Sussex Wildlife Trust

IPING and STEDHAM COMMON LOCAL NATURE RESERVE

MANAGEMENT PLAN

December 2014- March 2024

Iping and Stedham Scientific Committee

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1: VISION STATEMENT & EXECUTIVE SUMMARY

Lowland heath is an internationally scarce habitat and the UK heaths (20% of the European total area) are of particular importance for their landscape and wildlife. While West Sussex has a small area of heathland compared with Hampshire, Dorset and Surrey, it still has c.1.2% of the UK total. By 1992, 91% of the 1813 area of heathland in West Sussex had been lost through conifer planting, mineral extraction, agricultural intensification and neglect (simple lack of management) (Rose 1992) leaving just c670ha scattered across the county as more or less isolated fragments. Through the concerted efforts of the SWT, West Sussex County Council, Sussex Wealden Greensand Heaths Project of the South Downs Joint Committee (SDJC), RSPB, National Trust, Natural England, Amphibian and Reptile Conservation, Butterfly Conservation and other partners and private landowners several heaths have been restored.

Iping and Stedham Commons were notified as an SSSI in 1954 and revised in 1980. In the SSSI notification, the site is described as "one of the richest examples of heathland remaining in West Sussex and is of particular interest for its invertebrate fauna which includes several rare spiders. It is of national importance as a breeding site for heathland birds and is the only locality in Sussex for an uncommon species of grass: bristle-leaved bent, *Agrostis curtisii*. Much of the open habitat is dry heath, with smaller areas of wet heath and Sphagnum bog; other habitats include woodland, scrub, grassland, bracken and ponds.

Iping and Stedham Commons together with Ambersham and Woolbeding comprise the most extensive area of heathland in West Sussex. These sites are remnants of the extensive chain of Wealden heaths that once stretched almost unbroken for 40km from Woolmer to Washington (Rose 1992).Due to its close proximity to other heathland sites, e.g. Midhurst Common, there is great potential for extending sympathetic management to link the site with other heathland blocks. These other blocks could be created by clearance of forestry plantations, creation of wildlife corridors and eventual restoration of mineral workings. The Trust is a key partner in a Heritage Lottery bid called Heathlands Reunited which aims to achieve 'bigger, better, more and joined up heathland' within the South Downs National Park, (in the development phase at time of writing). It is hoped that if successful, significant funds will be put towards this reserve. It will contribute towards many UK Biodiversity Habitat Action Plans and Species Action Plans as well as assisting with community based initiatives. If unsuccessful, other funding streams will be sought for this project. This area is all within the South Downs National Park.

Until the early part of this century, heathlands had been managed since the last Ice Age by local people, creating and maintaining a mosaic of different microhabitats in each area. However grazing and cutting by commoners as a purely economic activity was progressively abandoned by the Second World War and the main threat to heathland is now neglect and lack of management leading to scrub and bracken invasion and succession to woodland. The thin heathland soils are also vulnerable to fire damage and erosion caused by heavy recreational use and some species may be vulnerable to recreational disturbance and dogs, e.g. Dartford Warblers and ground nesting birds such as Nightjar. Also sensitive to change, are the many archaeological features, especially Bronze Age barrows which are likely to become overgrown by scrub woodland unless the natural regeneration is kept in check.

The heathland component of Stedham Common was disappearing to scrub succession until the Sussex Wildlife Trust undertook a major programme of timber and pine litter removal in the early 1990s followed by more in late 2000s as well as re-introducing cattle grazing in 2000. The work has been rewarded by excellent heather regeneration and the return of much of the typical heathland

fauna. West Sussex County Council and the South Downs Joint Committee's Heathland Project have also (since the 1970's for WSCC and then the SDJC Heathland Project from 1994) undertaken extensive scrub and tree clearance, litter scraping, forage harvesting, controlled burns, bracken control and pond restoration work amongst other activities, creating an extensive and diverse area of heathland on Iping. In 2006 Field crickets were re-introduced to Iping and in 2007 and 2009 Heath Tiger Beetles were re-introduced. The status of these species is discussed.

In 2007, SWT entered into a Higher Level Stewardship (HLS) scheme with Natural England. The scheme funded 126ha heathland management works. The agreement also funded special projects for the Heath Tiger beetle, Silver Studded Blue, Invertebrate survey & Common Purpose Consultation. The scheme is due to expire in 2017 when SWT will apply for continued funding through the scheme's successor, Countryside Stewardship.

It is important now, to understand and interpret past management and species monitoring on the reserve, so that future management can be adapted and fine tuned to improve habitats further. This management plan is the sixth revision of the original plan and has been agreed by all the members of the Iping and Stedham Scientific Committee. This group currently includes Robin Crane, Dan Cornell, Mike Edwards, Brian Rogers, Barry Larkom, Graeme Lyons, Bruce Middleton, and Jane Willmott. This is the first plan where SWT is manager of the whole nature reserve.

2: POLICY STATEMENTS

The aim of the Sussex Wildlife Trust is to conserve the Sussex landscape, its wildlife and habitats, and to use our knowledge and expertise to help the people of West Sussex to enjoy, understand and take action to this end.

The LNR is within the Wealden Greensand Natural Area and reference should be made to Natural England's relevant Natural Area Profile (published 1998).

Lowland Heathland
This is a UK Biodiversity Action Plan priority habitat with a Habitat Action Plan for Sussex.

Sussex has around 4.5% of the UK's heathland and the nature reserve is meeting the following major targets of the Sussex Heathland HAP:

- Maintain and where possible improve the ecological integrity of lowland heathland in Sussex.
- Maintain and expand the range of lowland heathland in Sussex.

And the following Action Plan Targets:

A Maintain the current extent of all existing lowland heathland with no net loss of habitat.
B Improve the condition of lowland heathland on sites currently in unfavourable condition.

The Heathland Habitat Action Plan requires further heathland re-creation and maintenance management in order to meet agreed targets. The Sussex Biological records centre has produced a habitat potential map for heathland and this will help to identify areas where heath can most effectively be re-created. If the Heathlands Reunited bid is successful, this will unlock funds to enable this to progress. Areas to focus on should include designated sites, buffer land around existing SSSI and SNCI areas to enlarge the available habitat unit and linkages to reduce habitat

fragmentation. Heathland restoration by conifer clearance and litter scraping at Bridgelands Plantation and the western plantations on Stedham have already contributed approximately 7 ha of heathland restoration.

The reserve contains a large number of species that are rare at local, county and even national levels.

Summary of Rare and Protected species

There have been so many rare, scarce and regionally important species recorded that only the rare and BAP species are summarised in the table below. Further details are available in Attachment 4 along with species habitat and management requirements.

Taxa	Species	English	Conservation status	Detailed cons status	Priority species	Legal
Mammals	*Micromys minutus*	Harvest Mouse	NS		BAP	
Mammals	*Plecotus auritus*	Brown Long-eared Bat			BAP	EPS
Mammals	*Pipistrellus pipistresllus*	Common Pipistrelle				EPS
Mammals	*Myotis myscatinus*	Whiskered Bat				EPS
Reptiles	*Vipera berus*	Adder			BAP	Schedule 5
Reptiles	*Natrix natrix*	Grass Snake			BAP	Schedule 5
Reptiles	*Anguis fragilis*	Slow-worm			BAP	Schedule 5
Amphibians	*Bufo bufo*	Common Toad			BAP	
Birds	*Falco subbuteo*	Hobby		Green listed		Schedule 1
Birds	*Streptopelia turtur*	Turtle Dove		Red listed	BAP	
Birds	*Caprimulgus europeaus*	Nightjar		Red listed	BAP	Schedule 1
Birds	*Phylloscopus sibilatrix*	Wood Warbler		Red listed	BAP	
Birds	*Lullula arborea*	Woodlark		Amber listed	BAP	Schedule 1
Birds	*Sylvia undata*	Dartford Warbler		Amber listed		Schedule 1
Birds	*Regulus ignicapilla*	Firecrest		Amber listed		Schedule 1
Birds	*Loxia curvirostra*	Common Crossbil		Amber listed		Schedule 1
Fungi	*Hericeum erinaceus*	Bearded Tooth			BAP	
Fungi	*Gestrum lageniforme*	Flask Earthstar		NT		
Fungi	*Boletus aereus*			NT		

Bryophytes	*Dicranum spurium*		NS	VU	BAP	
Vascular plants	*Chamaemelum nobile*	Chamomile	Red list	VU	BAP	
Vascular plants	*Centunculus minimus*	Water-purslane	Red list	NT		
Vascular plants	*Cuscuta epithymum*	Common Dodder	Red list	VU		
Vascular plants	*Lycopodiella inundata*	Marsh Club-moss	NS	EN	BAP	
Vascular plants	*Radiola linoides*	Allseed	Red list	NT		
Vascular plants	*Anagallis minima*	Chaffweed	Red list	NT		
Arachnids	*Dipoena inornata*		Na		BAP	
Arachnids	*Walckenaeria corniculans*		Na		BAP	
Arachnids	*Tapinocyba mitis*		Nb		BAP	
Arachnids	*Centromerus brevivulvatus*		NR, RDB3	RDB3		
Arachnids	*Haplodrassus dalmatiensis*		Nb		BAP	
Orthoptera	*Grilus camprestris*	Field Cricket	NR, EN	EN	BAP	Schedule 5
Coleoptera	*Lucanus cervus*	Stage Beetle	Nb		BAP	Schedule 5
Coleoptera	*Cicindela sylvatica*	Heath Tiger-beetle	Na		BAP	
Coleoptera	*Anisodactylus nemorivagus*	Heath Short-spur	Na		BAP	
Coleoptera	*Aleochara fumata*		NR	RDB - Insufficiently known		
Coleoptera	*Hylis olexi*		NR	RDB3		
Coleoptera	*Ampedus cinnabarinus*		NR	RDB3		
Coleoptera	*Cryptocephalus biggutatus*		NR	RDB2 - VU		
Coleoptera	*Dieckmanniellus gracilis*		NR	RDB3		
Coleoptera	*Pelenomus olssoni*		NR	RDB3		
Lepidoptera	*Plebejus argus*	Silver-studded Blue	Nb	VU	BAP	
Lepidoptera	*Hipparchia semele*	Grayling (Extinct 19880s)		VU	BAP	
Lepidoptera	*Paracolax tristalis*	Clay Fan-foot	Na		BAP	
Diptera	*Cheilosia nigripes*		NR			

Diptera	*Callicera aurata*		NR			
Diptera	*Eutolmus rufibarbis*	Golden-tabbed Robber-fly	NR			
Diptera	*Asilus crabroniformis*	Hornet Robber-fly	NS		BAP	
Diptera	*Thyridanthrax fenestratus*	Mottled Bee-fly	NR		BAP	
Hymenoptera	*Ectemnius borealis*		NR	RDB3		
Hymenoptera	*Mimumesa spooneri*		NR	RDB3		
Hymenoptera	*Diodonotus insidiosus*		NR	RDB3		
Hymenoptera	*Hylaeus incongruus*		NR	RDB3		
Hymenoptera	*Andrena florea*		NR	RDB3		
Hymenoptera	*Halictus confusus*		NR	RDB3		
Hymenoptera	*Sphecodes scabricollis*		NR	RDB3		
Hymenoptera	*Nomada fulvicornis*		NR	RDB3		
Hymenoptera	*Ceratina cyanea*	Blue Carpenter Bee	NR	RDB3		

NR = Nationally rare, NS= Nationally scarce, Na=Nationally scarce a, Nb=Nationally scarce b, EN= Endangered, VU=Vulnerable, NT=Near Threatened,

3: DESCRIPTION

3.1: General information

3.1.1: Location & site boundaries

County: West Sussex
District: Chichester
Planning Authority: SDNP delegated to Chichester District Council
Grid Reference: SU852220
Area: SWT Nature Reserve is 125.1 Hectares (309.1 acres), 124.6 ha (307.9 ac) is SSSI and 118 ha (19.6 ac) LNR. Approximately 2.5 ha (6.2 ac) of the SSSI and LNR is not SWT reserve.

Iping and Stedham Commons are located near the west end of the Lower Greensand ridge, within close proximity to Midhurst Common (2 miles to the east) and Ambersham Common SSSI (c. 4miles east). To the west lies West Heath, of which only c.20ha remains. Iping is somewhat complimentary to Ambersham in that the former has a richer dry heath fauna while the latter has a richer wet heath and bog fauna. Woolbeding Common is the nearest large block of heath lying only 2 miles to the north, on the Hythe beds (very different exposures and mineral soils). The Wealden Heaths Phase II SPA, of which Weavers Down forms a part, is c.6 miles to the NW.

Ambersham and Heyshott commons cover 134 ha, Blackdown and Marley Commons cover 239 ha, Chapel Common covers 100 ha and Woolbeding Common covers 194 ha. The most recent figures from the Sussex Biological Recording Centre (BRC) suggest that there are 853 of heath in the West Sussex part of the Wealden greensand area. This is up 137ha since the previous management plan. This consists of 50% (428 ha) open heath 45 % (386 ha) wooded heath, and 5% (39ha) of recovering heath. There is also 96 ha recorded as acid grassland. See map 17 showing location of heathland in the area.

The reserve sits in the Wealden Greensand Natural Area Profile and Biological Opportunity Area 11 Stedham, Iping and Woolbeeding Crescent (Natural England).

3.1.2: Tenure

Ownership and uses
The Trust now manages 125 ha of the commons mostly through ownership with only 9 ha being leased. A small area of Trotton Common to the west is excluded from the plan as it has been split up into local household ownership although technically it is still part of the LNR and SSSI. See ownership map 1.

Previous management agreements led to the joint management of Iping and Stedham Commons by SWT and SDJC. Since the South Downs National Park Authority came into being in April 2011, the Trust has taken on management of the whole site while still contracting the Authority to carry out works in partnership and close liaison.

The Sussex Wildlife Trust purchased the freehold to Stedham Common (35.21ha) in 1985 and the timber rights in 1988. A 21 year management agreement was established with WSCC - 1 July 1986. The reserve had been used as a wood yard and plantation area. One other use at Stedham, over and above the registered common rights, allowed Midhurst Gun Club (under licence) to hold clay pigeon shoots on one Sunday each month. This was stopped in 2011 due to disturbance to Woodlarks.

In 2005 the Sussex Wildlife Trust was able to buy 46.54 ha (northern section of Iping) from the Cowdray Estate through the Heritage Lottery Fund. West Sussex County Council donated 21.78 ha (purchased from Amey Roadstone Corporation (ARC) Ltd on 24 March 1993) to SWT as match funding.

Mineral rights under 29 acres of the S-W part of Iping Common (CL100) are held by Viscount Cowdray. Mineral rights under 21 acres of the southern part of Trotton Common are held by Viscount Cowdray.

In December 2006 SWT also bought 20 ha at Fitzhall Heath from Cemex (formerly RMC Ltd). Fitzhall Heath was not part of the LNR but was included in the SSSI and had previously been entered into a management agreement with English Nature in 1996. It was managed thereafter by the South Downs Joint Committee's Heathland Project until March 2011 when SWT took on management of the entire site. Mineral rights were retained the vendor.

The Leconfield Estate own 9.03 ha including the main car park – under a 21 year lease to WSCC dated 25 December 1977 and renewed on 22 December 1999. This area has been sub-leased to SWT from June 2008. The lease runs, until 23 June 2029 (i.e. 15 years remaining). The car park is an important interpretation and access point for the reserve.

The management of the site follows a 10 year plan prepared and agreed by a Scientific Committee and the Management Committee, comprised of representatives from the Sussex Wildlife Trust, South Downs National Park, Leconfield Estate Land Agents and both Stedham with Iping and Trotton cum Didling Parish Councils.

The gravel pit workings to the south of Stedham were being worked by Dudmans Ltd under planning application SJ/1705/06 and SJ/488/06 until very recently (July 2014). Work was suspended by the National Park due to the operators not meeting the terms of the planning agreement and providing insufficient environmental information for the Review of their Management Plan (ROMP). The future of the site is uncertain and the Trust is concerned over the impact that the over abstraction has had and will continue to have on the ground water levels on Stedham.

Common Land

The whole area is Common Land: CL192 (Stedham) - 45ha, 112 acres, CL100 (Iping) 67 ha, 167 acres and CL101 (Trotton) 31 ha, 76 acres although the Common compartments extend outside the LNR. See Common land map 2. The registered rights are limited to CL192 Alec and Urna Fry of Heather Cottage, Minsted, who has the right to graze 7 cows, 2 horses, 1 goat, 1 donkey, 2 pigs, 72 chickens and 3 ducks, to cut and take bracken, peat and wood for kindling, bean sticks and repairs, and to dig and take sand, and CL101 Mrs Lourie of Steps who has rights of estovers. Mr & Mrs Fry only collect limited wood. It is not known whether Mrs Lourie exercises her rights.

SSSI

The reserve was originally designated as a SSSI in 1954 and revised in 1980. See map 3 of designations. It is split into 3 units with a total area of 124ha. Unit 1 is Stedham 36ha, unit 2 is most of Iping and Trotton Commons 79ha and unit 3 is Fitzhall Heath 9ha. Bridgelands plantation was not included because it was conifer plantation at the time. Unit 1 is in a favourable condition whereas 2 and 3 are unfavourable recovering according to NE condition assessment date 1 May 2013. The main reason given for unfavourable condition was "targets for structural diversity, cover of Molinia, presence of characteristic plants and bare ground are not currently met"

Local Nature Reserve

The Local Nature Reserve (LNR) was first declared in 1978, extended in 1986 to include Stedham and currently totals 118 hectares. Fitzhall Heath and Bridgelands Plantation are not currently in the LNR. These should be added to the LNR as resources allow.

Scheduled Monuments (SM)

There are several scheduled ancient monuments on Iping Common (see map 4). These include Bronze Age Tumuli and a section of Roman road. . All are Scheduled Monuments (SM) covered under the Ancient Monuments and Archaeological Areas Act 1979. This Act, building on legislation dating back to 1882, provides for nationally important archaeological sites to be statutorily protected as Scheduled Monuments. There are also two Mesolithic sites that are not scheduled.

3.1.3: Management / organisational infrastructure

Iping and Stedham Commons is one of 34 sites managed by the SWT Land Management Team. The Living Landscapes Officer, based within the National Park Offices in Midhurst, is part of the reserves department at Woods Mill and working very closely with the Heathland Officer from the SDNP is responsible for the Reserve management. This includes contract management and volunteer tasks. The Assistant Reserves Officer provides a few days per year additional management help. The SDNP officer carries out most of the tractor driving, pesticide spraying and many volunteer tasks per year. There is a voluntary reserve warden for Stedham and Iping (Sue Payne), who monitors the Commons regularly. The Trusts own Ecologist supervises and carries out most of the surveying and monitoring of the Reserve, while volunteers supply invaluable time and support for specific projects including bird surveying and scrape invertebrate monitoring. The Trust's Conservation Committee acts as a forum to discuss conservation policy and advises Council on scientific matters. It has delegated authority to approve management plans.

To date the management of the Reserve has been guided by an LNR Management Advisory Committee, which includes two representatives from each managing body, NE plus other interested parties, including the two Parish Councils and the Leconfield Estate. The Committee meets twice a year to agree and review management works.

A Scientific Committee meets regularly to discuss management of the Reserve. It was first established in the 1970s, but has not met consistently throughout all this time and membership has changed over time and with different management structures.

SWT have limited financial resources. and must rely on grants and income it can generate as a charity.

3.1.4: Site infrastructure including access

The northern boundary of Iping and Trotton Commons is primarily formed by the A272 (although there are small strips of LNR on the north of the road, not owned by SWT) and the western boundary is a forestry track. Fitzhall is bordered to the south by the Elsted Road. Stedham is bordered along the south by a bridleway and along its eastern side by the Minsted Road. It should be noted that the bridleway denotes the SWT ownership of Stedham rather than the fence against the quarry to the south. This fence was erected in agreement with the quarry and was replaced in 2013 by SWT and SDNP staff and volunteers at a cost to SWT.

There is a network of bridleways across the reserve as well as informal paths and tracks. Under the Countryside and Rights of Way (CROW) Act 2000 the public have a general right of access on foot

(only) to all Registered Common Land in England and Wales. However the public are encouraged to keep to paths particularly with dogs, and to keep them under close control from the beginning of March till the end of August, due to the impact of disturbance on ground nesting birds. See map 5 for Public Rights of Way.

Vehicle access is mainly confined to off-road vehicles only and some wet tracks should not be used excessively in wet weather to prevent rutting damage. The emergency action/fire plan map 6 shows vehicle access.

There is a high pressure gas main that runs east-west across all three of the commons. This forms one of the main access tracks although in some places it is too wet for on-road vehicles. There is an overhead power line across the north-east corner of Stedham. There is an underground water pipe running from the A272/Elsted Road junction across Iping going west. Utilities are also marked on map 6.

Stedham was fenced in 1999 /2000. This project created 14 gates (8 bridlegates for riders and walkers, two kissing gates for walkers and four vehicle gates) together with a corral (south-west) and a water trough in the south-east part of the Common.

There is a surfaced car park which can accommodate 25 vehicles on the eastern side of Iping. This car park is owned by the Leconfield Estate and requires regular maintenance such as pothole filling. There is also an informal and unsurfaced roadside parking area on Fitzhall Heath that can accommodate approximately 7 vehicles. Limited car parking is also available along the Minsted Lane.

The Trust has presumed access rights along the boundary track in the far west of Iping Common; however the first section of the track from the Elsted Road is not registered with the land registry. This lack of clarity of the access rights need to be addressed as soon as possible.

3.1.5: Map coverage

Ordnance Survey Sheets: 1:50,000: Landranger 197
1:25,000: Explorers 120 & 133
1:10,000: SU82W & SU82SE

Historic maps

3.1.6: Photographic coverage

WSCC aerial photography inc 2013
SWT aerial photography 2004, 2007
Richard Williamson fixed point photography 1960 / 1970s
Mike Edwards fixed point photography 1994 – current
Limited LIDDAR information is also available from Sussex Biological Records Centre

3.1.7: Zones or compartments

For management purposes the LNR has historically been divided into 14 compartments, with 7 on each Common. With the previous plan, the fire ride system on the Reserve was improved which broke the Commons up into 8 compartments only. See map 7 for the compartment numbers.

3.2: Environmental information

3.2.1: Physical

3.2.1.1: Climate

The Soil Survey of England and Wales bioclimatic map shows the general climate of the Reserve to be 'moderately warm' (accumulated temperature* as recorded on days with a temperature above 5.6°C of more than 1925°C), 'slightly moist' (moisture deficit 100-180 mm), unexposed (average annual wind speed less than 4.8) and hemi oceanic. This means the Reserve has been experiencing warmer summers than further west but without the colder winters of further north and east. *Accumulated Temperature is a measurement of accumulated values in degrees when the mean temperature is above 5.6°C (the minimum temperature at which grasses can start to grow).

3.2.1.2: Hydrology

Water issues from the ground at many places producing wet flushes that often soak back into the ground after a moderate distance. Both the north and southern edges of Stedham lie very wet, whereas on Iping and Trotton, the lower wet areas are to the north and the centre of the site. Mineral extraction from adjacent areas may impact on the water table as it may lower the water table and affect the hydrology in the vicinity - this is suspected but has not been confirmed due to the lack of available data. .

Dip wells were installed by D.K.Symes Associates (01295 712266) around the quarry in December 2005 as part of the planning requirements for mineral extraction. These dip wells (or piezometers) were to be checked monthly over a minimum period of 15 months and results were expected to be sent to SWT. One dip well was installed in the south-eastern corner of Stedham with permission from SWT. To date this information has not been supplied and no records have been taken since this requirement ceased in 2007 as far as the author is aware.

3.2.1.3: Geology

The Lower Greensand is made up of the Folkestone beds, which predominantly consist of poorly consolidated quartzose sands with seams of pebbles and clays and veins of hard ferruginous sandstone (carstone). These beds are approximately 100ft deep in the Midhurst area and sit above the ferruginous loamy sand of the Sandgate beds. These beds are much more variable and can be up to 150ft deep. In the Midhurst area these beds sit above the Bargate beds. Below these, the Hythe beds are found, which consist of sand, sandstone and chert and are about 200ft deep.

3.2.1.4: Geomorphology/landform

The site is situated on the Lower Greensand and rises from the wetter low-lying areas to a maximum elevation of 62 metres above sea level. It has both northerly and southerly aspects.

3.2.2: Biological

Lowland heathland or heath is a rare habitat globally - it is only found in north-west Europe and many of the best examples are in southern Britain (Currie 1994, Gimmingham 1992, Evans 1991, Michael 1996, Rose 1992, 1994, Prins 1993). It is a generally open habitat characterised by dwarf shrubs (woody plants not normally exceeding a metre or so in height); typically heathers of various kinds. Scrub, woodland, and acid grassland are also important components. It is confined to acid soils; the proportions of sand, clay, and peat in the surface layers and the local topography all contributing to the balance of the various vegetation types on each site. Because of the nature of the subsoil, heathland tends to have an extreme local hydrology, either "dry" (regularly subject to drought), or, where drainage is impeded, "wet", (water logged for much of the year).

This reserve is fairly typical of sub-Atlantic lowland heath and similar to other Wealden heaths. Common heathland plants are found within a range of heathland plant communities. Habitats include dry and wet heaths, bog, mires, open water, dry and wet acid grassland, continuous bracken, bare ground, dense scrub, semi-natural broadleaved woodland, semi-natural and plantation pine woodland. These habitats display the various stages of succession from open heath to woodland. 14 different vegetation types have been identified within Stedham Common. The complex arrangement found here is a result of variations in relief, soil type and hydrology and has led to small pockets of diverse vegetation types found closely-knit together.
Other characteristic plants found include the parasitic Dodder *Cuscuta epithymum*, Hare's Tail Cotton grass, *Eriophorum vaginatum* and the carnivorous sundews *Drosera rotundifolia* and *D. intermedia* as well as many rare lower plants (mosses, liverworts and lichens).

Unit 1 (Stedham) changed from being unfavourable recovering to **favourable condition** whereas 2 (Iping and Trotton) and 3 (Fitzhall) remained **unfavourable recovering** according to NE condition assessment dated 1 May 2013. Units were described by NE as follows:

Stedham Common
The assessment was carried out rather late in the year (late October) and it proved difficult to assess either grasses or broadleaved plants. Other than that it passed on all attributes including pioneer heather.

Iping Common
There is evidence of significant areas of recent tree clearance to increase the extent of open heath and tree cover is now within target levels. However, other key targets are not met for the dry and wet heath habitats. There are extensive areas which are overwhelmingly dominated by tall Molinia caerulea well above the 50% cover target. Leaf litter levels are high in these areas and species diversity very low. There are also extensive areas dominated by a dense turf of wavy hair grass. In areas dominated by heather most are made up of blocks of a single age class, mostly mature and leggy, with little or no bare ground evident. Some management of the dry heath is evident; there are small scrapes producing bare ground, and small areas where heather has been cut. Plant diversity is generally low but there are occasional richer patches, with characteristic species including dwarf gorse, heath bedstraw and tormentil. Common dodder was noted in several places. So targets for structural diversity, cover of Molinia, presence of characteristic plants and bare ground are not currently met. Although there has been a lot of recent tree clearance, there is a lot of re-growth of birch in places. In addition, the wet heath area appears much reduced in extent compared to the map produced at designation and Molinia is dominant. A small area of more open wet heath was noted which supported the characteristic species Sphagnum compactum, Trichophorum cespitosum and Drosera rotundifolia.

