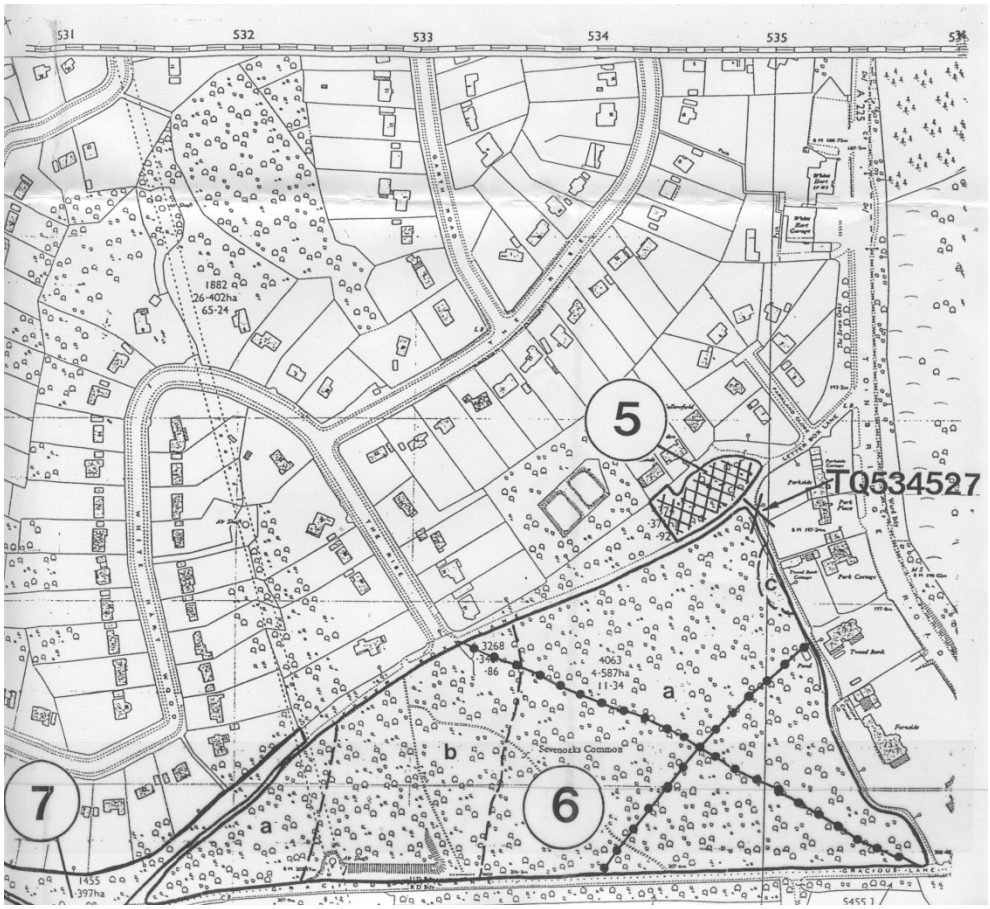

Figure 4: Sevenoaks Common. Extract from Woodland Management Plan (Esus Forestry and Woodlands, 1996) showing location of TPO (hatched)

Sevenoaks Common has been under a Woodland Grant Scheme with the Forestry Commission since 1997 and is still under this scheme, although the grant funding has dried up. Sevenoaks Town Council still follow the most recent program of works that was from 2013 to 2018.

Kent & Medway Biological Records Centre

Kent & Medway Biological Records Centre

Map showing the habitats recorded by the Kent Habitat Survey 2012 at
Sevenoaks & Weald Commons
Anne Waite, Kent Wildlife Trust
ENQ/17/129 28/03/2017

0 0.375 0.75 1.5 Kilometers

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

552000 000000 554000 000000 556000 000000

152000 000000

150000 000000

N

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
- Other artificial exposure

Agriculture and improved grassland (GI, CR, FT)
- Improved grassland
- Arable
- Arable field margin
- 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: Sevenoaks Common. Kent Habitat Survey, 2012. For ease of reference Sevenoaks Common is shown outlined in blue

The 2017 Phase 1 Habitat Survey results were similar to previous descriptions of the site, confirming that Sevenoaks Common comprises predominantly woodland of two main types: broadleaved semi-natural woodland, and mixed semi-natural woodland. The verge to the north of White House Road supported a small area of semi-improved grassland, while a native hedgerow was recorded to the south of White House Road.

The Phase 1 Habitat map is enclosed at Figure 6.

Compartments 1 – 9 and Target Notes 1 – 16, included at Table 1 below, provide descriptions of the habitats and other features encountered during the site walkover. Photograph numbers referred to are included at Appendix A.

Table 1: Sevenoaks Common Target Notes

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR[23])) during 2017 walkover
Cmpt 1	Broadleaved semi-natural woodland (2.76ha)	Block of semi-natural mixed broadleaved woodland bounded on eastern side by Windmill Road; a wall forms part of the western boundary. Southwestern boundary abuts larger woodland block shown on Magic website as comprising ancient semi-natural and ancient re-planted woodland. Compartment includes mature standards (Photo 1), with occasional very mature / veteran trees. The understorey comprises mainly holly *Ilex aquifolium* varying in density across the area. The species and age classes suggest that there has been considerable colonisation by pioneer woodland species such as birch *Betula* spp., for perhaps 20 – 30 years. Ground flora is sparse and there are few, if any, signs of traditional woodland management. Rhododendron *Rhododendron ponticum* and cherry laurel *Prunus laurocerasus* were present in this area. There is evidence of historic 'workings' within this compartment.	Birch (A); rowan *Sorbus aucuparia* (A); honeysuckle *Lonicera periclymenum* (O); bramble *Rubus fruticosus* agg. (O); redcurrant *Ribes rubrum* (R); sycamore *Acer pseudoplatanus* (R); sweet chestnut *Castanea sativa* (R); cherry laurel (R); beech *Fagus sylvatica* (R); ferns (R); ash *Fraxinus excelsior* (R); bluebell *Hyacinthoides non-scripta* (R); holly (R); Scots pine *Pinus sylvestris* (R); oak *Quercus* spp. (R); rhododendron (R); willow *Salix* spp. (R).
Cmpt 2	Mixed semi-natural woodland (3.23ha)	Block of mixed broadleaved / conifer woodland surrounded on all sides by roads. Birch and sycamore are dominant. (Photo 6) Notable beech / sweet chestnut twist (Photo 5). Rhododendron present in this area. Horse riding observed.	Sycamore (F); birch (F); bracken *Pteridium aquilinum* (F); bramble (F); rhododendron (O); lord's-and-ladies *Arum maculatum* (R); sedges Carex spp. (R); hornbeam *Carpinus betulus* (R); sweet chestnut (R); beech (R); ash (R); bluebell (R); holly (R); larch *Larix* spp. (R); Scots pine (R); wild cherry *Prunus avium* (R); oak (R); elder

[23] DAFOR = **D**ominant; **A**bundant; **F**requent; **O**ccasional; **R**are

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR[23])) during 2017 walkover
		Extensive 'workings' throughout this area.	*Sambucus nigra* (R); common whitebeam *Sorbus aria* (R); rowan *Sorbus aucuparia* (R); small-leaved lime *Tilia cordata* (R).
Cmpt 3	Broadleaved semi-natural woodland (2.60ha)	Comprises three blocks of broadleaved woodland – the main block is surrounded by roads; the smaller blocks lie to the north of Beechmont Road and are themselves bisected by Brattle Wood Road. Cotoneaster was recorded in this compartment.	Bramble (A); holly (F); sycamore (O); wood anemone *Anemone nemorosa* (O); birch (O); beech (O); willow (O); common nettle *Urtica dioica* (O); field maple *Acer campestre* (R); hornbeam (R); cotoneaster *Cotoneaster* spp. (R); oak (R); elder (R); rowan (R); small-leaved lime *Tilia cordata* (R).
Cmpt 4	Broadleaved semi-natural woodland (4.05ha)	Area of broadleaved woodland surrounded on all sides by roads. Beech is dominant as high forest with holly understorey present in places. Sycamore is rapidly establishing. Whilst categorised as broadleaved woodland this compartment includes occasional larch standards. There are also a number of yew *Taxus baccata* saplings, indicating that perhaps this species may be potentially establishing here (Photo's 7 & 8) Rhododendron is present here. There was evidence of 'workings' within this compartment.	Bramble (D); sycamore (F); birch (F); beech (F); oak (O); field maple (R); hornbeam (R); broad buckler fern *Dryopteris dilatata* (R); larch (R); lily-of-the-valley *Convallaria majalis* (R); rhododendron (R); yew (R).
Cmpt 5	Broadleaved semi-natural woodland (0.25ha)	Small fragment of beech-dominated broadleaved woodland, with occasional yew saplings bounded by Letter Box Lane to the south and residential housing to the north (Photo 14). Cherry laurel was present here. Evidence of workings observed within this Compartment.	Sycamore (O); birch (O); holly (O); common nettle (O); cherry laurel (O); hazel *Corylus avellana* (R); hawthorn *Crataegus monogyna* (R); beech (R); yew (R).
Cmpt 6	Broadleaved semi-natural woodland (1.80ha)	Two blocks of woodland bisected in northeast-southwest direction by Ashgrove Road. Sycamore is starting to dominate the woodland to the south of Ashgrove Road. Rhododendron and cherry laurel is present here.	**Area to south of Ashgrove Road (6):** Sycamore (A); birch (F); bramble (F); wood anemone (O); bluebell (O); rowan (O); hornbeam (R); cherry laurel (R); hazel (R); hawthorn (R); beech (R); ferns (R); holly (R); primrose *Primula vulgaris* (R); wild cherry (R); oak (R); sallow *Salix cinerea* subsp. *oleifolia* (R); yew (R); small-leaved lime (R); gorse *Ulex* sp. (R) **Area to north of Ashgrove Road (6a):** Holly (A); bluebell (O); hawthorn (R); beech (R); ivy (R); oak (R); rhododendron (R; yew (R).
Cmpt 7	Broadleaved semi-natural woodland (0.08ha)	A triangle of mixed broadleaved woodland at road junction. Woodland includes some standard trees, sapling	Bramble (A); bluebell (F); ferns (O); false-brome *Brachypodium sylvaticum* (R); ivy *Hedera helix*

