



NOTICE OF MEETING

TRAFFIC, ENVIRONMENT & COMMUNITY SAFETY SCRUTINY PANEL

TUESDAY 1 FEBRUARY 2022 AT 3.30PM

COUNCIL CHAMBER, SECOND FLOOR, THE GUILDHALL

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Membership

Councillor Lee Mason (Chair)
Councillor Matthew Atkins
Councillor Stuart Brown

Councillor Hannah Brent (nee Hockaday)
Councillor Charlotte Gerada
Councillor Leo Madden

Standing Deputies

Councillor Simon Bosher
Councillor Ryan Brent
Councillor Graham Heaney
Councillor Ian Holder

Councillor Lee Hunt
Councillor Benedict Swann
Councillor Rob Wood

(NB This agenda should be retained for future reference with the minutes of this meeting).

Please note that the agenda, minutes and non-exempt reports are available to view online on the Portsmouth City Council website: www.portsmouth.gov.uk

A G E N D A

1 Apologies for Absence.

2 Declarations of Members' Interests

3 Minutes of the Previous Meeting.

The minutes of the meeting held on 25 January will follow.

4 Review into improving biodiversity in urban Portsmouth. (Pages 5 - 276)

The panel will hear from the following witnesses:

Tipner

- Tristan Samuels, Director of Regeneration
- Megan Carter, Senior Regeneration Manager

Portsdown Hill

- Richard Jones, Portsdown Hill Countryside Officer

Farlington Marshes

- Chris Lycett, Reserves Officer, Hampshire & Isle of Wight Wildlife Trust

Milton Common & Eastney Beach

- Pete Roberts, Ranger

Lakeside North Harbour

- Simon Bateman, Lakeside Asset Manager

Biodiversity Enhancements of Flood Defence Work in the North and South of the City.

- Guy Mason, Coastal, Highways and Drainage Team Manager
- Lyall Cairns, Head of Coastal Partnership

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Agenda Item 4

Biodiversity on Portsdown Hill

Notes for TECS Scrutiny Panel on Biodiversity 01 02 2022

PCC-maintained public open space on Portsdown Hill is managed to maintain a variety of grassland and scrub habitats with intermediate communities in a mosaic of optimal proportions for biodiversity, that also enables easy public access. The core area is the SSSI (55ha), a similar area of non-SSSI land is managed to extend and complement the SSSI, with the focus on species-rich calcareous (chalk) grassland.



Portsdown SSSI June 2019

Over the last 25 years management has been changed on 13ha of low ecological interest land such as agricultural fields and mown amenity grassland so that they now support much more wildlife. This has been assisted by the translocation of seed and plants from intact communities elsewhere on the hill. The use of Portsdown gathered seed sources helps establish locally adapted plants.



Former agricultural land July 2021

The aim of the management is to reverse the widely reported decline of biodiversity. Biodiversity loss is not just the disappearance of species but also the reduction of population sizes (bio-abundance) and genetic variation. The best way of reversing this is to re-establish a connected ecosystem that allows a flow of plants, animals and fungi.

Connecting wildlife-rich sites along the Portsdown escarpment would bring considerable biodiversity benefits. This accords with the DEFRA's Nature Recovery Network ^{1,2}.

Threats to biodiversity include the lack of appropriate management, invasive species and pollution such as nutrients and litter.

Any increase in biodiversity requires that monitoring occurs. The key sites on Portsdown are surveyed, and the data is passed on to biological recording schemes.

Richard Jones

Portsdown Hill Countryside Officer

Parks and Open Spaces, Culture, Leisure and Regulatory Services

1 www.gov.uk/government/publications/nature-recovery-network/nature-recovery-network

2 www.documents.hants.gov.uk/biodiversity/MappingtheHampshireEcologicalNetworkFinalReport.pdf

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DRAFT

2022 - 2026

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0.1 Preamble

This management plan has been drawn up by the Portsdown Hill Countryside Service, which is currently responsible for most of the publicly owned land on Portsdown Hill, including the adjacent Site of Special Scientific Interest (SSSI). The plan covers the land outside the SSSI and it should be read in conjunction with SSSI Management Plan, Jones (2021) and successor documents.

The purpose of this document is to describe, evaluate and propose management for the sites. The aim is to protect wildlife and its habitat whilst promoting public enjoyment. The land is divided up into the field numbers allocated by the Rural Land Registry and is a mixture of former arable fields, grassland, woodland and chalk pits.

The plan's format is based on the Countryside Management System, Alexander, (2005).

0.2 Summary

Portsmouth City Council land on Portsdown Hill that lies outside the SSSI contains substantial fragments of calcareous grassland. These are relics from the time when the hill and adjacent area was much less developed and subject to intensive land use. There is also a variety of wildlife rich habitats such as former arable land, scrub, grassland, hedges, wooded and non-wooded chalk pits.

The most significant feature is that of former calcareous grassland that has been cultivated or managed for amenity without reference to its wildlife value. There is an opportunity to continue to restore species-rich grassland to the land that was formally farmed and increase the biodiversity of mown open space. Other habitats such as hedgerows, woodland and scrub form a mosaic of habitats that increase the biodiversity and amenity of the local area. The aim is to manage the complex of sites outside Portsdown Hill SSSI in such a way that they complement the ecological value SSSI by extending and connecting with similar habitats across the wider landscape.

Management has to be mindful of the area's rich archaeology and history which, along with the prominent geology, adds visitor interest. Interconnected flower-filled grassland with a variety of viewpoints makes the hill an attractive destination and a network of paths and walkways will encourage people to appreciate the area.

Considerations of the wider environmental issues are factored in so that appropriate recognition is given to problems of climate change, biodiversity loss and unsustainable activity. In essence if the land not used for countering climate change and biodiversity loss there should be a very good reason.

DESCRIPTION

1.1 General information

This plan refers to a group of sites that are relatively small in the context of the wider landscape. They are widely scattered and have different land use histories. Generic information that refers to all sites is given below under the relevant heading. Additional site-specific information is given in Section 1.1.5.

Table 1 Non-SSSI Land on Portsdown Hill Information Summary		
Site: Portsdown Hill, also known as Ports Down , see OS maps	Local authority: Portsmouth City Council.	OS Sheets: 1:50,000 - 196, Explorer -119, 1:10,000 - SU60NE & SU60NW
Status: Public open space	OS Grid. Ref: SU 623068 in west to SU 666064 in east.	Photographic cover: Archive: Map library University of Portsmouth, Portsdown Hill Countryside Service.
Soil Survey: Soils of south east England No 6 (1:250000)	Geological survey: Fareham No 316 (1:63,360)	Owners: Portsmouth City Council.
Site Manager: Richard Jones Line manager Adrian Rozier	Address: Portsdown Hill Countryside Service, Fort Widley, Portsdown Hill Road, Portsmouth. PO6 3LS 023 9238 9623 Richard.jones2@portsmouthcc.gov.uk	Total area: 58 ha
		Plan prepared by: Richard Jones
		Last updated: 14/09/2021
Holding numbers: 15/130/8002		

1.1.1 Location

Portsdown Hill lies immediately to the north of the City of Portsmouth. It is on the urban fringe and clearly marks the boundary between the northern boundary of Portsmouth and Fareham and rural South East Hampshire. The area described in this plan is crossed by several roads, notably Portsdown Hill Road (B2177), Widley Walk and the London Road out of Cosham.

1.1.2 Tenure

This is not a legal document.

The land is owned by Portsmouth City Council.

1.1.3 Relationships with any other Plans or Strategies

Many sites covered in this plan are adjacent to [Portsdown Hill SSSI](#), which is covered by a management plan, Jones, (2021). This plan has the same relationships of that plan with other plans and legislation/strategies apart from those relating to SSSIs. All of the basic administrative and house-keeping functions that are come to both plans are described in the plan that covers the SSSI land.

See [Portsmouth City Council's Adopted Plan](#) area, Portsmouth City Council, (2012).

There is no Biodiversity Action Plan for Portsmouth.

1.1.4 Management Infrastructure

Management of the sites is carried out by Portsdown Hill Countryside Service (PHCS), which is based at Fort Widley. The PHCS has a single employee (Portsdown Hill Countryside Officer). Practical management of the site is carried out by the Portsdown Hill Countryside Officer, contractors, volunteers and various community groups. Most of the volunteer work is done by the Portsdown Hill Conservation Volunteers who meet weekly and one weekend a month.

Certain legal and administrative functions are carried out by other departments within Portsmouth City Council. Under the control of the Park's department (and in coordination with conservation management aims produced by the PHCS) staff mow areas of amenity grassland and clear litter.

A friends group ([the Friends of Portsdown Hill](#)) represent some of the local views on the site and the wider area, in particular taking an interest in the site's history and wildlife; there are close links between the FoPH and the conservation volunteers.

Gas, water, telephone and electricity companies have mains/cables with wayleaves crossing the site. Some of these are substantial and need to be considered when carrying out constructive works.

Most of the land is directly managed by the PHCS. Other areas are the responsibly of Portsmouth City Council's Parks department who administer the grass cutting and litter clearance which the PHCS.

Some roadside verges and grassland areas surrounded by roads are managed by Colas through a PFI. Liaison with Colas results in the management of this land being in accordance with the aims of this plan.

1.1.5 Sites

This plan refers to 20 sites of which 18 are registered under Rural Land Registry field numbers as parcels of land. Where the sites are similar, share a common history and are adjacent they are grouped together, see Table 2.

Table 2 Sites covered in this plan

(A)	3	Widley Dell	su6508293	
(A)	4	Two Dells Trail	su65064677	
(A)	5	Fort Widley Nature Trail, Triangular Meadow	su65068553	
(A)	1	Children's Wood Field and walkway	su65069967	
(A)	2	Land around Widley Farm field	su66061055	
(A)	3	Verge North of viewpoint car park	su66062345	
(B)	1	Land surrounding Main Viewpoint car park	su66063137	
(B)	2	Candy's Pit	su66065934	
(B)	3	Large road island south of The George PH	su66068237	
(B)	4	Open space east of Old A3	su66067025	
(B)	5	Farlington Avenue Meadow	su67062530	
(B)	6	Land south-west of Cliffdale Gardens	su66061011	
(C)	1	Land south of Fort Purbrook	su67068432	
(C)	2	Land east of Crookhorn lane	su68061831	
(C)	3	Verges south Fort Purbrook Farlington Redoubt	su680063	
(D)	1	Paulsgrove Chalk pit	su63065157	
(E)	1	Top field	su64063967	
(E)	2	Mill Lane Southwick road walkway	su645067	
		For information		
		Field numbers relating to SSSI		
		SSSI comps 7-10	su65067931	
		SSSI comps 1-6	su64062852	

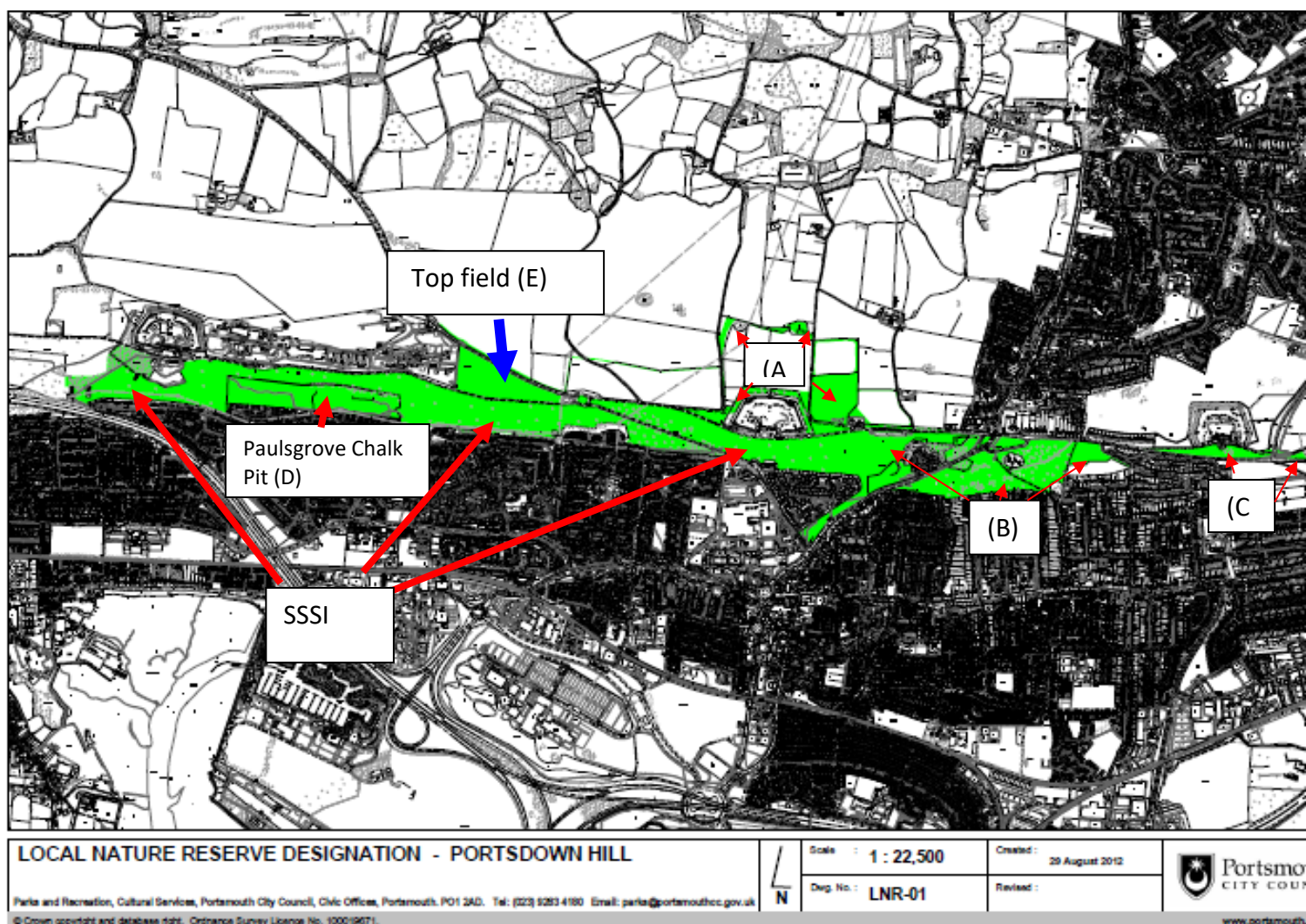


Fig 1 Map of sites and location of SSSI

1.1.5.1 Open Space North of Portsdown Hill Road (A)

Land east of Fort Widley / Land west of Fort Widley
 Fort Widley Nature trail and Triangular Meadow
 Children's wood field
 Land around Widley Farm field
 Two Dells Trail
 Verge North of Viewpoint car park

There are 8 fields north of Portsdown Hill. The road runs along the ridge of the hill resulting in those fields on top of the Hill having a greater presence of chalk and therefore a greater

proportion of calcareous grassland. The ground falls away to the north and chalk is overlain with tertiary, non-calcareous deposits.