Fitzhall Heath
The assessment was carried out rather late in the year (late October) and it proved difficult to assess either grasses or broadleaved plants. Other than that it passed on all attributes other than pioneer heather. However, the transect did not include any areas which had been cut, scraped or burnt in order to encourage regeneration so I estimate that the actual target would have been reached.

Identification / Confirmation of important features (for species see attachment 4)

Importance = ✓✓✓✓ International
✓✓✓ National
✓✓ Regional
✓ County

Site Features	Importance
Geology and geomorphology Leached podzolic soils on Lower Greensand	✓
Archaeology Mesolithic sites Bronze Age tumuli Roman road	 ✓✓ ✓✓✓ ✓✓✓
Landscape Open heathland	 ✓✓✓✓
Vegetation types Lichen rich heath Lowland heathland wet/dry communities Bogs Acidic grassland	 ✓✓✓✓ ✓✓✓ ✓✓ ✓✓

3.2.2.1: Habitats / communities

NVC map can be found in map 8. A detailed NVC survey was undertaken in 2008 to consolidate the information from previous separate NVCs for Iping and Stedham.

Dry heathland

H2a *Calluna vulgaris-Ulex minor* heath; typical sub-community
In this area *Calluna* is strongly dominant but *Ulex minor* is present throughout and *Erica cinerea* abundant. The dry heath is found in large blocks on Iping on the better drained slopes and has been revealed on Stedham following large scale removal of pine plantation. (Common gorse, *Ulex europaeus* is found in linear thickets where past ground disturbance has occurred, e.g. around tumuli and along tracks and paths, particularly on Iping and along both sides of the A272.)

H2c Calluna vulgaris – ulex minor heath; molinia caerulea sub community

H3a Ulex minor- Agrostis curtisii heath; typical sub-community
A very small and localised area restricted to a slightly clay-rich soil. *A. curtisii* has been enhanced by scraping to reduce *Molinea* dominance and create seeding opportunities.

U1b *Festuca ovina- Agrostis capillaris- Rumex acetosella* grassland; typical sub-community
This vegetation type comprises an open sward of tussocky grasses, with abundant dicotyledons such as *Plantago coronopus* and abundant ephemeral species such as *Aira praecox* and *Vulpia bromoides.* Species such as *Agrostis capillaries, Trifolium repens* and *Ranunculus repens* are abundant, indicating a degree of nutrient enrichment perhaps due to the location of this type along paths and near gate entrances. *Carex arenaria* was found in the area at SU 8531 2203 (TN8). This species is usually coastal but also occurs occasionally on sandy commons.
Small patches of U1b occur across the site along and at the junctions of paths (e.g. TN3 at SU 85758 21899)

U2a *Deschampsia flexuosa* grassland; *Festuca ovina- Agrostis capillaris* sub-community
This vegetation is quite diverse and dominated by *Deschampsia* with grasses including *Festuca ovina* and *Agrostis capillaris*, and herbs such as *Potentilla erecta, Rumex acetosella* and *Galium saxatile.*
The U2a at SU 8578 2182 covers an area of very hummocky ground (TN6).

Dry acid grasslands overlie acid igneous and sandstone rocks, surface sand and gravel deposits of a pH of less than 5.5. These calcifugous plant communities vary with local and regional variations in soil and soil moisture, but always include specialised species and assemblages not found in neutral grasslands. Although prevalent in the uplands of Britain, acid grassland is rather uncommon in the lowlands where it occurs mainly on nutrient poor dry sandy soils. The National Vegetation Classification for unimproved dry acid grasslands occurring in Sussex is U1. (U1 is defined as having the grasses sheep's fescue and brown bent plus sheep's sorrel as constants, accompanied typically by winter annuals that flower in the spring, and heather and gorse).(Sussex BAP)

Grassland is mainly confined to the rides which cross the site. Creeping and Common bent grasses, *Agrostis stolonifera* and *Agrostis capillaris*, dominate drier areas – purple moor grass and soft rush, *Juncus effusus,* dominate wetter areas. Iping Common (north slope Cpt 2) is the only Sussex site for Bristle bent grass, *Agrostis curtisii*.

The site contains a good diversity of heathland habitats and is therefore of high conservation value. Past management work has cleared much of the site of trees and scrub. More clearance could be done particularly at the western and southern edges of Iping and the western and eastern edge of Stedham. This should be done sympathetically to retain some of the roadside screen and scattered groups of trees and scrub, which are of ornithological and landscape value. On going maintenance is required to check further scrub invasion - this will be partly achieved at Stedham through grazing.

Management requirements

A variety of age classes of heather should be created, to promote maximum diversity of flora and fauna. The 4 growth phases of *Calluna* - pioneer, building, mature and degenerate should be maintained at a ratio appropriate for SSSI heathland in favourable condition through grazing, annual cutting, mowing wide firebreaks (6m alternate years), scraping and burning on rotation. Areas of Erica cinerea should also be maintained in these various stages.

Strips of common gorse occur along tracks and on tumuli - these are generally very mature and require a coppice regime, or flailing and removal of arisings to promote a varied age structure, prevent die back and reduce fire-risk, especially along the sides of paths and bridleways. The development of new stands of gorse in areas of mature *Calluna* would favour an increase in species such as Dartford Warbler and spider populations in the longer term. Aim to produce some areas of dense thick gorse suitable for DW to over-winter. Some stands of mature / degenerating heather adjacent to the gorse clumps should be left as "non-intervention areas" and allowed to go through their natural cycle. They are valuable for lichens, invertebrates and reptiles. Such stands will be at risk from fire so may require adequate protection by fire breaks.

The ecological effects of human visitors should be considered - disturbance to breeding birds could be caused by dogs off lead. Problems of eutrophication caused by dog faeces may develop along edges of paths and rides. Open access conditions require dogs to be on a fixed lead, no more than 2 metres (6 feet) long at all times near livestock, and from **1st March to 31st July** due to ground-nesting birds. This disturbance by dogs can be a serious problem and needs effective interpretation and monitoring.

On heathlands there is a particular process of succession over and above the normal trend towards woodland. Heather itself tends to occur in patches of even age (Gimmingham 1992) and at Stedham virtually all the heather dates either from the 1984 fire (the eastern part) or from the Trust's tree clearance around 1990 and 2008. Heather grows through distinct phases from seedling to mature (closed canopy) to over-mature and degenerate. This is when the heather becomes leggy and falls apart under its own weight. While new growth of heather seedlings can arise under the degenerate plant, this is a stage that is especially prone to fire and invasion by grass, birch, or pine. Livestock can prevent large patches reaching this vulnerable stage by breaking up the age structure through trampling and grazing.

Mowing can be effective in removing vegetation in relatively large patches - there is a trade off between the desire to keep patches small and the ease and economy of mowing larger areas. Mowing cannot be used on much of Stedham where there are many tree stumps or where the ground is very uneven and it cannot be used on wet heath because the machinery simply bogs down. Mowing produces very obvious artificial patchiness into the landscape without producing the small scale mosaic that is best for wildlife. Mowing in these areas ideally needs to be as close to the ground as practicable to prevent pollard growth on old heather stems rather than the desired coppice regrowth. Pollarding heather does not create the desired pioneer/building phase growth and is therefore of limited success as a management activity, although skilful operation of a forage

harvester can and does achieve the sought after results where the terrain permits. Scraping may be a better solution, providing areas of bare ground and pioneer growth for longer periods. Scrapes should be of sufficient size so that adjacent heather does not entirely shade the scrape as it matures as this results in colonisation by lower plants particularly algae and is of limited value to wildlife and the heather management programme. Both mowing and scraping are limited by the accessibility of areas by machinery. Mowing and scraping have only been partially successful in creating structure in the heather and therefore controlled burning should also be investigated as a management tool for the reserve.

Nitrogen deposition has been of concern on the Thames Basin heaths where it may be approaching a critical threshold beyond which heathers will not replace themselves and grassland will then dominate the sward. It is not thought that the more sandy Greensand heaths are in any immediate danger of reaching critical nitrogen load, although it appears that this may be happening along some of the main tracks from the car park at least partly due to dog excrement. Some nitrogen will, however, promote plant growth. This may be of concern where low growing plants such as marsh clubmoss are to be conserved as they may become shaded out by the vigorous growth of other species. (Natural England study).

Bare ground has been recognised as an important stage in the vegetation cycle and is valuable for a range of plant and animal species. This, in the absence of grazing, should be created regularly (annually / biannually) by burning and / or manual / mechanical turf removal, both on dry heath (benefiting woodlark and many invertebrates) and wet heath (benefiting lower plants and invertebrates). Some scrapes should have a deep, south-facing, edge which provides a bare vertical face, a resource with is scarce yet extremely valuable for hymenoptera particularly Livestock are also valuable in creating bare ground on dry heath and grassland and by minor poaching on wet heath and can be particularly useful in creating micro-habitats for lower plants, e.g. sundews and mosses.

Dry, bare, non-friable ground provides suitable areas for the construction of nesting burrows by many bees, wasps and ants. It may also provide larval habitat for a number of other insects, particularly tiger beetles, robber flies, bee flies, stiletto flies and satellite flies. Some of these species are directly dependant on the nesting bees, ants and wasps.
As the ground re-vegetates, it provides habitat niches for more insects. Many specialist bees, bugs, beetles and flies are associated with rosette forming plants growing in sparsely vegetated areas. Re-vegetating areas, wet or dry, may support a greater diversity of flowering plants, which in turn support a greater diversity of insect species (Edwards,1996).

Bare ground surveys undertaken by Mike Edwards in 1996,1997 and 1998, resulted in a report which details management activities across several sites. Results suggest that in most cases, the regeneration of vegetation was very fast and future scrapes should be wider. Without disturbance, most areas will vegetate by over 75% within 5 years. Exceptions are found in very dry areas, or disturbed or heavily rabbit grazed areas (Edwards,1998).Conclusions from this report include:

- The creation of bare ground within heathland habitats does provide a resource required by many heathland insects and should be part of ongoing management where such resources are in short supply.
- Areas created should be greater than 2m in either direction in order to reduce rapid loss of habitat from over-hanging plants and colonisation from seedlings.
- Areas of bare ground should incorporate both flat and vertical components where practicable.

- Rapid re-vegetation of scrapes leads to rapid loss of species diversity and reduction in individuals utilising the area. Slowly re-vegetating areas, however, may offer more niches than completely bare ones.
- The expected life of areas of bare ground is approximately 5 years. Therefore create new areas (preferably adjacent to previously managed areas) on a rotation between 3 and 7 years (Edwards, 1998).

In 2013 Graeme Lyons introduced a monitoring scheme for the dry scrapes on Iping Common (now carried out by volunteers Penny and Dave Green). He made the following recommendations:

- Scrapes between 100 and 500 m2 appear to work better than those smaller and larger
- A range of sizes better than all one size
- Tighter clusters of scrapes (such as original release sites)
- Consider shelter aspect
- Humid heath appears poor location for dry heath species (but potentially good for *Anisodactylus*)
- Look at stepping stones between existing scrape clusters
- Proximity to paths important
- More in *Deschampsia* for Field Crickets
- New scrapes to be updated onto map annually and incorporated into monitoring (Lyons 2014)

Wet / humid heathland

M1 *Sphagnum auriculatum* bog pool community

In the wettest low-lying places there are a number of bare muddy pools across the site, usually within the M16a plant community described below. The largest of these have been mapped, but there are several more small ones located within the area of M16a at SU 8570 2167. There is little vegetation in these pools, except for patches of submerged *Sphagnum* spp. and *Juncus bulbosus.* A good Sphagnum bog occurs in Cpt 2 on the north-facing scarp west of the Roman road. According to Rose (1994), this is the best valley-bog community on the reserve, with one of the best populations of *E. vaginatum* and 8 species of Sphagnum. Wet-loving plants such as *Lythrum portula* and *Callitriche stagnalis* are found in damp water filled ruts along the path at SU 85309 21989 (TN9).

M4 Carex rostrata – sphagnum recurvum mire

M16a *Erica tetralix- Sphagnum compactum* wet heath; typical sub-community

Here there is a mixture of *Calluna vulgaris*, *Molinia caerulea* and *Erica tetralix* with variable proportions and *Sphagnum compactum* is constant throughout. This vegetation type occupies areas of waterlogged peaty soils. Associates include *Eriophorum angustifolium* (small amount found at SU 85813 22031 – TN2); *Drosera intermedia* (found only in the area at SU 8570 2167 - TN7) and frequent *Drosera rotundifolia.* Wet heath occurs in areas with impeded drainage on Iping (Cpts 1,2,3,4 and 7), on Stedham (Cpts 9,10,12 and 14) and around the perimeter of Fitzhall Heath.

M25a *Molinia caerulea- Potentilla erecta* mire; *Erica tetralix* sub-community

Here *Molinia* is highly dominant and tussocky, with few other species present. A bare muddy area within the M25a at SU 85430 22062 contains *Hydrocotyle vulgaris* (TN1). It is colonised in the drier areas by *Pteridium aquilinum.*

Areas of bog and pools are limited in size and number (the heaths of the Lower Greensand are relatively dry compared with those in Surrey and Dorset). These support valuable plant and animal communities and are of high conservation importance relative to their size. Where drainage is impeded on North Trotton and part of Stedham Common, the dry heath grades in to a wetter heathland type, where an increase in cross-leaved heath, *Erica tetralix* and purple moor grass, *Molinia caerulea* is found. Where surface water is permanently present, purple moor grass becomes dominant with deer grass, *Trichophorum cespitosum*, and Heath rush, *Juncus squarrosus* locally abundant. These areas of wet heath also support a rich moss flora which includes *Polytrichum commune, Sphagnum tenellum* and *Dicranum spurium.*

Bare peaty areas are important habitats for the larvae and adults of a number of heathland flies and beetles.

Management requirements
Succession from open water to scrub needs to be kept in check and margins should be periodically scraped to create shallow wetland habitats for sundews and other low 'wet' plants. Grazing helps with both of these requirements.

We need to aim to achieve favourable condition by maintaining the plant communities characteristic of wet heath, providing a varied age structure and a diversity of plant and animal species. There is the possibility of dominance by molinia in wet heath and mire communities which usually leads to decreased species diversity in the absence of cutting/grazing management.

Grazing or other disturbance is essential for the long term survival of Marsh clubmoss which is a slow coloniser – poaching very useful. (Also good for sundew and cotton grass). Scrub colonisation also needs to be kept in check to retain the open conditions for this species.

The wet heath in the southern end of Stedham is certainly drying out – possibly as a result of the adjacent quarrying activities. Possibilities for pumping out water from the quarry on to this area have been discussed and should be investigated further.

Open water

Several ponds occur on Iping, two on the north side adjacent to the road (Cpts 1 and 2), one in the south western area next to the bridleway (Cpt 4), one seasonal pool in the south central area (Cpt 3), and two in the south-east (Cpt 5). A winter pool also occurs in the south-east of Stedham (Cpt 8) with surrounding bog-wet heath supporting the rare moss *Dicranum spurium* and there is a small semi-permanent pool in Cpt 6. One pond also occurs on Fitzhall Heath next to the Roman Road and Elsted Rd (cpt 5).

Ornamental hybrid waterlillies have been introduced to Black Pond several years ago, possibly from Aylings nursery across the road. These do not appear to be spreading significantly but should ideally be removed. Of greater concern would be the possible accidental introduction of invasive aquatic plants. The sluice was repaired in 2002 but should be inspected regularly as it is partly constructed from soft, Midhurst Whites bricks. Fitzhall Pond is recovering well after its restoration and its margins have already been colonised by a number of wet heath/bog plants.

Woodland

W4c Betula pubescens – molinia caerulea woodland; sphagnum spp. sub-community

W10a *Quercus robur- Pteridium aquilinum- Rubus fruticosus* woodland; typical sub-community
Here *Quercus robur* is the canopy dominant with abundant *Betula* spp. and a number of other woody associates.
The ground flora comprises of *Lonicera periclymenum, Rubus fruticosus* and *Pteridium aquilinum. Molinia* becomes more abundant towards the edge of the woodland.

W10a/W7b *Quercus robur- Pteridium aquilinum- Rubus fruticosus* woodland; typical sub-community/ *Alnus glutinosa- Fraxinus excelsior- Lysimachia nemorum* woodland; *Carex remota- Cirsium palustre* sub-community
This community is similar to the W10a, however it has a much greater diversity of species. Of particular interest are the localised appearances of species indicative of flushing by ground waters with a degree of base-enrichment, such as *Mercurialis perenni,s Circaea lutetiana, Lycopus europaeus* and *Cirsium palustre*.

This vegetation therefore exhibits a tendency towards W7b - a type of vegetation which occurs where there is flushing by moderately base-rich waters in woodlands. *Alnus* are absent from the area mapped but *Salix cinerea,* a common species in this community, is abundant and many other species typical of this plant community were found amongst the ground flora.

W16a *Quercus* spp.- *Betula* spp.- *Deschampsia flexuosa* woodland; *Quercus robur* sub-community
This woodland occurs on acidic free-draining soils. It is fairly species poor and *Quercus* is often scarce or absent, with a ground flora often dense with *Pteridium aquilinum,* with frequent *Deschampsia flexuosa.*

W16a(*Pinus sylvestris*) *Quercus* spp.- *Betula* spp.- *Deschampsia flexuosa* woodland; *Quercus robur* sub-community
This woodland is rather similar to the W16a described above but the canopy comprises almost exclusively of *Pinus sylvestris.* The ground is often quite bare with *Pteridium* once again the most common species. Along the southern edge of the site this woodland has a thick understorey of *Rhododendron ponticum.*

Scrub / bracken / birch

U20c *Pteridium aquilinum- Galium saxatile* community; *species-poor* sub-community

W23c *Ulex europaeus-Rubus fruticosus* scrub; *Teucrium scorodonia* sub-community
A strip of *Ulex europaeus* crosses the middle of the site running along one of the paths; perhaps not a distinct community type, but part of the surrounding heathland.

Management requirements
Despite large areas of birch and pine being cleared from the LNR, there is the ongoing problem of regeneration from seed. This needs to be dealt with by both contractors and volunteers on a regular maintenance cycle.

Grazing would be a more effective and sustainable solution in the medium – long term. Cattle eat birch and pine seedlings and would also graze down Molinia tussocks to the benefit of heather. There are many other benefits to wildlife from grazing other than scrub control, and these include: creating a diverse and well structured heathland sward, creating poached ground and removing nutrients (cattle tend to defecate most in the woodland).

Finally it should be noted that dense bracken can prevent or at least greatly slow succession by preventing tree seedlings from becoming established. The area of bracken along the Minsted road, for instance, has remained bracken dominated and fairly free of trees since before the war (Mr. Moseley pers. com.). SWT has not tried to alter these long established bracken stands.

3.2.2.2: Flora

A list of known surveys of flora is held in the Sussex Biodiversity Records Centre, administered by the Sussex Wildlife Trust. These records suggest that there are over 444 vascular plant species on the Reserve with 10 species of rush, 15 species of sedge and almost 30 species of grass.

The few notable species which have been recorded include bristle-leaved bent which occurs on the north slope of Iping (Cpt 2 – its only site in West Sussex); Dodder is found beside some of the firebreaks, e.g. near the tumuli, SW corner of Iping and is found on Stedham. Hare's-tail cotton sedge, *Eriophorum vaginatum* occured on the north side of Iping, west of the Roman road line in Cpt 2, and also in Cpt 3 and in Cpt 8 and 10 on Stedham and Fitzhall Heath; bottle sedge *Carex rostrata* occurs further to the west in Cpt 2 in a gully. Sundews, *Drosera rotundifolia* and *D. intermedia* occur in wet heath and bog in Cpts 1, 2, 7, 8 and Fitzhall Heath (5) with *D. rotundifolia* also in Cpt 2. The rare moss *Dicranum spurium* is now only found on Stedham, in Cpt 8, although it formerly occurred on Iping, as did *Lycopodiella inundata*. *L inundata* was rediscovered on Stedham in cpt7 in 2012 after a 10 year absence. Francis Rose first recorded it in 1951 then re-introduced it in 1994 in the NE and SE parts of Stedham (although exact details need to be clarified). It was thought not to have been successful as the only other record was in 2001 in an area not thought to be in the re-introduction location. *Sphagnum magellanicum* occurs in compartment 2, a Sussex rarity. Yellow loosestrife, Bog Pondweed and Bogbean occur around Fitzhall Pond.

On the east side of the Elsted road there is an area where logs were formerly stacked and loaded. Here several rare plants and fungi occur which are rare elsewhere in Sussex or only occur here. The tractor ruts running south from the gas main track in Cpt 6 have developed very interesting communities of wet ruts, including the rare species not known elsewhere on the reserve: All seed *Radiola linoides*; Chaff weed *Anagallis minima*; Small centaury *Centaurium palchellum*; British club rush (*Isolepis setacea* and a scarce liverwort, *Fossombronia sp*.
The status of some of the notable species needs to be checked.

Lower plants

Lichens and bryophytes have been recorded by F. Rose and British Bryological Society (BBS) respectively. There are approximately 82 lichen species, 7 liverworts, and 148 moss species including 10 bog moss species and 5 hair moss species.

Moss species include - Bog Groove-moss, *Aulacomnium palustre*, Heath Plait-moss, *Hypnum jutlandicum*, Compact Bog-moss, *Sphagnum compactum*, Blunt-leaved Bog-moss, *Sphagnum palustre*, Soft Bog-moss, *Sphagnum tenellum*, Heath Star-moss, *Campylopus introflexus,*

Campylopus introflexus, Swan-neck Moss, *Campylopus paradoxus,* Common Feather-moss, *Eurhynchium praelongum,* Common Haircap, *Polytrichum commune,* Neat Feather-moss, *Scleropodium purum,* Flat-topped Bog-moss, *Sphagnum fallax,* Silky Forklett-moss, *Dicranella heteromalla,* Broom Fork-moss, *Dicranum scoparium,* Juniper Haircap, *Polytrichum juniperinum,* Red Bog-moss, *Sphagnum capillifolium.*

Lichen species include- *Cladonia portentosa, Cladonia coniocraea, Cladonia furcata, Cladonia cervicornis, Cladonia fimbriata, Cladonia pyxidata, Cladonia ramulosa, Cladonia polydactyla, Cladonia chlorophea, Cladonia squamosa, Candelariella xanthostigma, Catillaria globulosa, Cetraria chlorophylla, Hypogymnia physodes, Lecanora conizaeoides, Lecidea uliginascens, Parmelia sulcata, Parmelia caperata, Peltigera canina and Pertusaria amara.*

Liverworts include - Two-horned Pincerwort, *Cephalozia bicuspidate, Cladopodiella francisci, Gymnocolea inflate, Mylia anomala, Diplophyllum albicans, Lophocolea bidentata, Lophocolea bidentata var. rivularis and Lophocolea heterophylla.*
Some of these species are found on rotting logs and stumps and therefore require rotting timber to be left as part of the habitat.

Fungi

Fungi surveys have been undertaken by M. Goodchild (1980-93) and by the local fungus society (John Need 2011)

There are nearly 500 species recorded on the reserve including Orange peel fungus, Cramp ball, Candle snuff fungus, Golden jelly fungus, Chanterelle, Cauliflower fungus, Hedgehog fungus, Brain fungus, Sulphur polypore, Birch Polypore, Dryad's saddle, Beef steak fungus, Earth fan, Bay bolete, Red- cracking bolete, Penny bun, False chanterelle, Brown Birch bolete, Orange Birch bolete, Brown roll rim, Slippery Jack, Miller, Common ink cap, Lawyers wig, Poison pie, Sulphur tuft, Stinking parasol, Charcoal pholiota, Shaggy pholiota, False death cap, Tawny grisette, Fly agaric, Blusher, Honey fungus, St. Georges mushroom, Club foot, Clouded agaric, Clustered tough-shank, Russet shank, Spotted tough-shank, Conical wax-cap, Amethyst deceiver, Deceiver, Horse hair fungus, Fairy ring champignon, Bonnet mycena, Porcelain fungus, Oyster mushroom, Coconut scented Milk-cap, Oak milk-cap, Rufous milk-cap, Wooly milk-cap, Ugly milk-cap, Yellow swamp russula, Sickener, Fragile russula, Common earthball, Collared earthstar, Puffball, Stump puffball, Giant puffball and Stinkhorn.

We have experienced problems over a number of years with mushroom pickers collecting the edible species commercially. It is important now, that a greater understanding and protection of the fungi species is achieved in order to stop commercial picking on site.

There are also several rare fungi including one, as yet unnamed, for which this is the only known world locality. The wet heath areas are generally richest botanically while the area around the old timber storage site opposite Iping Common car park contains a number of important species including the tooth fungus, Hericium erinaceum. Another very rare species, Buchwaldoboletus hemichrysus, was found on the chippings pile (SU 854219) following clearance of pines at Stedham in 2004. There were only 7 previous records of this species in Britain, the last being 1994, and it is on most European Red Data lists. This boletus is found on partly buried wood and has a bright yellow cap of 30 - 50 mm across and is likely to be found following any further pine clearance at the Western end of Stedham (ensure some of this area is retained).

3.2.2.3: Fauna

Invertebrates
Lowland heathlands are of outstanding importance for their invertebrates, especially insects and spiders, of which many rare species occur. Edwards and Hodge (1994) recorded 113 heathland indicator species from the West Sussex heaths, many of which are nationally rare. See full list in Edwards, Hodge 1994 entomological survey report. Re-survey Edwards / Hodge 2003/4.

Coleoptera
Over 300 species of beetle have been recorded to date on the reserve. The Green Tiger beetle was uncommon on the sandy tracks and paths and is now seen frequently. Heath Tiger beetle (a national rarity) also occurred with unsubstantiated records from the late 1990's and a re-introduction programme, planned with Natural England, occurred in 2007-2009. Monitoring of the scrapes over the last 2 years has shown this species to be well established and spreading from the original release sites. Glow worms occur in low numbers along the margins of the Gas Main track and around the car park.

Odonata
25 species of dragonfly have been recorded and around the reserve including 15 from Black Pond the Common Hawker, Black Darter, Emperor dragonfly, Small red-eyed damselfly and White-legged damselfly.

Fitzhall Pond (an historic pond opposite Fitzhall Lodge) was restored from dense willow and rhododendron scrub in 2001. 5 species of dragonfly have since been recorded. These are: Brown Hawker (*Aeshna grandis*), Azure Damselfly (*Coenagrion puella*), Common Blue Damselfly (*Enallagma cyathigerum*), Blue Tailed Damselfly (*Ischnura elegans*) and Emerald Damselfly (*Lestes sponsa*).

Pond scrapes on Iping Common adjacent to Bridgelands Farm were restored in 1999 also from an historic pond marked on early OS maps. This was colonised by black darter, but the colony was lost when the scrapes dried in the summer of 2005 and remained dry until December 2006.