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR[23])) during 2017 walkover
		and understorey, with brambles dominant with bluebells in the ground flora (Photo 17).	(R); dog's mercury *Mercurialis perennis* (R); red currant (R).
Cmpt 8	Intact hedge with associated improved grassland verge (0.14ha)	Small stretch of improved grassland verge (Photo 18) including beech with mature sweet chestnut coppice hedge line (Photo 20). One beech tree is showing signs of failure (Photo 19) and, given its proximity to the highway, examination by an arboriculturist is advised. It is recommended that this hedgerow should assessed for relevant management works, such as restoration coppicing and maintenance of veteran tree features.	Beech (A); sweet chestnut (F); hornbeam (R).
Cmpt 9	Semi-improved grassland (0.01ha)	Grass verge to residential properties. In places daffodil was frequent (Photo 21). The verge contains numerous standard trees of oak and sweet chestnut (Photo 22). There are two notable beeches which have a number of forks which should be assessed by a suitably qualified arboriculturist (Photo 24). Cherry laurel is present on the verge.	
TN1	-	Compartment 1. TQ52720 52672. Veteran oak.	
TN2	-	Compartment 1. TQ5279 52820. Sweet chestnut and Oak mature standards.	
TN3	-	Compartment 1. TQ52830 52851. Multi-stemmed beech exhibiting *Ganoderma*, white rot, and with bat roost potential to crown (Photo's 2 & 3).	
TN4	-	Compartment 1. TQ52844 52883. Failed beech. Query *Meripilus* followed by *Ganoderma*. Fallen stem in-situ (Photo 4). Leaning hazard away from footpath.	
TN5	-	Compartment 1. TQ52859 52916. Veteran oak.	
TN6	-	Compartment 1. TQ52866 52943. Mature oak standard considered to have potential as future veteran.	
TN7	-	Compartment 3. TQ52967 52577. Row of four beech standards.	
TN8	-	Compartment 3. TQ53087 52506. Mature oak and beech.	
TN9	-	Compartment 4. TQ53303 52629. Multi-stem beech (Photo 9).	
TN10	-	Compartment 4. TQ53449 52642. Large beech (Photo's 10 & 11).	

Cmpt No / Target Note	Phase 1 Habitat Type (Area)	Description	Species recorded (Abundance (DAFOR[23])) during 2017 walkover
TN11	-	Compartment 4. TQ53470 52702. Damaged beech (Photo 12).	
TN12	-	Compartment 4. TQ53299 52684. Mature multi-stemmed beech (Photo 13).	
TN13	-	Compartment 6. TQ52946 53192. Veteran oak with bat roost potential (Photo 15).	
TN14	-	Compartment 6. TQ53001 53249. Mature oak (Photo 16).	
TN15	-	Compartment 8. TQ51787 52148. Beech. Considered to be veteran coppice on former boundary woodbank.	
TN16	-	Compartment 9. TQ51718 52127. Possible relict woodbank (Photo 23).	

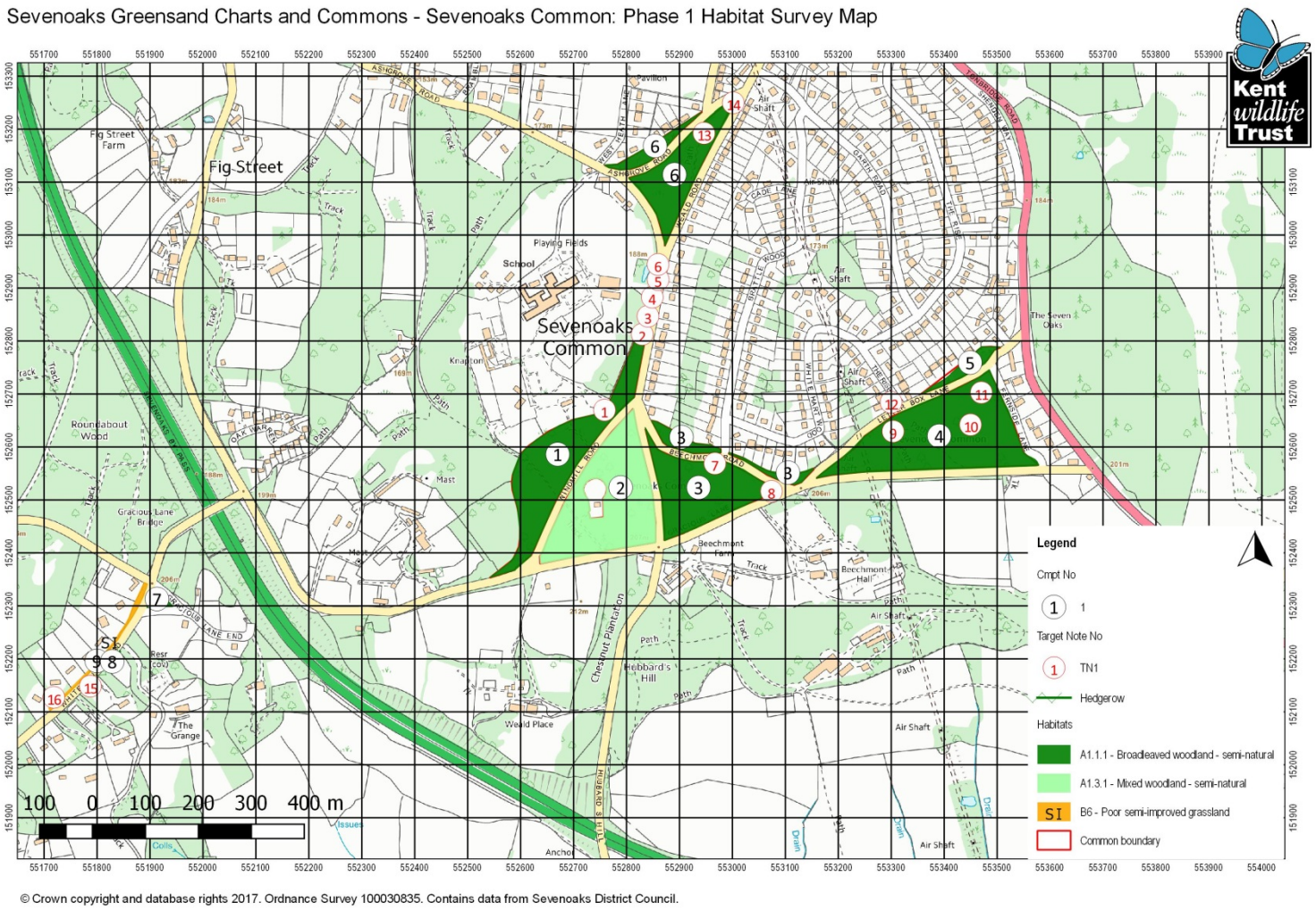

Figure 6: Sevenoaks Common. Phase 1 Habitat Map, based on site walkover survey April 2017

3.4 Preliminary Woodland Condition Survey

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

Table 2: Sevenoaks 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:	Mixed native broadleaved 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 70cms dbh 2% Beech STA 50cms dbh 20% Beech SET 5% Beech SA 5% Yew SA 1% Birch EST 60% Birch STA 1% Holly US 15% Rowan SA 30% Sycamore STA 50cms+ dbh 1% Sycamore STA 20cms dbh 20% Sycamore SET 5% Sycamore SE 20% Sycamore Coppice MAT 1% Sweet chestnut STA 50cms dbh 1% Sweet chestnut Coppice MAT 50cms+ dbh 1% Oak STA 50cms dbh 1% Scots pine STA 50cms dbh 1% Scots pine STA 20cms dbh 1% Ash SA 1% Willow SA 1% Holly STA 30cms dbh 1%
Ground Flora:	See Table 1 Ch 3.3
Fungi:	None observed.
Decaying Wood: **Standing:** **Fallen:**	Decaying wood: 5% Fallen wood: 100%
Invasive Species:	Rhododendron, cherry laurel.
Deer Damage:	None observed.
Historic Features:	Evidence of historic workings.
General Comments:	Mixed broadleaved woodland-semi-natural with mature standards, mostly holly understorey varying in density and very occasional very mature and veteran trees. In much of the compartment the species and age classes suggest that there is considerable recent colonisation (20 – 30 years?) by pioneer woodland species such as birch. Much, if not all, the fallen wood is wind-throw of standard trees which is not recent. Ground flora is sparse and there are few if any signs of traditional

	woodland management.

Table 3: Sevenoaks Common Compartment 2. Preliminary Woodland Condition Survey

Feature	Description
Woodland Type:	Mixed 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 COPPICE MAT 5% Beech STA 50cms+ dbh 5% Beech SET 5% Beech SA 1% Sycamore SET 20% Sycamore SA 10% Sycamore STA 30cms dbh 2% Small leaved lime SET 5% Birch SET 40% Pine sp. STA 20cms dbh 5% Pine sp. STA 50cms dbh 5% Holly US 1% Hornbeam SA 1% Rowan SET 5% Rowan SA 5% Whitebeam SET 1% Oak STA 50cms dbh 1% Sweet chestnut COP 1% Ash STA 50cms dbh 1% Larch STA 1% Wild cherry STA 1%
Ground Flora:	See Table 1 Ch 3.3
Fungi:	None observed
Decaying Wood: **Standing:** **Fallen:**	Decaying wood >5% Fallen wood 100%
Invasive Species:	Rhododendron.
Deer Damage:	None observed.
Historic Features:	Evidence of historic workings.
General Comments:	Birch and sycamore dominate over what was perhaps once a more open woodland structure of mixed standards.