These sites can be considered together as they form a geographic unit, with the same aspect and similar land use history except the verge north of the viewpoint car park.

Land east of Fort Widley / Land west of Fort Widley

These two sites are of a similar area, aspect and appearance. They largely comprise open grassland with isolated mature hawthorn bushes. The grassland is generally diverse with localised areas of low diversity. Like much of the mown amenity grassland on Portsdown it is made up of downland, which has been partially reseeded and enriched with topsoil.

The two sites are close to Fort Widley and would have been disturbed during the building of the fort during the 1860's and road building.

Two Dells Trail / Widley Dell

Two strips of predominantly grassland in which a walkway is bounded by either fences or hedges. It was under agricultural grass until the 1980s. Widley Dell is a wooded chalk pit off Widley Walk that marks the Eastern end of the Two Dells Trail. Mature Ash, Lime and Sycamore trees dominate the canopy. Hazel forms part of the understory and Elm is present. Pedestrian access is via a circular path with entrance points to the east and west.

Fort Widley Nature Trail / Triangular Meadow

These areas are immediately next to the dry moat that surrounds Fort Widley. Some the land lies within the Scheduled Ancient Monument designation associated with Fort Widley and consideration needs to be given to preservation of historic features alongside those of habitat conservation. During the construction of the fort the whole area would have been extensively disturbed. It seems likely that that calcareous grassland would have been established on the bare chalk and scrub would have been suppressed during the maintenance of the fort's defences.

Scrub developed in the years leading up to the 1990s as the areas received little management during this time. In recent years scrub clearance aimed at preventing bushes encroaching on the grassland and some grassland management, (haymaking and cut and clear) has occurred. In the 1990s a hedge was planted to connect scrub to the roadside hedgerow system.



Figure 2 View north on Two Dells Trail off Mill lane

Children's wood field

Situated north-west of the Churchillian pub. It slopes downhill to the north and was formerly an agricultural field under grass. Since the early 1990s it has been open public access and has largely been mown as amenity grassland. From 2000 approximately 1 ha has been cut as a late hay crop in order to increase the botanical diversity.

In 1991 and 1992 five blocks of woodland were planted at the edge of the site. This has produced a mixed deciduous woodland. Hazel, ash, blackthorn, holly, field maple, hawthorn are present. Some of the plantations are subject to heavy pressure and littering and most of the understorey has been flattened.



Land around Widley Farm Field

This is a fenced walkway of approximately 5m wide around an arable field. It

was established in 2007. Since it was established it has grassed over with a sward dominated by *Arrhenatherum elatis*, false oat grass.

Figure 3 Preparing grass for baling Children's wood field (top)

Seed heads of flowers established on former species poor grass ley (bottom)

Verge North of Viewpoint car park

It is continuous with the land around Wildly Farm field but is largely separated by a tall wide blackthorn dominated hedge. It contains evidence that it was fine calcareous grassland with localised attempts to enrich the soil.

1.1.5.2 Open space south and east of SSSI (B)

Candy's pit

Open space east of London Road*

Islands south of The George *^

Farlington Avenue Meadow

Land south west of Cliffdale Gardens*

Land surrounding Main Viewpoint car park*

* indicates PCC Parks department has some responsibility for general mowing and bin provision

^some areas managed by Colas

Largely on the same contour as the SSSI is a complex of 7 areas that are recognised as fields. They are a mixture of open space amenity grassland of a variety of levels of ecological interest to chalk pit dominated by secondary woodland.

Candy's pit

It is one of a group of 4 chalk pits. On the opposite (eastern) side of the road is a smaller chalk pit known by some as Foxdell, which can be considered a continuation of Candy's Pit. Immediately to the south is a larger chalk pit that is now a mobile home park, known as Cliffdale Gardens. To the east (220 m) is Collyer's Pit a small chalk pit containing private housing. Neither Cliffdale Gardens nor Collyer's pit form part of this plan

The chalk pit and associated surrounding land occupies 1.56 ha. The site is immediately west of the London Road, approximately 1 km north of Cosham, grid reference SU666064. It lies 200m east of Portsdown Hill SSSI.

The chalk pits has been put to many uses over time other than chalk extraction. They have been used for defensive and recreational purposes. There are no houses in the pit now; however, there were at least two in the past. They were demolished in the 1940s and 1980s. The houses had tea gardens and many naturalized cultivated plants are found in the pit.

Open space east of London Road.

The majority is mown amenity grassland, managed in the main by Portsmouth City Council's Parks department. Some conservation management is carried out by the PHCS. Despite extensive reseeding and disturbance chalk grassland species are present, so the grassland is reasonably diverse. Areas supporting a diverse flora have a mowing regime consisting of a single winter cut and clear.

A wooded chalk pit, (Foxdell) occupies a central position in the site. Trees and scrub extend from the pit. Sycamore dominates but there is a mix of beech, ash and hawthorn. The understory is dominated by ivy.

Islands south of the George Pub

These areas of grassland are surrounded by roads and have been substantially disturbed by road realignment work in the 1970s. The bare chalky nature of the soil has led to the establishment of diverse calcareous grassland. An Iron Age enclosure was discovered during the road works.



Figure 4 Grassland on traffic islands

are cut and cleared annually. There are areas of bramble and scrub with emergent trees, notably sycamore and black poplar.

Land surrounding Main viewpoint car park

Intensively used mown grassland dominated by ryegrass surrounds the main car park. Isolated hawthorn trees are scattered over the grassland. Where the area abuts the fenced off top of Clifdale Gardens secondary woodland dominated by sycamore has established. Substantial areas retain a diverse assemblage of calcareous grassland plants and areas taken out of the standard mowing regime support a many characteristic species of calcareous grassland.

1.1.5.3 Open space near Fort Purbrook (C)

Land south of Fort Purbrook

Land off Crookhorn Lane

Verges south of Fort Purbrook and Farlington Redoubt *

* indicates PCC parks department has some responsibility for general mowing and bin provision

Three parcels of land near Fort Purbrook

Land south of Fort Purbrook

A linear strip parallel to the road and separated from it by a hedge/band of scrub. A well-used track runs the length of it. The ground has been disturbed by the construction of the fort. This was colonised by grassland and then more recently scrub. Although little grassland remains what remains there is botanically diverse. Substantial numbers, several thousand, of

Farlington Avenue Meadow

This is predominantly a grassland site. *Arrhenatherum elatis* (false oatgrass) dominates the sward with calcareous grassland species well represented. The site is cut and cleared if haymaking doesn't occur. Planted scrub occupies 15% of the area.

In 2009 the eastern limb of the site was considerably widened by realigning the boundary fence that separated a narrow walkway from a grazing paddock. The land was then for conservation and public access.

Land south west of Clifdale Gardens

Predominantly amenity mown grassland that shows signs of reseeding and disturbance. Areas of calcareous grassland that have been taken out the standard mowing regime support diverse flora. They

Anacamptis pyramidalis (pyramidal orchid) are found. Recent clearance work suggests that grassland species will return following scrub clearance.

Land off Crookhorn lane

A triangle of land surrounded by tall established hedges. Calcareous grassland has been overtaken by scrub invasion. Much of this scrub has been cleared but its re-growth is vigorous.



Figure 5 Cut and clear south of Fort Purbrook

Verges south of Fort Purbrook and Farlington Redoubt

Mostly verges on the northern side of Portsdown Hill road between mature hedges and roadside pavement. The verges the eastern extreme of the land extends 5 metres beyond the hedge line into the field to a fence.

1.1.5.4 Paulsgrove chalk pit (D)*

* indicates PCC parks department has some responsibility for general mowing and bin provision

Paulsgrove chalk pit is a former quarry site on the southern edge of the SSSI. It has been re-landscaped for public access; of this the western end, 2.91 ha, is still designated as part of the adjacent SSSI. The prominent chalk cliffs are a landmark feature.



Figure 6 *Hippocrepis comosa* In Paulsgrove chalk pit

and bin provision

The floor of the older eastern end of the chalk pit was levelled and reseeded in the 1970s. It has a moderately diverse flora dominated by meadow fescue. The western end of the site was substantially re-landscaped in 1998. It was reseeded using seed from the adjacent SSSI and harvested seed from chalk grassland sites in Dorset. *Brachpodium pinnatum* (Tor grass) is the spreading here, the only place on the hill where it is growing. It is likely that it was introduced in the seed from Dorset. PCC parks department has some responsibility for general mowing

1.1.5.5 Top field and walkway between Mill Lane and Southwick Road (E)

Top field

The top field is a 7 ha field site that extends over the ridge of the Hill. Roughly triangular in shape it is bounded by roads to the north (B2177) and south (James Callaghan Drive). The Western boundary is formed by the perimeter fence of a prominent naval research establishment.



Figure 7 Cattle grazing Top Field

There is very little topsoil; chalk and flint dominate. Soil analysis indicates a low level of phosphate, index 1. This makes it suitable for reversion to species-rich grassland.

Historically, the field was downland until the early 1960s. The site was under arable production until 2010. The site has been reseeded using seed from downland vegetation on adjacent areas of the hill. Scrub blocks have been established and a hedgerow surrounding the site.

The scrub and hedges provide shelter for reptiles and nesting birds, and to act as a windbreak for downland species. An insect survey, Pinchen (2014), recorded several RDB species.

It occupies an exposed prominent hilltop position and has impressive views north and south.

Southwick Road – Mill Lane walkway

A walkway (1.5km) around the field margins of some 6 metres width extends from the North side of Southwick Road (B2177) to Mill Lane. It crosses Pigeon House Lane.

The walk has been delineated from the farmland with a fence and access points installed. The walkway and hedge was overgrown in places. Access has been improved and the hedge laid and replanted with the help of The Tesco Bags of Help Scheme in early 2017.

1.2 Environmental Information

1.2.1 Physical

1.2.1.1 Climate

There are few weather readings available from the site. The nearest meteorological recording station is on Southsea Common, 7 km to the south. The highest monthly average temperature occurs in July and August (approximately 17.5°C). The lowest monthly average is in January and February, (approximately 5.0°C).

Portsdown Hill is a relatively warm site in an area that enjoys warmer weather than much of the country. Winter temperatures remain higher than inland sites due to the proximity of the sea and large urban area. Its south facing slopes are protected from cold northerly winds and therefore are noticeably warmer than the surrounding area during cold weather. Shelter from wind can be found within the scrub, woodland and chalk pits whatever the wind direction.

High summer temperatures occur due to the sites with southerly aspects. The average yearly rainfall is 800 mm, which is 100 mm higher than the coast.

1.2.1.2 Geology

The underlying cretaceous deposits are responsible for the topography and soil chemistry, thus it is highly significant.

The chalk extraction has exposed prominent cliffs. Unlike the large quarries at Wymering and Paulsgrove, the cliff at Candy's Pit is cut through the fold of the anticline in a north south orientation. This gives an uncommon view of the strata and is of interest from a geological perspective.



Figure 8 Chalk exposure Candy's Pit

Portsdown Hill is the product of an anticline in Upper Cretaceous chalk (84 to 90 million years old). It is considered an out-lier of the South Downs. The chalk forms a continuous stratum that outcrops to the north to form the South Downs and to the south where it forms chalk cliffs on the Isle of Wight. A borehole found the chalk to be 400 metres thick. Details of the geology are viewable at the [UK Onshore Geological Library](#).

The highest point of Portsdown's ridge is 120 metres. Within the plan the height ranges from 50 to 116 metres. The highest point is within the Top Field.

1.2.1.3 Soil

The soil classification of England and Wales (Avery, 1980) place the soils of Portsdown Hill within the Upton 1 series where they are described as a 'chalky grey rendzina' with some loessial silt. An average soil pH of 7.83 has been recorded. The soil becomes more clayey at the base of the escarpment where the depth reaches 30 cm due to Coombe deposits. Higher up the slope the soil forms a layer less than 3 cm over considerable areas. There is a considerable variation in soil depth over short distances *i.e.* less than a metre. These variations are caused by historic disturbance such as the construction of defensive structures, trackways and turf stripping.

Analysis of soils suggests it is suitable for conservation of calcareous grassland. Soil chemistry results on all sites in 2016 show pH to be high (> 7.7) c.f. guidelines of pH 6.5 and phosphorous to be low (< 10ppm) c.f. of 26ppm. The guidelines are based on minima for agricultural for productivity rather than conservation. See appendix 2

1.2.2 Biological

Many biological records exist and [vegetation](#) surveys have been carried out in the last ten years. Other older records often relate only to 'Portsdown Hill' and pre-date the designation of the SSSI so it is not possible to separate them, (Appleton *et al*, 1975). However, most of the characteristic calcareous grassland species which are well represented on the SSSI are

also found elsewhere on Portsdown Hill. The process of compiling the available information is ongoing. See [species list](#).

1.2.2.1 Flora

Many species of plant found on the SSSI are also found elsewhere on Portsdown Hill. Many characteristic species of chalk downland are found in grassland that has been taken out of the standard amenity mowing regime. Surveys of grassland sites reveal diverse calcareous grassland with a history of disturbance.

In the Top Field arable plants, *e.g.* Venus Looking Glass, Prickly Poppy and Rough Poppy are present along with many other plants associated with arable cropping. See fig 9.



Figure 9 Rough poppy and Venus Looking-glass

1.2.2.2 Fauna

1.2.2.2.1 Invertebrates

No up to date investigation of invertebrates has been apart from the Top field, (Pinchen, 2014) it can be assumed a diverse fauna exists as the habitats range from open calcareous grassland, long-established hedgerows woodland and sheltered chalk pits.

1.2.2.2.1.1 Insects

Many species found on the SSSI are also found elsewhere on Portsdown Hill, these include, *Asilus crabroniformis*, (Hornet Robber fly). Areas of flowery grassland support many pollinating insects.