Several species have been recorded at newer ponds west of the Elsted Road, Stedham and Fitzhall

Orthoptera
Eighteen species of Orthoptera have been recorded on the reserve. The BAP species Bog Bush cricket has been recorded throughout the reserve. Field Cricket was recorded in 1973 at the west of Iping and a re-introduction was carried out in 2007. A re-introduction of Field Crickets (1999 and 2000) occurred on Stedham Common although these populations failed due to poor weather conditions. The population introduced in 2007 was doing well, but lack of grazing leading to a thatch of dense Deschampsia grassland appears to have impacted badly on the numbers. Mottled grasshopper is found in the acid grassland.

Other species include Woodland grasshopper, Common green grasshopper, Common field grasshopper, Meadow grasshopper, Slender groundhopper, Common groundhopper, Oak bush cricket, Dark bush cricket and Speckled bush cricket.

Hymenoptera
The dry warm sunny rides, banks and scrapes are beneficial for this group with 267 species recorded. The aculeates (ants, bees and wasps) are well represented and include Spider-hunting

wasps, Solitary wasps, Cuckoo wasps, Potter wasps, Social wasps and numerous bee species. The ant *Lasius platythorax* has an intimate relationship with the Silver-studded Blue butterfly and management for the ant is key to the success of the latter.

Hemiptera
Alydes cacaratus is a national rarity.

Diptera
The Bee fly *Thyridanthrax fenestratus* occurs on Iping. Other species include Craneflies, Soldier flies, Snipe flies, Robber flies, Hoverflies and Thick-headed flies.

Lepidoptera
Thirty seven species of butterfly have been recorded on the reserve; however the heathland specialist, the Grayling has not been recorded since 1989. This follows a national downward trend in this very particular species. The Silver-studded Blue has recovered since the 1976 fire, populations increasing as a result of ride mowing and heather management – see survey by R. Crane (1989 – 1993 and 1990-2009). The micro-populations fluctuate as suitable habitat is lost as heather grows and new areas are created either by mowing, scraping or burning. The study indicated that the populations reach a peak 5 years after management and then decline thereafter. It is therefore important to have a plan of annual creation of suitable habitat around the reserve.

Other butterfly species recorded on the reserve include: Small skipper, Essex skipper, Large skipper, Brimstone, Large white, Small white, Green-veined white, Small copper, Silver studded blue, Brown argus, Common blue, Holly blue, White admiral, Red admiral, Painted lady, Small tortoiseshell, Peacock, Comma, Silver washed fritillary, Speckled wood, Gatekeeper, Meadow brown, Ringlet and Small Heath.

Moths were surveyed in 1986 by Colin Smith. Moth trapping has also been undertaken from 2004-2007 by Robin Storkey, Mike Perry and Sarah Patton and other local enthusiasts, but no regular trapping has been carried out since. Approximately 446 species have been recorded on site including 40 Sussex Rare species inventory ones. Species include Dotted Border wave, Clay fan-foot, Festoon, Great Oak beauty, Horse Chestnut. Other surveys have recorded Silvery Arches, Grass Wave, Waved Black, Rosy Marbled, Dotted Chestnut – all Notable
A large range of larval food sources are used including alder, birch, oak, ash, willow, Scots pine, heather, dock, bramble , bedstraws, rushes and lichens.

Araneae
Prior to the fire of 1976, 109 species of spider were recorded. Iping has several species of national rarity including the crab spider (*Tomisus onustus*) and *Centromus aequalis* (new to Britain). In 2012 an invertebrate survey was carried out on the reserve by Andy Phillips and Graeme Lyons with a total of 209 species of spider now been recorded. Four new species to Sussex were recorded and many nationally rare, Notable A or B species. This represents 30% of the British spider fauna making the reserve very important for this group. By comparing Iping, Trotton and Stedham the survey demonstrated the benefits of grazing in providing a diverse habitat for a greater variety of species of invertebrates.

Amphibians and reptiles
Populations of common lizard and slow worm are good and, despite high public use, the adder population appears to be reasonably healthy and stable. Grass snakes occur around the pools. Palmate newt is found in pools on Iping and smooth newt has apparently been recorded in the past. Common toad and Common frog can also be found. The three rare heathland specialities –

Natterjack toad, Sand lizard and Smooth snake do not occur on the reserve and no historical records exist.

All species are protected under the Wildlife and Countryside Act 1981.

Birds

Dartford warbler (Amber status and BAP). This delightful small warbler is largely confined to lowland heaths in Britain. It is a continental species whose populations here have fluctuated with the severity of our winters. Only 11 pairs survived in Britain after the winter of 1962/63 They re-appeared as a breeding species in Sussex in 1989. They re-colonised Iping and Stedham Commons in the early 1990s thanks to the mild winters and got up to 15 pairs, but suffered again in the bad winter of 2009-10 and no birds bred in 2014.

Stonechat. (Amber status) For many years there were only 1 or 2 pairs on Iping Common but the population has grown, probably because of the increase in the stands of gorse. The clearance of the pine trees and re-creation of large areas of heather on Stedham has also produced suitable habitat for this species.

Woodlark. (amber status and BAP) A fairly stable population of around 8 pairs of Woodlarks also breed here; feeding in the short turf, e.g. fire rides and bare ground Although the birds are remarkably tame and can be seen at close quarters when they are on the ground, it is very difficult to understand their behaviour and ascertain their territories. However in recent years much study has been done on them on the reserve. Woodlarks are very scarce birds and in Sussex are mostly confined to the heathlands in West Sussex where they require sparse ground cover with scattered trees.

Nightjar. (red status i.e globally threatened and BAP) are also found, with greater numbers on Iping (c 4-6 prs) than on Stedham (2 prs), These summer visitors are nocturnal birds which feed on flying insects such as moths and beetles. As dusk sets in after sunset they begin their extraordinary churring sound, sometimes continuously for many minutes. A national survey in 1994 established that 38% of the British population occupy lowland heathlands. Nightjars are ground nesting species, usually choosing small scrapes on bare ground in small clearings of vegetation - therefore the nests are uncovered and unprotected. Nightjars' breeding success has been shown to decline in areas heavily used by the public. This nest loss can be attributed to predation, particularly by corvids and can be extremely high where birds are regularly flushed from nest sites by the public or dogs.

Around half a dozen pairs of **Tree Pipits (red status BAP**) breed on the reserve.

Robin Crane has just published a report on 20 years worth of CBC data for Stedham Common. This showed that the number of bird territories grew from 58 in 1993 to 246 in 2012. Although the heathland birds grew and stabilised, the most significant increases were in generalists and woodland edge species indicating a diverse habitat benefitting a broad range of species.

Mammals –

Rabbits breed on the commons and the vegetation is grazed heavily in some areas e.g. western end of Iping, Cpt 1 and Cpt 7. Harvest mice occured in Compartment 5 and adjacent in Fitzhall Heath in tall *Molinia* stands before the fire of 2004. It is not known if the population survived although, encouragingly, not all of the *Molinia* was burnt. No recent mammal surveys have been undertaken,

although there are historical records for most species. These include – Bank vole, Field vole, Fallow and Roe deer, Fox, Stoat, Weasel, Wood mouse and Yellow-necked mouse, Hedgehog, Badger, Mole and Pygmy and Common shrew. Evidence of harvest mice was found on Fitzhall Heath in 2004 following the fire. These were confined to areas of tall and dense *Molinia*.

Bat records include Common Pipistrelle, Natterer's, Noctule, Whiskered and Brown Long-eared bat. Daubentons and Serotines have been recorded nearby – undoubtedly bat species have been under recorded on the Reserve or records have not been submitted to SWT.

3.3: Cultural

3.3.1: Archaeology

There are several scheduled ancient monuments on Iping Common (see map 4 and schedule of features in appendix 2). These include Bronze Age Tumuli and a section of Roman road. There are also two Mesolithic sites.

The earliest traces of man's presence on the Commons date to the period 9000-7000 BC, following the last glaciation or Ice Age. At this time Britain was still linked to the continent across the English Channel by a bridge of land, which was gradually swallowed up by the rise in sea levels caused by the melting of the ice sheets as the temperature rose. In the warming climate the arctic tundra vegetation over much of south-east England was replaced by colonizing birch and pine and by 6000 BC by a forest of oak, elm, alder and lime.

On two sites on Iping Common (nos. 1, 2), scatters of flint tools, made from nodules brought from the Downs and flakes and chips of flint left over from the tool manufacture, point to the occasional presence of itinerant bands of hunters camping in the forest, working the flint to renew their stock of flint axes, arrow and spear points, scrapers, saws, awls and knives. Although no animal bones of this time survive here in the acidic heathland soils, other sites of this period show that aurochs (wild ox), red and roe deer and wild boar were hunted, not just for food but for skins (clothes and bedding), antler and bone to make other types of tool (e.g. needles), sinew for thread, fat for oil; while the forest itself could be rich in small game and edible plants and nuts. Animals which may have survived in England from the end of the last glaciation include wolf, brown bear, stoat, fox, pygmy shrew, root vole, blue hare, and, for a time, elk, reindeer and wild horse, remains of all these species having been found on human occupation sites of this period; following the retreat of the ice sheets the beaver, pine marten, badger, hedgehog, mole, common shrew and water vole made the journey from northern Europe.

From plant and tree pollen preserved in the soil with the flint tools at one of the flint scatters (no. 1) on Iping Common, excavated in 1960 (near the County Surveyor's Depot), comes early evidence of man's impact on the environment (Keef et al., 1965). The hunting camp began near an area of dense hazel woodland but perhaps during the period of the hunters' occupation the hazel was largely replaced by heather. A corresponding increase in soil acidity and evidence of soil deterioration and erosion, with blown sand covering the flint tools, points to the creation of heathland soils and vegetation around the site. The link between sites occupied by human communities at this time, decreasing tree cover and the creation of areas of heath, is known from many areas and it seems likely to be due to localised and temporary forest clearance by hunting bands. It is clear that forest clearance was often effected by burning, which temporarily created ideal growth conditions for

lush new vegetation particularly attractive to browsing animals. This practice may be an early method of animal herding.

A further pollen 'profile' taken from Mitchell's Common (now the site of Dudman's sandpit), immediately south of Stedham Common, also showed a scatter of flint tools of this period, with an ancient buried soil, containing much heather and little tree pollen, buried under a layer of windblown sand, suggesting clearance of vegetation in the Stedham Common area. At both sites ivy pollen was common and it has been suggested that this was deliberately gathered by hunters as fodder for browsing animals such as red deer, though the high concentration of ivy pollen may be due to other factors.

It is clear that elsewhere on Iping Common the primary vegetation cover, before forest clearance, comprised a mixed deciduous forest of birch, oak and lime, with hazel shrub, a fern-rich understorey with alder growing in damp hollows. Early deforestation on the Common is likely to have been localised, so that primary woodland would have remained in valley bottoms. It also seems probable that after this episode man's use of the Commons was for a while not so intensive, allowing, in the Mitchell's Common / Stedham Common area, re-establishment of a light birch / hazel scrub woodland cover, though with much heather-dominated heath remaining.

The large concentrations of worked flint on the Sussex Greensand dating to around 6000-4300 BC may suggest that by this time some communities had 'home territories', perhaps occupied by extended families camping on the drier soils over the winter months. Sites on these soils tend to have more flint scrapers and axes, suggesting skin preparation and forest clearance, and sometimes have shallow pits for the burial of flint waste, so keeping a small, much-used area tidy. At the same time the Wealden forest continued to be used for longer-distance hunting trips: a small collection of flint tools found on the south of Iping Common may date to this time, left by a short-stay hunting party.

About 4400-4200 BC the first settled agricultural communities appear in south-east England, bringing with them a new social organisation and introducing pottery making, arable farming and domestic livestock for the first time: sheep and goat were brought from Europe and perhaps cattle and pig. Communal monuments, such as large ceremonial enclosures (e.g. The Trundle near Singleton), were built for the first time, mainly on the Downs and were probably used as central points for protection, barter and redistribution of goods, gift exchange and ceremonial occasions. Latterly they were used as fortified settlements but had fallen out of use by about 3000 BC, hinting at yet another change in prehistoric society. Again, the Weald continued to be used as a woodland resource for hunting, though no archaeological finds of this date have yet come to light on Iping and Stedham Commons.

With an increasing, largely settled population came an increase in pressures on the land. From about 2500 BC to 1400 BC farming communities on the Downs and Greensand built circular earthen mounds or barrows in such profusion that it seems likely that each community constructed its own. Twenty barrows were built on Iping Common and Fitzhall Rough, on low ridges where they were more visible from a distance and were probably built for ceremonial or ritual reasons. In some cases barrows on the greensand cover human cremation burials but in many or perhaps even most cases had certainly never contained any burials; the cremated and uncremated dead being buried in graves.

Most of the barrows on the Commons show signs of previous excavation, probably as a result of 19th Century antiquarian interest but no record of any burials or other finds from these excavations has been left. Unlike most barrows on the Downs, none of those on the Commons show any clear signs

of having a surrounding ditch, the excavation of which usually supplies the bulk of the spoil for building the mound. It seems likely that most of the Common barrow mounds were built, as on some other sites on the Greensand, by stripping large areas of turf from around the proposed barrow site, piling the turves in a stack, and covering the stack with sand to round it off. Certainly a barrow formerly located on Mitchell's Common, just south of Stedham Common, now removed by sand extraction, was found during archaeological excavation in1973 to have been built in this way, without either a surrounding ditch or underlying burial. Quite why no barrows are recorded from Stedham Common is not certain, given the number of them in surrounding areas.

From the number of barrows on the Commons it is clear that several contemporary prehistoric settlements must have existed nearby, as yet largely unfound. It is, however, unlikely that these lay on the Commons themselves. Pollen taken from buried soil beneath one of the barrows on Iping Common (no. 5) clearly shows a change in the vegetation of the Common from a birch / hazel scrub with abundant bracken (itself perhaps regenerated woodland, the legacy of earlier hunters' clearance) to heather-dominated heathland on acidic soils, with hazel thickets. The barrow was certainly built in an area of existing heathland, which was probably (though not certainly) then of recent origin.

The deterioration and erosion of soils and formation of heather-rich heathland on the Sussex greensands appears to have taken place principally in the second millennium (2000-1000 BC), although as mentioned above, it is clear that soil degradation on part of Iping Common and the Mitchell's / Stedham Common area had begun much earlier. An increasing settled population, widespread tree clearance and over-grazing of stock and some ploughing of the unstable sandy soils are thought to be largely responsible. Not surprisingly, perhaps, the 1960 pollen profile on Iping Common revealed evidence of nearby arable cultivation before the final formation of heathland.

What is not yet certain is the degree to which the Commons had become heathland before the second millennium; perhaps the heath areas were still localised at this time. There is no evidence to suggest that the Commons recovered from the final phase of woodland clearance and soil deterioration and although woodland is likely to have regenerated locally on occasion, their heather-dominated heathland character has persisted to the present day.

After the second millennium BC, no remains of man's occupation of the Commons have been recorded until the mid-1st Century AD, when the engineers and surveyors of the Roman army, recently arrived in Britain, built a road running north-south across Iping Common between the Roman towns of Chichester and Silchester (Hants.), probably between about 43 and 61 AD. The Roman road is clearly visible on aerial photographs as it runs across the Common, and is best seen south of the firebreak, where it consists of a raised, cambered causeway between side ditches 18 metres (60ft) apart. The nature of the surfacing material is not known, but it is most likely to be gravel or greensand blocks. The extent of nearby settlement in Roman times is uncertain though "portions of Roman urns" found beneath St. Mary's Church, Iping, in 1885, suggest the presence of a settlement or cemetery.

By the time of Domesday Book in 1086 settlements certainly existed at Iping, Stedham, Trotton and Chithurst on the Sandgate Beds near the Rother, north of the Commons. Parishes and manors in this part of the Weald were often long and narrow in plan, extending over a variety of different soils of varying agricultural quality, offering a range of economic resources. The historical parishes of Iping and Stedham are typical in this regard, extending from the foot of the Downs in the south, across Gault clay, the heath-bearing Lower Greensand and the Rother Valley. The Nature Reserve area was from the Middle Ages until recent times divided between all four of the manors mentioned

above, yielding rough grazings, probably mostly for sheep, bracken for litter, turf and peat for fuel, and underwood on a small scale for the tenants of the manor.

In 1086 the manors of Iping and Stedham both had quarries, but these are perhaps most likely to have been on the Sandgate Beds to the north. In several places on the Commons, small sandpits may be seen, often with traces of disused and overgrown rutted cart tracks leading away across the heath. These could date from the Middle Ages onwards, taking sand from the Commons, for clay and tile making and latterly for stones for making up the local roads and sand for mortar and cement. Some are mapped, e.g. nos. 16, 18, 27, 29.

Other activities taking place on the edges of the Commons include piece-meal small-scale enclosures, particularly along their southern fringes. Immediately to the south of Iping Common, the estate at Fitzhall was, by 1629, using its Common more intensively than most. Heather and fern were cut, peat and turf were dug for fuel, sand was sold to glass-makers, who leased part of the heath, part of the Common had been converted to a rabbit warren, part sown with oats and part planted with fir (Scots pine). The grazing of rabbits, introduced into England in the 12th Century but scarce and expensive during the Middle Ages, also had an effect on woodland regeneration, caused by the lopping of boughs to feed rabbits in winter and burning heath to improve grass for their feed. The repeated cutting of fern, used for litter and fertiliser and to lay in the meadows to ensure a good growth of grass, also discouraged the regrowth of trees. Some or all of these activities are also likely to have taken place on the southern fringes of Iping Common.

By the early 19th Century a number of roads and tracks are shown on historical maps, running across the Common, as they do today. The main track was the “old road to Midhurst” (no. 20), which began at Black Pond, swung southwards across Trotton and Iping Commons to the site of the present car park and back north across Stedham Common to rejoin the line of the present A272 north-west of the chicken farm. This track is now little-used and overgrown for most of its alignment. In 1825 the Midhurst-Petersfield Road was turnpiked, resulting in a new road alignment east of Crowshole Farm, parallel to but 250 metres north of the old road. Further road realignment after World War II has left a section of the turnpike road visible as a sunken track between the Stedham turning and Trotton Gate Garage.

Along the southern edge of the present Stedham Common a long, continuous land boundary, shown on the 1845 Stedham Tithe Map, coincides with an ancient earthen boundary bank still visible today on the south-west of the Common (no.26). Iping Common, then divided into Iping, Trotton with Chithurst Commons were largely listed as “common” in the 1840’s. A light tree cover seems to have existed on the south and west of present-day Stedham Common at the end of the 19th Century. An estate map of 1842 refers to rights of hunting (rabbits) and pasturage enjoyed by several of the chief local landowners on Iping Common.

The later 19th Century also saw Stedham Common in regular use for the village’s annual fair on the longest day of the year, at a high point on the main footpath through the Common known as “Fair Hill” (no.34). Here, the village cricket team played from perhaps the1840s on an acre of turf, the remnants of which are still visible in this area. The cricket team’s headquarters were at the Hamilton Arms on the northern edge of the Common, in School Lane until 1884, when the Rev. Caleb Collins secured a clubhouse in the village; however, the team continued to play on Fair Hill until 1910. The Fair may have lasted a little longer, until the 1920’s, but the annual Guy Fawkes bonfire and procession continued to be held for some years afterwards on the Common. At one time, probably in the 1920’s, there was also an Isolation Tent on Stedham Common.

3.3.2: Past land use

Traditionally the heathland mosaic has been a marginal landscape for settlements and a high proportion of the land is common land, traditionally used by commoners for rough grazing and the cutting of wood, turf, heather and bracken. The traditional use is reflected by the extensive network of tracks and footpaths and by the many villages on the outer fringe of the heathland mosaic.

Before 1922, cattle and sheep were grazed on the northernmost part of Stedham Common, south of School Lane, though the extent to which they grazed the remainder of the Common seems uncertain. All grazing on the Commons was thought to have ceased by 1939 but a local farmer (personal communication) remembers Miss Garnett Back from opposite the Old Police Cottage in Trotton grazing 6 goats on Trotton Common before and after WW2. The area continued to be used long afterwards by local inhabitants for gleaning a variety of materials. Heather was cut to lay down on muddy tracks, while bracken was cut for litter and used with faggots made from underwood to make the bases of hayricks, allowing air to circulate beneath. During World War II, the Womens' Institute was encouraged to gather sphagnum moss from the Commons, to be used as rough bandages and for caulking wreaths. Underwood was cut to make faggots for fuel, though timber rights to Stedham Common were sold to the West family around the turn of the century. Stedham Common was also used occasionally to dig for bottle-dumping. Some of the pitted area (no.29) on the south slope of present day Stedham Common, including a peculiar earthwork known as the "snakepit" is attributed by local inhabitant to digging up of these bottle dumps in the 1950s and 1960s, though the appearance of this area is largely due to sand digging earlier this century.

Of circa 10 active Commoners, Mr Moseley was one of the last people to graze Stedham and Iping Commons (up to WW2). Although he had rights over the whole of the Commons, he only registered rights on the Minsted part of Stedham. Note that pre-war, the common area was about twice the size of the present LNR, extending over the present A272, the Sandpit, etc.

All year round grazing was practised. Animals were not folded in at night until traffic became a problem, sometimes tethering was used near the road. A local farmer remembers Bridgelands Plantation when it was fenced and grazed by cattle belonging to the Piggott family prior to 1931. Natural water supply / ponds were used but not piped water. The past rabbit population was similar to today, although numbers have fluctuated, e.g. there was a population crash after the 1921 drought due to disease. About 20 acres of bracken ("Varn") was cut each year for bedding etc. Commoners cut it twice a year, aiming to keep it short, or they cut it once a week if they wanted to kill it (May-Sept.). Cut turf was used to build chicken houses etc., as it provided excellent insulation. It was used both for walls and roof and both heather and grass turf were used equally. Up to 1 acre/yr of turf was cut (best estimate varied according to needs). Turf was always cut from off the ridges where the soil was deeper – the commoners always left organic soil not bare mineral soil after cutting to encourage rapid recolonisation. Fires were lit only in March to promote grazing. Areas to be burnt were decided communally on an ad-hoc basis according to the state of vegetation. Commoners tried to burn patches of c.2 acres at a time. Amounts varied but generally they burned heather as it got leggy. There were occasional summer fires but these were always put out. The ending of peat and turf digging, small scale stone and gravel quarrying, the cutting of bracken and the virtual cessation of fuel gathering have all also reduced soil disturbance and the resulting bare ground, an important component of the heathland habitat.

Three lots of pine were planted: 2 on Minsted (one overlap onto Stedham, thinned in 2007) planted c.1950s, and 1 on Stedham ridge planted c.1970s. Stedham Hall estate was split up in the late 1940s and the timber landing was used to season timber cut from the estate had been used until SWT bought the timber rights. The track across Stedham (now most visible crossing the gas main ride about halfway along) superseded by the Elsted road A272, was in regular use by non-motor

traffic until the late 1940s. Mr Moseley's family records go back to the 1500s. Until then the Commoners were landless but in the C16th, two brothers built their houses in a day so claiming title under the Squatters Act. Smallholdings managed alongside common grazing were thus established. From 1800s to 1920s the Church Tenants were able to buy their land outright.

During the last war, from about 1942 to 1944, Iping and Stedham Commons were used intensively by Canadian troops based at St Cuthman's School, Iping, for training exercises leading up to D-Day, particularly tank training. Two gutted tanks, used for target practice, remained on Iping Common until about 1950. Slit trenches left from these wartime activities have been observed in the past on Iping Common.

After the war, major legislative changes took place which affected common land in England. Part of the Government's post-war recovery programme included the afforestation of 5 million acres of land in 50 years under systematic management. A Royal Commission of Land was appointed in 1955 to look into possible use of common land for this purpose, as it had become steadily less valuable either for food production or public recreation. Many in the western Weald were neglected and some almost unused. (The County Council reported in 1955 that Iping Common probably had rights of bracken cutting, although little used and that Stedham Common had grazing rights but these were unused. Parts of Iping Common (with Fitzhall Heath) and Stedham Common, though amenity land, could be used for forestry).

3.3.3: Present land use

The reserve was originally designated as a SSSI in 1954 and revised in 1980.Most of the reserve was declared a Local Nature Reserve in 1978 and this was extended in 1986 after the purchase of Stedham Common. The reserve is managed for conservation purposes including education and informal recreation. It is regularly used for walking, dog walking, horse riding, cycling and nature watching (SWT consultation 2013).

3.3.4: Past management for nature conservation

A large fire in the summer of 1976 caused extensive damage to Iping Common, with most of the dry heath being burnt, destroying most of the lichen communities. Smaller (but still quite extensive) fires occurred on Iping in 1984, 1985, 1989 and 2004. Since these fires the vegetation has recovered well, but a large amount of birch and bracken invasion has occurred.

Unlike Iping Common, Stedham Common largely escaped post-war fires, including the major 1976 fire. This has the beneficial effect of retaining some over-mature heather areas with their rich moss and lichen flora. The great disadvantage of this was that pine spread unchecked from post-war plantation areas and scattered older trees and threatened to completely overwhelm the heathland. In 1985 when the Trust was able to buy the site, only a recently-burnt area and the wet heath were in a satisfactory tree-free state. Although the Trust bought the freehold, it was unable to buy the timber rights until 1987. Without the timber rights no tree clearance – even pulling of seedlings – could be carried out. One exception to this was the area used by Midhurst gun club until 2011. The Trust was able to regularise their use, granting them a lease, in return for an agreement to keep their area clear of trees. While primarily done in the interest of safety, this achieved valuable conservation work.

Following the purchase of the timber rights an extensive programme of timber removal was undertaken over several years. Large amounts of timber- much of it too small to have an economic value in the pulp glut that followed the 1987 storm - were felled and what could not be sold was burnt. The Trust also thinned the long neglected plantations to open them up and encourage the ground flora to develop under the canopy. Individual specimen trees were left and the plantation edges landscaped to create a maximum of edge habitat (used especially by Nightjars) and songposts and to keep the overall historical landscape "feel" of the area.

As clearance at Stedham progressed, it became increasingly obvious that the thick layer of bracken and pine litter that had accumulated under the trees was preventing the regeneration of the heather from the seedbank that lay underneath. An extensive programme of litter removal was undertaken which proved even more costly than the tree clearance had been, partly because the work was done by hand to avoid excessive churning of the ground and the unsightly uprooting of the thousands of tree stumps that remained after clearance. The work was rewarded by excellent heather regeneration in the first damp spring after clearance, followed by the return of much of the typical heathland fauna over the next few years.

As well as conducting major habitat restoration work at Stedham, the Trust has also improved public access. The public bridleway (PROW 909/1) along the southern boundary was reopened and the boggiest parts surfaced, at a cost of £5000. This bridleway had been entirely lost in a huge *Rhododendron* thicket that had grown up, probably since the Canadian Army used the area in WW2. The Trust also built some steps at the north-eastern corner of the reserve following a request from a local resident who found the long-standing informal entrance too steep. Of course the simple reopening of the common in landscape terms also restored the ability to wander freely over the Common as a whole and several new informal paths have evolved as a result.

A small heath fire occurred at Stedham in March 2006 in cpt 6 - approximately 1 acre of heather burnt.