Table 4: Sevenoaks 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)	Birch EST 20cms dbh 1% Birch SET 20% Birch STA 40%

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	Sycamore EST 20cms dbh 10% Hornbeam SA 2% Beech STA 30cms dbh 5% Beech EST 5% Beech SET 5% Beech SA 5% Small-leaved lime EST 1% Holly US 30% Sycamore STA 30% Sycamore SA 5% Sycamore SE 20% Oak STA 75cms dbh 1% Oak STA 50 cms 1% Oak STA 30cms dbh 1% Field maple SET 1% Rowan SA 5% Elder SL 1% Sallow SA 1%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None observed.
Decaying Wood: **Standing:** **Fallen:**	Decaying Wood 10% Fallen 100%
Invasive Species:	Cotoneaster species.
Deer Damage:	None observed.
Historic Features:	None observed.
General Comments:	

Table 5: Sevenoaks 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	Beech STA 50cms dbh 20% Beech STA 30cms 40% Beech SA 5% Beech SET 5% Yew SA 1% Birch STA 30cms+ dbh 1% Birch EST 10% Birch SET 30% Holly US 15% Rowan SA 10% Rhododendron SA 10% Sycamore STA 40% Field maple STA 15cms dbh 1% Hornbeam EST 20cms dbh 1% Oak STA 50cms+ dbh 2% Sycamore STA Very MAT 1%

	Sycamore STA 20cms dbh 20% Sycamore SET 20% European larch STA 30cms dbh 1%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None observed.
Decaying Wood: **Standing:** **Fallen:**	Decaying Wood >5% Standing Wood: 20% Fallen Wood 80%
Invasive Species:	Rhododendron.
Deer Damage:	None observed.
Historic Features:	Evidence of historic workings observed in this Compartment.
General Comments:	To the west starts as mixed woodland and then grades east to where beech is dominant as high forest with holly understorey in places. Sycamore is rapidly establishing throughout the compartment. A few larch standards were observed. The eastern half of the compartment is dominated by birch and sycamore with beech and oak standards. A number of yew saplings were recorded.

Table 6: Sevenoaks 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) 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 50cms dbh 2% Beech EST 20cms dbh 1% Holly US 20% Yew SA 1% Cherry laurel US 1% Hazel US 5% Sycamore SA 10% Birch SE 10% Horse Chestnut MAT 5% Hawthorn SA 1%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None observed.
Decaying Wood: **Standing:** **Fallen:**	Decaying Wood >10% Fallen Wood 100%
Invasive Species:	Cherry laurel.
Deer Damage:	None observed.
Historic Features:	None observed.
General Comments:	

Table 7: Sevenoaks 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:	Plantation.
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	Birch EST 10% Birch SET 25% Holly US 15% Beech STA 30cms+ dbh 1% Beech STA 50cms dbh 1% Beech SET 1% Sycamore STA 30cms dbh 2% Sycamore SET 50% Hawthorn SA 1% Rowan SET 10% Rowan SA 1% Wild cherry STA 20cms dbh 1% Sallow STA 1% Oak STA 50cms dbh 1% Hornbeam EST 2% Yew EST 15cms dbh 1% Yew SA 1% Ash STA 20cms dbh 1% Small leaved lime PLANTED 1% Hazel US 1%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None observed.
Decaying Wood: **Standing:** **Fallen:**	Decaying wood 5% Fallen wood 100%
Invasive Species:	Cherry laurel.
Deer Damage:	None observed.
Historic Features:	None observed.
General Comments:	Sycamore starting to dominate over establishing mixed broadleaved woodland with few standards.

Table 8: Sevenoaks Common Compartment 6a. 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)	Beech STA 50cms dbh 20% Beech STA 30cms dbh 1% Beech STA 25cms dbh 1% Beech SET 5% Beech SA 5% Yew SA 1%

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	Birch EST 10% Holly US 40% Hawthorn SL 1% Oak STA 75cms dbh 1%
Ground Flora:	See Table 1 Ch 3.3.
Fungi:	None observed.
Decaying Wood: **Standing:** **Fallen:**	None observed.
Invasive Species:	Rhododendron.
Deer Damage:	None observed.
Historic Features:	None observed.
General Comments:	

3.5 Veteran Tree Survey

A veteran / mature tree survey of Sevenoaks Common was undertaken by Nicholas Cave, Open Spaces Manager for Sevenoaks Town Council in March 2017.

The survey identified thirteen veteran trees spread across Compartments 1 – 6.

The results, including a map and photographs of identified trees is included at Appendix D.

3.6 Species

Table 9 below provides a summary of the species information obtained as part of the desktop study.

Table 9: Sevenoaks Common. Protected / notable species which either occur within, or have the potential to occur within or close to Sevenoaks Common

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
Vascular Plants	Data search indicates historic presence of several notable species on the Common including: Dwarf mouse-ear *Cerastium pumilum* (1980) Treacle-mustard *Erysimum cheiranthoides* (1980) Small-flowered sticky eyebright *Euphrasia officinalis* subsp. *anglica* (1980) Bird's-nest orchid *Neottia nidus-avis* (1980) There are also records of two heather species: heather *Calluna vulgaris* and bell heather *Erica cinerea* (both 1999). A file note within the LWS site file (J. Pitt, 9 Sept 1988) refers to narrow-leaved bitter-cress *Cardamine impatiens* occurring in several places along the base of the scarp on the ragstone (uncertain as to whether this may be within Common or not?). The LWS citation states that it has been recorded after periods of disturbance such as the clearance of trees and that its seed can persist in the seed bank for many years – therefore its presence should not be discounted.	Bluebell *Hyacinthoides non-scripta* observed during survey visit Narrow-leaved bitter-cress NS, CR Dwarf mouse-ear E, K Treacle-mustard CS Small-flowered sticky eyebright EN, S41, CS Bird's-nest orchid CS Common wintergreen E, K Bell heather CS	Bluebell: listed on Schedule 8 of the Wildlife & Countryside Act (as amended). Protection is limited to 'sale' only.[24] Those species marked with 'NS' are considered to be Nationally Scarce i.e. occurring in 16-100 hectads in Great Britain. 'CR' = County Rare i.e. occurring in 1-11 tetrads in Kent 'CS' = County Scarce i.e. occurring in 12 – 52 tetrads in Kent 'E' relates to those species not recorded in Kent during preparation of the New Atlas of the Kent Flora (Philp, 2010) and possibly now extinct in the county. 'K' = included in the Kent Red Data Book. 'EN' relates to those species which are considered to be facing a very high risk of extinction in the wild. Those species marked with 'S'41' are Species of Principal Importance (formerly UKBAP Priority Species).
Birds	KMBRC database search has a number of records of breeding birds attributable to Sevenoaks Common including woodcock, feral pigeon, stock dove, tree pipit, coal tit, lesser redpoll. Non-breeding bird records include black-headed gull,	Wood warbler +, k, S41 Goldcrest k Bullfinch k, S41 Lesser redpoll +, k, S41 Nightjar k, S41 Tree pipit +, k, S41	All species of bird whilst actively nesting are afforded legal protection under the Wildlife & Countryside Act 1981 (as amended).[25] Those species marked with '+' are Red List[26] species; Those species marked with

[24] http://naturenet.net/law/sched8.html
[25] Further information about the Wildlife & Countryside Act 1981 (as amended) is available at http://jncc.defra.gov.uk/page-1377
[26] Definition included at http://www.rspb.org.uk/discoverandenjoynature/discoverandlearn/birdguide/status_explained.aspx

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
	herring gull, and nightjar. A file note within the SE14 LWS file suggests that the site may be of importance for its birds and recommends a bird survey (file note J Pitt 17 June 1985).	Herring gull [+, k, S41] Woodcock [+]	'k' are Kent Red Data Book species; Those species marked with 'S'41' are Species of Principal Importance (formerly UKBAP Priority Species).
Bats	Ten species of bat, of the 15 species recorded in Kent, have been recorded in this area. One roost (unknown type) has been recorded close to the southern boundary of the Common close to the junction of Weald Road / Gracious Lane. One other roost (unknown type) has been recorded to the south of Gracious Lane close to Weald Place, and a flying bat has been recorded at the junction of Weald Road / Beechmont Road, with another recorded just to the north of Cmpt 6a.	Serotine, Daubenton's, Whiskered, Natterer's, Leisler's, Noctule*, Nathusius' pipistrelle, Pipistrelle (45kHz), Pipistrelle (55kHz)*, Brown long-eared*	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 2010[27] and are therefore "European Protected Species". Those species marked with '*' are considered to be Species of Principal Importance in England (formerly UKBAP)[28] .
Badgers	No records for Sevenoaks Common itself; no evidence of badgers were observed during the site walkover, however the Common contains suitable foraging habitat and their intermittent presence should not be discounted.		Badgers and their setts are protected by the Protection of Badgers Act 1992[29].
Hazel Dormouse	No dormouse recorded on the Common. Nearest records appear to be for Brimstonewell Wood, approximately 950m to east. The Common is highly fragmented by roads, and the relatively small size of the woodland blocks suggests that it is unlikely to support a permanent population of dormice. Nevertheless the presence of occasional individuals should not be discounted.		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 2010[30] and therefore a "European Protected Species". A Species of Principal Importance in England (formerly UKBAP) and is included on Schedule 5 of the WCA 1981 (as amended)[31].