An environmental survey of Paulsgrove Chalk pit (Hampshire Ecological Services, 1995) carried out prior to the 1998 landscaping work noted a predominantly bare chalk habitat with small areas of calcareous grassland and an abundant insect community. Several red data book (RDB) insect species were found. The subsequent landscaping work aimed to retain these species and to safeguard their habitat.



Figure 10 *Nemophora metallica* on Field Scabious

Two insect surveys of the Top Field, (Pinchen, 2014, 2018) listed several BAP species including Brown banded bumblebee, (*Bombus humilis*)

1.2.2.2.1.2 Molluscs

Snails are abundant on all of the sites but there is as yet no survey data. An observer noted a considerable number and diversity of snails on the chalk rubble at the base of the cliff face in Candy's Pit. It was thought that moisture and shelter provided by the chalk debris produced ideal conditions for algal growth and thus the snails.

1.2.2.2.2 Birds

The variety of habitats and the prominence of Portsdown Hill provide good habitat for birds either for breeding or stopping over during migration. Skylarks hold territories in the Top Field throughout the breeding season and Peregrines nest in Paulsgrove Chalk pit. Yellowhammer breed on the site. The post arable vegetation attracts finches and stonechats and many other migrants are seen on passage in the spring and autumn. The sites host winter thrushes and summer warblers. Passage migrants such as Redstart, Spotted flycatchers and Wheatears are regularly seen.

1.2.2.2.3 Mammals

Notable species include Harvest Mouse and Hare in the Top field. Elsewhere Rabbits, Badgers, Foxes, Field Mouse, Yellow-necked Mouse, Common Shrew are reported. Roe deer and Muntjac are present.

1.2.2.3 Communities

1.2.2.3.1 Arable plants

Around half a hectare of the Top Field is managed to maintain notable arable plants. It is cultivated each year to maintain this habitat.

1.2.2.3.2 Grassland

There is a variety of grassland types that reflect the management history. Most, if not all, are influenced by the underlying calcareous geology.

Within Paulsgrove chalk pit different landscape restoration techniques have given rise to different types of grassland. The grassland in the western end of the site is open, and botanically diverse with many species associated with chalk grassland e.g. *Hippocrepis comosa*, (Horseshoe Vetch), *Anthyllis vulneraria* (Kidney Vetch), *Crepis* sp Hawkbeards. The site is beginning to scrub over with *Ulex europaeus*, Gorse.

The grassland in the eastern end of the chalk pit is a tall vigorous sward dominated by *Festuca pratensis*. Other features are bunds, scrub (including planted blocks), a pond and chalk cliffs.

The Top Field supports a recently established diverse, grassland community (largely introduced from elsewhere on Portsdown).



Figure 11 Cultivating ground for the benefit of arable plants

Mown amenity grassland comprises a large part of the plan area and it shows signs of a mix of factors. Disturbance through engineering projects of different ages, trampling, enrichment, top-soiling and reseeded, agriculture and measures to improve the habitat diversity. This has given rise to enriched species-poor areas ranging to substantial areas of calcareous grassland where the original grassland community is at least partially intact. Where overlying non-calcareous soil occurs in sufficient depth i.e., on the northern slopes of the hill and where past soil importation has occurred then mesotrophic grassland communities occur. These are generally botanically diverse though several years of sympathetic management.

Haymaking and cut and clear operations have been widely applied since 2000. The extent of this management is influenced by the residual grassland biodiversity and the requirement to maintain short turf for public access near car parks.

1.2.2.3.3 Woodland

Woodland is characteristically sycamore-dominated secondary woodland. In Candy's Pit and areas near to an understory of hawthorn and ivy is interspersed with many cultivated species, which reflect the past use as gardens. A small amount of calcareous grassland remains in glades. The woodland developed relatively recently. Photographs from the 1950s and earlier show it to be much less wooded than present.



Widley Dell is a mix of sycamore, ash, lime, hazel. The presence of (*Ulmus*) elm is adds interest. Dutch elm resistant elm have be planted on the site with the intention of encouraging white letter hairstreak butterflies.

In the Children's Wood Field there are several small, recently planted (early 1990s) plantations with a diverse composition, hazel, ash, beech and hawthorn.



South west of the main view point is a commemorative plantation, the Falklands Plantation, planted in 1982. It was established as a beech wood with supporting ash trees. The density of the trees is such that most trees will fail so thinning of ash trees is ongoing.

Figure 12. Hedge north of Children's wood planted in 1996 laid in 2006 (top) and as it is in 2021 (bottom)

1.2.2.3.4 Scrub and hedges

Hedgerows and bands of scrub are distributed across the plan area. On the north side of the hill they are botanically diverse and so appear to be relatively old. It is likely they were cleared (and kept clear for some decades) when the hill

forts were built in the 1860s. There is a substantial amount of scrub at the Fort Purbrook site.

Several hundred metres of hedge planting occurred in the 1990s in the Fort Widley area so that the plants are now tall. Even hedges that have been laid have had time to re-grow to a considerable height, see fig 12.

1.2.3 Cultural

1.2.3.1 Archaeology/past land use

The land described in this plan has a complex archaeology. As part of the HLS application process two Historic Environment Records have been produced [See Historic Environment Record 1](#) and [2.....](#)

1.2.3.1.1 Archaeology

The entire Portsdown Hill area is of archaeological interest any management that includes ground disturbance must have regard for underground features. A notable area of archaeological interest is near Candy's pit. The pit is very close to the site of a Long Barrow and an Iron Age enclosure. Like much of the rest of the Hill it is likely that the area once contained archaeological evidence from many different cultures. The expansion of the pit, road construction and other disturbance destroyed most of this evidence. Chalk extraction has occurred for several centuries and there is evidence of a lime kiln.

In addition to military exercises and disturbances during the world wars, the hill has been used for leisure purposes. Picnicking and tobogganing are well recorded and large fairs were held on part of the site until the early 20th century.

Although there is some evidence of historic occupation on Portsdown much archaeological evidence was lost during the building of five brick hill forts during the 1860's. The Victorian forts, which dominate the skyline today, were obsolete soon after being built. The disturbance that occurred when building the forts, and constructing wartime defences, has left a varied soil profile and surface layer.

1.2.3.1.2 Quarrying and re-landscaping

Several sites of chalk extraction occur across the plan area. Candy's pit and Widley Dell are largely wooded but recognizably the result of quarrying on closer inspection. The largest quarry is Paulsgrove chalk pit. Chalk extraction at occurred from at least the 1850's. A chalk pit of approximate 2 ha is shown on the 1857 6" to one mile map. It has expanded considerably since then, most notably during the 1970s when its chalk was used for motorway construction. The quarry was owned and operated by EEC at this time and has since passed into the ownership of Portsmouth City Council.

Most of the landscaping of Paulsgrove Chalk pit was carried out in two phases. The eastern section was levelled, top soiled and sown with a standard grass mix in the 1980s. Landscaping in the western section was carried out in 1998 as part of a house building scheme in the chalk pit. The chalk and quarrying waste was used to form an infill to create a sloping access to the northwest corner of the chalk pit. The planting specification had several recommendations to promote the establishment of calcareous grassland. They included the

limited use of seeds from elsewhere on Portsdown Hill and the mostly use of seeds from other chalk grassland sites in Dorset.

Areas of calcareous grassland that have established naturally in the chalk pit were scraped together prior to the landscaping work and redistributed after the landscaping work was completed.

1.2.3.2 Present land use

All sites are public open space. Pressure is concentrated around the main viewpoint car parks. Activities include dog walking, picnics and kite flying.

1.2.3.2 Past Conservation management

Conservation management of Portsdown Hill began in 1991 with the formation of the Portsdown Hill Countryside Management Project, which became the Portsdown Hill Countryside Service in 1997. Most efforts have gone into the restoration of the SSSI.

Work on non-SSSI land concentrated on maintaining access features and hedge planting. By the use of third parties some grassland management has been achieved though haymaking. Amendments to the amenity grass mowing regime were implemented by contractors responsible for the grass cutting and latterly by in house Parks staff. The area of land taken out of regular amenity mowing has been increasing year on year. See map, fig 12.



Figure 13 Land outlined in red has been taken out of the amenity mowing regime (as of 2021) and is allowed to grow through the summer. It is variously cut for hay or cut and cleared at the end of the season.

A 10-year Higher Tier Countryside Stewardship Scheme covering both the SSSI and most land described in this plan began in 2017. It funded and formalised the conservation management of many of the parcels of land outside the SSSI. It contained options and capital works aimed at promoting species-rich grassland, well-managed hedges and diverse woodland.

1.2.4 Environmental relationships which may have implications for management

1.2.4.1 Considerations of land to be managed as species-rich grassland

Historically most of the sites would have supported calcareous grassland. Much of this grassland has been disturbed and reseeded at some time in the past and has been mown for amenity purposes for many years. Other areas were cultivated for crops or short term grass leys.

Downland species were largely eradicated from the cultivated land and nutrient levels increased, thus the plants that grow back when the land is returned to conservation management tend to be vigorous species of limited conservation interest. The effects of post-war agriculture on biodiversity are described in Robinson and Sutherland, (2002). Before embarking on an attempt to re-establish calcareous grassland on former arable land it is important to know the levels of nutrients, especially phosphorous.

Repeated cultivation, plus the use of fertilisers and herbicides will have disturbed the soil structure. Characteristic grassland fungi will have been lost along with the effect of their mycorrhiza on plant/soil functioning. The most ecologically diverse grassland is known to be very old. It will obviously take many years for such disturbed ground to once again support a species rich downland plant community again.

The establishment and maintenance of calcareous grassland is greatly assisted by an appropriate level of grazing. Sheep, cattle and horses can all be used. Gibson, (1996); Bacon, (1990).

It has been noted that on land that was previously arable elsewhere on Portsdown Hill downland plant species established themselves within a few years, e.g. *Euphrasia nemorosa*, (Eyebright), *Lotus corniculatus*, (Birdsfoot trefoil), *Leontodon hispidus*, (Rough Hawkbit), *Trisetum flavescens*, (Yellow oat grass), *Clinopodium vulgare*, (Wild Basil).

Fragments of botanically diverse grassland remain in the amenity grassland. It is impractical to graze most of the sites due to heavy public pressure and small size, so it can be mown sympathetically, with arisings being removed, to prevent the build-up of nutrients and thus conserve its ecological interest. A small manoeuvrable tractor with a cut and collect mower is available.

The expanding presence of *Brachypodium pinnatum* (Tor Grass) in Paulsgrove chalk pit has reduced the diversity of the grassland. It appears to be spreading and has the potential to adversely affect the site.

The definition of species-rich can be taken from the DEFRA document [Assessment of eligibility for permanent grassland](#)

How to assess species richness to qualify as semi-improved or species-rich grassland or unimproved, at least 2 of the relevant thresholds for the criteria below must be met.

Criteria 1. Cover of rye-grass and white clover is 10%-30% (GS2/GS5), or less than 10% (GS6/OT2).

2. Cover of wildflowers and sedges is 10%-30% (GS2/GS5) or greater than 30% (GS6/OT2) (excluding creeping buttercup, white clover and injurious weeds).

3. There must be 9 species per square metre or greater (GS2/GS5) or 15 species per square metre or greater (GS6/OT2) identified - list the species identified and for wildflowers their frequency across the field parcel.

1.2.4.2 Arable plants

In land that was recently arable, notable arable plants have appeared. Habitat supporting these plants is rare and it is also of value to overwintering birds and invertebrates. In order to retain this habitat, designated areas will have to be cultivated annually to prevent grassland establishing.

1.2.4.3 Woodland

Where secondary woodland has developed it is dominated by *Acer pseudoplatanus* (Sycamore). Management aimed at encouraging other species (Ash, Elm, Holly, Hazel, Hawthorn), that are present in the woodland at the expense of the Sycamore would increase diversity. Following guidance, (Humphrey and Bailey, 2012), on the provision of dead wood habitats would also increase biodiversity. Dutch elm resistant strains have been planted in order to provide habitat for white-letter hairstreak butterflies. This may be of value in maintaining woodland structure should ash trees be afflicted by ash dieback.

1.2.4.4 Hedgerow and scrub



Figure 14 Paths by hedges have to be kept clear

Hedges and scrub are a valuable addition to the area's wildlife habitats. Nesting birds, reptiles, invertebrates and mammals benefit from this habitat, both as a place to complete their lifecycle and a means of connecting to similar habitats in the wider countryside. The existing hedgerow network is adequate on well-established sites, however on the recently acquired former arable land (Top Field) there is scope for an increase in both hedgerow and scrub.

1.2.4.5 Planting and reseeded provenance

When establishing vegetation, the importance of using suitable local provenance plant and seed sources has been well-stated, Ennos, 2000. All new material should be as local as possible to avoid issues with different morphology, phenology, biochemistry that reduce fitness and obscure the patterns in vegetation variation and its history. (Everett, 2002). Self-establishment, local transplanting, collection of seed elsewhere on the hill are the favoured techniques. The provenance of the hedges and trees planted in the early and mid-1990s is not known.

1.2.4.5 External considerations - climate change, wider landscape biodiversity and the maintenance of ecosystem services

Any land management plan must consider wider environmental issues, notably climate change and the loss of biodiversity from the surrounding landscape. It would be possible, but undesirable to have an effectively managed site with a disproportionately large carbon footprint or other polluting effects that failed to address loss of biodiversity in the adjacent area and beyond. Any land management must have reference to these issues, even if the land is managed for conservation. These issues are addressed at length in the SSSI management plan, 3.6.3

It is important to remove contamination and invasive species from the site and this approach should be encouraged on adjacent land as well. Harmful land use that results in agriculturally related contamination e.g. agrochemicals, excessive faecal bacteria/ phosphate/nitrogen, has no place on the site. Likewise, it should be discouraged in the neighbourhood. Tree planting should avoid the use of tree guards as they will either require removal and disposal or add plastic to the environment if they are left *in situ*. The considerations around using them or not are discussed by Chau *et al*, (2021).

There are stands of vegetation on the plan area and the SSSI that could be profitably used as a seed source for botanically impoverished sites within the plan area or on external sites in the local neighbourhood. Seed collection and green hay strewing has been used effectively and its continued use has many benefits. Bringing in material is to be avoided.

As the sites are not intensively managed for agriculture or recreation, the sites can be considered natural resources that provide ecosystem services to benefit the wider environment. The value of them should be defined and publicised.