Past Conservation Management on Iping has included tree and scrub clearance, bracken control, pond management, heather mowing, turf stripping / scraping. The Countryside Commission funded much of this work via the Countryside Stewardship Scheme with the remainder funded by the SDJC's Heathland Project. Management undertaken between 1977-1987 is summarised in the second version of the management plan, and in 1991/92 the site was entered into a Countryside Stewardship agreement - practical management has since been carried out annually. This has included heathland re-creation and restoration by removal of pine and birch, scrub regeneration control, bracken control, gorse management, rhododendron eradication and a penned grazing trail. Pond sites have been restored by scraping and re-profiling and a sandstone exposure used by mining bees was cleaned and re-profiled and cleared of scrub. Heather management has been a high priority in an attempt to maintain the heathland in an acceptable condition with various mechanical methods trailed by the Project since the early 1990's including scraping, cultivating, forage harvesting, hand cutting and removal (for use at the Weald and Downland Museum) and controlled burning. Forage harvested heather was initially piled in sacrificial areas and allowed to compost. However, since 2000 all forage harvested heather has been removed from site to aid in re-creation projects on other heaths in the Greensand area. This has allowed for the removal of nutrients from site to the benefit of the heathland ecosystem. Bracken control has been quite successful and few patches now remain on open heath. The cutting programme of early years has now been superseded by chemical control which has proved to give better and longer lasting results. Where necessary, areas of dense bracken litter were scraped or, if archaeology permitted, broken up and incorporated by cultivation. Scraping was limited by the desire not to leave too many bunds on site due to difficulties in finding someone willing to remove the material as bulk for

compost at a low additional cost to the Project. This has now been resolved with local golf courses taking the heather turves to re-create heath on their roughs and fairways. Where timber was extracted by forwarder in Compartment 3, wet heath regeneration occurred without further management due to the ground disturbance promoting good heather germination.

As the agency with responsibility for maintaining public rights of way in the AONB, SDJC carried out a number of rights of way improvements including resurfacing works on bridleways 3341 and 3342. SDJC contractors maintained rights of way to the standard width by an annual vegetation cut in summer where necessary. This has now been taken back into WSCC control with the establishment of the National Park. Otherwise paths are maintained as part of the winter forage harvesting or scrub and gorse control programmes. Drainage works were undertaken on the Gas Main track with the consent of Transco in 2003 in order to improve access from the car park. This had only limited success, partly because wood chippings had been incorporated into the surface some years previously which composted, creating a soft surface and partly because of a desire not to dry the surface completely to the detriment of the lousewort colony.

Several wet scrapes have been created: In 1999 / 2000 shallow pools were dug in wet heath at Stedham using 3 tonne digger. In 1998 scrapes were created around Black Pond by excavator to encourage wet heath and particularly marsh clubmoss; 2000 scrape created by cultivator on historic marsh clubmoss location on Fitzhall Heath; 1998 bare ground created on bog in Compartment 2 by Land Rover and further scrapes cut by hand by volunteers in 2003. Scrapes have been dug in Compartment 8 at Stedham in March 2007 to encourage Marsh clubmoss. This work was funded by Plantlife and Natural England.

Grazing

In 2000 following lengthy consultation, permission was granted to fence and graze Stedham Common.

SWT proposed the use a mix of cattle and ponies as species feed differently and so should increase habitat diversity. The original proposed stocking rate was approximately one animal per 3-4 hectares in spring and summer and perhaps half that in autumn and winter - very low densities by modern standards. The Trust gave a written public undertaking not to use sheep or goats to graze the common as this might create some restrictions on dog walking which the Trust was anxious to avoid.

Grazing began in June 2000 with 4 Shetland cattle and 2 ponies. After some minor problems, the ponies were removed and 2 more cattle were added. In November, the cattle numbers were reduced to 3 for the winter.
In 2002, 4 cattle were on site until May when another 3 were added. These remained on site until September when the numbers were reduced back to 4 through to April 2003 when barren cows were replaced with in-calf cows. That summer the numbers were fairly consistent at 4LU.

In 2004 the grazing plan changed due to a need for daily checking and 4 Hereford cattle were introduced from April – December.

2005/6 - 3 Hereford cows introduced to site September 1st 2005 - 1 cow had twin calves in December and was removed a few days later. The other two cows were removed in February 2006

2006/7 – 3 Hereford cows on site late September 06. 1 cow calved on site nov 10th and 1 late November. Cows with calves removed in Jan and replaced with other animals. All removed end Jan 2007.

2007/8 – 5 British White cattle (including 1 young calf) on site from October 2007 until end of March 2008. One heifer calved in January and another (quite young) was removed to calf at Lewes in February. GPS collar downloaded successfully.

In 2005, the Scientific Committee noted the significant impact of summer grazing on molinia tussocks and the grazing period was changed to between September and March. This means that the cattle will need rumevite blocks (and in exceptional circumstances small quantities of cake roll) as additional feed in the winter.
A lack of grazing in the following summer of 2006 noticeably improved the structure of the grassland component of Stedham Common and confirmed that winter grazing would be preferable – this may need to be changed occasionally should the grassland mixture become too dominant and grazing pressure should be assessed on an annual basis. Pulsed grazing, where areas are grazed and then rested for a while, has been adopted. Over-grazing in the winter must be avoided as this may damage the heather stands and lead to invasive and rank species.

It is very important to understand how the grazing animals utilise the heathland and to demonstrate this we used a GPS collar on the lead cow in 2007/08 (collar failed in 2006/07 season) and 2011/2. We need to understand daily movements around the site, diet selection, intake rates, habitat selection, ranging behaviour and use of the water trough and additional feeds including Rumevite blocks. Direct impacts of grazing may arise through feeding, trampling, poaching, dung and urine deposition, dispersal, erosion and through husbandry. These will vary according to stocking density, livestock type, grazing season, vegetation start point, site characteristics (such as location of shelter and distribution of habitats) and climate (Lake, Bullock, Hartley, 2001).Small scale trampling can help to break up the litter layer, encourage heather seed germination, create bare ground for invertebrates and may help to suppress bracken.

2009/10 – 6 British Whites until end of April

2011 – no grazing

2012/13 – 6 British White cattle from January 2012 until 13 July when 3 were moved to graze Iping until 23 October, when they were moved back onto Stedham until beginning of March 2013

2013/14 – 5 British White cattle on site from beginning of December until nearly the end of May 2014

The Trust has carried out some detailed comparisons of grazed and ungrazed areas on Iping and Stedham. In April 2012, the Parish Councils were consulted and a temporary electric fenced grazing area of 9ha was set up in the centre of Iping (cpt 3 and 5). The fence did not cross any public rights of way and gates were installed across the paths to ensure public access was maintained. An invertebrate survey was commissioned and carried out by Andy Phillips and Graeme Lyons from May to October. This was based on 3 selected survey areas with similar habitats and aspects, one within Stedham (grazed for 12 years), one on Iping within the trial grazed area and one on Iping outside the trial grazing area. Grazing was carried out for 3 months from July by 3 British White Cattle. The report on the survey is held by Sussex BRC. By comparing the 3 sites the survey demonstrated the benefits of grazing in providing a diverse habitat for a greater variety of species of invertebrates. The trial grazing was planned again for 2013, and was started in

May but unfortunately due to a gate being propped open several times and the cattle escaping the animals had to be taken off site.

A Heritage Lottery bid named Heathland Re-united, a partnership being led by SDNP, is currently passed stage 1 and in the development phase. It is hoped that this bid will be successful and significant resources will be available to increase the management on the reserve and accompanied by grazing, the whole of site will reach favourable condition.

3.3.5: Past status of the site

All of the reserve is Common land and was traditionally used by commoners for rough grazing and the cutting of wood, turf, heather and bracken. Small scale sand extraction also took place and small pits are evident such as in Compartment 3 and Bridgelands Plantation. One pit appears to have been used in the past as an unofficial farm waste dump and is now partly infilled. A large area of former common land to the south of Stedham Common was lost to the Minsted sand pit after the Second World War.

During the Second World War the Commons were used as a training ground for the Canadian Army. Remains of slit trenches and tank tracks can be found in places; the Roman Road in Compartment 5 was particularly affected by the digging of slit trenches. Occasionally fragments of 2" mortar shells and armour piercing shells are found although it is understood that all unexploded ordnance was thoroughly dealt with after the war. The training activities created a great deal of bare ground which would have been to the benefit of certain species of invertebrates and early succession plants. It is during the war that the Antipodean moss, *Campylopus introflexus* was inadvertently introduced to the West Sussex heaths. This has become an aggressive coloniser of bare ground particularly where a humus layer remains in situ.

Following the Commons Registration Act of 1965, the West family registered the rights to all timber on Stedham Common. Some areas of Scots pine were planted on the heath and the area opposite the Iping Common car park was used for a time as a timber storage area for the family firm.

3.3.6: Present legal status of the site

The Iping Common SSSI covers c.125ha. The citation can be found in Appendix 3. Staff should also be aware of Potentially Damaging Operations (PDO's). Consultation with Natural England must be made in writing before any of the operations are carried out. (The HLS agreement contains Management prescriptions which were formally consented by NE when the agreement was signed, these are in operation until 2017, In addition, this Management Plan will act as the consultative document with consent being legally provided for all the operations specified in the 10 year work programme).

The site was designated as a Local Nature Reserve in 1978 in agreement between the landowners and WSCC, through Section 21 of the National Parks and Access to the Countryside Act 1949.

The site lies within the South Downs National Park.

3.4: Current public use & interest

3.4.1: Public interest / relationship with local communities

Iping and Stedham Commons represent the largest area of open space within 3 miles of Midhurst. There is a surfaced car park which can accommodate 25 vehicles, wide paths and rides and way-marked rights of way. The site provides a semi natural environment with broad views over sweeping expanses of heather and grassland together with attractive groups of trees. It is very popular with local people especially for dog walking. The numerous paths, tracks and bridleways and the traditional use of the heathland as Common Land help to make it a relatively accessible wilderness. The Reserve is used by a wide range of schools and colleges, including Stedham Primary School. Midhurst Grammar and Chichester College. Studies and monitoring work have been undertaken by these in the past, most notably by Kings College, London (Rogate Field Centre - now closed). The site is within easy walking distance of Trotton, Iping, Chithurst and Stedham.

In the mid 1990's English Nature promoted a national Heath Week in order to raise public awareness of the importance of lowland heathland. All of the county based heathland projects participated, organising a programme of events and activities in conjunction with landowners and NGOs which was widely featured in the local press. In 2001 the Heathland Project replaced Heath Week events with a summer-long programme of events in order to reduce pressure on staff time. With the commencement of the Sussex Wealden Greensand Heaths Project in 2002 the events programme was expanded. Events have included: reptile safaris, history walks, nightjar walks, nature detectives, Christmas wreath making, heathland painting, birch days and others. SWT have now taken on promoting the site through locally advertised walks and talks and a monthly Parish Magazine article. A weekend event named "Heathland Through The Ages" designed to promote understanding of the heaths heritage and natural history through living history demonstrations was held in September 2012. Although quite successful, the logistics of holding such an event on an isolated site with SSSI status was felt to be too complicated and the event was re-named and successfully moved to Petersfield Heath. Iping and Stedham are still promoted at this event.

Representatives of the local parish groups sit on the Management Committee and the SWT volunteer warden keeps the Stedham and Iping PC updated with activities and events.

The SWT carried out a public consultation on the management of Iping, Trotton and Stedham Commons following guidelines in "Common Purpose" in July and August 2013. A report was produced by Footprint Ecology in September making recommendations for management. This included a recommendation to continue consultation on possible re-introduction of grazing on Iping and Trotton Commons following a 73% support for cattle grazing with perimeter fencing. The second phase was carried out in November and December 2013 but proved controversial and the consultation was extended to February 2014. Refer to reports on consultation; Underhill Day J. & White J. (2013 and 14) Iping & Stedham Commons consultation. There was still a majority of support for grazing and the Trust has tried to allay the concerns of objectors through site meetings, by amending the plans to provide safer locations for bridle gates and a safety coral along the A272, add two new gates and amend the fence line slightly to fit into the landscape better. The Trust also investigated the possibility of "invisible fencing". Unfortunately it still has too many drawbacks to be used for a site as large as Iping close to a busy main road. The Trust has therefore decided to apply to the Secretary of State for permission to permanently fence Iping and Trotton with 33 access gates for maintenance and to maintain all public access points. The proposed fencing is shown as map 9. Due to some strong objections from a minority of local residents the application is expected to go to a Public Inquiry. A decision is therefore not likely until late 2015.

3.4.2: Access & tourism

Iping Common (c.67ha) and Fitzhall Heath (c.12ha) lie adjacent to Stedham Common just to the west. The Quags (c.10ha), The Severals (c.60ha), and Midhurst Common (c.30ha) lie to the east. Woolbeeding Common (190ha) is about three miles to the north and east in Woolbeeding Parish. This gives a total of around 380ha (950 acres) of open access land of similar landscape quality in the immediate area. Ambersham and Heyshott Commons (134ha, 330 acres) also have open access. They are not so convenient for inhabitants of Stedham but are reasonably close to Midhurst.

The LNR has a good Rights of Way network, with 6 bridleways and 2 public footpaths on Iping, and 3 bridleways on Stedham, plus 2 permissive paths on Iping (see map 5). A self-guided trail was opened in the spring of 1995 by SDJC. The leaflet for this trail is now out of print although all of the waymarker posts remain on site and can be used by visitors for a circular walk. A SWT reserve leaflet is available on line and through a dispenser in the car park.

In 2004, the Serpent Trail was opened by the Heathland Project. This provides a 64 mile walk along the Greensand outcrops from Haslemere to Petersfield passing through many of the best heathlands in the AONB including Iping and Stedham Commons. On Stedham Common the Trail makes use of existing public rights of way although on Iping Common some well established informal paths are used. The Trail is waymarked and SDJC have Trail guides available.

An app for mobile phones showing walking routes and points of interest is being developed for the reserve.

The open heathland, with wooded margins and clumps of gorse, provides an attractive landscape much appreciated by local dog walkers, horse riders and visitors. Flowering heather, gorse, birds and insects are an appealing aspect of the heath. The experience of passing across a large expanse of “natural habitats” with open, uninterrupted views across the heath is very precious and the ridge gives finer views onto and across the surrounding countryside, with the Weald to the north and the Downs to the south.

There is good pedestrian access around the Commons by Public Rights of Way (PROW) and the gas main track is an informal route. In addition there is a narrow permissive path on Iping from the top of Fitzhall Heath to the tumuli, Cpt 3. Changes in recreation patterns, including motorcycling and horse-riding may bring about increased pressures on the area. Occasionally there are organised events or visits by organised groups and clubs, e.g. the Sussex Ornithological Society.

A new height barrier was installed at the car park entrance in 1996. The track at the Trotton end provides access onto the site although it has a “Private – no Vehicles” sign. A formal agreement should be reached with the landowner for access here for SWT vehicles and contractors. A metal barrier at the eastern end of the gas ride gives staff access onto Iping. Stedham Common was fenced in order to permit grazing in 2000. Vehicular access onto Stedham is via 2 gates off the Elsted Road, or through 2 gates off the Minsted Road. Access for pedestrians and riders is via several bridle gates and kissing gates.

The term Common is often misunderstood by members of the public who mistakenly believe that Common Land “belongs to everyone” or has no owner and that there is a right of open access to Common Land. In fact Common land is owned in the same way as other land and historically the public would only have had a right of access on PROW and permitted informal routes. The Sussex Wildlife Trust has an open Access policy for its reserves, however, so on Stedham Common visitors on foot were at liberty to wander where they will. However under the 2000 CROW Act there is now

a right of public access on foot to all parts of the reserve. This will require additional effort in interpretation and community liaison to ensure that people (and especially their dogs) wandering across the site do not unwittingly risk disturbing particularly sensitive wildlife such as ground nesting birds. Some efforts may therefore be required to discourage the use of some paths. In 2005 the Project planted a patch of gorse to discourage use of a desire line to a scheduled barrow in Compartment 3 which was suffering from erosion from foot traffic. Further such measures may prove necessary should public use increase. Discouragement of use of routes, possibly with barriers, may be required.

A Heritage Lottery bid named Heathland Re-united, a partnership being led by SDNP, is currently passed stage 1 and in the development phase. It is hoped that co-ordinated projects targeted at dog walkers and the SDNP "Take the Lead" Campaign will help dog walkers to understand the importance of picking up dog mess and keeping dogs to paths.

The public, (both visiting and neighbouring), should have easily accessible information about what management is carried out and why. Problems can arise when there is no consultation and there is no explanation about why certain works are being carried out particularly for local people.

3.4.3: Current interpretation provisions

There is 1 interpretation panel and a notice board with a leaflet dispenser sited the western end of the car park although the panel has old logos and should be replaced. SWT plans to improve signage around the reserve including a new information point in the car park. See map 10 for location and stile of information.

3.4.4: Current educational use

The use of the LNR for education is probably under-promoted. Schools and colleges could play a useful role in future recording and monitoring. The heath is used as a demonstration site for groups and training courses through the Trusts training courses brochure, conservation staff and volunteers on species eg Nightjars and habitat management.

In the past, the Heathland Project has worked with groups from Midhurst Grammar School and Chichester High School who visited the site in order to learn about heathland ecosystems and management. Many of these visits still continue unrecorded. A group from the Grammar school has assisted the Project with an ongoing programme of vegetation monitoring and fixed point photography. The Trust has also made some useful links with Stedham School which could lead to further educational use of the LNR.

3.4.5: Current research use & facilities

The site is used occasionally by degree and A level students living or studying in West Sussex as a basis for research projects (including Midhurst Grammar and Chichester University). Further links to Sussex University should be explored.

3.5: Landscape

Iping Common falls within the Heathland mosaic category of landscape character as defined in the Sussex Downs Landscape Assessment (1995).

Characteristic features include:

- Irregular patchy landscape mosaic of oak – birch woodland, conifer plantations, open heath and Common land.
- Dense regenerating woodland thickets surround most open areas and are actively encroaching onto adjacent land.
- There are few roads; these are generally straight, often dead-end lanes and tracks lead onto heathland from small settlements on its periphery.
- Ancient earthworks and banks.

Lowland heath is one element within the heathland mosaic landscape which has been defined using visual rather than ecological criteria and so includes Iping and Stedham, which has visual significance in the wider landscape.

Extensive tracts of heather heathland only occur on such sites as Iping and Stedham Common, which is actively managed to conserve an open heathland habitat. Open patches of bracken fringed by scattered birch trees and dense regenerating woodland are typical. The conifer plantations and straight roads give some hard edges but the visual structure of other areas is governed by natural rather than man-made forces.

It should be noted however, that the woodland surrounding Iping and Stedham does provide an important role in acting as a screen that filters out much of the traffic noise, adding significantly to the remarkable tranquillity of the whole site.

The heathland mosaic landscape is rich in archaeological features, the most significant being the Bronze Age barrows which occur on the higher land.

The expansion of the heathland block, through forest clearance and restoration of farmland and mineral workings to heathland should be pursued in the mid – long term.

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4: FEATURES OF INTEREST

The following features are recognised as important for the site and as such form the key objectives for the site

4.1: Dry heathland
4.2: Wet / humid heathland
4.3: Open water
4.4: Woodland and scrub
4.5: Birds
4.6: Lower plants
4.7: Invertebrates
4.8: Grazing
4.9: Archaeology
4.10: Access/Education/Events
4.11: Legal obligations
4.12: Funding

5: PROJECT REGISTER

Feature 1 - Dry lowland heathland

Objective 1- Maintain existing areas of dry heathland and improve extent, structure and composition where appropriate

Factor List

1 – Scrub, rhododendron and bracken encroachment

RF13/1-Collect data, trees/shrubs, monitor
Monitor through aerial photography, fixed point photography and rapid grazing assessment.
Reserves Manager / SWT ecologist

2 - Disturbance including dog walking

RA13/1-Collect data, birds, monitor
monitor effect of dog walking on bird activity and territories. Continue to undertake bird survey of key species and digitise all territory and nesting maps.
SOS volunteer/Ecologist

RH33/1-Collect data, public use, recreation
Monitor use of reserve and use interpretation to advise public.
Reserve Manager

3 - Erosion of heathland soils

RH33/2-Collect data, public use, recreation
Monitor recreational use of the reserve and address any problem areas.
Reserve Manager

Attribute List

1 - Favourable habitat composition and structure

RF03/1-Collect data, vegetation, monitor
The heathland is to be monitored using NE's condition assessment as a guide to composition and structure. Aim to achieve favourable condition for whole reserve by 2020 at the latest (in line with NE target)
Reserves manager / Ecologist

RF03/7-Collect data, vegetation, monitor
Continue monitoring using fixed point photography annually.
Ecologist/Volunteer (Mike Edwards?)

RF03/8-Collect data, vegetation, monitor
Rapid grazing assessment annually and NVC every 10 years (due 2018).
Ecologist.

RA63/2-Collect data, Orthoptera, monitor
Monitor field cricket population

Ecologist.

RA73/1-Collect data, other/general insects, monitor
Monitor scrapes for heath tiger beetle and other invertebrates.
Ecologist/Volunteers

2 - Diversity of heathland associated species

RA13/2-Collect data, birds, monitor
Monitor key heathland bird species activity annually as part of SOS Heathland bird survey
SOS volunteer

RA22/1 – Collect data, herptiles, monitor
Volunteer from Sussex Amphibian and Reptile group will continue to monitor reptiles using metal sheets

RA43/1-Collect data, Lepidoptera, monitor
Monitor silver studded blue populations annually. through transect and scrape monitoring
Ecologist/volunteers.

RF06/1Collect Data, vegetation, list species – Rare species List
Carry out a rare plant species survey for the reserve
Ecologist/volunteer

Management Prescriptions

1 - Maintain and improve composition and structure of dry heathland

MH30/1-Manage habitat, lowland/upland heath, by controlled grazing
Grazing. Monitor effects of grazing at Stedham using rapid grazing assessment and assess and agree numbers annually. Pulse grazing to vary effect and ensure that in some years there is enough poaching to create bare ground for Marsh Club-moss. Seek permission through Common Act for permission to fence and graze Iping Common as per consultation and plan. Seek to secure more readily available local livestock (will become more important if grazing goes ahead at Iping)
Reserve Manager/Ecologist.

MH31/1-Manage habitat, lowland/upland heath, by scrub / tree control
Control birch and pine scrub following rotational scrub plans attached (map 11) through primarily winter cutting and stump treatment with volunteers and/or contractors. Investigate possibility of using heavy machinery to cut and remove as well as possible markets for arisings. Any summer spraying of young birch must be agreed with bird surveyors and must only use Roundup Probiactive – if possible experiment with summer cutting only, and spray by hand rather than weed wiping. All summer management activities must be fully supervised. Scrub is to be encouraged in woodland edges to create a gradual ecotone – when volunteers are clearing scrub it is important that a small percentage of scrub (5-10%) is left

Control rhododendron by stump treatment in winter and foliar spray of re-growth in May (check on locations of bird territories first to avoid any disturbance). If significant resources can be secured, clear large areas on southern boundaries with digger.

MH31/2-Manage habitat, lowland/upland heath, by scrub/tree control - gorse coppicing
Coppice gorse on a 10 year cycle to maintain optimum conditions for Dartford as per gorse plan attached (map 12). Aim to maintain a mixture of large stands for winter protection, small clumps and individual plants. Stump treat gorse on Scheduled Monuments.

MH32/1-Manage habitat, lowland/upland heath, by mowing - mowing/ forage harvesting
Follow plan of forage harvesting along fire breaks, silver-studded blue areas, scrape areas (not over new scrapes) and other areas to break up large stands of mature heather and create a diverse age structure(see map 13) (Iping – 0.2ha per year and Stedham – 0.1 ha per year). Continue to seek receptor sites for arisings for heathland restoration projects.

MH33/1-Manage habitat, lowland/upland heath, by fire prevention /control - fire prevention.
Agree fire plan with Sussex Fire and Rescue Service including emergency procedures relating to livestock on site (see map 6). Finish clearance of northern fire break on Iping. Mow half of each fire break ie 6m annually (unless Molinia area in which case mow whole break) and maintain fire beaters. Rotate fire breaks after 5 years to create mosaic (unless grazing introduced by then).

MH37/1-Manage habitat, lowland/upland heath, by controlled burning - controlled burning
Burn 1ha per year on Iping and 0.5 ha on Stedham in mature heather stands as per burn plan (map 14) and following heather and grass burning code ie from 1 November to 31 March. Avoid burning in a Molinia dominated area as a burn may result in even more Molinia.

MH39/1-Manage habitat, lowland/upland heath, by other activities - rabbit management.
Monitor current effect and any necessary control methods.

MH39/2-Manage habitat, lowland/upland heath, by other activities - scraping to create bare ground
Maintain 1-10% undisturbed bare ground under guidance from the Scientific Committee and as per plan (map 15). These are particularly important for the Heath Tiger Beetle and should be focussed on linking up existing populations. Scrapes to be between 100 and 500m2 and without straight edges where possible. Other scrapes are to encourage pioneer heather, for silver-studded blues butterflies and remove Deschampsia thatch for Field Crickets. All scrapes should be left unseeded to ensure maximum potential of bare ground. Scraped heather turf to be either sold or collected by receptor sites eg golf courses. If turf not suitable for receptor sites or no suitable receptor site can be found then turves to be turned over and left adjacent to de-turved area. Some crapes with south-facing vertical edge

MH39/4-Manage habitat, lowland/upland heath, by other activities - Control bracken
Aim to maintain some bracken under existing woodland with a small percentage in the open heath circa 1-5%. Bracken can be sprayed with Asulox in July/August by contractors under an emergency licence. Follow up work in subsequent years is essential with spot spraying and digging of rhizomes. Priority areas are those providing links between existing heathland areas. If Asulox is eventually banned, then we may have to look at other methods of control such as rolling and bruising although this will be difficult because of ground nesting birds and topography.

Feature 2 - Wet / humid heathland

Objective 2 - Maintain existing areas of wet / humid heathland and improve extent, structure and composition where appropriate

Factor List

1 - Drying out of wet areas

RP13/1-Collect data, hydrological, monitor - monitor and record hydrology.

AR30/1-Prepare correspondence, general
Liaison with SDNP, Dudmans and DK Symes over future of Minsted quarry
Reserve Manager

2 - Scrub encroachment

RF13/2-Collect data, trees/shrubs, monitor
Monitor through aerial photography, fixed point photography and rapid grazing assessment.
Reserves Manager / SWT ecologist

Attribute List

1 - Favourable habitat composition and structure

RF03/4-Collect data, vegetation, monitor
The heathland is to be monitored using NE's condition assessment as a guide to composition and structure. Aim to achieve favourable condition for whole reserve by 2020 at the latest (in line with NE target)
Reserves manager / Ecologist.

RF03/5-Collect data, vegetation, monitor
Continue monitoring using fixed point photography annually.
Ecologist/Volunteer (Mike Edwards?)

RF03/6-Collect data, vegetation, monitor
Rapid grazing assessment annually and NVC every 10 years (due 2018).
Ecologist.