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

[28] http://webarchive.nationalarchives.gov.uk/20140605090108/http:/www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx

[29] A summary of the Protection of Badgers Act is available at http://adlib.everysite.co.uk/adlib/defra/content.aspx?doc=18122&id=18124

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

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

Species	Summary of Taxon Interest	Occurrence of protected / notable species on or near site	Status
Reptiles	The data search has records of three reptile species occurring on the Common – adder (recorded 2005), slow-worm (recorded 1995 / 1997), and viviparous lizard (1995). There are also reports that grass snakes have been seen on several occasions.	Adder Slow-worm Viviparous lizard	All reptile species likely to be encountered at Sevenoaks Common are protected against killing & injury under Schedule 5 of the WCA 1981 (as amended).
Amphibians	The data search reveals records of two amphibian species from Sevenoaks Common itself – common toad and common frog – both records date from 1995. Smooth newt and palmate newt have been recorded within the wider search area. The closest recorded great crested newt observation is located at [private residence]. 0.14km to the NE. Whilst the absence of ponds on site will limit its value for supporting breeding amphibians, individual animals are likely to use the habitats on the Common for sheltering, foraging and/or dispersal.	Common toad Great crested newt	Great crested newts are afforded full legal protection under Schedule 5 of the WCA 1981 (as amended) [32]. Also listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2010[33] and therefore a "European Protected Species". Great crested newts and common toads are Species of Principal Importance in England (formerly UKBAP).
Invertebrates	There appear to be very few invertebrate records for the Common. The KMBRC datasearch has historic records for beech bark beetle *Taphrorychus bicolor* (1974), which can be a serious pest of beech, boring into the bark and causing damage[34], and the beetle *Philonthus albipes* (1978). There are also more recent records for the belladonna flea beetle *Epitrix atropae* (2008) and the butterflies small heath (2000) and white admiral (2003).	Beech bark beetle [N] *Philonthes albipes* [K] Belladonna flea beetle [N] Small Heath [S41] White admiral [S41, VU]	Those species marked with 'N' are considered to be nationally notable i.e. they are estimated to occur within the range of 16 – 100 10km squares. Those species marked with 'S'41' are Species of Principal Importance (formerly UKBAP Priority Species). Those species marked with 'k' are Kent Red Data Book species. Those species marked with 'VU' are considered to be facing the risk of extinction in the wild in the medium term future.

The KMBRC datasearch highlighted the presence of a number of non-native vascular plant species on the Common which are included on Schedule 9 of the Wildlife and Countryside

[32] Further information about the Wildlife & Countryside Act 1981 (as amended) is available at http://jncc.defra.gov.uk/page-1377
[33] Further details about the Conservation of Habitats and Species Regulations 2010 is available at http://jncc.defra.gov.uk/page-1379
[34] http://www.eakringbirds.com/eakringbirds5/insectinfocustaphrorychusbicolor.htm

Act, 1981 (as amended). It is illegal to 'plant or otherwise cause to grow in the wild' species included on Schedule 9. Records of Schedule 9 species recorded on Sevenoaks Common include:

- Rhododendron *Rhododendron ponticum*
- Montbretia *Montbretia* sp.
- Himalayan cotoneaster *Cotoneaster simonsii*
- Wall cotoneaster *Cotoneaster horizontalis*
- Yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum*
- Indian balsam *Impatiens glandulifera*
- Shallon *Gaultheria shallon*
- Japanese knotweed *Fallopia japonica*
- False acacia *Robinia pseudocacacia*

The surveyor recorded rhododendron in Compartments 1, 2, 4, and 6, and cotoneaster species in Compartment 3. One additional invasive species (but not listed on Schedule 9) recorded on the Common was cherry laurel, recorded in Compartments 1, 5 and 6.

The data search also indicated that fallow deer has been recorded on the Common, most recently in 2003; no evidence of deer damage was observed during the site visit.

The 1996 Woodland Management Plan (Esus Forestry and Woodlands) flagged up the issue of squirrel damage to the planted trees. The comment given is that, "*in places the damage is severe but across the whole site it is not yet significant.*" No evidence of squirrel damage was observed during the 2017 site visit.

The data search indicated that the horse chestnut leaf miner *Cameraria ohridella* has been recorded, most recently in 2004.

3.7 Identification of Access Issues

Sevenoaks 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).

A number of Public Rights of Way cross the Common (Figure 8). Walkers, with and without dogs, were observed during the walkover survey and horse-riders were observed in Compartment 2.

There is a Railway Tunnel Air Shaft at the western end of Compartment 4, shown on the Ordnance Survey maps at grid reference TQ532525.