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PART 2 EVALUATION AND OBJECTIVES

2.1 Evaluation of features

This chapter evaluates the information from the preceding description. It identifies and confirms the important features and finally identifies and allocates the priorities of the site management objectives.

2.1.1 Evaluation

These sites can be considered valuable natural capital assets in that they generate obvious ecosystem services if they are maintained to support biodiversity.

A considerable value comes from the fact the sites are an extension of wildlife-rich habitat beyond the SSSI to other areas that are also managed for wildlife. The beneficial effect of calcareous grassland corridors is the most notable of these. The wider issues raised in Sutherland *et al* (2006) help place the evaluation in context.

The SSSI is positioned half way along the length of the hill and it therefore has the important role of acting as an ecological core for the numerous calcareous grassland fragments to either side of it. As part of the Hampshire Biodiversity Action Plan a habitat plan for lowland calcareous grassland has been prepared (HCC, 2000). In the plan Hampshire's calcareous grasslands are described as one of the most important semi-natural habitats in the county; being of key importance for 50 Hampshire priority species.

2.1.1.1 Size

The importance of a site generally increases with size (Ratcliffe, 1977). Larger sites can maintain larger, more viable populations and provide a wider range of habitats. Portsdown Hill is important because it is one of the largest expanses of semi-natural vegetation on chalk in Hampshire. Most of this is accounted for by the SSSI, however land described in this plan adds to this area and connects it to other calcareous grassland sites, e.g. grasslands associated with Fort Nelson in the west and the Crookhorn area in the east.

2.1.1.2 Diversity

In addition to a range of grasslands there are hedges, chalk pits and wooded areas. Unusually on chalk, there is a pond.

2.1.1.3 Potential

An opportunity exists to provide a valuable educational resource close to a large centre of population. There is considerable scope for environmental education as there is both abundant biodiversity and easily demonstrated ecological processes. Historical, archaeological and geographical principles can be conveniently conveyed on site.

2.1.1.4 Intrinsic value

The intrinsic value of the site is extremely high as it offers excellent views over to the north to the South Downs and south to Portsmouth, the Solent and Isle of Wight. Chalk grassland supports many attractive species, such as butterflies and colourful flowers. It is the nearest open countryside to the Portsmouth area and if accessibility is retained the public usage will almost certainly increase. The intrinsic value could be increased if a well-cared for attractive

environment were provided over the length of Portsdown Hill to complement the SSSI land. The value of such a large area of high-quality open space for mental and physical wellbeing is considerable.

2.1.3 Summary of Important Features

2.1.3.1 Vegetation

Botanically diverse, (largely calcareous) grassland is a prominent feature of the sites in this plan, the adjacent SSSI and the Portsdown Hill area. Historically it was dominant; today it is fragmented and appears alongside a mix of woodland, scrub and amenity grassland. The grassland can be enhanced and connected whilst maintaining other habitats which increase the area's biodiversity and aesthetics.

2.1.3.2 Species

Uncommon and characteristic species of plant and animal that are associated with lowland calcareous grassland are widespread. Surveys indicate that many taxa are well represented.

2.1.3.3 Access and recreation

Accessible pedestrian routes extend from entry points to form a network of paths that enable a visitor to enjoy wildlife and scenery in the context of a historically significant landscape.

2.1.4 Long-term /Ideal Management Objectives

Management is to be carried out for the foreseeable future with the following objectives

- 1. To maintain, improve, and increase the area of species-rich grassland**
- 2. To maintain and increase biodiversity on areas not managed as species-rich grassland**
- 3. To provide for public access, awareness, appreciation and educational use of the site except where it compromises objectives 1 and 2**
- 4. Incorporate wider environmental considerations into the plan by: ensuring climate change considerations are accounted for; opportunities to improve and connect biodiversity across Portsdown are defined and sought; ensuring land management is sustainable**

2.2 Factors influencing the achievement of long term management objectives

2.2.1 Owners objectives

The sites covered in the plan are entirely owned by the Portsmouth City Council. PCC's relevant service plan and Local Plan, (2012), propose that the land is set aside for conservation of biodiversity and public access.

2.2.2 Internal natural factors

There is a requirement to manage open grassland in order to maintain its conservation interest and to retain accessibility. Left alone any species-rich grassland will become rank and subsequently be overtaken by brambles and scrub. Bushes will block paths.

Several particularly invasive species are present, which are well known to spread effectively and thus dominate chalk grassland and thus reduce its diversity, e.g. Cotoneaster and tor grass. Sycamore is already the dominant tree, in wooded areas.

2.2.3 Internal human induced factors

The site has the status of public open space and has a high level of visitor usage concentrated in relatively small parts of the sites plan area. Litter, trampling, fires, vehicle usage, metal detecting and vandalism are issues that encumber management. The most significant factor is dog walking as it makes the use of grazing animals difficult without extensive measures. The adverse effects caused by dog waste, increased soil fertility and invertebrate poisoning from veterinary products are an issue.

2.2.4 Legislation and Obligations

The following obligations, among others have to be considered in carrying out any management operations:

The Health and Safety at Work Act 1974

Wildlife and Countryside Act 1981

Occupiers Liability Act

Ancient Monuments and Archaeological Areas Act 1979 (as amended);

Animal welfare and livestock regulations

Countryside and Rights of Way Act 2001

2.2.5 Physical Constraints

Unlike the adjacent SSSI the sites are relatively level therefore the use of tractor-based machinery is easier. However, the need to maintain site security hinders access.

2.2.6 Resources

Many areas of amenity grassland are managed via Portsmouth City Council's Parks established mowing arrangements. Amendments to these bring about considerable wildlife gain. Other areas of grassland are cut for hay and are cost neutral. There is sufficient access to necessary mowing machinery to maintain other grassland on the sites. A small manoeuvrable tractor with a cut and collect mower is available. However, constraints of time and weather make it difficult to carry out all operations at the optimal time.

Staff and contractor time, supplemented by volunteer input is sufficient to maintain the essential estate work.

There is no departmental budget from Portsmouth City Council for the implementation of this plan. Operational enhancements, such as mowing regimes on grassland outside the

amenity mowing area, tree work, hedge maintenance, scrub control, costs associated with establishing grazing, etc., require external funding.

2.2.7 Summary of factors influencing the achievement of long term objectives

Internal natural trends:

Decreasing biodiversity through scrub expansion in the absence of suitable management.

Resources:

The cost of mowing amendments to diversify grassland are within the budget of Parks department. The fine-grained management works such as; cut and clear, localised haymaking, seed collection/distribution, monitoring will be within the scope of the PHCS provided volunteer input remains high and external funding continues. There is a synergy with resources available to the adjacent SSSI.

Internal human-induced trends:

Pressure and constants arising from public access. Litter, vandalism and adverse effects on grassland from nutrient enrichment. Damage arising from recreation.

2.3 Operational Objectives

This section considers how the long term objectives may be modified by the impact of trends and constraints. This leads to the formulation of short term or operational objectives that can be achieved by the end of the plan period *i.e.* January 2026. The operational objectives present a route by which the long term objectives can ultimately be achieved.

2.3.1 Rationale and Operational Objectives

2.3.1.1 Consideration of long-term objectives to derive the Operational Objectives

Long term Objective 1 and 2

To maintain, improve, and increase the area of species-rich grassland

To maintain and increase biodiversity on those areas not managed for species-rich grassland

The first two long term objectives can be considered together as they require similar resources and both influence land use decisions that should reflect on historical and ecological factors that vary across the sites. It is possible to achieve these objectives as resources are in place. The outline prescriptions and projects should reflect the best way of achieving the objectives.

The prominence of botanically diverse, largely calcareous, grassland, across all the sites leads towards the presumption that the first management option should aim to enhance this habitat. Grassland dominates currently and historically.

Nationally and internationally, it is now an uncommon habitat that has undertaken a dramatic reduction in the last sixty years. The sites described in this plan are adjacent to, and share the same escarpment as, Portsdown Hill SSSI, the designation of which values its chalk grassland. The SSSI and this plan area are fragments of chalk grassland that once extended

over much of the hill. It is worth noting that other areas of calcareous grassland exist in land controlled by a variety of agencies across the top of Portsdown.

There exists a range of grassland types ranging from relatively untrampled diverse flower-rich sward to heavily used improved ryegrass dominated mown turf. The natural geology on the northern slopes gives rise to more neutral grassland and past soil deposition in other sites means chalk is overlaid with neutral soils giving rise to botanically diverse but non calcareous grassland. Management for species-rich grassland on the hill's free draining ground is the same whether it is calcareous or not.

There is little point trying to encourage species-rich grassland on the areas adjacent to the main car parks. The use of these areas for enjoyment of the view or making use of the facilities associated with the car park is an essential component of the Portsdown Hill experience for many visitors. Away from these areas diversification of the grassland should continue using the techniques described earlier, i.e., arable reversion to grassland, haymaking, cut and clear, minimal mowing collection and redistribution of seed. The proportion of grassland to other habitats should remain the same.

The proportion of land given over to woodland, scrub and hedges is high by the long term historical context. However, it contributes a variety of habitats and vegetative structure that supports a greater range of wildlife and in turn makes the hill a more interesting place to visit. It can be maintained at its current level. Hedges should be maintained with regard to best practice with minimal trimming and in the long term by hedge-laying. The habit of scrub is to encroach into adjacent grassland. In order to retain the scrub grassland proportions as they are, it requires ongoing scrub control.

Woodland structure and diversity should be managed to control the spread of invasive species and retain a range of ecological niches. There is a legitimate case for maintaining a network of characteristic lowland habitats other than, and in conjunction with, species-rich grassland. Being mindful of threats to native trees, e.g. ash dieback, diversifying the tree stock by planting disease resistant strains or even fruit trees should be further explored.

Long term Objective 3

To provide for public access, awareness, appreciation and educational use of the site except where it compromises other objectives

The provision of a safe and enjoyable access to the land assists with its wildlife conservation. Legitimate access discourages misuse. Also, it encourages respect and pride in the quality of the local environment. Maintained infrastructure, unobstructed paths and access points along with interpretation passively encourage people to explore the area. Guided walks, talks and interaction with specific groups e.g. Forest Schools further assists with this aim.

It will be necessary to keep rubbish under control with ongoing litter picking. It is a combined effort with Parks staff supplemented by PHCS volunteers and other volunteer agencies. Problems with undesirable behaviour, unauthorised encampments and vehicle access require barrier features to be maintained.

The utility infrastructure that occurs on site, e.g., buried service access covers can fail or be damaged and thus become dangerous. It should be possible to make safe by intervening, e.g. barriers, and informing the relevant agency.

In-house infrastructure such as fences, benches and steps should be maintained as necessary, directly or by engaging PCC staff.

The resources required to achieve the long term objective 3 are less than those associated with the previous objectives 1 and 2 and many of these are in place. Therefore, to some extent the long term objectives need not be modified. Many more resources could be used to produce ever more literature and signage, etc. There is no realistic upper limit to the objective, so as opportunities present themselves to achieve an increased public perception of the site they should be pursued.

Any promotion of recreation activities should avoid those that damage the vegetation and discourage people from walking.

Long term Objective 4

Incorporate wider environmental considerations into the plan by: ensuring climate change contributions are addressed; seeking opportunities to improve and connect biodiversity across Portsdown; ensuring sustainable land management is carried out

The intention is to ensure wider environmental concerns are addressed as management proceeds. This means assessing and mitigating contributions to climate change and other polluting activities and incorporating these considerations in operations. This means the climate change consequences of vegetation management and procurement should be accounted for in the projects. The aim will be to reuse, repair and recycle equipment. Where possible the same principle will apply to waste disposal. Parks cleansing team remove collected rubbish, however pre-sorting to various waste streams can reduce the impact of disposal.

Sustainable land use of the sites should be pursued. The value of the land as an ecological service provider should be defined and time spent doing this accounted for in the plan. These findings should feed into the promotion of the site.

Calcareous grassland and scrub habitats can be extended onto non-SSSI land within this plan. Habitats can be provided on non-SSSI land that wouldn't be possible on the SSSI, e.g. ponds, arable plants and tree planting. Integration of this management activity will considerably increase overall biodiversity of PCC land on Portsdown Hill.

It is appropriate to seek opportunities to achieve favourable wildlife conservation outcomes beyond the area of the plans that complements the work within the plans. It requires an assessment of the potential to join and enlarge wildlife-supporting land management across the Portsdown escarpment and encouragement of land managers to do this.

The above actions feature in the SSSI management plan, thus they can be carried out as part of that plan and referred to in this plan's register and any modifications relating to this site noted.

2.3.1.2 Operational Objectives

From the previous discussion the long-term Objectives are unmodified thus the Operation objective of the plan are:

- 1. To maintain, improve, and increase the area of species-rich grassland**
- 2. To maintain and increase biodiversity on those areas not managed for species-rich grassland**
- 3. To provide for public access, awareness, appreciation and educational use of the site except where it compromises objectives 1 and 2**
- 4. Incorporate wider environmental considerations into the plan by: ensuring climate change considerations are accounted for; opportunities to improve and connect biodiversity across Portsdown are defined and sought; ensuring land management is sustainable**

PART 3 ACTION PLAN

The operational objectives are achieved by the completion of a series of outline prescriptions each of which in turn is achieved through a group of projects. To enable comparison with other organisations projects have standardised codes and names written in a stylised form.