2 - Diversity of wet heathland associated species

RF03/9-Collect data, vegetation, monitor - monitor marsh clubmoss
Survey commons for Marsh clubmoss (old sites and re-introductions) and monitor changes in population. Ensure exact locations of Marsh clubmoss re-introductions are recorded.
Reserve Manager/Ecologist

RA83/1-Collect data, other/general invertebrates, monitor - monitor other invertebrates
Monitor important invertebrate assemblage of wet heath every 3 years.
Ecologist

Management Prescriptions

1 - Maintain and improve composition and structure of wet / humid heathland

MH30/2-Manage habitat, lowland/upland heath, by controlled grazing

Maintain pulse grazing at Stedham to vary effect and ensure that in some years there is enough poaching to create bare ground for Marsh Club-moss. Apply for permission for fencing and grazing on Iping as per plan (map 9)

MH31/3-Manage habitat, lowland/upland heath, by scrub/tree control

Control scrub as per plan (map 11) and above in MH/31/1

MH39/3-Manage habitat, lowland/upland heath, by other activities - create scrapes

Scrapes have not been found to be beneficial for Marsh club-moss, but are suitable for other bare peat species such as sundews. Create new wet scrapes in wet flushes and maintain a variety of structure in the wet areas. Maintain some structure for species such as Bog Bush cricket.

MH40/1-Manage habitat, by water level control

Maintain dam at Stedham to retain water in wet heath area. Investigate pumping water from quarry on to Reserve with particular reference to effect on vegetation. Liaise with D.K.Symes and obtain hydrogeological report for quarry. Liaise with SDNPA with regard to quarry workings and restoration plan. Sort out drainage of bridleway so that adjacent habitat remains wet.
Reserve Manager

Feature 3 - Open water

Several ponds occur on the reserve and are important particularly for Odonata.

Objective 3 - Maintain existing areas of open water and improve extent and condition where appropriate

Factor List

1 - Drying out of open water areas

RP13/2-Collect data, hydrological, monitor - monitor and record hydrology.

2 - Introduction / invasion of alien vascular species

RF03/10-Collect data, vegetation, monitor - monitor for alien / invasive species
Survey and monitor aquatic / emergent vegetation in ponds. Remove ornamental water lily on rotation and monitor for invasive species.
Reserve Manager

3 - Scrub encroachment

RF13/3-Collect data, trees/shrubs, monitor
Monitor scrub every 3-5 years.
Reserve Manager

4 - Failure of sluices etc

AI10/1-Implement inspection, site equipment - inspect sluices, banks and other structures.
Inspect sluices and outflows and outflows regularly, particularly after heavy rain.
Reserve Manager.

Attribute List

1 - Favourable condition of open water habitat

RP13/3-Collect data, hydrological, monitor
Monitor open water regularly and through NVC
Reserve Manager/Ecologist

RP13/4-Collect data, hydrological, monitor - monitor for pollution
Regular checks by Reserve Manager

2 - Diversity of open water associated species

RA23/1-Collect data, herptiles, monitor - monitor amphibians

RA53/1-Collect data, Odonata, monitor
Continue annual surveys (using National system) of odonata.

Management Prescriptions

1 - Maintain favourable condition of open water habitat

MH60/1-Manage habitat, open water, by water level control
Manage water levels where possible. Maintain sluices and outflows. Secure resources to raise western-most bridleway on Iping (cpt4) and raise pipe to improve water retention on reserve.
Reserve Manager

MH61/1-Manage habitat, open water, by excavation - create / extend open water where appropriate.
Maintain ponds through cyclical clearance and maintenance of outflows and create areas of bare peat margins. Create new ponds with damp shallow margins in appropriate areas. Investigate opportunities for further areas of open water.
Reserve Manager

MH64/1-Manage habitat, open water, by clearing/dredging/ re-profiling
Remove alien species
Reserve Manager

MH65/1-Manage habitat, open water, by clearing surrounding vegetation
Manage surrounding vegetation but retain some willow and alder.
Reserve Manager

MH69/1-Manage habitat, open water, by other activities
Monitor use of areas by cattle – GPS and visual.

Feature 4 – Woodland

Objective 4 - Maintain composition and structural diversity of woodland habitat within agreed parameters

Factor List

1 - Alien / invasive species

RF13/4-Collect data, trees/shrubs, monitor - monitor birch, pine and rhododendron.
Monitor using fixed point photography, aerial photos and NVC
Ecologist/volunteer

Attribute List

1 - Favourable condition of various woodland types

RF13/5-Collect data, trees/shrubs, monitor
Monitor woodlands using NE condition assessment criteria

2 - Diversity of woodland associated species

RF66/1-Collect data, fungi, list species
Survey fungi 3- 5 years.
Fungi groups

Management Prescriptions

1 - Maintain diverse woodland mosaic to agreed parameters across reserve

MH09/1-Manage habitat, woodland/scrub, by other activities
The priority now the major felling works are complete is maintaining existing open heath. Maintain linear woodland along boundaries as screen against traffic noise. Improve the structure at the edge of these belts by coppicing. Shelterbelts of trees and low scrub are important for some invertebrates and bird species. Glades should be created in the woodland and the edges scalloped to increase the edge effect and reduce unnatural straight lines. Ring bark 1% of conifers annually (where safe to do so). Leave any dead wood on the ground and as much standing dead wood as is possible. When digger is on site push over occasional tree to provide south-facing root plate for invertebrates.
Reserve Manager

MH09/2-Manage habitat, woodland/scrub, by other activities
Clear scrub/woodland in two places between Iping and Stedham to create links in the heathland habitat between the two sites.
Reserve Manager

AI30/1-Implement inspection, site safety
Undertake tree safety inspection on road-side and car park trees at Stedham and Iping every 3 years.

Feature 5 - Lower plants

Lower plants are a vulnerable group to burning (accidental and controlled) and water level changes so this is an important area to control.

Maintain diversity of lower plants on the reserve

Factor List

1 – Drying out of wet heath areas

RP13/5-Collect data, hydrological, monitor
Monitor hydrology and any effect on lower plants.
Ecologist

2 – Uncontrolled fire damage
RF00/1-Collect data, vegetation
Monitor effect on lower plants of any uncontrolled fire.
Ecologist

Attribute List

1 – Diversity and extent of lower plant community

RF02/1-Collect data, vegetation, survey
Create new NVC for reserve 2018. and rare plant survey 2015
Ecologist./volunteer

RF02/2-Collect data, vegetation, survey – walkover survey.
Map and survey areas of lichen heath, sphagnum and moss rich zones as part of NVC and rare plant survey
Ecologist

RF03/11-Collect data, vegetation, monitor
Monitor using fixed point quadrats.
Ecologist/volunteer

Management Prescriptions

1 – Maintain habitat mosaic to include wet zones, bare ground, dead wood etc. Maintain diversity of species through diverse habitat matrix.

Feature 6 – Invertebrates

Lowland heathlands are of outstanding importance for their invertebrates, especially insects and spiders, of which many rare species occur. Edwards and Hodge (1994) recorded 113 heathland indicator species from the West Sussex heaths, many of which are nationally rare. Invertebrates have very specific habitat requirements and to maximise diversity, it is important that the reserve has a full range of appropriate vegetation types and structural diversity

Maintain diversity and populations of invertebrate species on the reserve

Factor List

1 – Loss of specialist heathland invertebrates
RA83/3-Collect data, other/general invertebrates, monitor – monitor specialist indicator species.

Attribute List

1 - Diversity and numbers of heathland invertebrate species
RA43/2-Collect data, Lepidoptera, monitor - Carry out transect targeted at monitoring silver-studded blue and adjust management programme as necessary to include specific scrub clearance and mowing / scraping.

RA43/3-Collect data, Lepidoptera, monitor - monitor moths annually in agreed areas.

RA53/2-Collect data, Odonata, monitor - monitor odonata - especially small red-eyed damselfly.

RA63/3-Collect data, Orthoptera, monitor - monitor field cricket re-introductions and continue as necessary. Monitor heath tiger beetle populations through scrape monitoring

RA83/4-Collect data, other/general invertebrates, monitor - monitor invertebrates - full survey every 5-10 years Interpret invertebrate surveys.

Management Prescriptions

1 - Maintain diverse habitat mosaic and structure
MH30/4-Manage habitat, lowland/upland heath, by controlled grazing - grazing at Stedham - interpret grazing impact assessment. See map 9

MH32/2-Manage habitat, lowland/upland heath, by mowing - mowing and clearing of fire breaks. Monitor invertebrate species following controlled burns Create patches of bare ground in dry / wet heathland on rotation in appropriate areas. Continue forage-harvesting margins of fire-rides, cut sections biannually. Create patches of bare ground by turf stripping to increase size of fire ride. See map 15

Carry out cutting, in conjunction with limited controlled burning, in late autumn/winter (in c.50m sq patches) adjacent to colonies on 10-15 year rotation. Select patches with plenty of bell heather under advice from Robin Crane.

MS80/1-Manage species – Add to populations of Field cricket and Heath tiger beetle as necessary in agreement with Natural England.

Feature 7 – Birds

The reserve provides breeding habitat for key globally threatened and Amber listed species including Nightjar, Woodlark, Dartford Warbler, Tree Pipit and Stonechat. Most of these species are vulnerable to disturbance and their protection must be addressed.

Maintain diversity and populations of bird species on the reserve

Factor List

1 - Disturbance including dogs, recreational activities,

RH02/1-Collect data, human impact, monitor
Monitor recreational use of the reserve especially dog usage.

Attribute List

1 - Diversity of bird species including several rare heathland specialists

RA13/6-Collect data, birds, monitor
Map heathland bird territories and digitise. Repeat CBC in 10 years.

Management Prescriptions

1 - Maintain habitat mosaic to include open heath, scattered trees, scrub, woodland, open water, bare ground etc.

MH31/7-Manage habitat, lowland/upland heath, by scrub/tree control
Retain 10% birch within open heath in scattered groups and individual trees of different ages and continue to assess bird requirements when cutting.

MH31/8-Manage habitat, lowland/upland heath, by scrub / tree control
Gorse coppicing to maintain good structure for Dartford Warbler etc. (see map 12)

MH32/3-Manage habitat, lowland/upland heath, by mowing
Mowing / forage harvesting as agreed by Scientific Committee and per plan (map 13).

MH39/5-Manage habitat, lowland/upland heath, by other activities - maintain / improve nightjar habitat
Map territories. Create patches of bare ground or very short vegetation 1-3m sq in old heather or under bracken, some in open, some beside 1-3m tall bushy trees. Create glades (c.1 ha) in woodland on heath. Scallop edges of woodland, maintain scattered trees 1-20m tall (max 15/ha) and monitor changes in habitat and population.

MH39/6-Manage habitat, lowland/upland heath, by other activities - maintain / improve Dartford warbler habitat.
coppice gorse on 10 year rotation and reduce importance of ride-side and road-side gorse due to fire risk. Retain patches of mature heather in areas where gorse is absent. Retain scattering of small bushy pines, 1-3m tall, < 25/ha within territories, and some birch at low density. Remove

scrub once connection between the lower branches and the heather is lost to conserve open heath. Monitor changes in habitat and population.

MH39/7-Manage habitat, lowland/upland heath, by other activities - maintain / improve woodlark habitat.
Map territories, create bare ground and short sward (<50mm, ideally <20mm tall) >5ha.
Retain scattered trees 1-5m tall for song posts and monitor changes in habitat and population.

Feature 8 – Grazing

Grazing was a fundamental part of traditional lowland heathland use until its decline in the 20th century and is acknowledged by many heathland managers as the most appropriate heathland management tool and is the only large scale technique suitable for wet heath. It gives the very small scale mosaic of sward heights and vegetation structure that is required by many reptile and invertebrate species and it provides small areas of bare ground which are important for a variety of rare plants and insects. It provides a variety of types and sizes of bare ground from individual hoof marks to stock routes, all important for burrowing insects (notably the solitary bees and wasps for which heathland is especially important) as well as a supply of suitable dung for the dung beetles (Edwards and Hodge 1993, Tubbs 1997) - this is another interesting and unusual insect group that uses heathlands and they also need bare ground in which to bury their eggs. Grazing reduces Purple Moor grass and favours heathers. Grazing also controls birch and scrub re-growth (probably most effective at seedling size) if appropriate stock are used and through trampling it helps to break up bracken stands.

SWT believes that grazing will provide much greater ecological and landscape benefits than other methods of management. As the main traditional activity on the common, grazing will also preserve the historical and cultural value of a site which would be lost if it reverts to scrub woodland.

Maintain appropriate grazing management at Stedham Common and obtain permission to graze at Iping

Factor List

1 - Possible conflict between grazing and recreational use of the reserve
RH30/1-Collect data, public use, research
A survey has been carried out by Footprint Ecology as part of the development phase for Heathlands Reunited. Monitor changes in number and behaviour of visitors and comments after grazing introduced.
Reserve Manager

Attribute List

1 - Grazed management of heathland at Stedham

RF03/12-Collect data, vegetation, monitor
Monitor effect of cattle using fixed point quadrats and rapid grazing assessment.
Ecologist

RA02/3-Collect data, mammals, survey
Continue use GPS collar to understand cattle movements and monitor visually. Monitor dung for related species.

Management Prescriptions

1 - Manage grazing to achieve diverse structure and composition

MI10/2-Inform visitors, general
Provide interpretation of grazing project.

MH30/7-Manage habitat, lowland/upland heath, by controlled grazing
Manage by pulsed cattle grazing - numbers and period to be agreed annually following assessment by reserve Manager and Ecologist. Use mineral blocks as required (this will be limited). No Ivermectins to be used.

ME01/1-Boundary structures - maintain all fences, gates and infrastructure.

AR01/2-Prepare report, project review, new projects
Apply for permission to graze at Iping. If forthcoming, install infrastructure required.

Feature 9 – Archaeology

The Sussex Greensand heathland is especially valuable because it represents continuity of land use and land character which is virtually unbroken since Neolithic times (if not earlier). The absence of regular cultivation and tilling over the ages means that evidence for prehistoric flint tool manufacture and other activities can remain *in situ* and undisturbed, however close to the soil surface, over a remarkably long period. In addition, the fact that such heathland often contains wet or semi-wet areas makes it an ideal 'bank' for pollen sequences that provide important palate-environmental and climate data. In this respect, any ground disturbance needs to be carefully considered. While management measures such as scrapes or removal of silt from ponds or boggy areas are beneficial to biodiversity, there is a risk that the finite, non-renewable historic environment resources such as artefact scatters, below ground archaeological features and palaeo-environmental deposits could be damaged or destroyed.

There are no proposals within this plan for major pond works but shallow scrapes will be undertaken annually and therefore offer good opportunities for monitoring for flint scatters etc. It is therefore important to get archaeological advice before any scrapes are undertaken and the Chichester and District (amateur) Archaeology Society map be interested in getting involved. A programme of non-intrusive archaeological survey to establish whether there are any other hitherto unknown Mesolithic sites on the Common should be established

Bronze Age barrows must be avoided when planning scrapes or other management. Although it is assumed that they were built in the 'turf stack' method as at West Heath not all barrows on sandy heathland are constructed without a surrounding ditch and as the Iping barrows have never been examined under modern scientific methods this possibility needs to be kept in mind.
Maintain an attractive heathland landscape and improve condition of all archaeological features

Factor List

1 - Damage to archaeological features

RF13/8-Collect data, trees/shrubs, monitor - monitor impact of scrub.
Survey current condition of archaeological features.
Reserve Manager

RA03/3-Collect data, mammals, monitor - monitor impact of rabbits.
Survey current condition of archaeological features.

RH35/2-Collect data, public use, trespass/theft/damage
Assess public use of archaeological features. Adjust / change paths where having a detrimental effect on archaeology.
Reserve Manager

Attribute List

1 - Diversity of archaeology including Scheduled Ancient Monuments

ML40/1-Liaise, local/national authorities - liaise with WSCC archaeology team and English heritage.

Consult archaeologists and draw up plan for management. The Reserve should also be assessed for optimum locations for the possible retrieval of pollen cores and any other potential archaeology such as flint workings. Invite archaeologist to join the Scientific Committee.

Management Prescriptions

1 - Conserve all archaeological features
MC00/1-Manage cultural interest, earthwork, by controlling scrub/sapling
Clear scrub from each feature at least every 5 years

MC02/1-Manage cultural interest, earthwork, by spraying - control bracken
Spray bracken using Asulox in July.

MC09/1-Manage cultural interest, earthwork, by other activities
Control public use where required by stopping up paths on features.

MC09/2-Manage cultural interest, earthwork, by other activities
Control rabbit populations as required.

MC09/3-Manage cultural interest, earthwork, by other activities
When clearing scrub on rotation, clear sight lines between tumuli to enhance features in the landscape and re-instate in historical setting.

Feature 10 - Access / education / events

The Commons provide many opportunities for access and informal recreation. The area is covered by the Countryside and Rights of Way Act 2000 and therefore allows open access across the whole reserve. Continued engagement with the local community regarding management is essential.

Create a programme of events and activities compatible with conservation requirements

Factor List

1 - Poor / undesirable use of the reserve

RH36/1-Collect data, public use, unplanned/undesirable activities
Monitor undesirable use and record incidents, including over-collection of fungi possibly by commercial use/sale.

Attribute List

1 - Appropriate use of reserve by locals, public and school / education groups. Encourage appropriate, co-ordinated research by liaising with colleges and naturalists and ensure copies of all research / field notes are sent to Biodiversity Records Centre. Monitor use of site by schools and colleges. Hold events to demonstrate heathland management to other heathland managers and owners. Monitor visitor numbers, distribution and impact. Carry out review of visitor audit. Monitor fungi collection and address if continues to be a problem of over-collection. Engage visitors on the importance of bird nesting season and alert them when birds are known to be nesting nearby.

Management Prescriptions

1 - Provide good opportunities for access, recreation and education

MI10/3-Inform visitors, general
Inform and encourage public (especially local) usage through continued articles in Parish magazines, liaison with Parish Councils, school and other local groups. Up to date information on the Trust web site and social media.

MI20/1-Inform visitors, educational - promote/ provide education activities
Promote environmental education events in collaboration with other organisations, e.g. RSPB, WATCH.

MI50/3-Provide interpretative material - provide interpretation on species and management
Provide / co-ordinate a minimum of 3 walks and other events for the general public targeted at local people and in the Trusts events programme. Create a workable Interpretation Strategy and local interpretative plan. See map 10 for new signage. Erect temporary notices on site to explain management such as burns and scrapes and address problem activities (eg fungi collection). Complete and launch phone app for exploring the reserve

ML50/1-Liaise, local community / groups - liaise community groups and parish council

Liaise / inform Parish Councils of management works and problem activities. Involve Parish Councils in management committee. Support local group to assist with wardening and management. Encourage other groups, e.g. schools, scouts, guides, youth groups to assist with work.

MP00/1-Protect site / species by patrol
Patrol Reserve to maintain a presence, assist the public and discourage inappropriate use. Particularly address the issue of fungi over-collection. Record incidents, report to police using the 101 number, obtain number plates if safe to do so, and liaise with PCSO.

ME04/1-Remove rubbish - especially car parks
Ensure site is free of litter weekly.

ME40/1-Provide/maintain paths/rides/roads - maintain PROW and infrastructure.
Manage PROW, permissive routes and car park. Clear requested new bridle route to connect BW3344 and 3342 with fire break so riders can avoid A272

ML80/1 – liaise, others – Partners
Working with partners set up a scheme for working with the local dog walkers to promote responsible dog walking Possibly funded by HLF heathlands Reunited

ML80/2 Liaise, others
Establish better communication and rapport with local horse-riders

ML80/3 Liaise, others -
Ensure local community are kept engaged in consultation and progress of application for fencing on Iping and Trotton Commons

Feature 11 – Legal

To meet all appropriate legal obligations.

1) **Wildlife and Countryside Act 1981, <u>Section 28</u> as amended by the Countryside and Rights of Way Act 2000**. All of the LNR together with Fitzhall Heath falls within the SSSI boundary. Natural England has to be consulted before certain practices are carried out (see attachment 5 for list of Operations Likely to Damage. Approval of this 10 year plan by NE should provide the necessary consent for future works if not already included in the current HLS or any future Countryside Stewardship.

2) **National Parks Act 1949** and **Access to the Countryside Act 1968** LNR agreement.

Environmental Stewardship Scheme / Higher level scheme The LNR is entered into an agreement with Natural England, who fund a programme of heathland management work. There is a Penalty fine if HLS Indicators of Success have not been achieved by the end of the agreement

3) **Ancient Monuments and Archaeological Areas Act 1979,** Archaeological Scheduled Ancient Monuments (SAM's).

4) **Occupiers Liability Act**. All landowners are obliged to hold public liability insurance. Any known dangers within the LNR should be signposted.

5) **Health and Safety at Work Act** (HASAWA). SDJC and SWT must ensure that all work undertaken in site by employees, volunteers and contractors complies with HASAWA and with the Control of Substances Hazardous to Health Act 1988.

6) **The Heather and Grass Burning Code 1992, MAFF.** Certain procedures must be followed before burning is carried out.

7) **Environmental Protection Act 1990.** All public areas should be kept free of litter.

8) **PROW.** Two public footpaths and 6 bridleways pass through the site and SDJC are responsible for their management and maintenance.

9) **Commons Act 2006.** Registered commoners must be allowed to exercise their rights. It is necessary to make an application to The Planning Inspectorate (PINS) for consent under section 38 of the Commons Act 2006 to erect structures on a Common (such as permanent fencing) and any associated works such as trenches for water pipes to water troughs. A consultation following the Natural England Common Purpose guidelines must be followed prior to any application.

Ensure all appropriate legal obligations are fully met

Factor List

1 - Prosecution of SWT

AL40/1-Prepare/revise plan, policy & legislation - understand and check all legal requirements

Attribute List

1 - Fully protected habitat and species

AP00/1-Prepare/revise legal site description - assess all legal conditions
Maintain effective liaison between SWT, Scientific Committee, biological recorders and landowners etc. Review management plan annually, especially with regard to Management objectives and work programme.

Management Prescriptions

1 - Ensure that all activities are undertaken with regard to legal and health and safety requirements

ML40/2-Liaise, local / national authorities - liaise with legal / H&S advisors

Ensure that all operations are undertaken with regard for Health and Safety and legal requirements. Liaison with Commoners. Check that all bye-laws are up to date.
Ensure NE consent through Management plan to collection of specimens for the purpose of survey and monitoring of the SSSI.

ML60/2-Liaise, emergency services - liaise emergency services.

AP50/1-Prepare/revise plan, safety - review all legal obligations
Manage Open access requirements including any restrictions. Maintain site management records.

AI00/1-Implement inspection, monitoring site integrity
Undertake all inspections regarding site integrity

AL10 – Safeguard title, legal - by securing access
Clarify right of access over western boundary track off Elsted Road by registering a caution with the Land Registry as soon as practicable. Also collate evidence from previous site managers of use of this track for access in case of possible legal challenge in future.

Feature 12 – Funding

Some aspects of management have not had sufficient resourcing over recent years including scrub management. Major projects such as fencing Iping Common will require substantial new funding. If the HLF bid is successful, it will help to address this. The new Countryside Stewardship Scheme will also be crucial to the future of the reserve.

Agree and secure appropriate funding for reserve

Factor List

1 - Loss of funding for heathland management works.
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Attribute List

1 - Appropriate funding for full management of reserve
ML80/2-Liaise, others - liaison with Natural England
Liaise with NE over the end of the Environmental Stewardship scheme which expires on 31 October 2017 and apply for New Countryside Stewardship Scheme.

Management Prescriptions

1 - Achieve full funding for reserve

AF01/1-Grant applications Secure funding for future works from Stewardship, HLF, other opportunities.

6. WORK PROGRAMME 2013 – 2023

Priorities: 1 = high (must be done), 2 = medium (should be done) and 3 = low (would be nice if it was done).