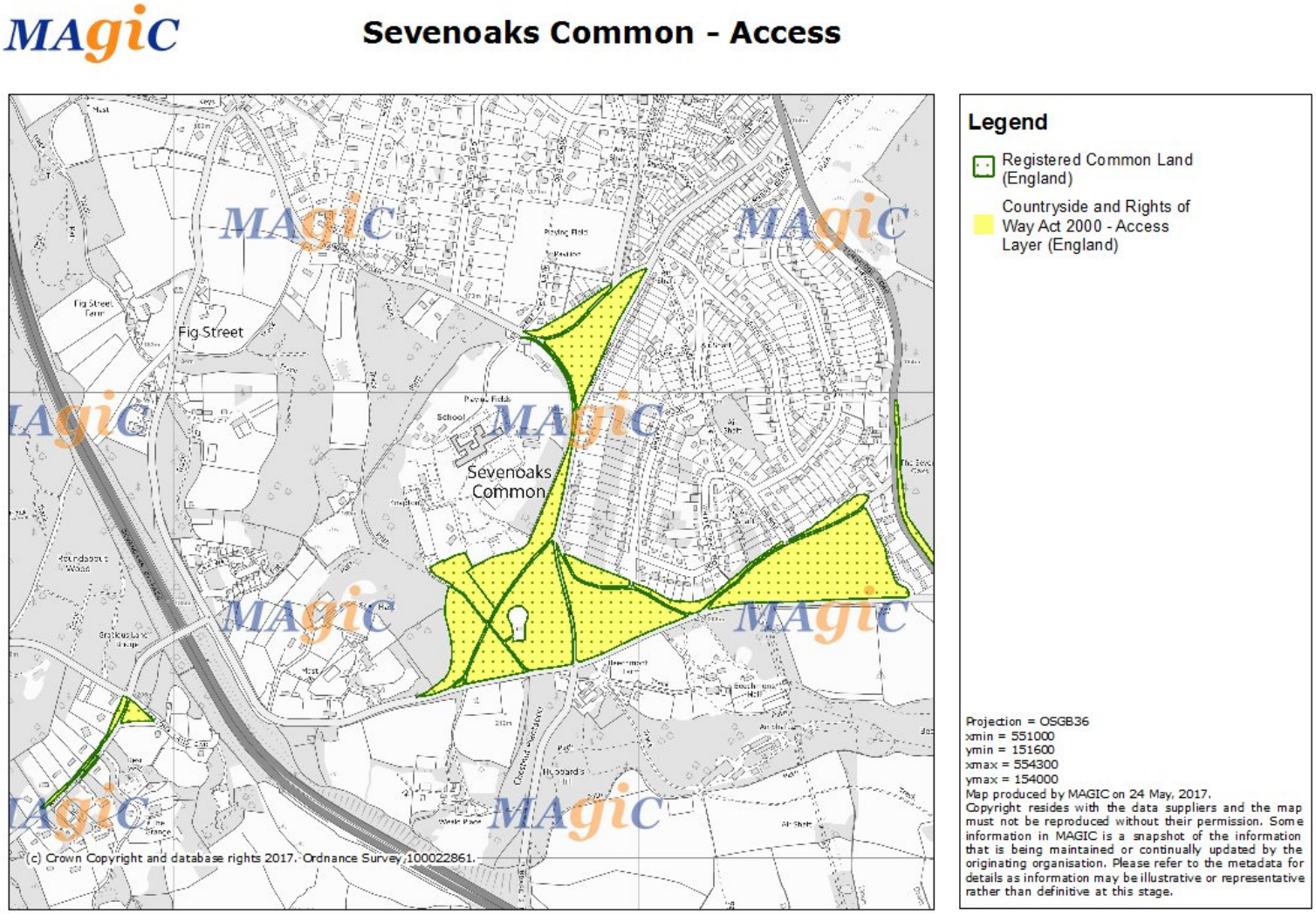

Figure 7: Sevenoaks Common. Access Land

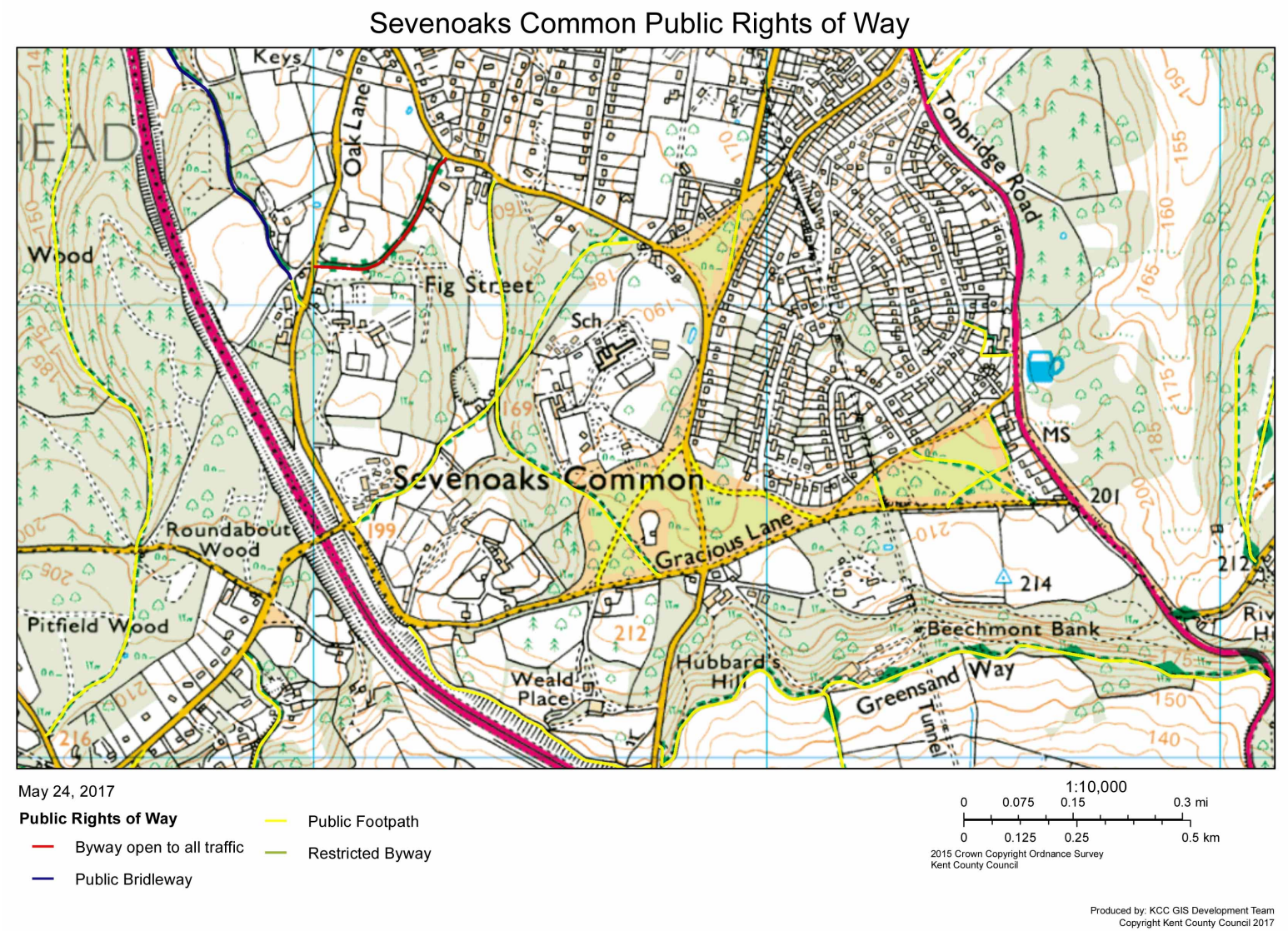

Figure 8: Sevenoaks Common. Public Rights of Way Map

4 ENHANCEMENT OPPORTUNITIES

4.1 Site Evaluation

Sevenoaks Common was found to be dominated by secondary broadleaved woodland. The LWS citation suggests that the Common was once more open and maps on the Magic website indicate that Compartments 1 – 4 were formerly wood pasture. However, following the 2017 site walkover, the surveyor observed that, with the exception of the presence of a number of veteran / mature trees, the woodland appears to lack the open structure with grassland / wooded heath elements that are characteristic of this habitat.

The broadleaved semi-natural woodland areas within Compartments 1, 2, 3, 4, 6, 7 and 8 are highlighted within the KMBRC data search as comprising mixed deciduous woodland - a Priority Habitat i.e. a habitat listed on Section 41 as a Habitat of Principal Importance in England (formerly UK BAP Priority Habitat), while, as mentioned above, the Magic website describes Compartments 1 - 4 as wood pasture, again categorised as a Priority Habitat, but also included within the 'Lowland Wood-pasture and Parkland' Kent Habitat Action Plan (Plan 16, 2005a).

Wood pasture is generally is considered to be a vegetation structure rather than a particular plant community, typically consisting of large, open-grown or high forest trees (often pollards) at various densities, in a matrix of grazed grassland, heathland and/or woodland floras. The value for this priority habitat type comes from the range of specialised and varied habitats found within the landscape. The presence of ancient or veteran trees provide such microhabitats as old bark, dead or decaying wood, holes and splits that support a range of insects, fungi and lichens. The grassland component of the complex is frequently grazed and provides open vegetation and habitat for a variety of plants and animals. Dung from grazing animals adds a further component to the invertebrate and fungal diversity of this habitat. The importance of this complex comes from the long continuity in the management and/or the structure of the land, with very long-lived trees supporting significant amounts of dead and decaying timber (Kent Habitat Survey, 2012).

The vegetation structure at Sevenoaks Common is now much more akin to secondary deciduous woodland, with evidence of both woodland natural regeneration and re-planting.

Given that both mixed deciduous woodland and wood pasture are Priority Habitats, consideration will need to be given as to whether the Common should continue to be managed as a woodland habitat, or whether a more ambitious project to restore the wood pasture across parts of the Common could be considered. In the latter scenario, management may include thinning of some of the canopy trees and rotational coppicing of the understorey in order to create halos' around some of the mature trees. Ideally grazing would be considered as a tool to create a much more open structure, so important within wood pasture for encouraging the development of flowering plants and shrubs, which provide the nectar and pollen required by the specialist invertebrates whose larvae develop in decaying wood. Without grazing pressure, creation / maintenance of a wood pasture structure is considered unlikely to be achievable here.

A number of veteran / mature trees (Appendix D) have been identified on the Common, primarily within Compartments 1 - 4, and along the verge in Compartment 8. Although not

examined in any detail, it is likely that some of these will have bat roost potential and 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 2014[35]. Ongoing monitoring will therefore be required.

Some rhododendron regrowth was recorded throughout the Common, and was dominant in a small area not owned or managed by Sevenoaks Town Council. It 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 rhododendron[36]. According it is recommended that steps are taken to eradicate or control the spread of rhododendron at this site.

Cotoneaster was recorded in Compartment 3, and there are also records of a number of other Schedule 9 species (Ch 3.6), which were not observed during the walkover survey. Given that it is illegal to 'plant or otherwise cause to grow in the wild' species included on Schedule 9, it is recommended that the Common should be monitored and appropriate action taken to eradicate or control the spread of these species across the site.

Cherry laurel were also recorded in Compartments 1, 5, 6, and 9. 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. It was not considered to be a particular problem on the Common at the moment and, for that reason, it is recommended that actions should be limited to monitoring its spread and taking action to control further development where appropriate.

The results of the data search suggest that Sevenoaks Common is likely to be of interest for a number of species groups. These include: bats, where ten species have been recorded within the search area and several roosts have been identified close to the Common boundaries; and reptiles, with recent records of adder and older records of viviparous lizard and slow-worm.

The Common has also been identified as being of potential interest for other groups including breeding birds and vascular plants, where there are historic records of a number of notable species, some of which have not been recorded in Kent in recent years. Some of the species such as narrow-leaved bitter-cress has seeds that are very long-lived in the seedbank, reappearing following episodes of disturbance, and it may be that targeted survey work at appropriate times would re-establish the presence of at least a few of these species.

There are very few notable invertebrate records for the Common, with recent records pertaining to small heath and white admiral butterflies and the belladonna flea beetle. There is a historic record for the beech bark beetle, which can be a serious pest of beech, a species commonly recorded across the Common. Conversations could be held as to whether to target survey work to establish the current status of this species here. Another 'pest' species – the

[35] http://chalaramap.fera.defra.gov.uk/
[36] www.nonnativespecies.org/downloadDocument.cfm?id=1018

horse chestnut leaf miner *Cameraria ohridella* was recorded in 2004. Whilst there is no requirement to report sightings of this pest to Forestry Commission, they are interested in monitoring its spread, with results helping to contribute to research into the horse chestnut leaf miner, and this could perhaps form the basis of a local Citizen Science Project here.

For the protected species flagged within Chapter 3.6, it is recommended that survey work should aim to establish the presence / absence of protected species within the Common 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.

It is interesting to compare the Google aerial photographs of the Common (Appendix C) dating from 1940 to 2003, as these chart the changes in the proportion of open space / trees.

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.

Although outside the strict remit of this report, it was observed that the site includes evidence of historic workings (Compartments 1, 2, 4, 5). Consideration could therefore be given to further explorations of the historic landuse / archaeology of the site.

Further details are provided below.

4.2.1.1 Management of Existing Woodland Areas

- Maintain structural diversity as a good variety of woodland and scrub at different ages and structure 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.

- Maintain all traditional woodland features such as internal woodbanks.

- Retain all existing veteran / mature trees wherever possible. These are considered to be features of the former wood pasture habitat, and would have traditionally grown in open sunny 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.

- Consider opportunities for increasing the number of potential veteran trees by selecting standards for bespoke management which may include pollarding and coronet cuts.

- 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. Sheltered and sunny open areas, such as along ride edges, and in scallops or glades, also support a greater abundance and variety of flowering plants and shrubs, providing valuable nectar and pollen sources for invertebrates.

- 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 i.e. whether to manage as broadleaved woodland or whether to consider restoration of certain compartments within the Common to wood pasture.

- 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 laurel[37]:

    - Cut during the winter (September to March), focussing on older, seedbearing 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.

    - Treat mature bushes with a stem injection treatment, if available. If not, then apply a foliar spray as for other younger bushes.

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

  - Burn the cuttings but make sure you limit the number of fire sites 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 research[38] 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 available[39].

- 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 guidance[40].

4.2.1.2 Species

- Vascular Plants. Consult with local experts to establish which of the notable species identified within Chapter 3.6 and which have not been recorded in recent years may re-appear on the Common given appropriate management / ground conditions.

- Birds. Consult with local experts to establish whether, as suggested within the Local Wildlife Site file, the Common may be of importance for its birds and, if so, whether it would merit specific surveys.

- Invertebrates. Consult with local experts to establish whether the Common is likely to be of importance for invertebrates and, if so, whether it would merit specific surveys.

4.3 Additional Survey Work

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

[38] http://www.cabi.org/isc/datasheet/16870
[39] http://www.forestry.gov.uk/forestry/infd-92pjkx
[40] Such as that provided by websites including the GB non-native species secretariat http://www.nonnativespecies.org/home/index.cfm

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.
- 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 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.
- Vascular Plants. To establish current status of heather and bell heather across the Common. Targeted surveys for notable vascular plants following advice of local botanical experts (Ch 4.2.1.2).
- Invertebrates. Take expert opinion on whether any targeted invertebrate survey work e.g. for beech bark beetle is appropriate. Consider involving local residents in ongoing monitoring for horse chestnut leaf miner and submit results to Forestry Commission[41].