The project codes begin with R (record) M (management) or A (administration). A second letter subdivides them *e.g.* V (archive) F (flora). A number further subdivides codes to the level where the short stylised description of the project is added,

e.g. RV10 List/collect photographs ground

The project is further qualified by a site specific number and may be subdivided further with a short phrase. Unlike the project code, the project number and associated phrase are devised by the management planner. The final project identification may appear like this:

RV10/01 List/collect photographs ground - fixed point

3.1 Project register

The project register lists all projects within the hierarchical structure of:

Operational objective > Outline prescription > Project

The CMS handbook recommends a full description and details of costs, time spent, *etc.* This time consuming and rather precise approach is not possible within the management structure of this site. To prevent the unnecessary diversion of resources into providing and updating a detailed list of projects and the achievement of each project a simplified approach has been adopted see a simplified [project register, description and review](#)

3.3 Operational objectives and Outline Prescriptions

Operational Objectives	Outline prescriptions
Operational Objective 1 To maintain, improve, and increase the area of species-rich grassland	Outline prescription 1.1 Monitor habitats
	Outline prescription 1.2 Maintain, enhance species-rich grassland
Operational Objective 2 To maintain and increase biodiversity on those areas not managed for species-rich grassland	Outline prescription 2.1 Maintain, enhance habitat for arable plants Top Field
	Outline prescription 2.2 Maintain hedges and successional scrub
	Outline prescription 2.3 Maintain trees and woodland to conserve biodiversity
	Outline prescription 2.4 Investigate suitable sites for ponds
Operational Objective 3 To provide for public access, awareness, appreciation and educational use of the site except where it compromises other objectives	Outline prescription 3.1 Monitor public use of the site
	Outline prescription 3.2 Maintain footpaths and other access, interpretative features
	Outline prescription 3.3 Ensure the site is a pleasant, welcoming, safe place to visit
Operational Objective 4 Incorporate wider environmental considerations into the plan by: ensuring climate change considerations are accounted for; opportunities to improve and connect biodiversity across Portsdown are defined and sought; ensuring land management is sustainable	Outline prescription 4.1 Incorporate climate change prevention and adaptation into management projects
	Outline prescription 4.2 Facilitate improvements in biodiversity elsewhere on Portsdown Hill and in the local area
	Outline prescription 4.3 Incorporate sustainable land management practices into plan projects

Outline Prescription 1.1 Monitor habitats

Project code	Description	Delivery date
RF02/01 Collect data, monitor vegetation - carry out botanical survey/Top Field	Carry out Phase 2 vegetation survey on Top Field.	Once During Plan Period
RF03/02 Collect data, monitor vegetation - carry out botanical survey/ other sites	Carry out vegetation survey on sites. Produce a species list with abundance of species-rich grassland indicator species.	Once During Plan Period
RV10/01 List/collect photographs/	Photograph sites, record	Annually
RF62/01 Collect data, fungi, survey	Survey waxcap fungi note position on a map	As and when fungi are found

Outline Prescription 1.2 Create and maintain species-rich grassland

Project code	Description	Delivery date
AP10/01 Prepare / revise work programme	Produce annotated map of sites showing area of grassland (indicate species-rich/calcareous, neutral), hedges, regenerating scrub, woodland, arable plant habitat and path network. Indicate management regime on each feature.	Jan 2022
MH12/01 Manage habitat, grassland,	Augment grazing in Top Field by cutting and clearing rank vegetation. Remove arisings from site. Clear major accumulations of dung.	Annually as necessary

MH12/02 Manage habitat, grassland, by mowing	Cut and clear areas designated as species-rich grassland in AP10/01. Remove arisings through cut and clear or haymaking.	Annually
MH10/01 Manage habitat, controlled grazing, Top Field	Graze Top Field with no more than 1.0 livestock unit over 3 months from October - March.	Annually
ME01/01 Boundary structures - maintain fences and gates	Maintain fences and associated features necessary for grazing the Top Field.	As necessary
MG00/01 Husband grazing stock.	Check livestock daily when on site. Ensure all are in good condition and have water available. Assess level of fodder and ensure that livestock will be moved before they run out to avoid supplemental feeding. Follow animal welfare guidance and legislation.	As necessary when livestock are present
MH13/01 Manage habitat, grassland, by sowing/planting/ turf laying	Collect seed from desirable species and spread on botanically impoverished areas.	Annually

Outline prescription 2.1 Maintain, enhance habitat for arable plants Top Field

Project code	Description	Delivery date
MA07 Manage habitat, artificial, by ploughing	Cultivate 0.5 ha - the established area of Top Field	Late winter, annually

Outline prescription 2.2 Maintain hedges and successional scrub

Project code	Description	Delivery date
MH09 Manage habitat, woodland/scrub, by other activities	Trim hedges in accordance with guidance in Higher Tier agreement, and successor agreements. Maintain successional companion scrub through phased clearance. Encourage desirable species, discourage undesirable species.	Ongoing

Outline prescription 2.3 Maintain trees and woodland to conserve biodiversity

Project code	Description	Delivery date
MH02/01 Manage habitat, woodland/scrub, thinning/felling	Encourage species and habitat diversity by controlling species such as sycamore and holm oak where native species will benefit. Leave safe dead wood on site.	Ongoing
MH02/02 Manage habitat, woodland/scrub, thinning/felling Falklands Plantation	Reduce by 90% the presence of ash trees in Falklands Plantation to favour beech trees and maintain short, negotiable ground cover consistent with its role as a commemorative plantation	End of plan
MH01/Manage habitat, woodland/scrub, by planting/sowing	Collect seed/plants from desirable species and establish where they increase diversity.	Ongoing

Outline prescription 2.4 Investigate suitable sites for ponds

Project code	Description	Delivery date
MA07 Plan pond	Plan pond	Jan 2023

Outline prescription 3.1 Monitor public use of the sites

Project code	Description	Delivery date
RH03 Collect data, human impact, count/estimate/measure/census	Produce report on numbers of visitors to site	Within plan period
RH02 Collect data, human impact, monitor	Report litter, damage, vandalism, antisocial behaviour	Ongoing

Outline prescription 3.2 Maintain footpaths and other access, interpretative features

Project code	Description	Delivery date
ME40/01 Provide/maintain paths/rides/roads	Keep paths passible, by mowing and cutting back encroaching scrub. Use work plan from AP10/01 to define works	Ongoing
ME02/01 Other structures / seat and signs.	Seating near car parks repaired as necessary. Maintain interpretation.	Ongoing

Outline prescription 3.3 Ensure the site is a pleasant, welcoming, safe place to visit

Project code	Description	Delivery date
ME02/02 Other structures / bunding	Prevent car parking off Widley Walk with bunding to discourage undesirable behaviour	Jan 23
ME04 Remove rubbish	Clear litter from site through regular litter picks, facilitate community litter picks.	When necessary
MI10 Inform visitors, onsite information	Install and maintain signage to welcome visitors to the site and remind them of the	June 22

	requirements not to damage the area. New interpretation in Paulsgrove chalk pit Remind people of bylaws regarding dogs, metal detecting and camping.	

Outline prescription 4.1 Incorporate climate change prevention and adaptation into management projects

Project code	Description	Delivery date
AR01/01 Prepare report, project review, new projects	Assess the contribution to climate change from management activities, making reference to Local Authority Carbon Neutral targets. Describe how impacts can be reduced.	March 22
AR01/02 Prepare report, project review, new projects	Assess how adaptation to climate change is met by proposed management. Examine if factors such as shade provision and ground infiltration rate can be improved.	March 22
AP10/02 Prepare/revise work programme	Implement findings from AR01/01 - /02 into Work plan AP10/01	April 22

Outline prescription 4.2 Facilitate improvements in biodiversity elsewhere on Portsdown Hill and in the local area

Project code	Description	Delivery date
AR01/03 Prepare report, project review, new projects	Assess how better ecological networks can be achieved across rest of Portsdown and the local area. Produce map to show potential amendments to external	March 23

	land management areas. Show how ecological connections with SSSI and this plan area might be improved.	
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Outline prescription 4.3 Incorporate sustainable land management practices into plan projects

Project code	Description	Delivery date
AR01/04 Prepare report, project review, new projects	Assess how management projects affect pollution, ecosystem functioning. Describe any improvements that can be made. Feed into AP10/01	March 23

Appendix 1 Higher tier stewardship options

Parcel Number	Option Code	Option Title	Total Parcel Area ha	Option Area/length	area length	Option Duration	Option Start Date	Option End Date
5096	BE3	Management of hedgerows	1.0808	370	m	5	01/01/2017	31/12/2021
1074	BE3	Management of hedgerows	0.4583	350	m	5	01/01/2017	31/12/2021
2345	BE3	Management of hedgerows	0.6249	210	m	5	01/01/2017	31/12/2021
5096	GS6	Management of species-rich grassland	1.0808	0.44	ha	5	01/01/2017	31/12/2021
8553	GS6	Management of species-rich grassland	1.7046	0.35	ha	5	01/01/2017	31/12/2021
8558	GS6	Management of species-rich grassland	0.3371	0.27	ha	5	01/01/2017	31/12/2021
5157	GS7	Restoration towards species-rich grassland	9.8871	1.45	ha	10	01/01/2017	31/12/2026
9967	GS7	Restoration towards species-rich grassland	4.6066	1.79	ha	10	01/01/2017	31/12/2026
2530	GS7	Restoration towards species-rich grassland	1.8801	0.7	ha	10	01/01/2017	31/12/2026
5157	WD7	Management of successional areas and scrub	9.8871	1.41		5	01/01/2017	31/12/2021
8432	WD7	Management of successional areas and scrub	2.1964	1		5	01/01/2017	31/12/2021

Appendix 2 Soil analysis 2016

Paulsgrove chalk pit

Analysis	Result	Guideline	Interpretation	Comments
pH	7.9	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	7	26	Very Low	(Index 0.7) 120 kg/ha P2O5 (96 units/acre).
Potassium (ppm)	80	241	Low	(Index 1.3) 80 kg/ha K2O (64 units/acre).
<u>Magnesium (ppm)</u>	55	50	Normal	(Index 2.0) Adequate level.
Organic Matter DUMAS (%)	2.2	3.0	Slightly Low	Incorporate organic material when possible.

Two Dells trail Mill Lane

Analysis	Result	Guideline	Interpretation	Comments
pH	7.7	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	5	26	Very Low	(Index 0.5) 120 kg/ha P2O5 (96 units/acre).
Potassium (ppm)	104	241	Low	(Index 1.7) 80 kg/ha K2O (64 units/acre).
<u>Magnesium (ppm)</u>	67	50	Normal	(Index 2.3) Adequate level.
Organic Matter DUMAS (%)	5.4	3.0	Normal	Adequate level.

Childrens Wood

Analysis	Result	Guideline	Interpretation	Comments
pH	8.0	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	10	26	Low	(Index 1.1) 80 kg/ha P2O5 (64 units/acre).
Potassium (ppm)	95	241	Low	(Index 1.5) 80 kg/ha K2O (64 units/acre).
<u>Magnesium (ppm)</u>	59	50	Normal	(Index 2.1) Adequate level.
Organic Matter DUMAS (%)	7.6	3.0	Normal	Adequate level.

Farlington Avenue

Analysis	Result	Guideline	Interpretation	Comments
pH	8.0	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	7	26	Very Low	(Index 0.7) 120 kg/ha P2O5 (96 units/acre).
Potassium (ppm)	56	241	Very Low	(Index 0.9) 120 kg/ha K2O (96 units/acre).
<u>Magnesium (ppm)</u>	54	50	Normal	(Index 2.0) Adequate level.
Organic Matter DUMAS (%)	3.4	3.0	Normal	Adequate level.

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1 Vision Statement

1.1 Vision Statement

Anyone walking along the length of Portsdown Hill S.S.S.I. should encounter extensive and continuous flower-rich grassland along with well managed scrub habitats that supports a characteristic array of biodiversity that is typical of the chalk downland landscape. During their visit everyone should feel confident that they are welcome to explore the whole site via a network of accessible paths.

1.2 Executive summary

- Portsdown Hill SSSI is a site of considerable ecological interest due to the conspicuous biodiversity of its chalk downland habitats.
- To retain these habitats, the site has to be managed, this involves grazing and scrub control.
- The nearby proximity of a large population presents challenges in the form of visitor pressure but there are also opportunities for voluntary input and a chance to present accessible wildlife-rich habitats to the wider public
- Wider environmental issues, such as Climate Change and the loss of biodiversity from the landscape, are factored into the management

Portsdown Hill S.S.S.I. hosts a significant area of biologically rich chalk grassland complimented by a mosaic of scrub and other vegetation types. There are striking views and the area has a readily interpreted historical significance. Therefore, the hill has a high conservation, amenity and educational value, especially as it borders a large centre of population.

The site has a long history of grazing and was grazed with livestock until the 1950s and was, until this time, predominantly a short grassland site. The hill remained unmanaged from the 1950s until the mid-1990s. Over this time there was a substantial change in the hill's vegetation as scrub and bramble spread to cover most of the site. Paths and flower-rich grassland were lost under hawthorn scrub. There was substantial disturbance, particularly from vehicle misuse and fires on the site.

Habitat management, in the form of scrub clearance and the reintroduction of grazing, prescribed in earlier versions of this plan has reduced scrub cover and increased the diversity of the grassland, see figures 1 and 2. To maintain public enjoyment of Portsdown Hill and safeguard the site's ecological value, continued intensive downland restoration work is needed with the implementation of a sustainable management system informed by the experience of the first 25 years of management.

The most appropriate management is extensive grazing and scrub removal and control. Prolonged grazing was responsible for the site's ecological interest and offers the most

effective way of retaining it. In addition, the landowners and relevant conservation bodies also endorse it. However, limited departmental resources, the requirement to maintain open public access, urban fringe problems and the extent of scrub regrowth constrain the management options. External funding is necessary to overcome these difficulties.

The plan's primary objective is to maintain all habitats currently present whilst pursuing management that will increase the proportion of species-rich calcareous grassland to 57% at the expense of scrub and coarse grassland.

The second objective is to carry out focused surveys and management that will protect and maintain viable populations of notable species.

The third objective is to encourage public enjoyment and appreciation of the site as this is essential to protect its wildlife in the long term.

A fourth is to incorporate measures into the plan that address the site's contribution to climate change, how wider biodiversity loss can be reduced and how the site contributes to ecological provision.

This management plan has been drawn up by the Portsdown Hill Countryside Service, which is responsible for most of the Portsmouth City Council managed open-access land on Portsdown Hill including the majority of the Site of Special Scientific Interest (S.S.S.I.). The plan's format is that of the Countryside Management System and broadly follows the Management Planning Handbook, Alexander, (1993).



Figure 1, Compartment 1 before scrub clearance in 2005 (left) and 2015 (right)



Figure 2, Compartment 9 in Feb 1993 (top left), April 2021 (top right), June 2017 (bottom). In 1993 scrub was spreading vigorously and would be now approaching woodland if it has been left. What grass there was left, was a coarse thatch. Now the scrub is much reduced and much of the grassland is short species-rich grassland.

Images looking west from south-west of Fort Widley. An aerial view of this area in 1955 is shown in Fig 12.