Management Activity	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
Monitor scrub through aerial photography, fixed point photography and rapid grazing assessment	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Monitor effect of dog walking on bird activity and territories. Bird survey of key species and digitise territory maps	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Monitor use of reserve and use interpretation to advise public	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
The heathland is to be monitored using NE's condition assessment as a guide to composition and structure			**2**			**2**			**2**	
Aim to achieve favourable condition for whole reserve (in line with NE target)						**1**				
Monitor using fixed point photography	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Rapid grazing assessment	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Carry out NVC					**1**					
Monitor Field Cricket population	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**
Scrape invertebrate monitoring	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Monitor reptiles	**2**	**2**	**2**	**1**	**2**	**2**	**2**	**2**	**1**	**2**
Rare plant survey		**1**								
Pulse grazing Stedham using cattle (based on assessment)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Seek permission to fence and extensively graze Iping and Trotton Commons	**1**		**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Secure more local grazing livestock		**2**								
Scrub control on rotation (see map 11)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Coppice gorse on rotation (see map 12)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Mow/forage harvest areas as per plan (map 13)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Agree and implement Fire/emergency plan with SFRS	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Carry out controlled winter burns (see map 14)	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**
Create 1-10% bare ground through scrapes and de-turfing (see map 15)	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Control bracken to 1-5% of site	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**
Liaise with relevant organisations over future of Minsted		**2**								

quarry										
Monitor Marsh clubmoss	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Monitor wet heath invertebrate assemblages			**2**			**2**			**2**	
Manage water levels on Stedham to maintain wet heath	**2**	**2**	**2**	**2**	**1**	**2**	**2**	**2**	**2**	**1**
Monitor pond vegetation and remove invasives		**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Monitor scrub invasion of ponds			**2**		**1**			**2**		**1**
Inspect outflows after heavy rain and clear	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Monitor ponds for pollution or invasive species	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Monitor amphibians		**2**		**2**		**2**		**2**		**2**
Monitor odonata	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Secure resources to raise western bridleway on Iping to improve water retention			**3**							**2**
Investigate creating new areas of open water			**3**							**2**
Monitor use of ponds by cattle	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Fungi survey		**2**		**1**			**2**		**1**	
Diversify age structure of woodland edges	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Link heath between Iping and Stedham by clearing sections of trees			**2**				**2**			
Tree safety inspections	**1**			**1**			**1**			**1**
Maintain habitat matrix	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Silver-studded blue transect	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Moth trap		**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Full Invertebrate survey				**2**					**1**	
Add to populations of Field Cricket and Heath Tiger Beetle as necessary in agreement with NE		**3**	**2**	**1**						
Repeat Common Bird Census									**1**	
Maintain habitat for key bird species as per plans	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Monitor changes in behaviour after cattle re-introduced to Iping/Trotton				**3**	**2**	**1**				
Continue use of GPS to monitor cattle movements	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**
Provide interpretation of grazing project	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Survey current condition of archaeological features	**2**	**1**								
Assess public usage and adjust paths if necessary		**2**	**1**							

Draw up archaeological plan		**2**	**1**							
Clear scrub from which features?	**2**					**1**				
Control rabbits as required										
Clear sight lines between tumuli		**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Monitor undesirable use of reserve inc fungi collecting	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Encourage and record research by schools and colleges		**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Hold heathland management demonstration events		**3**	**2**	**1**	**3**	**2**	**1**	**3**	**2**	**1**
Monitor visitor numbers, distribution and impact		**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
Inform and encourage appropriate public use	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Promote environmental education		**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
Develop interpretive strategy		**3**	**2**	**1**						
Address undesirable/illegal activities	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Liaise with Parish Council	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Patrol reserve as often as practical	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Clear litter from car park weekly	**1**	**1**		**1**	**1**	**1**	**1**	**1**	**1**	**1**
Manage public rights of way and paths	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Establish responsible dog walking scheme with partners			**2**	**1**						
Establish better rapport with local horse riders		**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Ensure local community are kept engaged about progress with fencing application	**1**	**1**	**1**							
Continue liaison with scientific and LNR advisory committees	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Review management plan annually		**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Ensure legal requirements are met in implementing plan	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Liaise with Emergency services as necessary	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
NE consent for collection of specimens for identification for monitoring	**1**									
Inspect infrastructure	**2**	**2**	**1**	**2**	**2**	**1**	**2**	**2**	**1**	**2**
Clarify right of access over western boundary track	**2**	**1**								
Manage open access requirements	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Liaise with NE over new Countryside Stewardship scheme		**2**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Secure grant funding for implementation of the plan	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Appendices

Map 1 Ownership Boundaries
Map 2 Common Land
Map 3 Designations
Map 4 Archaeological Interest
Map 5 Access and Rights of Way
Map 6 Fire Plan
Map 7 Compartment Numbers
Map 8 NVC Map
Map 9 Proposed Fencing Scheme
Map 10 Interpretation plan
Map 11 Scrub Clearance plan
Map 12 Gorse Coppicing Plan
Map 13 Mowing plan
Map 14 Controlled Burn Plan Map 15 Scraping Plan
Map 16 All Management activities
Map 17 Map of heaths in the local area

Attachment 1 Ownership Schedule
Attachment 2 Schedule of Archaeological Interest
Attachment 3 SSSI Citation
Attachment 4 Rare and BAP species habitat and management requirements
Attachment 5 Operations Likely to Damage SSSI

Map 1 Iping, Trotton & Stedham Commons Ownership Map (Refer to Schedule)

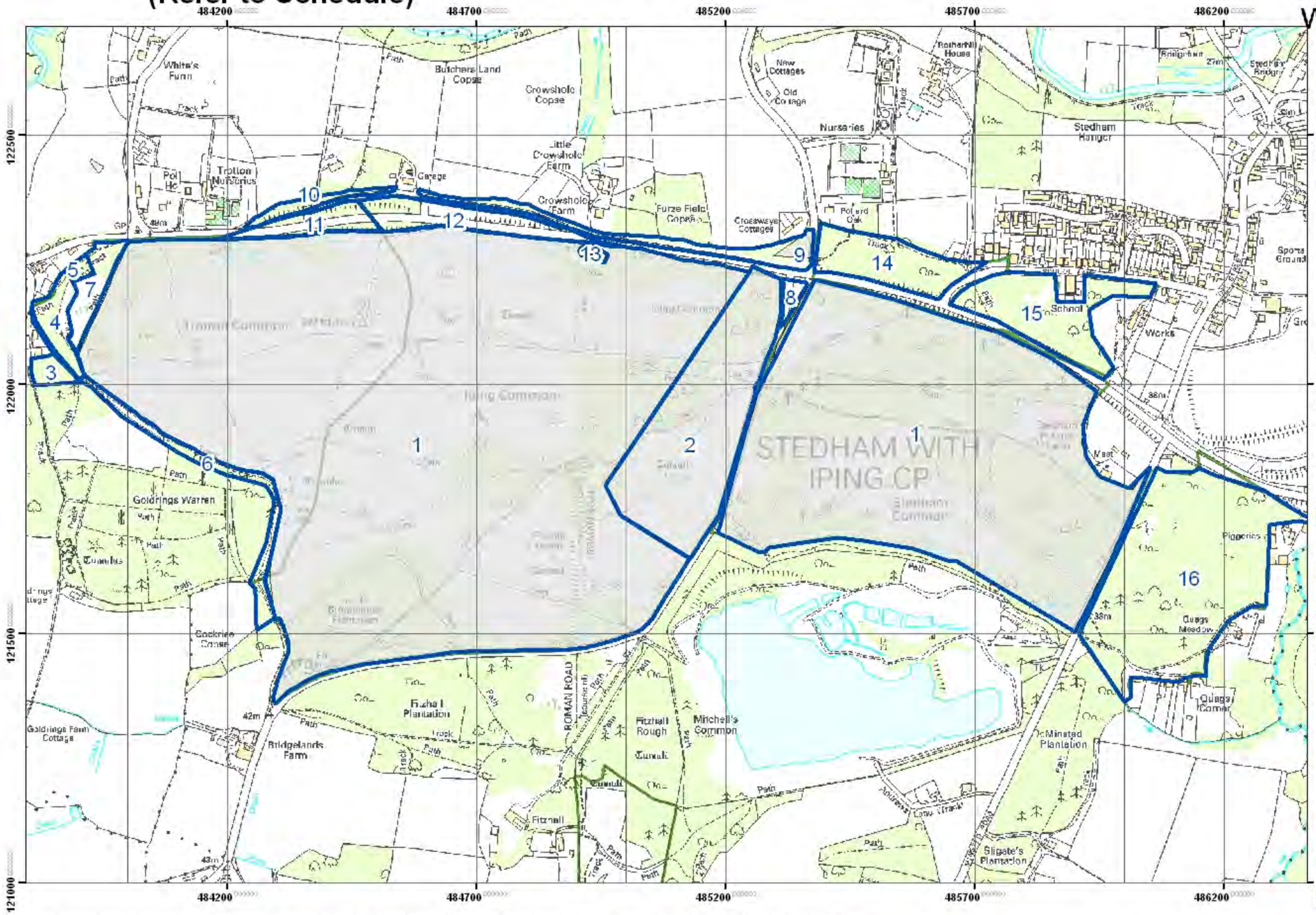
Sussex Wildlife Trust

Land Management Team

Sussex Wildlife Trust, Woods Mill, Henfield, West Sussex, BN5 9SD

01273 492630.
www.sussexwildlifetrust.org.uk

Registered charity number 207005



Where appropriate, The Sussex Wildlife Trust would like to thank the following dataset providers: Natural England (RAMSAR, SAC, SPA, NNR, SSSI, ancient woodland, chalk grassland, vegetated shingle and saline lagoon data), East Sussex County Council (LNR, SNCI, country park, notable verge and heathland data), Brighton & Hove City Council (SNCI & LNR data), The Environment Agency (grazing marsh, urban areas, and hydrological data), South Downs Joint Committee (chalk Grassland data), and Dr Francis Rose (ghyll woodland data).

Map 2 Iping, Trotton & Stedham Commons boundaries

Sussex Wildlife Trust

Land Management Team

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Henfield, West Sussex, BN5 9SD

01273 492630.
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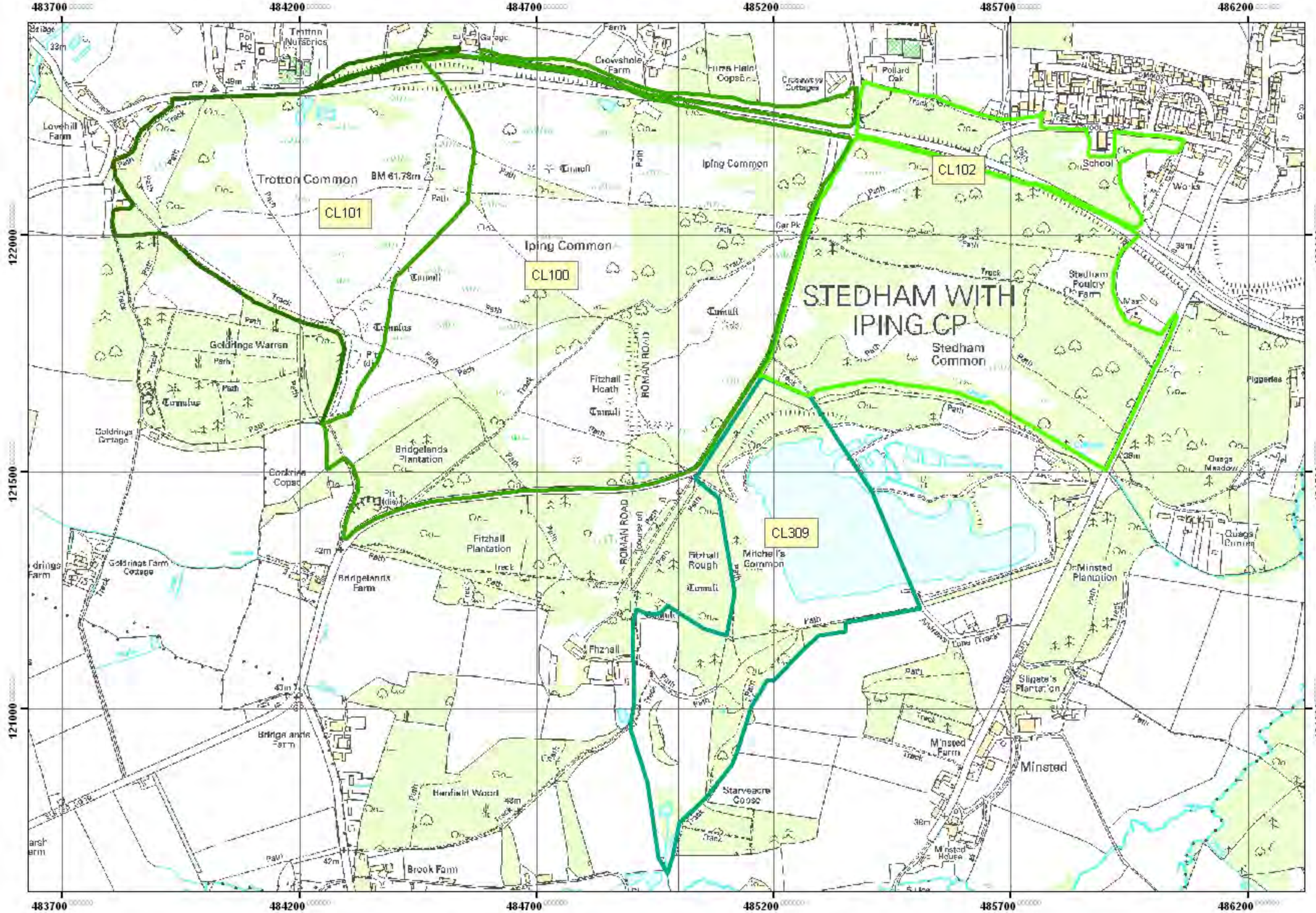

0 115 230 460 690 920 Metres

Map 3 Showing Iping Common SSSI and LNR

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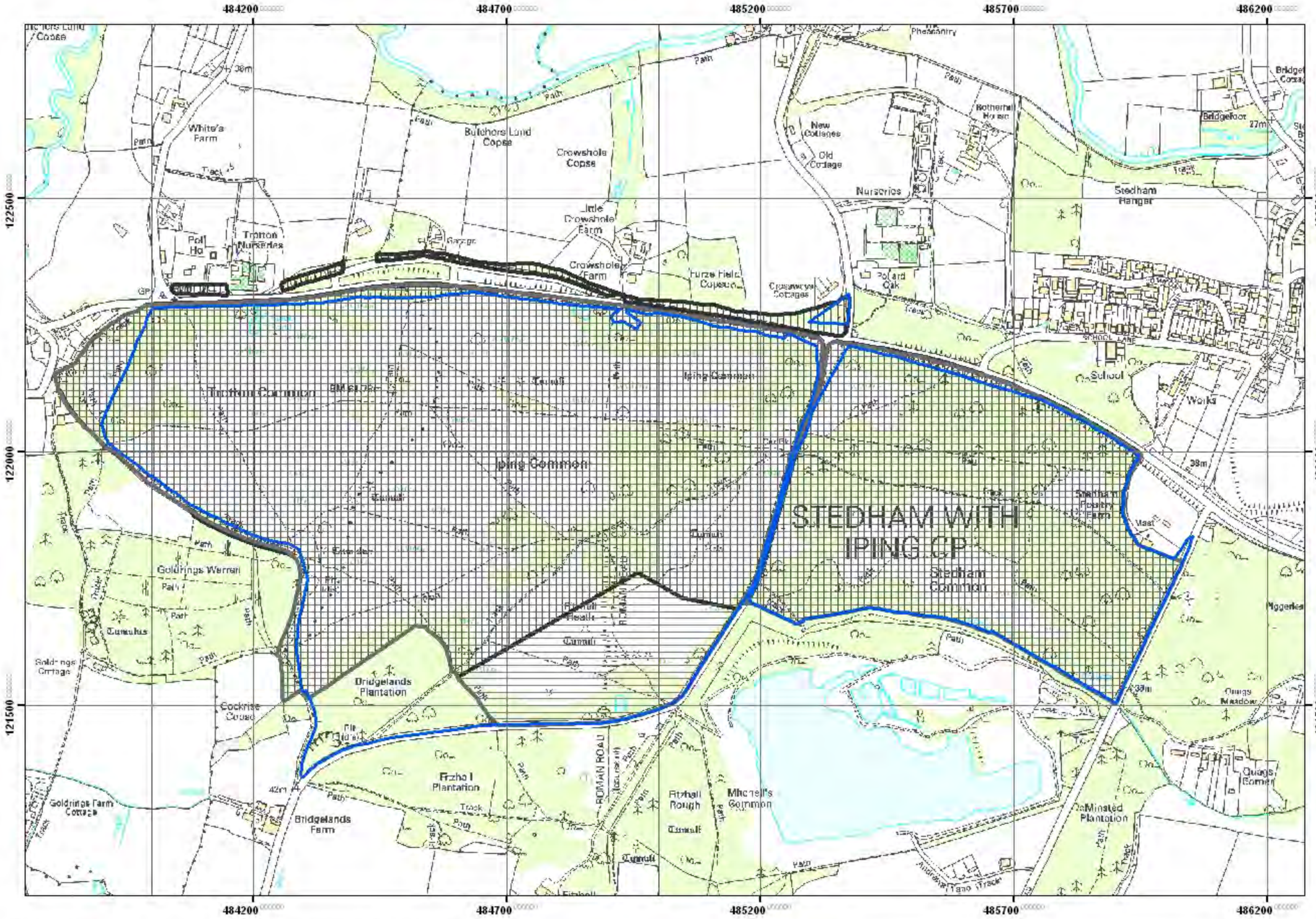

Where appropriate, The Sussex Wildlife Trust would like to thank the following dataset providers: Natural England (RAMSAR, SAC, SPA, NNR, SSSI, ancient woodland, chalk grassland, vegetated shingle and saline lagoon data), East Sussex County Council (LNR, SNCI, country park, notable verge and heathland data), Brighton & Hove City Council (SNCI & LNR data), The Environment Agency (grazing marsh, urban areas, and hydrological data), South Downs Joint Committee (chalk Grassland data), and Dr Francis Rose (ghyll woodland data).

0 105 210 420 630 840 Metres

Map 4 Archaeological Interest

Sussex Wildlife Trust

Land Management Team

Sussex Wildlife Trust, Woods Mill,
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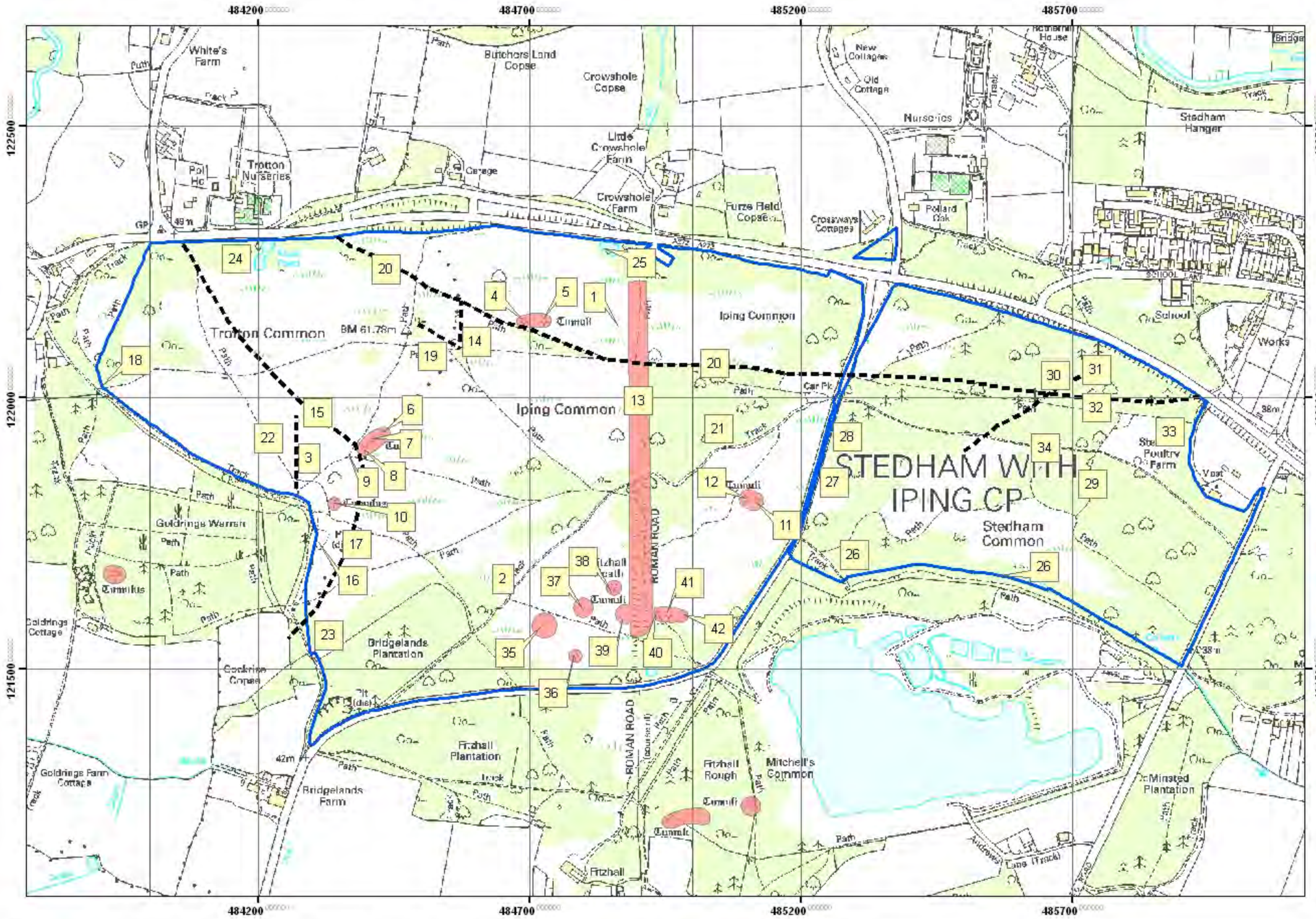

- Archaeological feature
- Scheduled Monuments
- SWT reserves

N

Metres
0 100 200 400 600 800

Where appropriate, The Sussex Wildlife Trust would like to thank the following dataset providers: Natural England (RAMSAR, SAC, SPA, NNR, SSSI, ancient woodland, chalk grassland, vegetated shingle and saline lagoon data), East Sussex County Council (LNR, SNCI, country park, notable verge and heathland data), Brighton & Hove City Council (SNCI & LNR data), The Environment Agency (grazing marsh, urban areas, and hydrological data), South Downs Joint Committee (chalk Grassland data), and Dr Francis Rose (ghyll woodland data).

Map 5 showing Access and Public Rights of Way (path numbers in bold)

Sussex Wildlife Trust

Land Management Team

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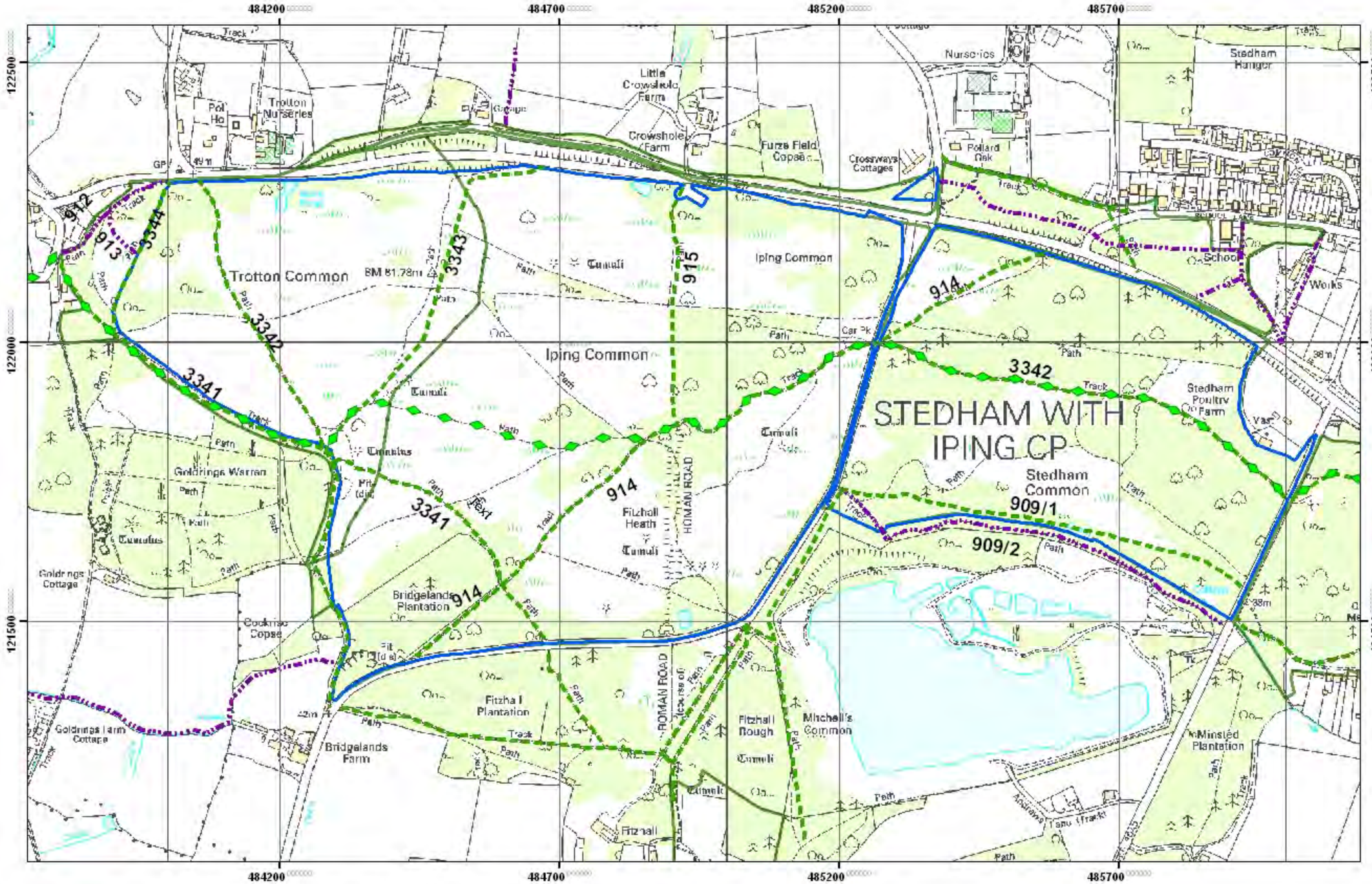
Registered charity number 207005



- Serpent trail
- Bridleway
- Footpath
- SWT reserves
- Designated Common Land

N

Metres
0 100 200 400 600 800

Map 6 Fire Plan

Sussex Wildlife Trust

SWT Reserves Team

Sussex Wildlife Trust, Woods Mill, Henfield, West Sussex, BN5 9SD

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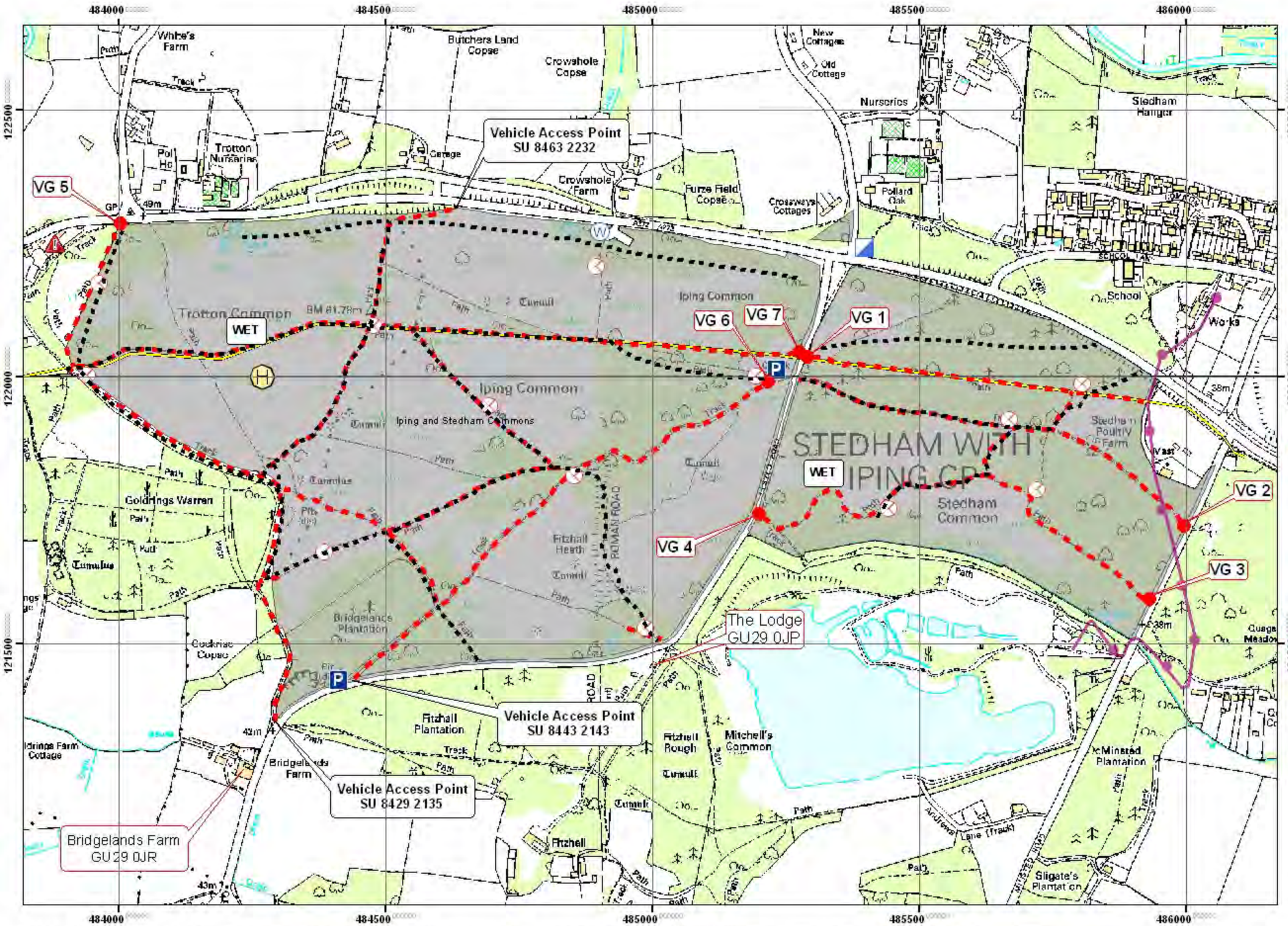

- Marshalling Point
- hydrant
- Fire Breaks
- Firebeaters
- Vehicle access
- Vehicle gates
- Car Park
- domestic gas tank
- Helicopter
- Overhead Power Line
- Southern Gas Networks Pipes
- SWT Reserve