[41] https://www.forestry.gov.uk/horsechestnutleafminer

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Appendix A: Photographs taken during the site visits April 2017

1. Compartment 1: General view

2. Compartment 1 (TN3): Photograph showing multi-stem beech with *Ganoderma*, white rot and with bat roost potential to crown

3. Compartment 1 (TN3): Photograph showing evidence of *Ganoderma* in multi-stemmed beech

4. Compartment 1 (TN4): Photograph showing failed beech

5. Compartment 2: Photograph showing notable beech / sweet chestnut twist

6. Compartment 2: Photograph showing general view with birch and sycamore dominant

7. Compartment 4: General view of Compartment

8. Compartment 4: General view of Compartment

9. Compartment 4 (TN9): Photograph showing multi-stemmed beech

10. Compartment 4 (TN10): Large beech

11. Compartment 4 (TN10): Large beech

12. Compartment 4 (TN11): Damaged beech

13. Compartment 4 (TN12): Mature multi-stemmed beech

14. Compartment 5: Photograph showing view into Compartment

15. Compartment 6 (TN13): Photograph showing veteran oak

16. Compartment 6 (TN14): Photograph showing mature oak

17. Compartment 7: Photograph showing general view of compartment

18. Compartment 8: Photograph showing improved grassland verge outside ‘Greenwood’

19. Compartment 8: Photograph showing beech with signs of failure

20. Compartment 8: Photograph showing mature beech / sweet chestnut hedge line

21. Compartment 9: Semi-improved grassland verge with daffodils and mature oak and sweet chestnut

22. Compartment 9: Photograph showing general view of verge with mature standards

23. Compartment 9 (TN16): Photograph showing possible relict woodbank

24. Compartment 9: Photograph showing two notable beeches which have a number of forks which should be assessed by a suitably qualified arboriculturist

Appendix B: LWS Citation

KENT LOCAL WILDLIFE SITE

KWT File No: 529525

Site:	Sevenoaks Common, Hubbard's Hill and Beechmont Bank	**Site Ref. No:**	SE14
LPA:	Sevenoaks	**Central Grid Ref:**	TQ 530524
Parish:	Sevenoaks/ Sevenoaks Weald	**Category:**	Woodland
Owner:	Local Authority/Private	**Natural Area:**	Wealden Greensand
Area:	45.73 Ha	**AONB:**	Kent Downs
First notified:	1986	**RIGS:**	Hubbard's Hill Geological SSSI
Last revised:	2005		
Last approved:	Oct 2006		

REASON FOR DESIGNATION

The site includes around 6 hectares of ancient woodland (excluding ancient replanted woodland) to the west of Windmill Road. The remainder of the site consist primarily of secondary woodland on Sevenoaks Common itself. This secondary woodland links the ancient woodland part of the site with the SSSI parkland of Knole Park. The site as a whole is considered valuable not just in its own right but as an important link in an extensive complex of woodlands, wood pasture and grassland (much of which is designated as SSSI or Local Wildlife Site) between Westerham and Ightham.

RATIONALE FOR SITE BOUNDARY

The site boundary has been drawn to include part of the Hubbard's Hill Geological SSSI. Roads, buildings and hard standing within the indicated boundary should not be considered part of the Local Wildlife Site.

DESCRIPTION

Part of the Greensand ridge below Sevenoaks which lies to the west of Knole Park is heavily wooded. The scarp slope has a variety of woodland stand types, ranging from sessile oak over holly, rowan, hazel and chestnut on the more acid soils on higher ground to pedunculate oak over ash, field maple, hazel and elm on rich Brown Earth soils on the lower slope.

Most of the woodland has been unmanaged for many years and is converting naturally to high forest.

Large mature beech trees are frequent but more common at the eastern end of the site. The ground flora is sparse under the densest canopy, but bluebell *Hyacinthoides non-scripta* dominates the higher ground, with creeping soft-grass *Holcus mollis*, hairy wood-rush *Luzula pilosa*, wood sorrel *Oxalis acetosella* and much *Mnium hornun* moss covering banks along the paths. On richer soils at lower levels the ground flora is also richer, particularly where it has been recently re-coppiced, and a good range of woodland herbs including primrose *Primula vulgaris*, wood spurge *Euphorbia amygdaloides* and yellow archangel *Lamiastrum galeobdolon* are present.

Sevenoaks Common is on the acid plateau above the scarp. Formerly more open common with occasional mature oak, beech and holly, the area is now developing into secondary woodland with little ground flora and much birch, beech and sycamore regeneration into what were once open

areas. Bracken is locally dominant. Small damp hollows are slightly richer, with pendulous sedge *Carex pendula*, ragged-robin *Lychnis flos-cuculi* and grey willow *Salix cinerea*.

This site is important as part of the wooded chain on the Greensand ridge stretching from Oldbury Hill in the east to Crockhamhill Common to the west and contains several SSSIs and SNCIs.

Important bird species recorded from the site in recent years include woodcock [3], nightjar and tree [4] pipit [3].

Narrow-leaved bitter-cress [2,5] *Cardamine impatiens* has been recorded after periods of disturbance, such as clearing of trees. This nationally scarce species can persist in the seed bank for many years, and should be considered as present on the site even though plants may not be regularly recorded. Common wintergreen [6] *Pyrola minor* has been recorded in the past, but was not seen on the recent visit.

Sevenoaks Common is criss-crossed by well used public footpaths.

Most of Sevenoaks Common is currently under a Woodland Grant Scheme which expires in 2008.

Slow worm [1] and viviparous lizard [1] have been recorded within the site as a whole. In addition, the site supports a range of lower plants.

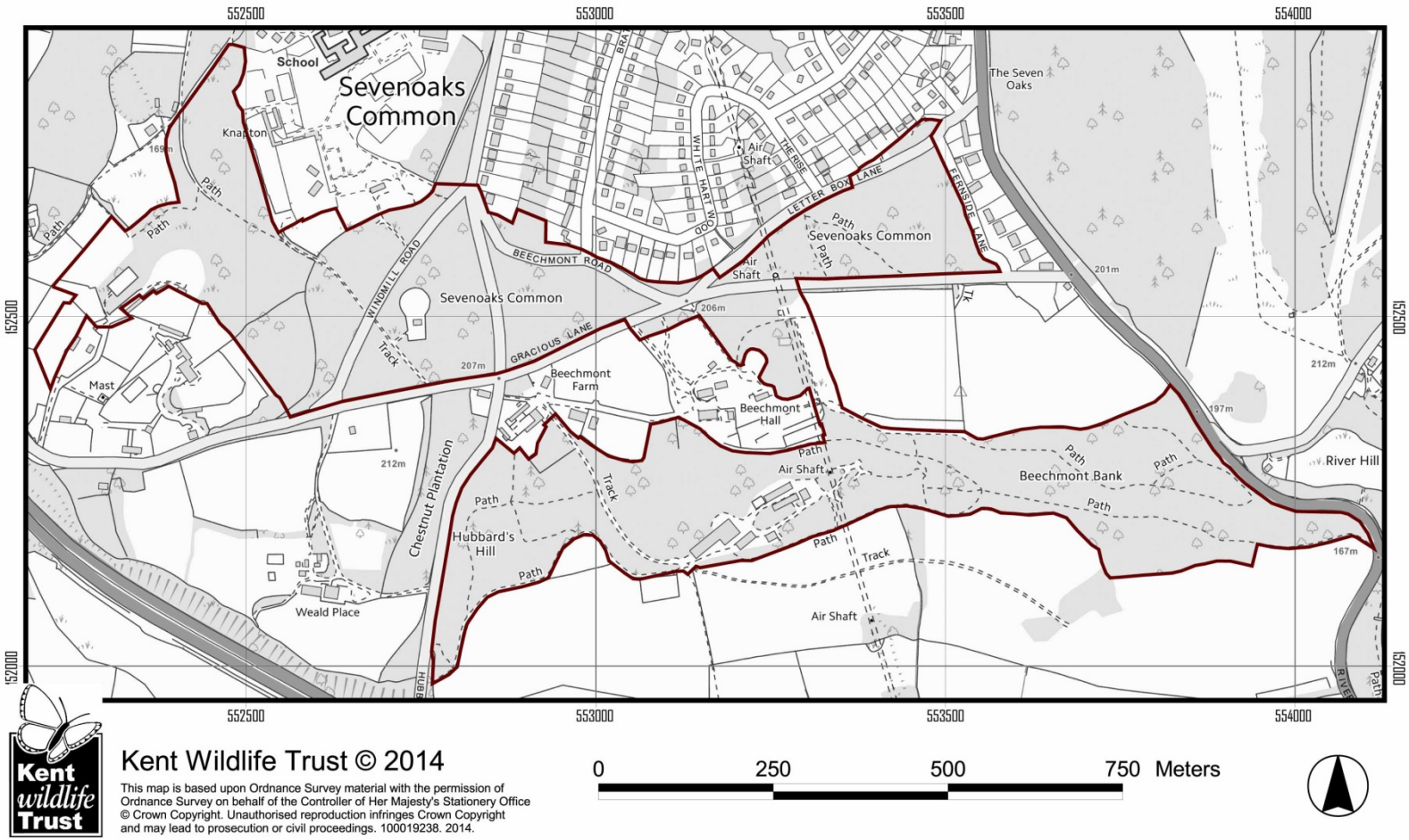
1 Protected under Wildlife & Countryside Act 1981.
2 County Scarce. Atlas of Kent Flora. Philp. 1982.
3 Amber List. Birds of Conservation Concern 2002-2007.
4 Red List. Birds of Conservation Concern 2002-2007.
5 Nationally scarce. Scarce Plants in Britain. 1994
6 County Rare. Atlas of Kent Flora. Philp. 1982.