2 POLICY AND LEGISLATION

2.1 Legislation

The following legal and non-legal obligations have to be considered in carrying out any management operations:

- The Health and Safety at Work Act; 1974
- Agreements arising from the site's status as a S.S.S.I.
- Wildlife and Countryside Act 1981
- Occupiers Liability Act
- Animal welfare and livestock regulations
- Formal agreements, such as those with Natural England, which require notification regarding potentially damaging operations (see appendix 5).
- Environmental Protection Act 1990
- Waste Management Licensing Regulations 1994
- The Dog Control Orders (Prescribed Offences and Penalties, etc.) Regulations 2006
- Section 9 and 10 Open Spaces Act 1906
- Countryside and Rights of Way Act 2000
- Natural Environment and Rural Communities (NERC) Act 2006 - obliges Local Authorities to consider biodiversity in its activities

Section 40 of the NERC Act states

“Every public authority must, in exercising its functions, have regard, as far as is consistent with the proper exercise of these functions, to the purpose of conserving biodiversity”.

2.2 Policy

1 [Portsmouth City Council's Adopted Plan](#) (PCC, 2012)

PCS13 a greener Portsmouth

The city council will work collaboratively to protect, enhance and develop the green infrastructure network in the following ways:

Protect green infrastructure by:

For nationally designated Sites of Special Scientific Interest:

the city council has a duty to further the conservation and enhancement of S.S.S.I.s under the Countryside and Rights of Way Act.

2 Portsmouth City Council's Sustainability Strategy (Sustainability Strategy 2010, PPC (2010)

Objective 6: Protect and enhance Portsmouth's natural environment including safeguarding local biodiversity and improving air and water quality.

3 Parks open spaces strategy 2012 [Parks strategy](#)

3 GENERAL DESCRIPTION

3.1 General information

Portsdown Hill S.S.S.I. is a non-cultivated site on the south-facing escarpment of an east-west chalk anticline. The S.S.S.I. notification, [see appendix 2](#), describes a rich chalk grassland flora which supports a diverse insect fauna, despite extensive scrub and a *Bromopsis erecta* (upright brome) dominated grassland. Since the last S.S.S.I. notification, in 1984, the site was left unmanaged and deteriorated for a decade. From the mid-1990s management has gradually been reintroduced so that scrub comprises around 50% of the site and species-rich grassland communities occupy the other half the site.

Table 1 Portsdown Hill S.S.S.I Information Summary		
Site: Portsdown Hill, Also known as Ports Down , see OS maps	County: Hampshire	Local authorities: Portsmouth City Council & Fareham Borough Council.
Status: S.S.S.I. - Scheduled 1978. Revised 1984	OS Grid. Ref: SU 618068 in west to SU 666064 in east.	OS Sheets: 1:50,000 - 196, Explorer -119, 1:10,000 - SU60NE & SU60NW
Soil Survey: Soils of south east England No 6 (1:250000)	Geological survey: Fareham No 316 (1:63,360)	Historic Photographic cover: Map library University of Portsmouth, Portsdown Hill Countryside Service
Site manager: Richard Jones PCC area	Address: Portsdown Hill Countryside Service, Fort Widley, Portsdown Hill Road, Portsmouth. PO6 3LS 023 9238 9623 Richard.jones2@portsmouthcc.gov.uk parkslei@portsmouthcc.gov.uk	Owners: Portsmouth City Council; Fareham Borough Council; MoD
		Area covered by this plan 55 ha Total area: 80.67 ha
		Plan prepared by: Richard Jones
Natural England site information	Holding number: Portsmouth 15/130/8002	Last updated: 14/09/2021

3.1.1 Location and site boundaries

Portsmouth Hill lies immediately to the north of the City of Portsmouth. It is on the urban fringe and clearly marks the boundary between the northern edge of Portsmouth and Fareham and rural South East Hampshire. The area described in this plan is crossed by several roads, notably Portsmouth Hill Road (B2177), and Southwick Hill rd. Most of the south of the site adjoins housing and associated access roads, see fig 3.

3.1.1.1 Areas of the S.S.S.I. excluded from the Plan

The most westerly compartment of the S.S.S.I., Portchester Common, is separated from the road by a narrow strip of arable land and has vehicular access at only one point, which is off Skew Road. The plan does not cover this part of the site as it is under separate ownership, that of Fareham Borough Council.

Approximately 5 ha of land covering the western end of Paulsgrove Chalk pit and nearby housing lies within the original S.S.S.I. boundary. The S.S.S.I. boundary pre-dates the extension of the chalk pit westwards. This area was excavated to a considerable depth and left as a chalk pit for several decades. In 1998 this area was landscaped and vegetated whilst the southern 2 ha were destroyed by being built upon. The established vegetation in the chalk pit is calcareous grassland species. This land is covered by the [non S.S.S.I. plan](#).

There is a small amount land south of Fort Southwick that is within the S.S.S.I. boundary, (part of Natural England unit 3) that is owned by the organisation that owns the fort. It is not covered by this plan.



Figure 3 Compartment map

500 metres

3.1.2 Compartments

Due to its linear shape, (approximately 200 m x 4 km) the site has been divided into management compartments. The 10 compartments chosen for this plan range in size from 3 to 12 ha and where possible have boundaries that reflect topographical features, see site map, fig 3. The compartments have no relationship to [Natural England](#) units that relate to the site.

3.1.3 Tenure

This is not a legal document.

Compartments 1, 2, 3 and part of 4 are owned by the MoD and leased to Portsmouth City Council (PCC) as public open space. Compartments 4 (greater part) and 5-10 are owned by PCC.

The verge alongside many sections of Portsdown Hill rd, James Callaghan Drive and Southwick Hill rd is within a Private Finance Initiative maintained by Colas for PCC.

[Appendix 8](#) shows the land ownership and areas of responsibility. There are bylaws relating to the site. [See appendix 4.](#)

3.1.4 Past status of the site

Formally much of the site was owned by the [Southwick Estate](#) until, in the mid-19th century, it was purchased by the military prior to the building of the hill forts that dominate the top of the hill. Various boundaries are marked by War Department stones. Literary and artistic references from the 19th and early 20th century describe an open landscape with grazing livestock. Extensive grazing occurred for centuries and drove roads leading to Portsmouth crossed the site.

Military manoeuvres were carried out on its slopes in Victorian time which were watched by large crowds. Fairs were held on its lower slopes until the early 20th century.

3.1.5 Relationships with other plans

This plan follows on from the 2016 - 2020 management plan for the site (Jones, 2016). A management plan, (Jones, 2017) for non-S.S.S.I. PCC land on Portsdown follows this plan's format. The land is adjacent to the S.S.S.I. and extends the area managed for conservation and access.

The S.S.S.I. falls under Portsmouth City Council's Adopted Plan area, Portsmouth City Council, (2012).

3.1.6 Management Infrastructure

Management of compartments 1-10 is implemented by the Portsdown Hill Countryside Service (PHCS), which is based at Fort Widley. The PHCS has a single employee (Portsdown Hill Countryside Officer) and is part of Portsmouth City Council's Parks,

Culture, Leisure and Regulatory Services. Practical management of the site is carried out by the Portsdown Hill Countryside Officer, contractors, volunteers and various community groups. Most of the volunteer work is done by the Portsdown Hill Conservation Volunteers, see table 2. Certain legal and administrative functions are carried out by other departments within Portsmouth City Council.

Table 2 Number of available workdays per year, compartments 1-10

Source	Days	Comments
Portsdown Hill Countryside Officer	120	Commitments to PCC and on non-S.S.S.I. land
Portsdown Hill Conservation Volunteers	600	Average of over 12 volunteer days per week
Other community volunteer groups	100	Butterfly conservation, school and cub groups
Other PCC staff	20	Line manager
Contractors	4	Input needed to carry out various task

The roadside verge of James Callaghan Drive and some others are nominally managed by PCC'S Highway contractor Colas. COLAS commissioned a vegetation survey with recommendations of the verges in their control, McKay (2005).

The PHCS is directly responsible for the management of other areas of non-S.S.S.I. land of conservation interest across Portsdown Hill. It is active in influencing the management of land in the control of agencies such as, the MoD, utilities and farmers.

A friends group ([Friends of Portsdown Hill](#)) represent some of the local views on the site and the wider area, in particular taking an interest in the area's history and wildlife.

The site is currently (until 2022) in a Higher Tier Countryside Stewardship scheme, see appendix (3). Which sets management prescriptions within its options. It is proposed that the scheme will be extended beyond its expiry date.

3.1.7 Site infrastructure

A path runs the length of the site with many minor paths that appear to be relics of livestock tracks and other historic routes. There are no intact buildings, although there are the remains of structures that were demolished after the 1940s.

Gas, water, telephone and electricity companies have mains and cables with wayleave agreements crossing the site. A number of pylons cross the site. Some of these are substantial and need to be considered when carrying out constructive works. Utility firms require access to their infrastructure with the potential to cause damage and impinge on site management.

There is approximately 12 km of HT stock netting fencing along with gates, water troughs and holding pens. There are four informal wooden benches in the eastern compartments. [See appendix 6](#)

3.1.8 Map coverage

Ordnance survey 1:25 000 Map 119

3.2 Environmental Information

3.2.1 Physical

3.2.1.1 Climate

There are few weather readings available from the site. The nearby meteorological recording station is Solent MRSC. It records an average (1981-2010) highest temperatures as 21.4°C (July and August) and the lowest as 2.8°C February. Average annual rainfall was 699.1 mm.

Portsdown Hill S.S.S.I. is a relatively warm site in an area that enjoys warmer weather than much of the country. Winter temperatures remain higher than inland sites due the proximity of the sea and large urban area. Its south facing slopes are protected from cold northerly winds and therefore are noticeably warmer than the surrounding area during cold weather. Shelter from wind is easily found within the scrub whatever the wind direction. Extremely high summer temperatures occur due to the southerly aspect and the shelter provided by scrub.

3.2.1.2 Geology

Portsdown Hill is the product of an anticline in Upper Cretaceous chalk (84 to 90 million years old). It is considered an outlier of the South Downs. The chalk forms a continuous stratum that outcrops to the north to form the South Downs and to the south where it forms chalk cliffs on the Isle of Wight. A borehole found the chalk to be 400 metres thick. Details of the geology are viewable at the UK Onshore Geological Library, 2012.

The highest point of Portsdown's ridge is 120 metres. Within the S.S.S.I. the height ranges from 50 to 110 metres. The average slope is approximately 1:4.

3.2.1.3 Soil

The soil classification of England and Wales (Avery, 1980) place the soils of Portsdown Hill within the Upton 1 series where they are described as a 'chalky grey rendzina' with some loessial silt. An average soil pH of 7.83 has been recorded. The soil becomes more clayey at the base of the escarpment where the depth reaches 30 cm due to Coombe deposits. Higher up the slope the soil forms a layer less than 3 cm over considerable areas. There is a considerable variation in soil depth over short distances *i.e.* less than a metre. These variations are caused by historic disturbance such as the construction of defensive structures, trackways and turf stripping. There is evidence that brick earth forms a significant component of the soil (Brookes, 2017).

Analysis of soils, see appendix 9, suggests it is consistent with what would be expected from calcareous grassland. Soil chemistry results from the SSSI and adjacent site PCC sites in 2016 show pH to be high (all > 7.7) c.f. guidelines of pH 6.5 and phosphorous to be low (all < 10ppm) c.f. of 26ppm. The guidelines are based on minima for agricultural productivity rather than conservation.

3.2.1.4 Contamination

The site has several localised concentrations of dumped rubbish as well as a general contamination from litter. The major categories are:

- rubbish left by visitors
- materials left in the post-war period (notably in the vicinity of Fort Southwick),
- vehicle-derived historic fly tip, (adjacent to roads)
- materials originating from nearby housing, (where the southern boundary of the site abuts adjacent housing)

Much of the rubbish is not immediately obvious, it has been obscured by vegetation and an understanding of the distribution often requires excavation.

A risk arises from possibility of contamination by hazardous materials liberated by scrub clearance. So, scrub clearance has to follow from an assessment of what is hidden in the scrub.

Rubbish such as bottles and cans also entraps [small mammals](#) and invertebrates and should be cleared on that basis, (Moates, 2018). Left to disintegrate most containers will eventually contribute to the environmental problems arising from plastic.

3.2.2 Biological

The relatively warm conditions of Portsdown encourage plants and invertebrates that are at the northern extent of their range and thus uncommon in the rest of Britain. The site's accessibility and close proximity to large centres of population has meant the hill has attracted many naturalists over the years. Many biological records exist, see [appendix 1](#) for historic records, and iRecord for recent survey work.

3.2.2.1 Flora

The vascular plant species list from a vegetation survey of 2020 (Norton, 2021) is 275. It is known that at least another 6 new species are found, see appendix 1. A list of calcareous grassland indicator species and taxa of conservation importance recorded during 2020 are given in Table 3.