N

Metres

0 90 180 360 540 720

Reviewed March 2014

Iping, Trotton & Stedham Commons compartment map

Sussex Wildlife Trust

Land Management Team

Sussex Wildlife Trust, Woods Mill,
Henfield, West Sussex, BN5 9SD

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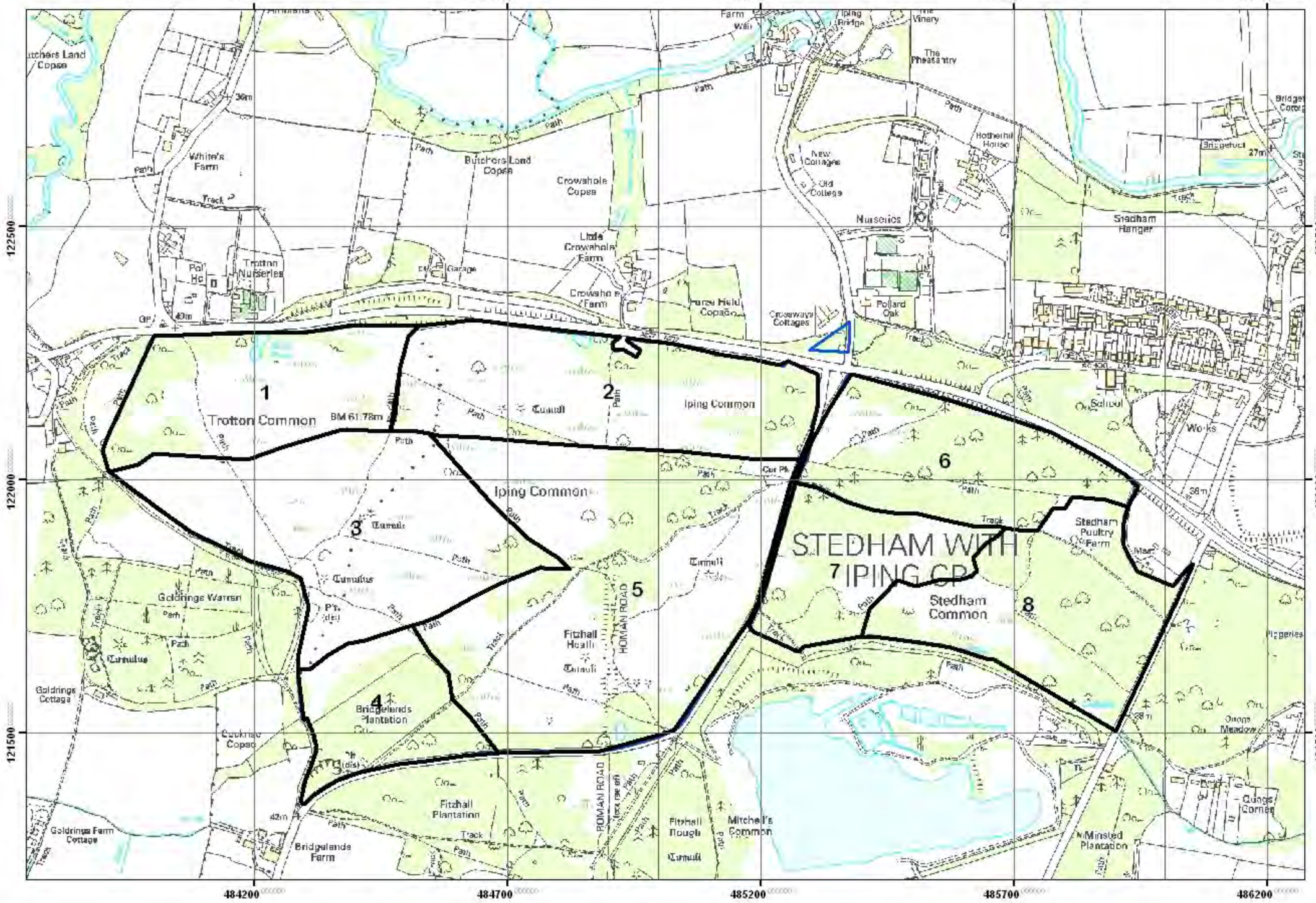
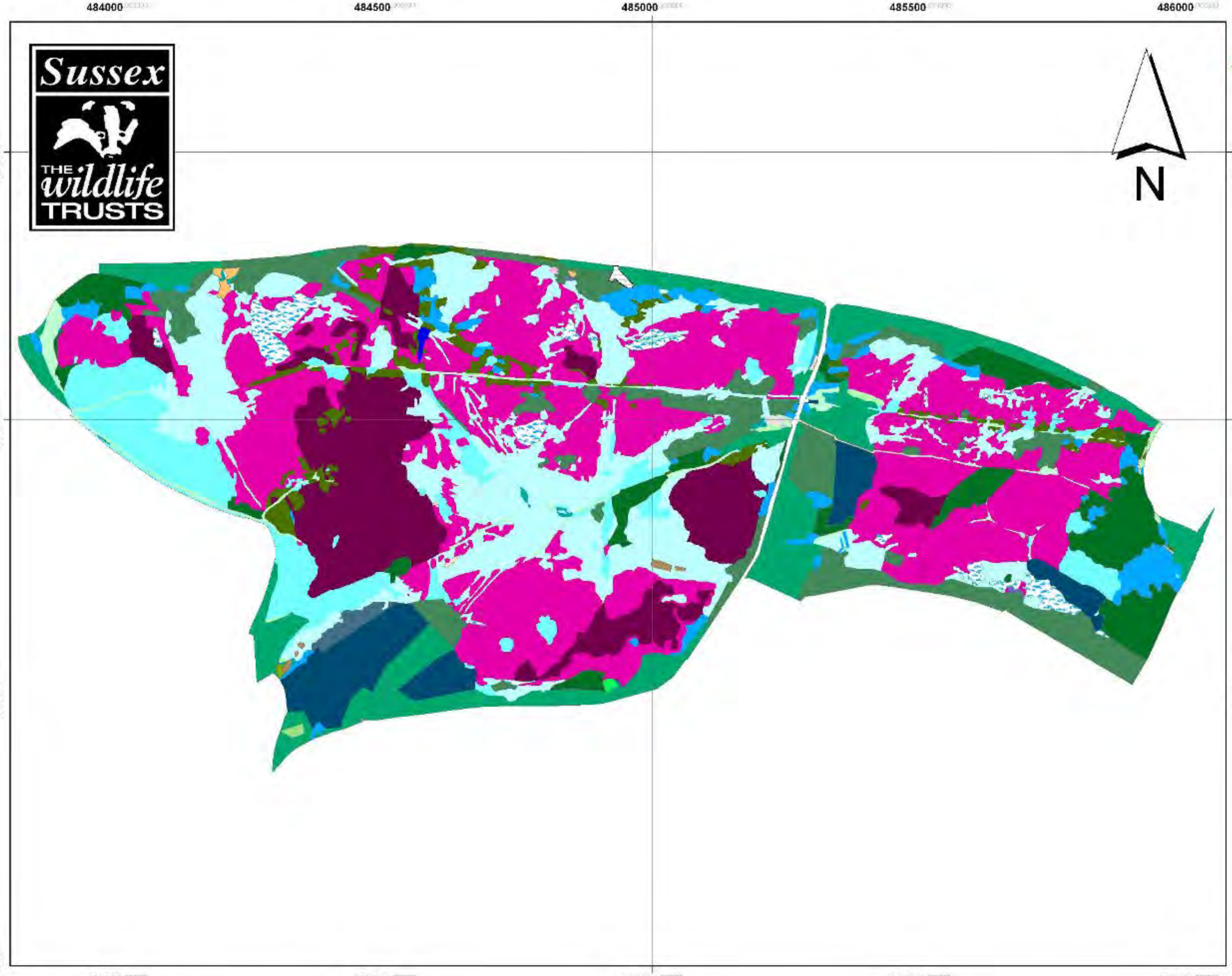


Where appropriate, The Sussex Wildlife Trust would like to thank the following dataset providers: Natural England (RAMSAR, SAC, SPA, NNR, SSSI, ancient woodland, chalk grassland, vegetated shingle and saline lagoon data), East Sussex County Council (LNR, SNCI, country park, notable verge and heathland data), Brighton & Hove City Council (SNCI & LNR data), The Environment Agency (grazing marsh, urban areas, and hydrological data), South Downs Joint Committee (chalk Grassland data), and Dr Francis Rose (ghyll woodland data).



SWT Reserves Team

Sussex Wildlife Trust
Woods Mill
Henfield
West Sussex
BN5 9SD

01273 492630

Iping and Stedham Commons SWT Reserve

Stedham Iping NVC 2008 final

NVC description

- A24b Juncus bulbosus community
- A2a Lemnor minor
- A8a Nuphar lutea
- Bare earth
- Bridgelands Car Park
- H2a Calluna Ulex minor heath
- H2c Calluna Molinia Sub community
- H3a Ulex minor Agrostis curtisii heath
- Iping Car Park
- M16a Erica Sphagnum mire
- M1 Bog pool community
- M23b Juncus Galium rush-pasture
- M25a Molinia mire
- M4 Carex rostrata mire
- MG10a rush-pasture
- OV24a Urtica Galium aparine
- OV27c Epilobium angustifolium
- Pond
- S19a Eleocharis palustris swamp
- S22a Glyceria Swamp
- Scraped area
- U1b Festuca-Agrostis-Rumex grassland
- U20c Pteridium
- U2a Deschampsia grassland
- W10a Woodland
- W16a Woodland
- W23c Ulex scrub
- W24b Rubus
- W4c Woodland
- WSCC Gritting Bay

0 105 210 420 630 840 Meters

Map 9 Iping & Trotton Commons proposed fencing scheme

Sussex Wildlife Trust

Land Management Team

Sussex Wildlife Trust, Woods Mill, Henfield, West Sussex, BN5 9SD

01273 492630.
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- Safety Corral
- Kissing gate
- Field gate
- Bridle gate
- Proposed fence line
- SWT reserves

N

1:5,000

Metres
0 70 140 280 420 560

Map 10 Interpretation plan

SWT Land Management

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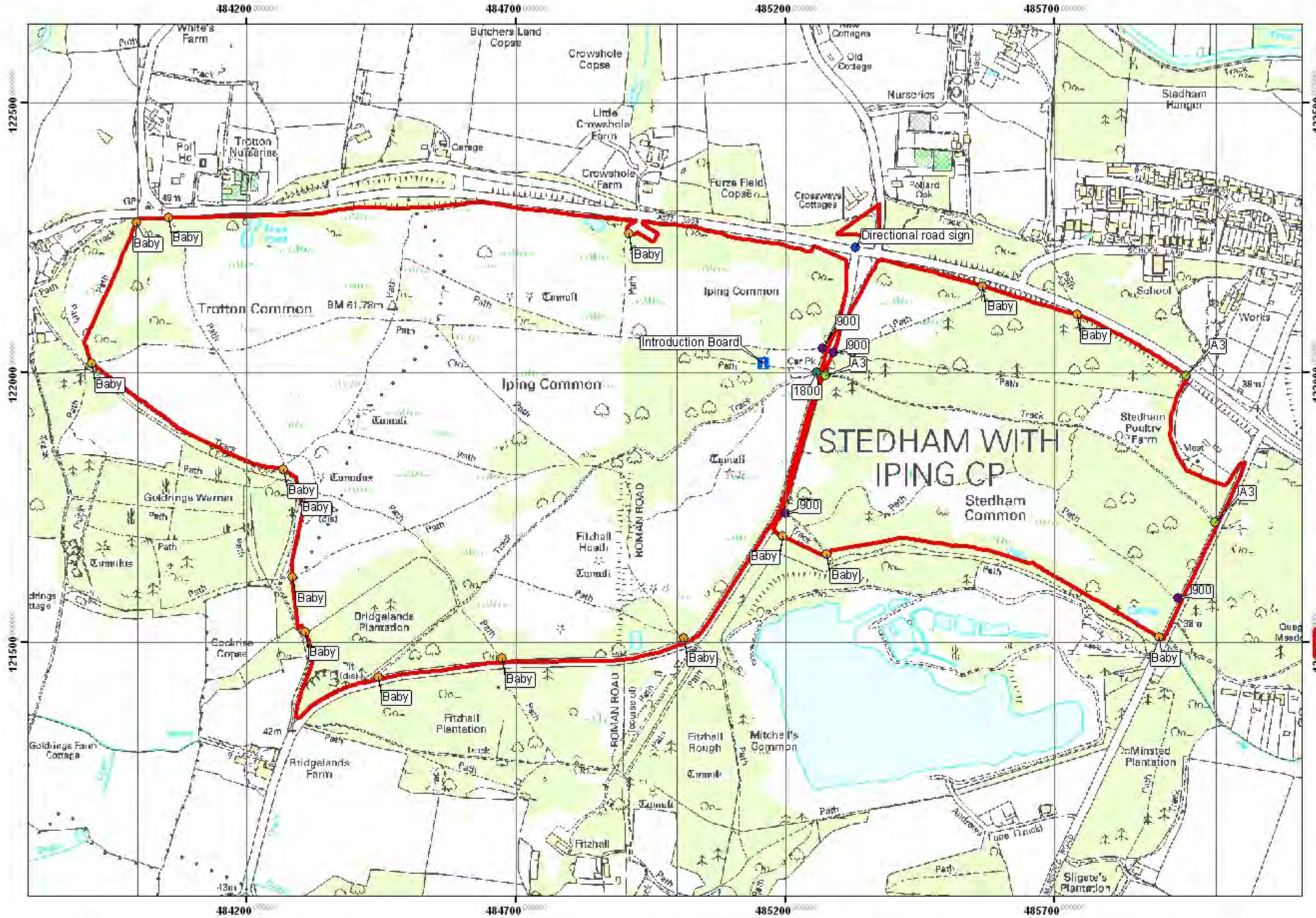
Sussex Wildlife Trust



Map 11 Scrub clearance

SWT Land Management Team

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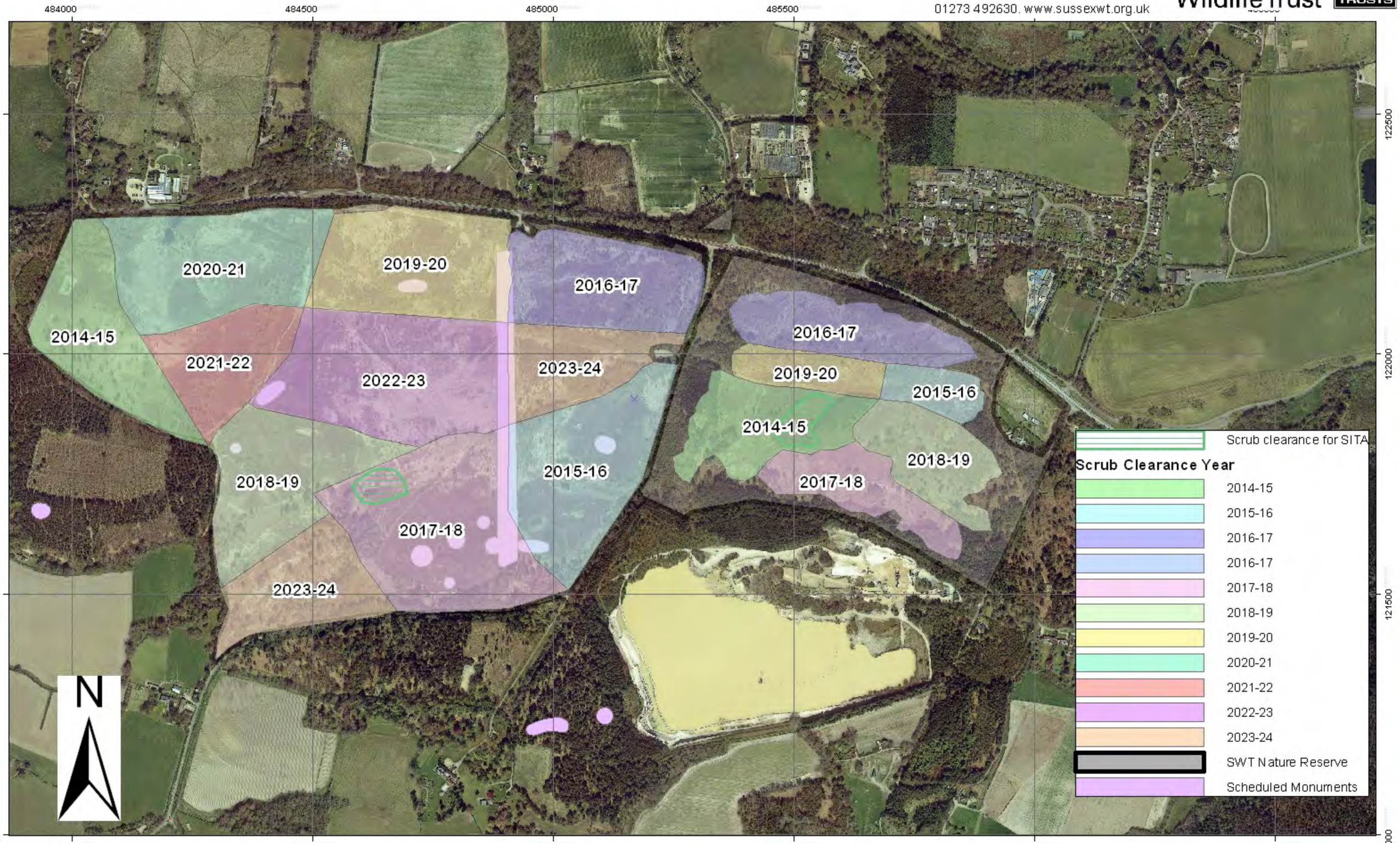
Sussex Wildlife Trust



0 145 290 580 870 1,160 Metres

Map 12 Gorse Coppicing Plan

SWT Land Management Team

Sussex Wildlife Trust, Woods Mill,
Henfield, West Sussex, BN5 9SD

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Sussex Wildlife Trust

484000 484500 485000 485500 486000

122000

121500

4 6 2 10 6 3 10 5 1 7 3 9 1 4 5 3 8 2

gorse coppicing
SWT Nature Reserve
Scheduled Monuments

N

0 125 250 500 750 1,000 Metres

Map 13 Mowing Plan

SWT Land Management Team

Sussex Wildlife Trust, Woods Mill,
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Sussex Wildlife Trust

484000 484500 485000 485500

122000

121500

Fire Breaks (12m wide)
Heather mowing for SITA
Stedham mowing areas
Iping mowing areas
SWT Nature Reserve
Scheduled Monuments

N

484000 484500 485000 485500 486000

0 125 250 500 750 1,000 Metres

Map 14 Controlled Burn Plan

SWT Land Management Team

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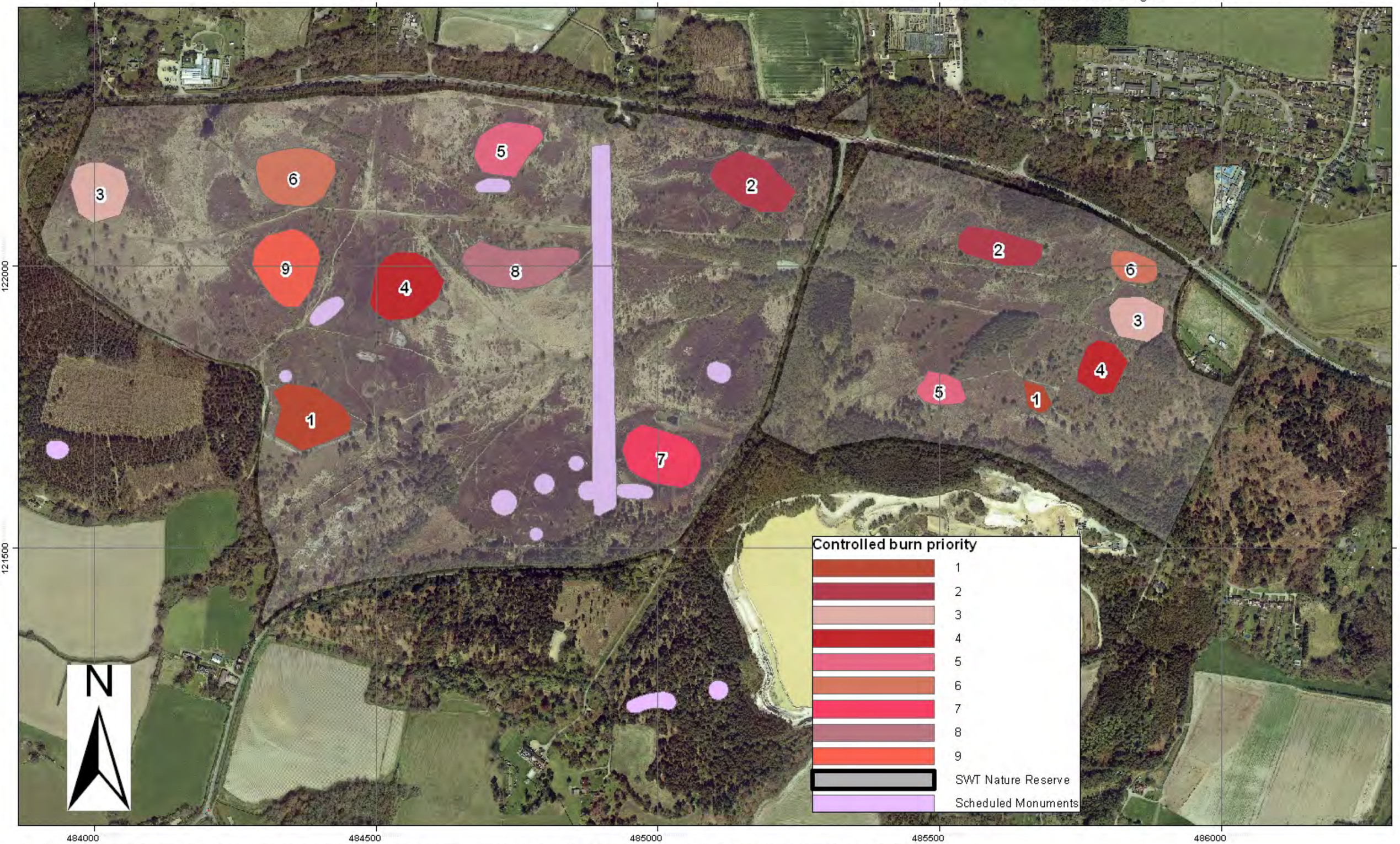
Sussex Wildlife Trust



0 125 250 500 750 1,000 Metres

Map 15 Scraping Plan (priorities in bold)

SWT Land Management Team

Sussex Wildlife Trust, Woods Mill,
Henfield, West Sussex, BN5 9SD

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Sussex Wildlife Trust

Map 16 All Management Activities

SWT Land Management Team

Sussex Wildlife Trust, Woods Mill,
Henfield, West Sussex, BN5 9SD

01273 492630. www.sussexwt.org.uk

Sussex Wildlife Trust

484000 484500 485000 485500 486000 486500

122500 122000 121500 121000

2014-15 2015-16 2016-17 2017-18 2018-19 2019-20 2020-21 2021-22 2022-23 2023-24

N

gorse coppicing
Fire Breaks (12m wide)
Heather mowing for SITA
Stedham mowing areas
Iping mowing areas
Proposed wet scrapes
Existing Wet Scrapes
Turf-stripped areas
Scrub clearance for SITA
Turf-stripped area for SITA
Priority scrape areas

Controlled burn priority

1 2 3 4 5 6 7 8 9

Scrub Clearance Year

2014-15 2015-16 2016-17 2016-17 2017-18 2018-19 2019-20 2020-21 2021-22 2022-23 2023-24

SWT Nature Reserve
Scheduled Monuments

0 145 290 580 870 1,160 Metres

Map 17 Map of heaths in the local area

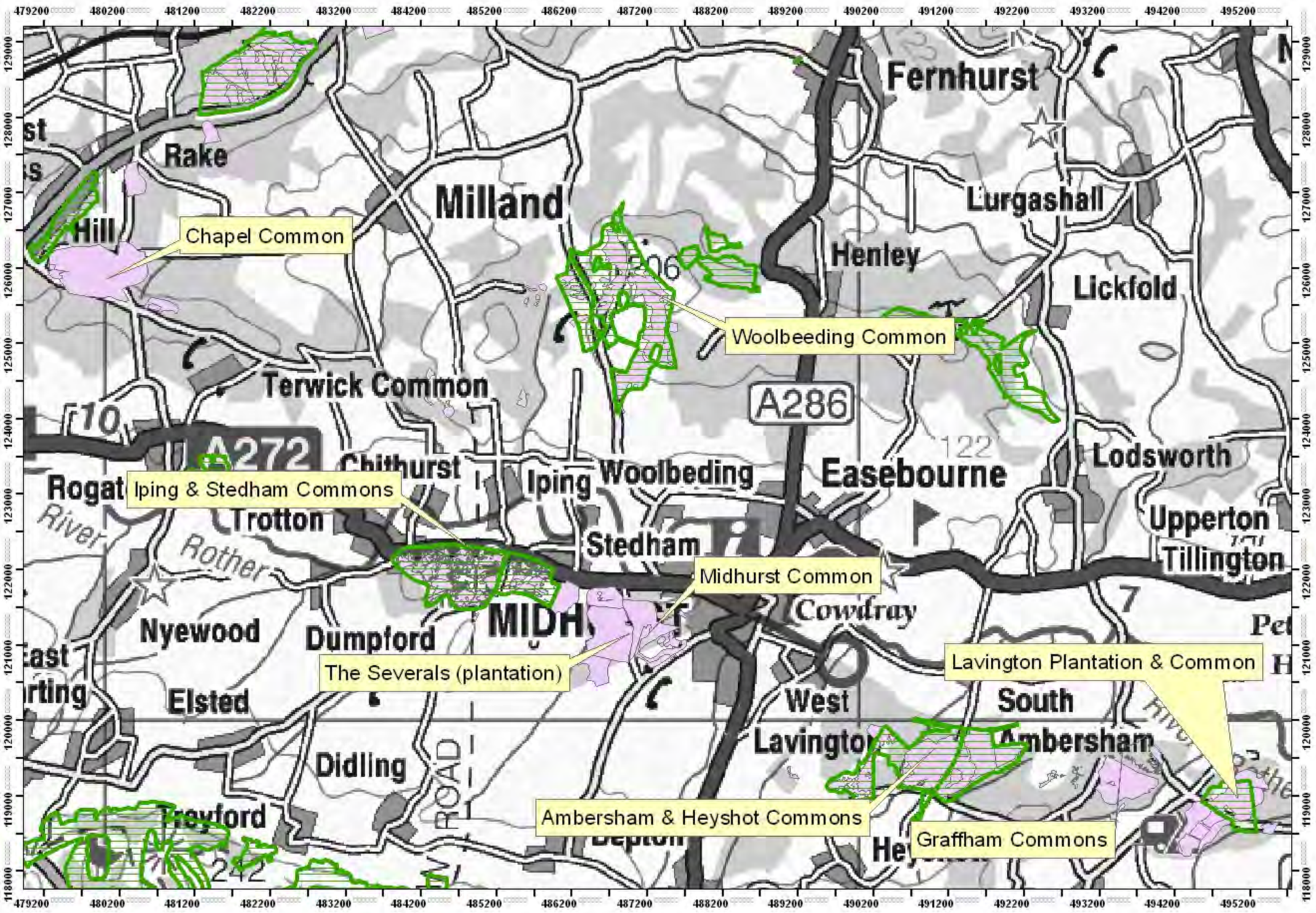
Sussex Wildlife Trust

Land Management Team

Sussex Wildlife Trust, Woods Mill, Henfield, West Sussex, BN5 9SD

01273 492630.
www.sussexwildlifetrust.org.uk

Registered charity number 207005



Metres
0 700 1,400 2,800 4,200 5,600

Attachment 1 Iping and Trotton Commons fencing Application

Schedule of owners of Iping and Trotton Commons (refer to Ownership map for details)

parcel no	landowner	Approximate area (ha)
1	SWT	80
2	Leconfield Estate, tenanted to WSCC and sub let to SWT	9
3	Duke, Fernbank	0.4
4	Homan, Spring Cottage	1
5	Laurie, Steps	0.1
6	Cowdray Estate	1.5
7	Berenc, Cocksparrow Hall	1
8	West Sussex County Council	0.25
9	unknown owner	1.5
10	Trustees of Bepton Estate	0.5
11	Unknown owner	1
12	Unknown owner	2
13	WSCC	0.1
14	Owners of Pub	
15	West Timber merchants	
16	Mr & Mrs Crawford	

Attachment 2 Schedule of Archaeological Interest on Iping, Trotton and Stedham Commons

Numbers refer to Map 4 – Archaeological Interest

The following archaeology was surveyed prior to 2000. Monuments 4, 5, 6, 7, 8, 11, 12, and those on Fitzhall Heath were inspected by English Heritage in 2005 and management recommendations have been incorporated into this report.