KENT LOCAL WILDLIFE SITE

Site: SEVENOAKS COMMON, HUBBARD'S HILL AND BEECHMONT BANK

Site Ref No: **SE14**

Map ref: TQ 530524



Kent Wildlife Trust © 2014

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Appendix C: Google Earth Aerial photographic images 1940 - 2003

Sevenoaks Common - 1940

Sevenoaks Common - 1960

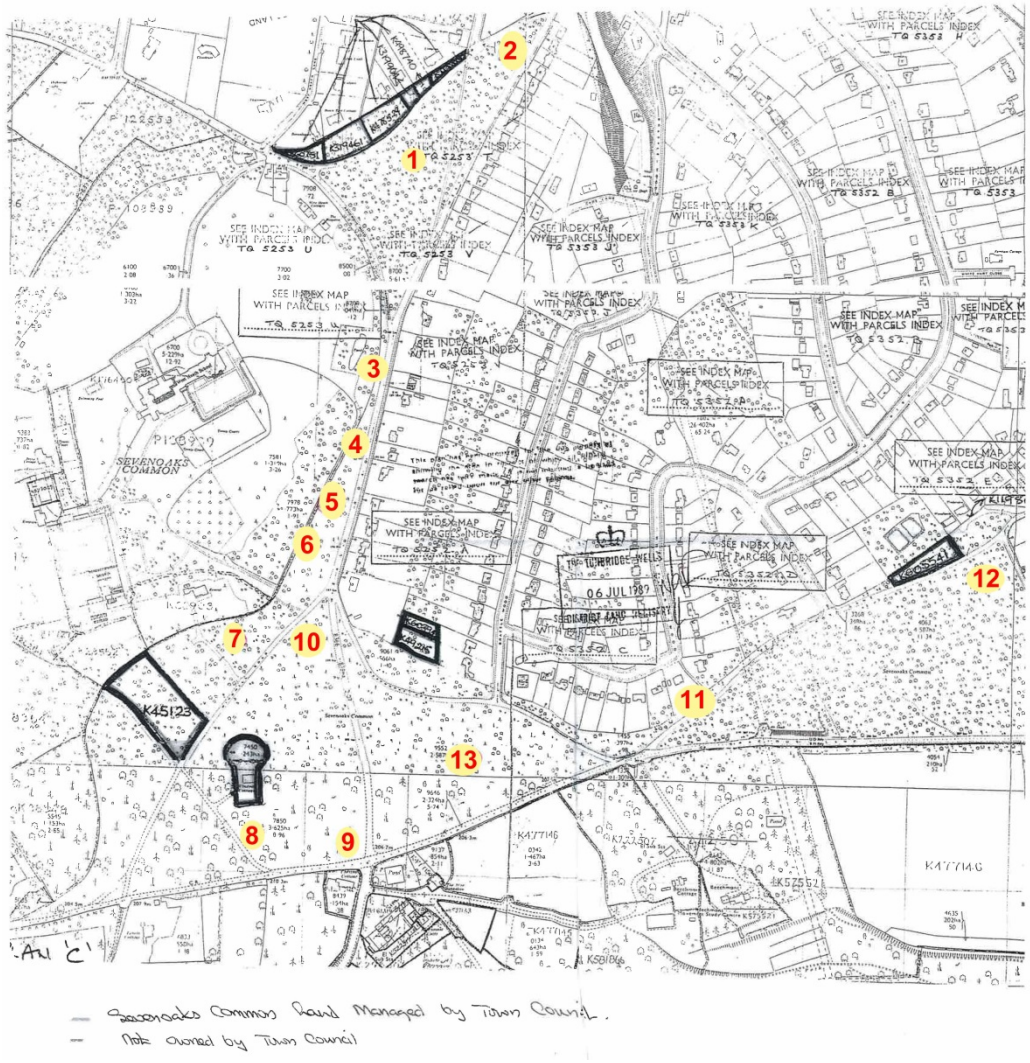
Sevenoaks Common - 1990

Sevenoaks Common – 2003

Appendix D: Selection of Mature – Veteran Trees

The survey was undertaken by Nicholas Cave, Open Spaces Manager for Sevenoaks Town Council in March 2017.

No. on map	Species & Comments	Photograph No.
1	Veteran Oak	0662
2	Pollarded Beech with Ganoderma decay	0663
3	Mature Oak	0665
4	Veteran Oak	0666
5	Mature co dominant Beech with Ganoderma infection	0667
6	Mature quad dominant Beech with Ganoderma 2 trunks remain	0668
7	Veteran Oak	0669
8	Beech and Sweet Chestnut entwined	0670 / 0671
9	Mature Scots Pine	0675 / 0676
10	Mature Beech	-
11	Multi Stem boundary coppice Beech	0672
12	Veteran Beech Ganoderma infection	0674
13[42]	?	



Map showing location of mature – veteran trees

[42] Shown on map – but no details provided in survey data

1. Veteran Oak Photo 0662

2. Pollarded Beech with *Ganoderma* decay Photo 0663

3. Mature Oak Photo 0665

4. Veteran Oak Photo 0666

5. Mature co dominant Beech with *Ganoderma* infection Photo 0667

6. Mature quad dominant Beech with *Ganoderma* 2 trunks remain Photo 0668

7. Veteran Oak Photo 0669

8. Beech and Sweet Chestnut entwined Photo 0670

8 cont. Beech and Sweet Chestnut entwined Photo 0671

9. Mature Scots Pine Photo 0675

9 cont. Mature Scots Pine Photo 0676

11. Multi Stem boundary coppice Beech Photo 0672

	
12 Veteran Beech *Ganoderma* infection Photo 0674	

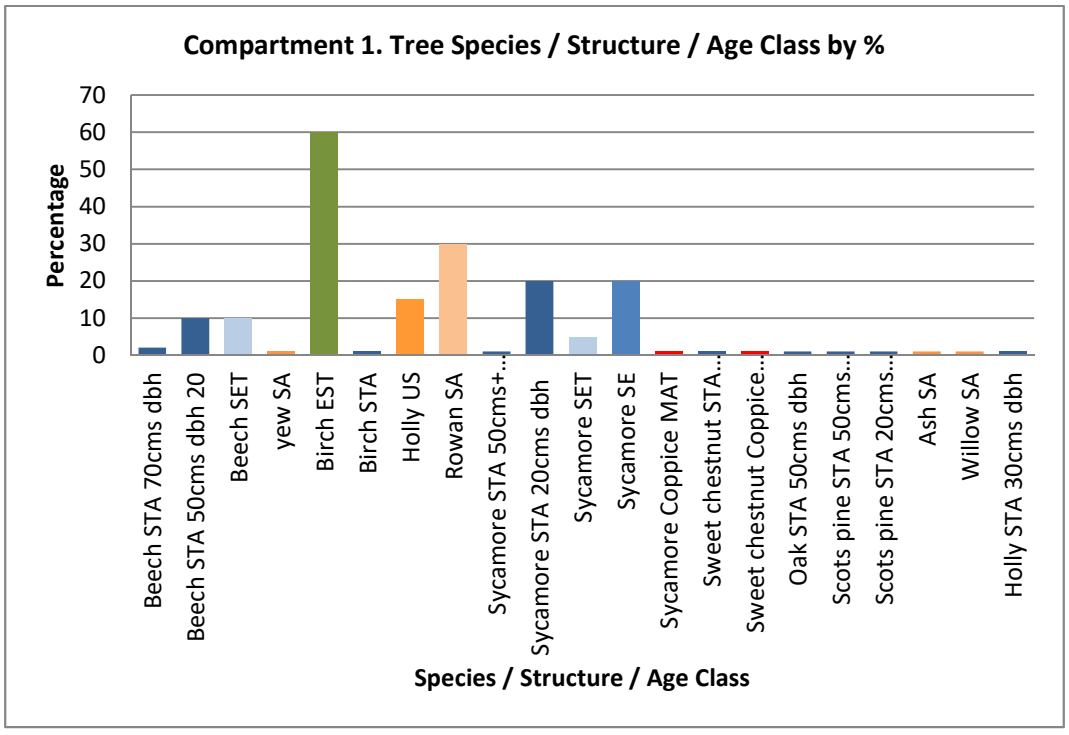
Appendix E: Preliminary Woodland Condition Survey

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

Compartment 1



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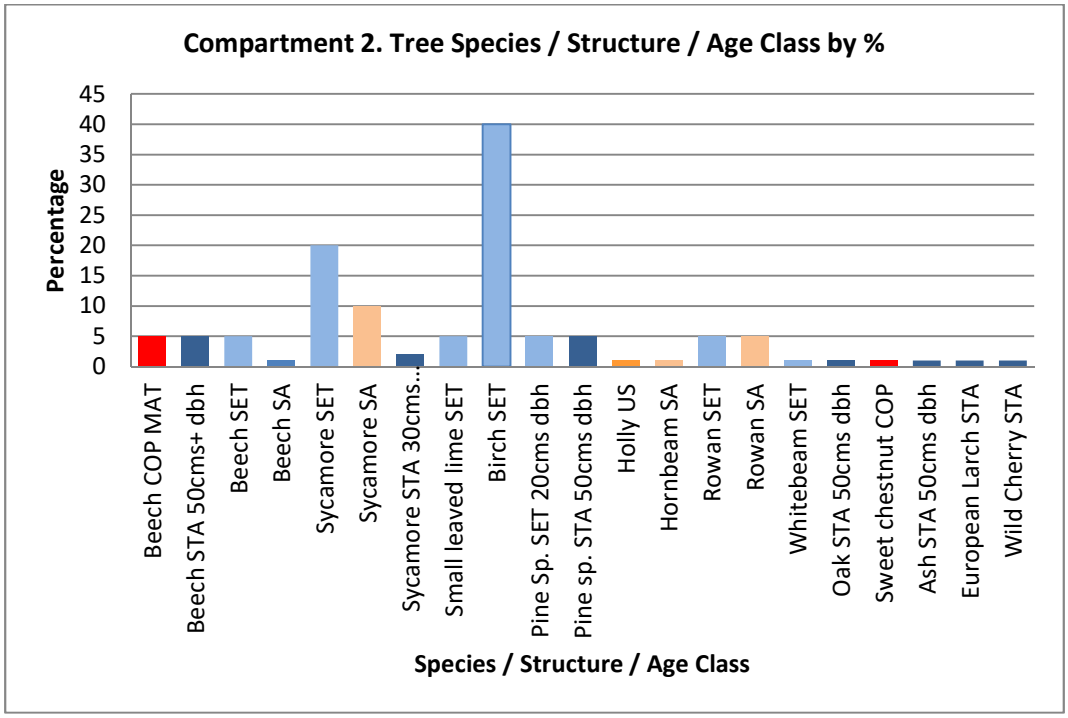