Table 3 Calcareous grassland indicator species and taxa of conservation importance (from Norton, 2021)

Species	English name	C-ind	ERL	S41	Hants Notable	NS
<i>Grasses, rushes & sedges</i>						
<i>Avenula pratensis</i>	Meadow Oat-grass	C				
<i>Avenula pubescens</i>	Downy Oat-grass	C				
<i>Briza media</i>	Quaking-grass	C	NT			
<i>Bromopsis erecta</i>	Upright Brome	C				
<i>Carex caryophylla</i>	Spring Sedge	C				
<i>Carex flacca</i>	Glaucous Sedge	C				
<i>Catapodium rigidum</i>	Fern-grass	C				
<i>Danthonia decumbens</i>	Heath-grass	C				
<i>Festuca ovina</i>	Sheep's Fescue	C				
<i>Koeleria macrantha</i>	Crested Hair-grass	C				
<i>Herbs</i>						
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid	C				
<i>Anthyllis vulneraria</i>	Kidney Vetch	C				
<i>Arabis hirsuta</i>	Hairy Rock-cress	C	NT		CS	
<i>Arenaria leptoclados</i>	Small Thyme-leaved Sandwort	C				
<i>Asperula cynanchica</i>	Squinancywort	C				
<i>Betonica officinalis</i>	Betony	C				
<i>Blackstonia perfoliata</i>	Yellow-wort	C				
<i>Campanula glomerata</i>	Clustered Bellflower	C				
<i>Campanula rotundifolia</i>	Harebell	C	NT			
<i>Carlina vulgaris</i>	Carlina Thistle	C	NT			
<i>Centaurea debeauxii</i>	Chalk Knapweed	C				
<i>Centaurea scabiosa</i>	Greater Knapweed	C				
<i>Centaureum pulchellum</i>	Lesser Centaury	C				
<i>Cirsium acaule</i>	Dwarf Thistle	C				
<i>Clinopodium vulgare</i>	Wild Basil	C				
<i>Cruciata laevipes</i>	Crosswort		NT			
<i>Cynoglossum officinale</i>	Hound's-tongue	C	NT			

Species	English name	C-ind	ERL	S41	Hants Notable	NS
Dactylorhiza fuchsii	Common Spotted-orchid	C				
Echium vulgare	Viper's Bugloss	C				
Erigeron acris	Blue Fleabane	C				
Euphrasia pseudokernerii	Chalk Eyebright	C	VU	Y	CS	NS
Galium verum	Lady's Bedstraw	C				
Gentianella amarella	Autumn Gentian	C	NT			
Helianthemum nummularium	Common Rock-rose	C	NT			
Hieracium spilophaeum	a hawkweed				CS	
Hieracium subleptostoides	a hawkweed				CR	
Hippocrepis comosa	Horseshoe Vetch	C				
Inula conyzae	Ploughman's-spikenard	C				
Knautia arvensis	Field Scabious		NT			
Leontodon hispidus	Rough Hawkbit	C				
Lepidium campestre	Field Pepperwort		NT			
Linum catharticum	Fairy Flax	C				
Lithospermum officinale	Common Gromwell	C				
Origanum vulgare	Wild Marjoram	C				
Orobancha elatior	Knapweed Broomrape	C				
Pilosella officinarum	Mouse-ear Hawkweed	C				
Pimpinella saxifraga	Burnet Saxifrage	C				
Plantago media	Hoary Plantain	C	NT			
Polygala vulgaris	Common Milkwort	C				
Poterium sanguisorba subsp. sanguisorba	Salad Burnet	C				
Primula veris	Cowslip	C				
Rhinanthus minor	Yellow-rattle	C				
Sanicula europaea	Sanicle		NT			
Scabiosa columbaria	Small Scabious	C				
Spiranthes spiralis	Autumn Lady's-tresses	C	NT			
Succisa pratensis	Devil's-bit Scabious	C	NT			
Thesium humifusum	Bastard-toadflax	C			CS	NS
Thymus polytrichus	Wild Thyme	C				
Valeriana officinalis	Common Valerian		NT			
Verbascum nigrum	Dark Mullein	C				
Verbena officinalis	Vervain	C				
Viola hirta	Hairy Violet	C				

Table 4 Summary of notable plant species

Calcareous grassland indicators	56
England Red List: Vulnerable	1
England Red List: Near Threatened	15
NERC S41	1
Hants Notables: County Rare	1
Hants Notables: County Scarce	4
Nationally Scarce	2

The condition assessment given in the most recent vegetation survey described the grassland condition as 'fairly good'. This equates to 2.5 out of 3 when considered against the Biodiversity Metric 2.0 (Crosher *et al* 2019b). Recent guidance and best practice in evaluating biodiversity makes use of the principles of Biodiversity Net Gain, (Baker, 2019) in which the Biodiversity Metric evaluates the habitats.



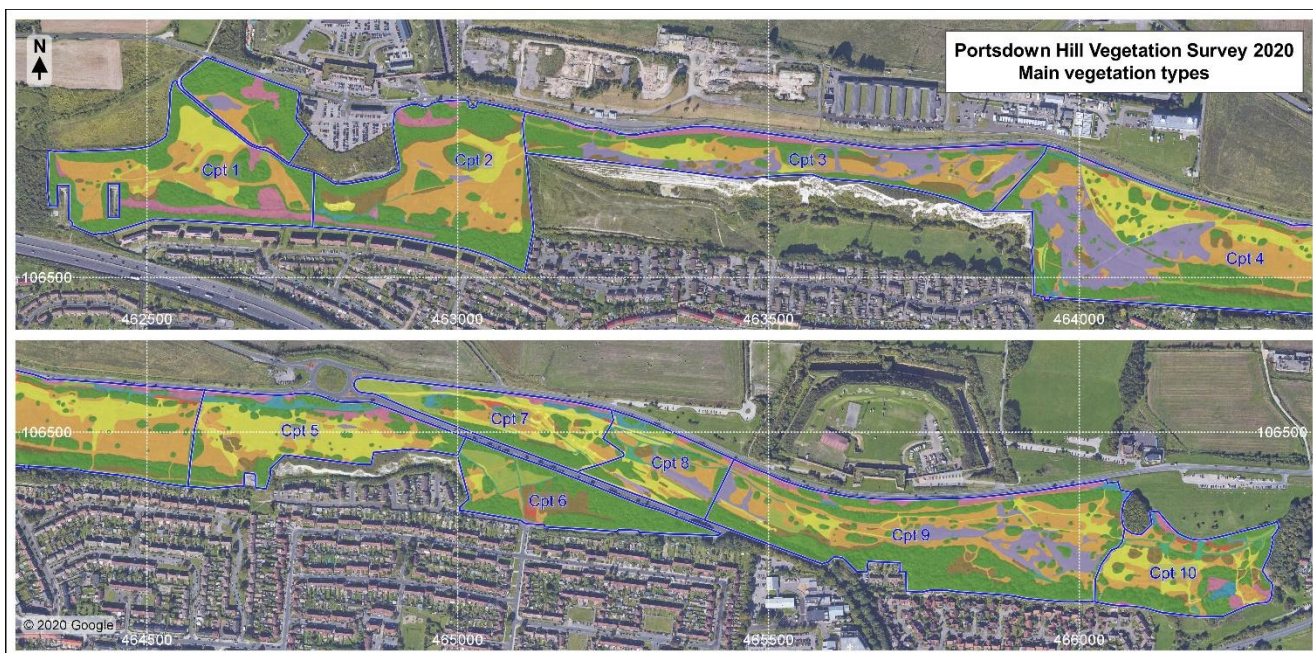
Figure 1 Early Gentian Last seen in 2019

Due to the presence of sparse chalk grassland Portsdown Hill also is known to be of interest for its lower plants including the lichens *Catapyrenium lachneum*, *Toninia coeruleonigricans* and *Leptogium schraderi*. There is a rich bryophyte flora including the several nationally scarce species, e.g. *Pleurochaete squarrosa* and *Didymodon acutus*.

3.2.2.1.1 Communities

The most recent vegetation survey of the hill Norton, (2021) proposed 10 vegetation types see fig. 5. These can be condensed into 6 broad vegetation types see fig. 6 and table 5.

In essence half the site is scrub, with a small amount of woodland. A similar area is species rich calcareous grassland, half of this is an ecotone with short, cleared scrub regrowth which is kept in check with mowing. Species poor grassland, both calcareous and neutral account for around 3 % and around 6% is a bramble clematis community.



See legend on separate page

Main vegetation types

- Short species rich calcareous grassland (*Festuca ovina* dominated) (CG3a/CG2/CG7 transitions)
- Short species rich calcareous grassland (*Bromopsis erecta* dominated) (CG3a)
- Medium to long species rich calcareous to neutral grassland (CG3b, MG1e)
- Short herb rich calcareous to neutral grassland (MG5a/b)
- Rough species poor calcareous to neutral grassland and weed communities (MG1a/b, CG3d, OV25)
- Improved to semi-improved grassland on trampled paths (MG6c/MG7)
- Chalk scrub ecotone ('CSE' - managed calcareous grassland/scrub mosaic; mostly referable to CG3b)
- Rubus-Clematis vitalba* scrub ('RC' - no NVC equivalent)
- Recently cleared chalk scrub ('CS' and 'CX' =W21d); gorse & blackthorn scrub (W23)
- Dense scrub, trees and developing woodland (W21a, W21d)

Figure 5 Vegetation types - NVC plant communities

Table 5 Broad vegetation types

		Area (m ²)	Area (ha)	% of total
	Bare ground / un-vegetated areas	562	0.06	0.10%
	Species rich calcareous (to neutral) grassland (Priority Habitat)	125825	12.58	22.84%
	Species rich calcareous grassland/scrub mosaic (CSE)	123589	12.36	22.43%
	Species poor calcareous to neutral grassland	16606	1.66	3.01%
	<i>Rubus-Clematis</i> scrub (RC)	30877	3.09	5.60%
	Scrub and woodland	253441	25.34	46.01%
	Total	550900	55.09	1.00

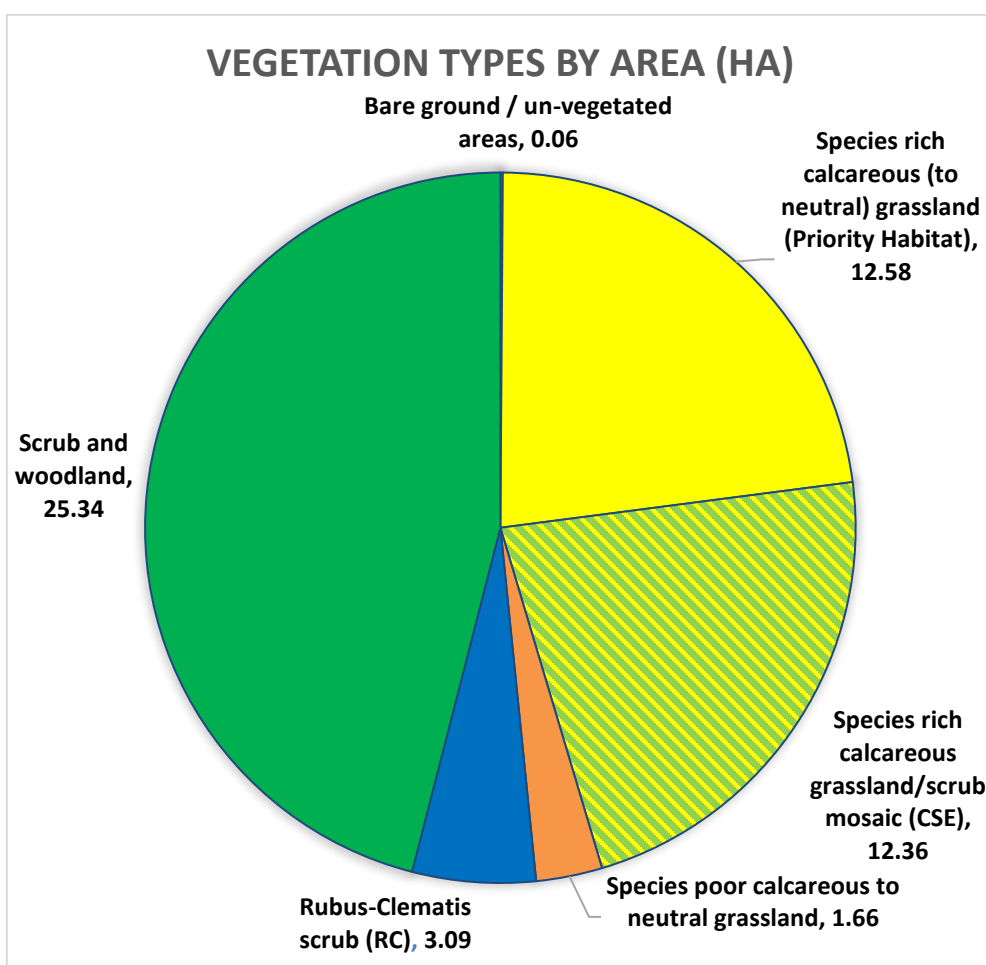


Figure 6 Broad vegetation types

Very little of the grassland is free from scrub. Cropped scrub plants occur in most 3 m² quadrats. The scrub is predominantly *Crataegus monogyna* (Hawthorn) with other species including: *Prunus spinosa* (Blackthorn), *Cornus sanguinea* (Dogwood), *Ligustrum*

vulgare (Privet), *Ulex europeus* (Gorse), *Clematis vitalba* (Clematis), *Rubus fruticosus*, (Bramble), *Rhamnus cathartica* (Buckthorn) and *Fraxinus excelsior* (Ash).

Following the Biodiversity Net Gain criterion condition assessment, (Norton, 2021) described the grassland as 'fairly good' i.e., 2.5 out of 3 and the scrub as good 3 out of 3.

Below is a brief description of the plant communities in the compartments, see compartment vegetation map, fig 5.

Compartments 1-2 These are the most westerly compartments in the plan. Most of the area was cleared of scrub in 2005 and 2006, returning it to grassland. This grassland is species rich and but is subject to spreading *Ulex europea* and *Cotoneaster*. There are smaller areas of long established chalk grassland containing notable plants *Euphrasia pseudokernerii*, (chalk eyebright), *Gentianella anglica* (Early Gentian) and *Thesium humifusum* (Bastard toadflax). Much of the scrub that remains is diverse *Rhamnus cathartica* (Buckthorn) dominated vegetation with species that suggest it has been established a long time but not given way to taller woodland. *Daphne laureola*, (Spurge laurel) *Taxus baccata* (Yew), *Juniperus communis*, (Juniper), *Ruscus aculeatus*, (Butcher's broom) *Mercurialis perennis* (Dog's mercury) and *Quercus robur* (Oak).

Compartiment 3 - In the compartment above Paulsgrove Chalk pit *Ulex europeus* (Gorse) is common and locally dominant. The presence of *Teucrium scorodonia* (Wood sage) suggests the formation of less basic. An old track way complex in the east of this compartment has short established species-rich grassland on its banks. Another area of species-rich grassland has abundant *Hippocrepis comosa* (Horseshoe vetch). Substantial scrub clearance (1 ha) is reverting to grassland. As in compartments 1 and 2 there is stunted *Rhamnus* scrub with oak trees.

Compartiment 4 - This compartment contains the largest expanse of grassland that was not scrubbed over by the 1990s. This area is known to have a good terrestrial lichen community, as well as some uncommon mosses. Various banks, pathways and earthworks exist many with short species-rich grassland. Three hectares of previously thick scrub has been flailed and cleared leaving scrub islands of *Crateagus* (hawthorn) *Cornus* (dogwood), *Rhamnus* and *Juniperus communis*, (Juniper), The cleared ground is and it is a mix of scrub regrowth and establishing grassland. It retains large patches of *Hippocrepis comosa* (Horseshoe vetch) rich turf. At the bottom of the slope a *Fraxinus-Ulmus* woodland strip is well established. Stunted *Rhamnus* scrub with oak trees occurs in the north western corner of the compartment.

Compartiment 5 - The predominant cover is open moderately diverse grassland with patches of scrub. The strip next to the road is tall *Arrhenatherum elatius* /ruderal grassland community with scrambling plants such as *Rubus* (bramble) and *Clematis*. A trench-like earthwork has been cleared of scrub giving rise to loose soil and chalk.