1. Iping Common. Site of scatter of flint tools and waste flint from tool manufacture, completely excavated in 1960 – 61 by West Sussex Excavation Group. Several thousand flint tools in a roughly circular area c. 7.5m (25fit) across, between layers of blown sand. Tools dated to c.9000 – 7000 BC (earlier Mesolithic). Ancient pollen also preserved. Source: Keef et al. 1965. SMR No 1126. OS map ref SU 8486 2214.
Management: Site currently overgrown with heather. No management needed; Mesolithic material removed.

2. Iping Common. Site of scatter of Mesolithic (9000 – 4500 BC) flint waste flakes and blades from tool manufacture, discovered in 1951 and partially excavated in 1960. Finds in Chichester Museum Source: SMR.SMR No 1137. OS map ref SU 8465 2162.
Management: Site marked with concrete post, overgrown with heather. Monitor birch re-growth in this area and remove birch from 5m radius.

3. Iping Common. "General scatter" of flint waste flakes from tool manufacture, in area around and to west of Site 6 (see below). Mesolithic/Neolithic date (possible 6000 – 2000 BC). Finds in private collection. Source: SMR. SMR No 1139. OS map ref. SU 8430 2190 – SU 8441 2193.
Management: Overgrown with heather. Focus of site not sufficiently distinct to warrant detailed management proposals.

4. Iping Common Bowl barrow (prehistoric ceremonial earthwork mound or *tumulus*) on crest of north-facing ridge. Circular mound, 15m diameter, 1m high, with hollow in middle from unrecorded (?) Victorian excavation. Most bowl barrows date to 2400 – 1500 BC. First recorded 1930s. With No 5 to the east, part of Scheduled Ancient Monument no. 20023. Sources: Ordnance Survey (OS) 25" map 1912, Grinsell 1940 no 21SW 9, EH Notice 19.1.93, SMR no 1104. OS map ref. SU 8468 2214.
Management: Under dead bracken; some rabbit burrowing. Spray and cut bracken regularly; keep free of birch and gorse re-growth. Control rabbits on and around the barrow. Liaise with WSCC archaeology department / English Heritage.

5. Iping Common. Prehistoric bowl barrow on crest of north-facing ridge, east of no.4. Circular mound, 20m diameter, 1.7m high Victorian / Wartime semicircular slit trench in top. Pollen samples taken by Kings College, London, from buried soil under barrow in edge of slit trench, 1976; published in 1982. With no 4 to west, part of Scheduled Ancient Monument no 20023. Sources: OS 25" map 1912, Grinsell 1940 no. 21SW 10, Keatinge 1983, EH Notice 19.1..93, SMR no. 1105. OS map ref. SU 8472 2214.

Management: Under dead bracken; some rabbit burrowing. Spray and cut bracken regularly; keep free of birch and gorse re-growth. Control rabbits on and around the barrow. Liaise with WSCC archaeology department / English Heritage.

6. Iping Common. Prehistoric bowl barrow on crest of south- east facing ridge, east of no.7. Circular mound, 15m diameter, 1.6 high, with hollow in middle from unrecorded (?) Victorian excavation. With nos. 7 and 8 to west, part of Scheduled Ancient Monument No. 20039. Sources: Shown as "mounds" on OS 6" 1st Ed. Map 1878; Grimsell 1940 no. 21SW8, EH Notice 19.1.1993, SMR no 1109. OS map ref. SU 8443 2194.
Management*:* Overgrown with heather and a little gorse. Control and monitor gorse growth. Liaise with WSCC archaeology department / English Heritage.

7. Iping Common. Prehistoric bowl barrow on crest of south-east facing ridge, west of no.6, east of no.8. Circular mound, 14m diameter, 1.3m high, with hollow in middle from problem recent (1970 or later) unrecorded excavation. With nos. 6 and 8 adjacent, part of Scheduled Ancient Monument No. 20039. Sources: Shown as

"mounds" on OS 6" 1st Ed map 1878; Grinsell 1940 No 21SW7, EH Notice 19.1.1993, SMR No 1108. OS Map ref No. SU 8441 2193.
Management: Overgrown with heather. Present condition satisfactory.

8. Iping Common. Prehistoric bowl barrow on crest of south-east facing ridge, west of nos, 7 and 8. Circular mound, 24m diameter, 2.2m high, with large, irregular hollow in middle from recorded (?) Victorian excavation. With nos. 6 and 7 to east, part of Scheduled Ancient Monument No. 20039. Sources: Shown as "mounds" on OS 6" 1 Ed. Map 1878; Grinsell 1940 No. 21SW6, EH Notice 19.1.1993, SMR No 1107. OS map ref. SU 8439 2191.
Management: Keep free of gorse and birch regrowth. Control rabbits on and around the barrow. This barrow is heavily used by walkers as a view point. Monitor erosion and block eroding desire lines as necessary. Liaise with WSCC archaeology department / English Heritage.

9. Iping Common. Possible prehistoric bowl barrow on crest of south-east facing ridge, aligned with nos. 6-8. Circular mound approx. 11m diameter, 1.0m high, with hollow in centre. Recognised by Grinsewll in 1930's but not traced by Ordnance Survey in 1970. Visible as low eminence, cut by former cart roads the common. Sources: Grinsell 2940 No 21SW5, SMR No. 1106. OS map ref SU 8437 2188.
Management: Overgrown with heather, to the extent that the possible barrow is not clearly visible. Localised light mowing of heather recommended; to be carried out as extension to mown area immediately to south-west.

10. Iping Common. Prehistoric bowl barrow situated on south-facing slope. Circular mound 10m in diameter, 0.6m high. First recorded by Ordnance Survey in 1970. Scheduled Ancient Monument No. 20049. Sources: English Heritage Notice 19.1.1993, SMR No. 1135. OS map ref SU 8434 2180
Management: Recently mown, clear of vegetation. Encourage gradual re- growth of heather to prevent erosion of surface of barrow.

11. Iping Common. Prehistoric bowl barrow situated near crest of gentle south-west facing slope. Circular mound 14m in diameter, 1.4m high. Small hollow in top, cut by excavation to north and south, during wartime activities. With no. 12 to west, part of Scheduled Ancient Monument No.20025. Sources: OS map 1912, Grinsell 1940 no. 21SW12, English Heritage Notice 19.1.1993, SMR No. 1148. OS map ref. SU 8511 2180.

Management: Top of mound denuded, sides covered with heather, some birch scrub. Cut birch and control re-growth; encourage re-growth of heather on top of mound to prevent erosion. Liaise with WSCC archaeology department / English Heritage..

12. Iping Common. Prehistoric bowl barrow situated near crest of gently south-west facing slope. Circular mound 13m diameter, 1.2m high. Mutilated by minor wartime excavations. With no. 11 to east, part of Scheduled Ancient Monument No. 20025. Sources: OS 25" map 1912, Grinsell 1940 no 21SW11, English Heritage Notice 19.1.1993, SMR No. 1147. OS map ref SU 8509 2181.
Management: Covered with heather, some birch scrub, rabbit disturbance. Cut birch and control re-growth. Liaise with WSCC archaeology department / English Heritage.

13. Iping Common. Roman Road from Chichester to Silchester, running north-south across the Common. This survives as a central upstanding *agger,* or cambered road surface, 6.5m wide with ditches either side, approx 4.0m wide. The road survives best on Fitzhall Heath to the south, but can clearly be discerned immediately south of the firebreak. North of the firebreak the road makes a sharp descent in a deep cutting in the greensand ridge. At the southern boundary of the Reserve the road is much mutilated by wartime pits and trenches. Overall the road is clearly visible from the air. The Road was in use from the 1st to 4th centuries AD. Scheduled Ancient Monument No 20041. Sources: Margary 1956, English Heritage Notice 19.1.1993, SMR no 1937. OS map refs. SU 8489 2221-SU 8490 2155.
Management: South of the firebreak the line of the road has been cleared of birch and is in a satisfactory condition. The relationship of the agar to the deep cutting is not evident as the southern part of the road lies behind a thin screen of birch on the firebreak. Clearance of this birch screen, and of the birch scrub in the deep cutting, is recommended. Liaise with WSCC archaeology department / English Heritage.

Fitzhall Heath – c.3 scheduled barrows.

Management: Control scrub and bracken encroachment and encourage heather growth. Monitor path erosion and block desire lines. One barrow is bisected by a well used informal path which is resulting in erosion. An alternative route around the barrow should be created by mowing the heather. This has been agreed with EH and the first stage, scrub removal on the alternative route, completed in 2006.

Other Historical features

Iping Common

14. "Holllow Way" or sunken road, marked on OS 1st Ed 6" map 1878. Visible as a north-south cutting, coinciding with the Trotton/Iping parish boundary. Former man-made trackway of unknown date.
15. "Side of the care road" marked on OS 1st ED 6th map 1878 and 25" map 1898. Visible to north and south of the firebreak as a cutting. Post-medieval trackway.
16. Small disused sandpit, shown on OS 25" map 1912.
17. Remains of cart tracks to no. 16, visible south of barrow 10.
18. Disused sandpit, shown on OS 1st ED 6" map 1878 and 25" map 1898.
19. Shallow sunken track just north of firebreak.
20. The "old road to Midhurst", visible from the north end of no. 14 eastwards as far as the Roman Road as a sunken track running NW-SE. Fell into disuse after building of the turnpike road to the north in 1825.
21. Series of disused tracks with roadside ditches, north of and parallel to the bridleway. Former main SW-NE route across Iping and Stedham Commons.
22. North-south cutting, probably a former track across the Common.
23. Former pond, shown filled with water on OS 25" MAP 1897.
24. Black Pond, shown on OS 1st Ed 6"map 1878.
25. Long pond shown on OS 1stEd 6" map 1878, running under modern A272. Now only the southern end remains visible. The lowest sediments of the pond, above the buried soil which it overlies, have yielded a radiocarbon date of approx. 810 +/- 90 Before Present (roughly late 11th-12th century AD), suggesting that the pond may be of medieval date; however there is a possibility that the dated sample may not be reliable. Source: Keatinge 1983.

Stedham Common

26. Bank with ditch on either side marking southern boundary of Stedham Common. Coincides with boundary shown on 1845 Stedham Tithe Map. May be of 18-19th century date. Largely overgrown.
27. Shallow hollows marked on OS 252 map 1913. Probably former shallow sand workings.
28. Series of ditches running parallel to Elsted Road. Most likely roadside ditches to tracks to 27, but they may represent a ditched former alignment of Elsted Road.
29. Area of much disturbed pitted ground marked on OS 25" map 1913, reached by a track from Minsted Road. Probably an area of former shallow sand workings, later used for dumping of domestic rubbish. It seems likely that this area was subsequently disturbed both by wartime trench-digging and local bottle-dump excavation.
30. Small former sandpit north of firebreak.
31.& 32 Sunken tracks across the Common, marked on OS 1st Ed 6" map 1878.
33 .Bank and ditch marking boundary of chicken farm (Kiln Field on Stedham Tithe Map 1845)
34. Fair Hill. Area where the annual Stedham Fair was held. An acre of turf formerly used by the cricket team survives in small patches along the bridleway. The possible WW2 bell tent is also in this area.
35. WW2 tank tracks are visible in this area under post-war pine regeneration.

COUNTY: WEST SUSSEX SITE NAME: IPING COMMON

DISTRICT: CHICHESTER

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981. Part of this site is a Local Nature Reserve (LNR)

Local Planning Authority: CHICHESTER DISTRICT COUNCIL

National Grid Reference: SU 856219 Area: 124.6 (ha.) 307.9 (ac.)

Ordnance Survey Sheet 1:50,000: 197 1:10,000: SU 82 SW, SE

Date Notified (Under 1949 Act): 1954 Date of Last Revision: 1980

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

Other Information:
The site lies within the South Downs Area of Outstanding Natural Beauty. This is 'A Nature Conservation Review' site.

Reasons for Notification:
This site includes Trotton, Iping and Stedham Commons as well as Fitzhall Heath. It is one of the richest examples of heathland remaining in West Sussex and is of particular interest for its invertebrate fauna which includes several rare spiders. The site is of county importance as a breeding site for heathland birds, and is the only site in Sussex for an uncommon species of grass.

As is typical of the Sussex commons, this heathland has developed on soils derived from the lower greensand. The majority of the heath is 'dry' although there are also smaller, wetter areas. Other habitats present include woodland, scrub, grassland and two ponds in the north of the site.

The site was extensively damaged by fire in 1976. Although much of the fauna was lost at the time, this has provided a rare opportunity to study the rate of heath recolonisation, and has particularly encouraged the regeneration of heather *Calluna vulgaris*.

The majority of the heath is dominated by heather and bell-heather *Erica cinerea* with dwarf gorse *Ulex minor* also present. Where drainage is impeded on north Trotton and part of Stedham Commons this dry heath grades into a wetter heathland type where an increase in cross-leaved heath *Erica tetralix* and purple moor-grass *Molinia caerulea* is found. Where surface water is permanently present purple moor-grass becomes dominant with deer-grass *Trichophorum cespitosum* and heath rush *Juncus squarrosus* locally abundant. These areas of wet heath also support a rich moss flora which includes *Polytrichum commune, Sphagnum tenellum* and *Dicranum spurium*.

Grassland is mainly confined to the rides which cross the site. Creeping and common bent grasses, *Agrostis stolonifera* and *Agrostis capillaris* respectively, dominate drier areas; purple moor-grass and soft rush *Juncus effusus* on wetter areas. Iping Common is the only Sussex site for bristle bent grass *Agrostis curtisii*, a record not verified recently.

The site supports a rich invertebrate fauna. Prior to the fires of 1976 109 spider-species (Arachnida) had been recorded, including such notable rarities as *Centromerus aequalis* a species new to Britain, *Micaria silesiaca* and *Prosopotheca corniculans*. Amongst the butterflies there were important local populations of the silver-studded blue *Plebejus argus* and the grayling *Hipparchia semele*. The dragonflies *Odonata* were also well-represented.

The Commons are of county importance for breeding bird’s; typical heathland species include nightjar and stonechat.

Attachment 4 Rare and BAP species habitat and management requirements

Taxa	Species	English	Conservation status	Detailed cons status	Priority species	Legal	Resources	Micro habitats	Management	Last recorded on site	Notes
Mammals	*Micromys minutus*	Harvest Mouse	NS		BAP		Omnivore	Rank grass	Leave some areas ungrazed (not seen on site for 40 years)	2004	
Mammals	*Plecotus auritus*	Brown Long-eared Bat			BAP	EPS	Invertebrate prey	Old growth trees	Retain old growth trees	2005	
Mammals	*Pipistrellus pipistresllus*	Common Pipistrelle				EPS	Invertebrate prey	Old growth trees	Retain old growth trees	2006	
Mammals	*Myotis myscatinus*	Whiskered Bat				EPS	Invertebrate prey	Old growth trees	Retain old growth trees	2005	
Reptiles	*Vipera berus*	Adder			BAP	Schedule 5	Small vertebrates (mammals)	Various	A well managed heathland with a range of structural types	2011	
Reptiles	*Natrix natrix*	Grass Snake			BAP	Schedule 5	Small vertebrates (amphibians)	Various including wet areas	A well managed site with a range of structural types and wa	2014	
Reptiles	*Anguis fragilis*	Slow-worm			BAP	Schedule 5	Small invertebrates	Various	A well managed site with a range of structural types	2013	
Amphibians	*Bufo bufo*	Common Toad			BAP		Invertebrate prey	Ponds	Prevent ponds from scrubbing over	2000	
Birds	*Falco subbuteo*	Hobby		Green listed		Schedule 1	Hirundines, large invertebrates	Mosaic of trees and heath	Manage disturbance	2014	
Birds	*Streptopelia turtur*	Turtle Dove		Red listed	BAP		Seeds	Mosaic of trees and heath	Extinct but may return	Extinct (1993)	
Birds	*Caprimulgus europeaus*	Nightjar		Red listed	BAP	Schedule 1	Invertebrate prey (moths)		Manage disturbance	2014	
Birds	*Phylloscopus sibilatrix*	Wood Warbler		Red listed	BAP		Invertebrate prey		Leave areas of oak/birch woodland	Extinct (1991)	
Birds	*Lullula arborea*	Woodlark		Amber listed	BAP	Schedule 1	Seeds, invertebrates	Bare ground	Manage disturbance	2014	
Birds	*Sylvia undata*	Dartford Warbler		Amber listed		Schedule 1	Invertebrate prey	Gorse, mature heather	Manage gorse & disturbance	2014	
Birds	*Regulus ignicapilla*	Firecrest		Amber listed		Schedule 1	Invertebrate prey	Evergreen trees and shrubs	Retain some vertical evergreen structure	2014	
Birds	*Loxia curvirostra*	Common Crossbil		Amber listed		Schedule 1	Conifer woodland	Conifer woodland	Retain some mature pine trees	2014	
Fungi	*Hericeum erinaceus*	Bearded Tooth			BAP			Deadwood	Leave deadwood	2002	
Fungi	*Gestrum lageniforme*	Flask Earthstar		NT				Soil, litter	???	1999	
Fungi	*Boletus aereus*			NT				Oak broad-leaved woodland	???	1981	
Bryophytes	*Dicranum spurium*		NS	VU	BAP		Shelter by leggy heather	Wet and dry heathland with mature heather	Always leave some areas to reach maturity	1992	A further 2 nationally scarce bryophytes and 2 regionally important species have been
Vascular plants	*Chamaemelum nobile*	Chamomile	Red list	VU	BAP			Short turf on acid soils	Cattle grazing	2014	A further 14 regionally important species and 16 England only Red Data Book species have
Vascular plants	*Centunculus minimus*	Water-purslane	Red list	NT				Short, damp turf on acid soils	Cattle grazing, track ways	2014	A further 14 regionally important species have
Vascular plants	*Cuscuta epithymum*	Common Dodder	Red list	VU			Host plants	Early to mid successional heathland	Create bare ground??? Grazing?	2014	A further 14 regionally important species have
Vascular plants	*Lycopodiella inundata*	Marsh Club-moss	NS	EN	BAP			Bare peaty soil	Cattle grazing	2014	A further 14 regionally important species have
Vascular plants	*Radiola linoides*	Allseed	Red list	NT				Short, damp turf on acid soils	Cattle grazing, track ways	2014	A further 14 regionally important species have
Vascular plants	*Anagallis minima*	Chaffweed	Red list	NT				Short, dam turf on acid soils	Cattle grazing, track ways	2014	A further 14 regionally important species have
Arachnids	*Dipoena inornata*		Na		BAP		Invertebrate prey	Mature heathland overhanging sandy banks	Scrapes next to mature heather	2012	A further 6 Na and 25 Nb species have been
Arachnids	*Walckenaeria corniculans*		Na		BAP		Invertebrate prey	Mature heathland (also beech litter)	Always leave some areas to reach maturity	1960s	A further 6 Na and 25 Nb species have been
Arachnids	*Tapinocyba mitis*		Nb		BAP		Invertebrate prey	Litter under heath and pine	Always leave some areas to reach maturity	1960s	A further 6 Na and 25 Nb species have been
Arachnids	*Centromerus brevivulvatus*		NR, RDB3	RDB3			Invertebrate prey	Mature heathland (also beech litter)	Always leave some areas to reach maturity	1960s	A further 6 Na and 25 Nb species have been
Arachnids	*Haplodrassus dalmatiensis*		Nb		BAP		Invertebrate prey	Early to mid successional heathland	Burning, cutting, scraping & mowing	1960s	A further 6 Na and 25 Nb species have been
Orthoptera	*Grilus camprestris*	Field Cricket	NR, EN	EN	BAP	Schedule 5	Grazed **Wavy Hair-grass** (U2)	Mosaic of grass and bare ground	Cattle grazing & bare ground creation	2014	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Lucanus cervus*	Stage Beetle	Nb		BAP	Schedule 5	Wood in contact with ground	Deadwood	Leave deadwood	????	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Cicindela sylvatica*	Heath Tiger-beetle	Na		BAP		Invertebrate prey	Bare ground	Create bare ground	2014	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Anisodactylus nemorivagus*	Heath Short-spur	Na		BAP		Invertebrate prey	Bare ground	Create bare ground	2014	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Aleochara fumata*		NR	RDB - Insufficiently			???	???	???	1989	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Hylis olexi*		NR	RDB3			**Mature beech**	Deadwood	Leave deadwood	1996	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Ampedus cinnabarinus*		NR	RDB3			**Mature birch & beech**	Deadwood	Leave deadwood	2014	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Cryptocephalus biggutatus*		NR	RDB2 - VU			**Cross-leaved Heath**	Bogs, humid and wet heath	Always leave some areas to reach maturity	2014	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Dieckmanniellus gracilis*		NR	RDB3			**Water-purslane**	Bogs, damp tracks on acid soils	Tracks keep habitat sustained	1996	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Coleoptera	*Pelenomus olssoni*		NR	RDB3			**Water-purslane**	Bogs, damp tracks on acid soils	Tracks keep habitat sustained	1990	A further 5, Na, 33 Nb, 3 NS and 3 regionally important species have been recorded
Lepidoptera	*Plebejus argus*	Silver-studded Blue	Nb	VU	BAP		Bell Heather, ant hosts	Bare ground	Create bare ground	2014	A further 1 Na and 20 Nb species of Lepidoptera have been recorded
Lepidoptera	*Hipparchia semele*	Grayling		VU	BAP		Grasses	Bare ground	Create bare ground	Extinct (1980s)	A further 1 Na and 20 Nb species of Lepidoptera have been recorded
Lepidoptera	*Paracolax tristalis*	Clay Fan-foot	Na		BAP		Oak	Dead oak leaves	Leave deadwood	2004	A further 1 Na and 20 Nb species of Lepidoptera have been recorded
Diptera	*Cheilosia nigripes*		NR				Nectar	Unknown	Unknown	1984	A further 9 NS species of fly have been
Diptera	*Callicera aurata*		NR				Nectar (**bramble and rose**)	Rot holes	Leave deadwood	1984	A further 9 NS species of fly have been
Diptera	*Eutolmus rufibarbis*	Golden-tabbed Robber-fly	NR				Invertebrate prey	Dung	Cattle grazing	2012	A further 9 NS species of fly have been
Diptera	*Asilus crabroniformis*	Hornet Robber-fly	NS		BAP		Invertebrate prey	Bare ground, dung	Create bare ground	2013	A further 9 NS species of fly have been
Diptera	*Thyridanthrax fenestratus*	Mottled Bee-fly	NR		BAP		Sand wasp hosts	Bare ground	Create bare ground	2014	A further 9 NS species of fly have been

Hymenoptera	*Ectemnius borealis*		NR	RDB3	Nectar, prey (**flies**?)	Deadwood & woody stems	Leave deadwood	1989	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded
Hymenoptera	*Mimusena spooneri*		NR	RDB3	Nectar	Unknown	Unknown	1993	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded
Hymenoptera	*Diodonotus insidiosus*		NR	RDB3	Nectar & **aphids**	Bare ground	Create bare ground	2007	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded
Hymenoptera	*Hylaeus incongruus*		NR	RDB3	Pollen & nectar	Woody stems	Leave deadwood	2007	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded
Hymenoptera	*Andrena florea*		NR	RDB3	Nectar & **white bryony** pollen	Bare ground	Create bare ground	1994	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded
Hymenoptera	*Halictus confusus*		NR	RDB3	Pollen & nectar	Bare ground	Create bare ground	1989	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded
Hymenoptera	*Sphecodes scabricollis*		NR	RDB3	Nectar & **mining bee hosts**	Bare ground	Create bare ground	2007	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded
Hymenoptera	*Nomada fulvicornis*		NR	RDB3	Nectar & **mining bee hosts**	Bare ground	Create bare ground	2012	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded
Hymenoptera	*Ceratina cyanea*	Blue Carpenter Bee	NR	RDB3	Pollen & nectar	Woody stems	Leave deadwood	1992	A further 14 Na, 22 Nb, 3 ns and 3 regionally important aculeates have been recorded

NR = Nationally rare, NS= Nationally scarce, Na=Nationally scarce a, Nb=Nationally scarce b, EN= Endangered, VU=Vulnerable, NT=Near Threatened, BAP=Biodiversity Action Plan

Operations likely to damage the special interest

Site name: Iping Common, West Sussex

OLD1000461

Ref. No.	Type of Operation
1	Cultivation, including ploughing, rotovating, harrowing, and re-seeding.
2	Grazing.
3	Stock feeding.
4	Mowing or other methods of cutting vegetation.
5	Application of manure, fertilisers and lime.
6	Application of pesticides, including herbicides (weedkillers).
7	Dumping, spreading or discharge of any materials.
8	Burning and changes in the pattern or frequency of burning.
9	The release into the site of any wild, feral or domestic animal*, plant or seed.
10	The killing or removal of any wild animal*, including pest control.
11	The destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould and turf.
12	Tree and/or woodland management+.
13a	Drainage (including the use of mole, tile, tunnel or other artificial drains).
14	The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
15	Infilling of ponds and pools.
20	Extraction of minerals, including peat, sand and gravel, topsoil and subsoil.
21	Construction, removal or destruction of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, or the laying, maintenance or removal of pipelines and cables, above or below ground.
22	Storage of materials.
23	Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.
26	Use of vehicles or craft likely to damage or disturb features of interest.
27	Recreational or other activities likely to damage or disturb features of interest.
28	Game and waterfowl management and hunting practices.

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* ‘animal’ includes any mammal, reptile, amphibian, bird, fish or invertebrate.

\+ including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management.