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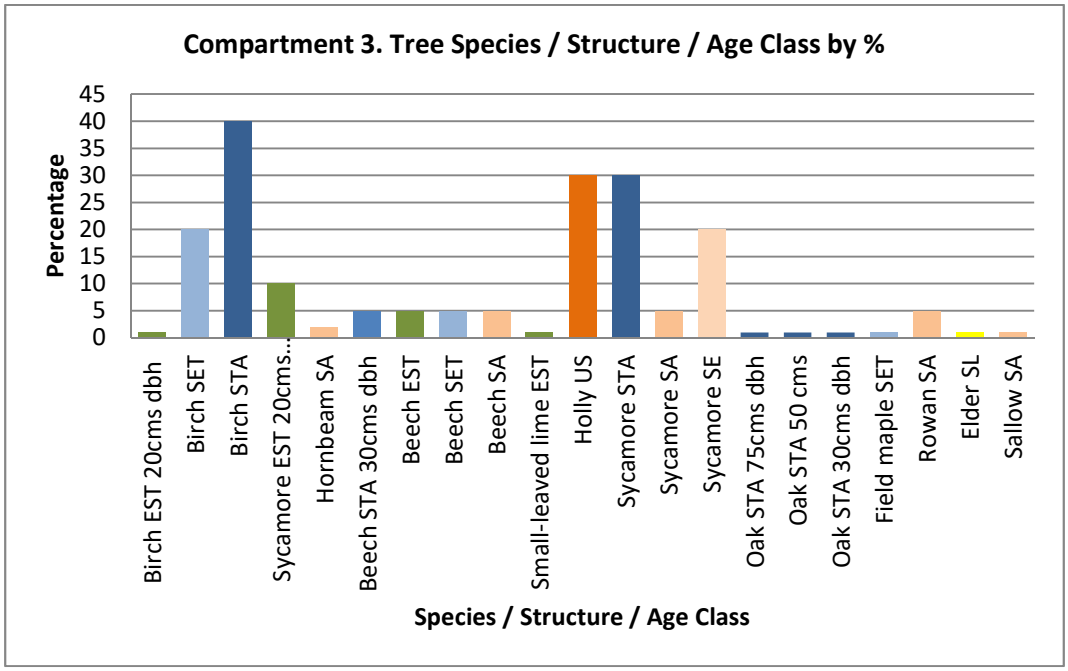

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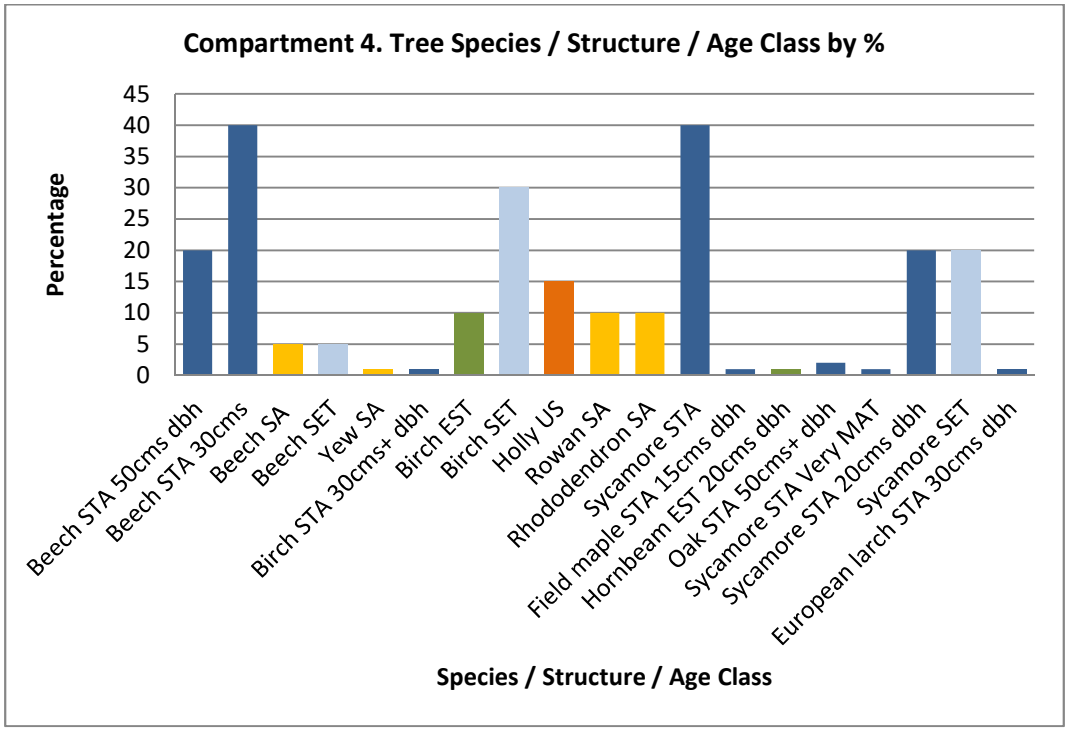

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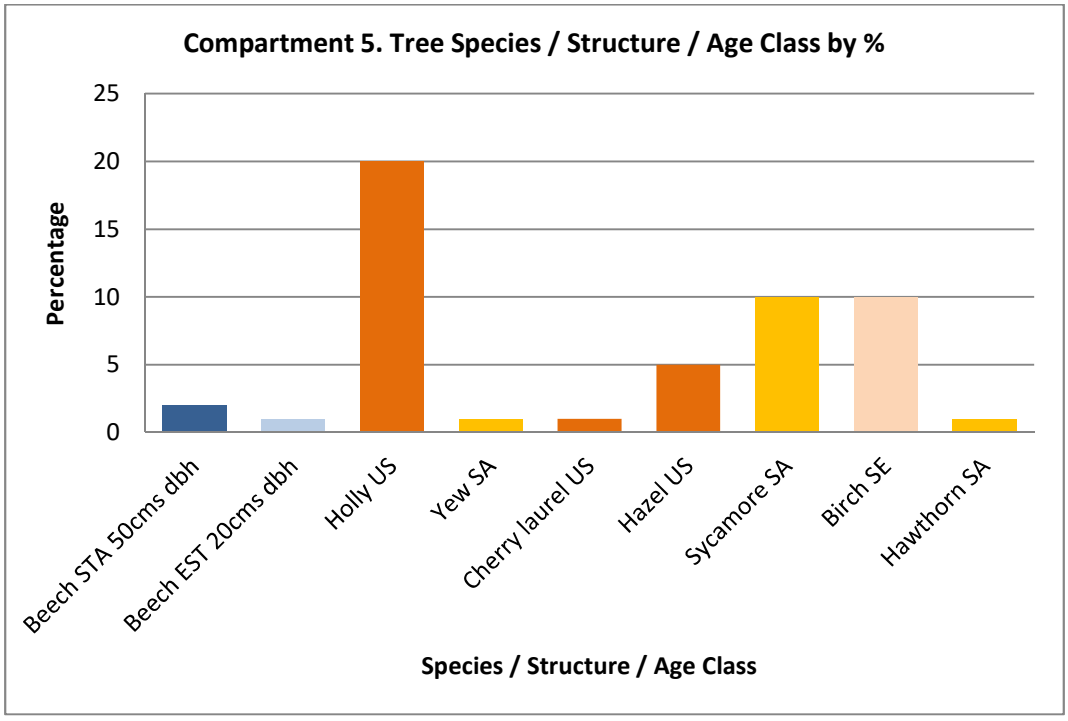

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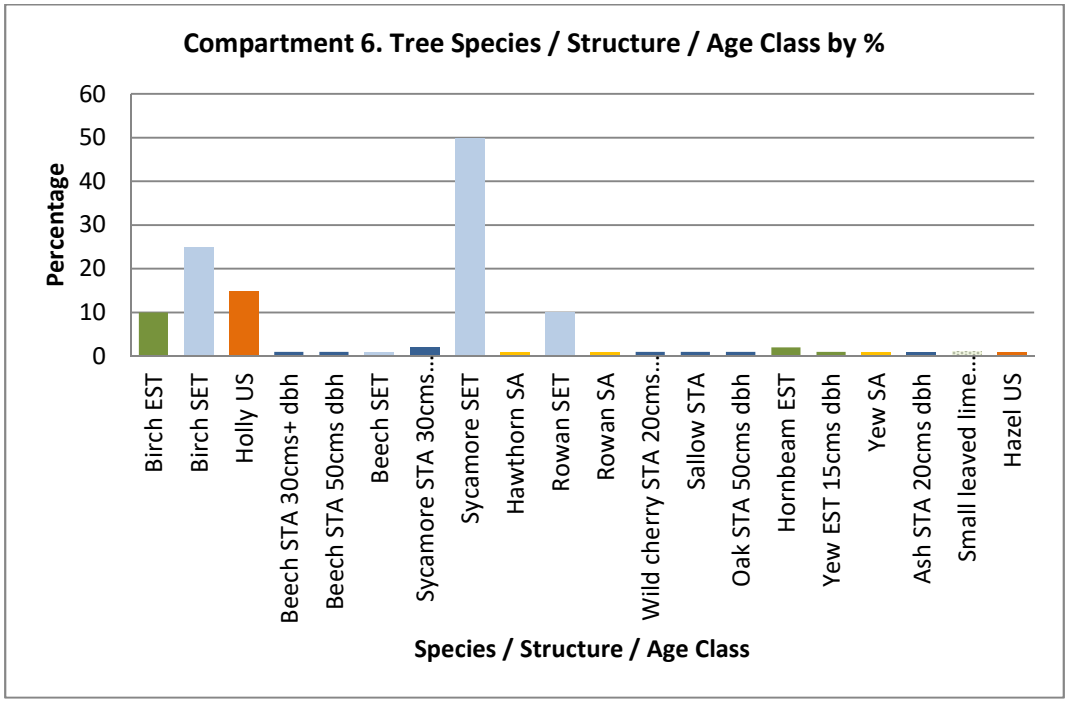

Compartment 6a