Compartment 6 - Scrub clearance before 2010 has given rise to abundant scrub regeneration and tall herb but some areas retain moderately diverse if mesotrophic grassland. Dense scrub with emergent *Acer pseudoplatanus* occurs at the eastern end. A large amount of scrub (around 6000m²) was cleared or thinned out during a Police operation in 2020 giving rise to bare ground.

Compartment 7 - Tall grassland with many ruderal species form a mosaic with scrub, bare ground and short species rich grassland on earthworks and tracksides. There is a diverse bryophyte community on the earthworks. The southern roadside is mown with a hedge-cutter from the road to create a band of scrub that is reverting to grassland.

Compartment 8 - This compartment contains earthworks and track ways with steep engineered slopes. Areas of short species-rich grassland occur on the steeper slopes with much of the area dominated by *Bromopsis erecta* (Upright brome). Scrub and scattered tree species are obvious and the margin next to Southwick Road is almost totally scrubbed over. The southern roadside is mown as compartment 7.

Compartment 9 - At the bottom of the slope tall scrub is over-topped with occasional trees, e.g., *Quercus ilex* (Holm oak), *Fraxinus excelsior* (Ash), *Ulmus* (Elm) and *Acer pseudoplatanus* (Sycamore). Holm oak control in recent decades has resulted in bare ground now occupied by a varied habitat characterised by downland, woodland, ruderal plants with the dead and living stumps of Holm oak.

Much of the rest of the site is diverse grassland that varies from short rabbit grazed turf to a tall herb community. Among the grassland is scattered dense scrub. Several small areas of short rich *Thesium*-containing grassland are found on old trackways. This area is heavily trampled as it used for recreational purposes and has numerous paths crossing it.

Compartment 10 - Dominated by moderately diverse short much trampled grassland with small patches of scrub. *Brachypodium sylvaticum* (False wood brome) is a prominent feature of the grassland. *Helianthemum nummularium* (Rockrose) and *Thesium humifusum* (Bastard toadflax) are notable. Scrub with a few emergent *Acer pseudoplatanus* (Sycamore) and other trees are concentrated in the southeast corner and southern boundary with a Clematis Bramble community.

3.2.2.2 Fungi

Grassland fungi, notably *Hygrocybe* (waxcaps) are well represented on the site especially in short turf. Indicating a healthy and diverse community of soil microorganisms. Fungi associated with scrub include *Verpa conica* and *Helvella lacunosa*. The site's fungi are poorly recorded.



Figure 7 Location of Waxcap *Hygrocybe conica* Sept 2020

3.2.2.3 Fauna

3.2.2.3.1 Mammals

Casual observations of small mammal surveys reveal healthy populations of *Apodemus sylvaticus* (Wood mouse), *Apodemus flavicollis*, (Yellow-necked mouse), *Microtus agrestis* (Field vole), and *Sorex araneus* (Common Shrew). *Oryctolagus cuniculus* (Rabbits) are common on the site and have a significant effect on the vegetation, by close grazing. Small numbers of *Capreolus capreolus* (Roe Deer) live on the hill all year. *Mustela erminea* and *M. nivalis* (Stoat and Weasel) are often seen. *Vulpes vulpes* (Fox) and *Meles meles* (Badgers) breed on the site.

3.2.2.3.2 Birds

Many birds can be seen on the hill as it provides a variety of habitats, food and shelter. The scrub is ideal habitat for warblers such as *Phylloscopus collybita* (Chiff-chaff). Also breeding on the site are *Sylvia communis* (Whitethroat, see fig 7), *Sylvia curruca* (Lesser whitethroat). Other scrub nesting birds include *Saxicola torquata* (Stonechat) and *Emberiza citrinella* (Yellowhammer). *Alauda arvensis* (Skylark) and *Anthus pratensis* (Meadow pipit), nest in the open grassy areas. The abundant hawthorn berries and ivy provide winter food. The hill's value is increased for birds as it is on a migratory route for many species.

Falco peregrinus (Peregrine), *Falco tinnunculus* (Kestrel) and *Buteo buteo* (Buzzard) nest on or near the site and are frequently seen hunting. *Picus viridis* (Green woodpecker) are often seen on the open grassland.

3.2.2.3.3 Reptiles

The site supports large populations of *Anguis fragilis* (Slow worm) and *Zootoca vivipara* (Common lizard).

3.2.2.3.4 Invertebrates

Much of Portsdown's scientific interest stems from its invertebrate community. The diversity of food plants and microclimate supports a considerable range of invertebrates.

Appleton *et.al.* (1975) produced a record of Lepidoptera, Hymenoptera, Coleoptera and Orthoptera. The findings of more recent workers [Pinchen](#) (2014, 2015, 2018), strongly suggest that a diverse invertebrate community remains. Many insect species that have shown considerable declines across their former range are still present, see, Table 6 and Figure 8.



Figure 8 Whitethroat - one of the many birds that breed on hill

Table 6 Uncommon or notable insects from insect surveys
2014/15/18

Species status

Forficula lesnei (Nationally Scarce B)

Gonocerus acuteangulatus (Red Data Book 1*)

Cheilosia soror (Nationally Scarce)

Chrysotoxum elegans (Red Data Book 3)

Thecophora fulvipes (Nationally Scarce)

Gymnosoma rotundatum (Red Data Book 3)

Mutilla europaea (Nationally Scarce B)

Hylaeus signatus (Nationally Scarce B)

Nomada flavopicta (Nationally Scarce B)

Bombus rupestris (Nationally Scarce B)

Bombus humilis (BAP Priority species)

Cupido minimus (BAP Priority species)

Stenobothrus lineatus (Noteworthy)

Corizus hyoscyami (Noteworthy)

Canthophorus impressus (Noteable)

Colletes hederæ (Recent colonist)

Tephritis divisa (Recent colonist)

Bombus hypnorum (Recent colonist)

Oxythreya funesta (Recent colonist)

Harmonia axyridis (Recent colonist)

3.2.2.3.4.1 Lepidoptera

Two [UKBMS](#) butterfly transects are walked on the site, Portsdown (compartments 1-3) and Portsdown SSSI 7-10. There are substantial populations of *Lysandra coridon* (Chalkhill Blue) and *Cupido minimus*, (Small Blue) as well as many of the commoner butterflies. *Aricia agestis* (Brown Argus) and *Argynnis aglaia* (Dark Green Fritillary) have returned in the last decade seen after an absence of several years. *Thecla betulae* (Brown hairstreak). Two moth species, *Cynaeda dentalis* and *Hyopchalcia ahenella* have their only known Hampshire locations on Portsdown Hill, but have not been recorded for several years. Their food plants are abundant on the site.

Other species *e.g.* *Plebejus argus* (Silver Studded Blue) and *Polyommatus bellargus* (Adonis Blue) disappeared from the site in the 1960s, Appleton et al, 1975.



Figure 9 Some Notable Insects

Top Left **Dark Green Fritillary**

Top Right **Brown hairstreak**

Mid left **Red bartsia bee (*Melitta tricincta*)**

Mid Right **Robberfly (*Machimus rusticus*)**

Bottom left **Chalkhill blue**

Bottom Right **Down Shieldbug, on Bastard Toadflax**

3.2.2.3.4.2 Hymenoptera

There is a rich bee and wasp fauna associated with the hill's summer-long flower rich grassland. The sun warmed sparsely vegetated banks are ideal habitat for many species that have life cycles with an underground larval stage. There are many notable species see table 6.

3.2.2.3.4.3 Orthoptera

Grasshoppers and crickets are well represented. There are large numbers of individual and species. There is a large population of *Tettigonia viridissima* (Great Green Bush Cricket) and *Conocephalus discolor* (Long-winged Conehead).

3.2.2.3.4.4 Diptera

Notable species include *Asilus crabroniformis* (Hornet robber fly), *Machimus rusticus*, *Eudorylas horridus*, *Cistogaster globosa*.

3.2.2.3.4.5 Arenea

Notable species include *Atypus affinis* (purse web spider) and a large colony of *Argiope bruennichi*, a large colourful spider with a limited distribution.

3.2.2.4 Invasive species

3.2.2.4.1 Non-native invasive species

There are numerous non-native species on the site, most are not spreading. Several are invasive and would most likely dominate the site in a few years, if not controlled.

Acer pseudoplatanus (Sycamore) and *Quercus ilex* (Holm oak,) are present. They form a dense canopy that very little few species can grow underneath. *Fraxinus ornus* (Manna ash) is widespread and in the central compartments.

Several low growing *Cotoneaster* species, notably *C. horizontalis*, are established and spreading rapidly in grassland or areas of cleared scrub that are being managed as grassland. The tendency of these invasive plant to spread and dominate is opposed by ongoing control measures. Holm oak trees, see fig. 10, are tenacious and it can take several seasons to kill off the stumps.

Other species may require monitoring, for example *Symphyotrichum* sp. (Michaelmas daisy) *Solidago canadensis* (Canadian goldenrod) which forms dense clumps in the eastern compartments and appears to be capable of colonising adjacent grassland.



Figure 10 Holm oak stumps. The regenerating grassland contains species of chalk grassland and woodland.

3.2.2.4.1 Native invasive species

Brachypodium sylvaticum (false wood brome), is the dominant grass in several areas that have been cleared of scrub. It appears capable of spreading into adjacent grassland.

3.3. Cultural

The scientific interest of Portsdown is largely due to centuries of interaction of people with the environment. Agriculture, chalk extraction and military construction have all left their mark, as did misuse of the site, see fig 11.

3.3.1 Archaeology and past land use

A [Historic Environmental Record](#) has been produced which lists the recorded finds and outlines the significant archaeological features of Portsdown Hill.



Figure 11 Burnt out cars (in 2000). They were a regular feature of the site.

As with many hill sites on Southern England's chalk, Portsdown has been a site of human occupation from prehistoric times. Evidence of flint working is readily found.

Neolithic, Bronze Age, Iron Age and Saxon burial sites have been found within the S.S.S.I. (Corney, 1967) or close by elsewhere on the hill, (Rudkin, 1989).

The hill forms an important defensive barrier for Portsmouth and so has strategic military importance. During Roman, Saxon and Norman times inhabitants must have taken account of this fact and so it is likely that Portsdown has been under constant human influence for many centuries.

In addition to military exercises, defensive constructions and disturbances during the world wars, the hill has been used for leisure purposes. Picnicking and tobogganing are well recorded and large fairs were held on part of the site until the early 20th century.

Although there is some evidence of historic and archaeological occupation on Portsdown much archaeological evidence was lost during the construction of five hill forts during the 1860's. The Victorian forts, which dominate the skyline today, were obsolete soon after being built. The disturbance that occurred when building the forts and constructing wartime defences has left, in places, a varied soil profile and surface layers.



Figure 12 Compartments south of Fort Widley in 1955 (top). There was very little scrub when compared with 2020, which is a reduction from that of 1990. The same area in 1910 but looking from the north east down the road (bottom). Sheep were still grazing then as they had been for centuries

The most important land use was that of grazing, see fig 12. Tithe maps of 1839 describe the hill as pasture with arable land to the north and south. Paintings and various accounts, e.g., Cobbett, (1830) describe

sheep grazing on open grassland. It seems likely that drove roads converged on Portsdown as livestock were driven towards the dockyard in Portsmouth to supply the navy. In the fifty years after WWII grazing ceased and the area of dense scrub on Portsdown increased from 5% to over 65%. In the last 20 years scrub has been reduced to approximately 50%. All of the photographs of Portsdown taken before the 1970s show an open grass-dominated landscape.

Quarrying occurred for many years with a substantial expansion in activity from the 1950s to the 1980s when Paulsgrove Chalk pit was expanded west.

Tree planting in the grassland of compartment 4 in occurred in the 1980s which accounts for the occurrence of ornamental species such as *Fraxinus ornus* (manna ash) in some areas.

3.3.2 Past Conservation management

The conditions found on the hill in the mid-eighties and prior to management starting are described in, (Johnson, 1985), (Portsmouth City Council, 1988), Rowe, J (1987, 1992) and (Brewis *et al* 1996). The site's calcareous grassland was declining due to a lack of management and substantial urban fringe problems made management difficult.

Conservation management of Portsdown Hill S.S.S.I began in 1991 with the formation of the Portsdown Hill Countryside Management Project, which became the Portsdown Hill Countryside Service in 1997. In the first few years, a small amount of scrub clearance was carried out.



Figure 13 Collector unit in action on land cleared of scrub

A vegetation survey was carried out in 2000, Norton, 2000). The site was re-surveyed in 2010 changes in the vegetation over the 10 years are detailed in Wilson, 2010. Changes in the vegetation between 2010 and 2020 are detailed in Norton, 2021. There was a considerable reduction in scrub and improvement in the grassland diversity.

The first five-year management plan was written in 1994 (Jones, 1994) and identified the following long-term objectives:

1. To maintain existing habitats and associated fauna and flora.
2. To improve, maintain and increase (to 70%) the area of species-rich calcareous grassland.
3. Safeguard all notable species.
4. To provide for public access and educational use of the site and to enhance public awareness and appreciation of downland habitat, except where it compromises objectives 1, 2 and 3.

The most significant result of the plan was the application and implementation of a programme of scrub clearance and grazing supported by a 10-year Countryside Stewardship application. The Stewardship Scheme ended in 2005 and was replaced by a 10-year Higher Level Stewardship scheme.

During the first, five-year plan fencing and grazing was extended over half the site and limited scrub clearance was carried out in many areas. The scrub clearance was aimed at connecting grassland across the hill and preventing scrub encroachment onto particularly species-rich grassland.

Where winter grazing with cattle occurred, the grassland became more diverse especially where there was an active rabbit population. All scrub clearance was followed by vigorous regrowth. Mowing and focused scrub clearance was applied to check regrowth.

A second, five-year management plan retained the long-term objectives. During this time the fencing was completed and grazing introduced to the whole site. This has led to a much shorter sward. A more extensive scrub clearance programme was carried out with the aim of reducing the scrub cover to no more than 30% in each compartment and managing 70% of the site in a way to produce or maintain species-rich calcareous grassland. Although around 15 ha of scrub was converted to grassland scrub cover



Figure 14 Scrub clearances in 2004 (top) and the resulting grassland in 2015 (below)

remained over 40% despite the presence of grazing animals. From 2005 horse grazing (in winter) at a density of one horse per 2.5 ha was used to maintain the grassland. To augment the reduction of soil fertility by nutrient export some of the dung (50 - 70 sacks per year) was collected from the site.

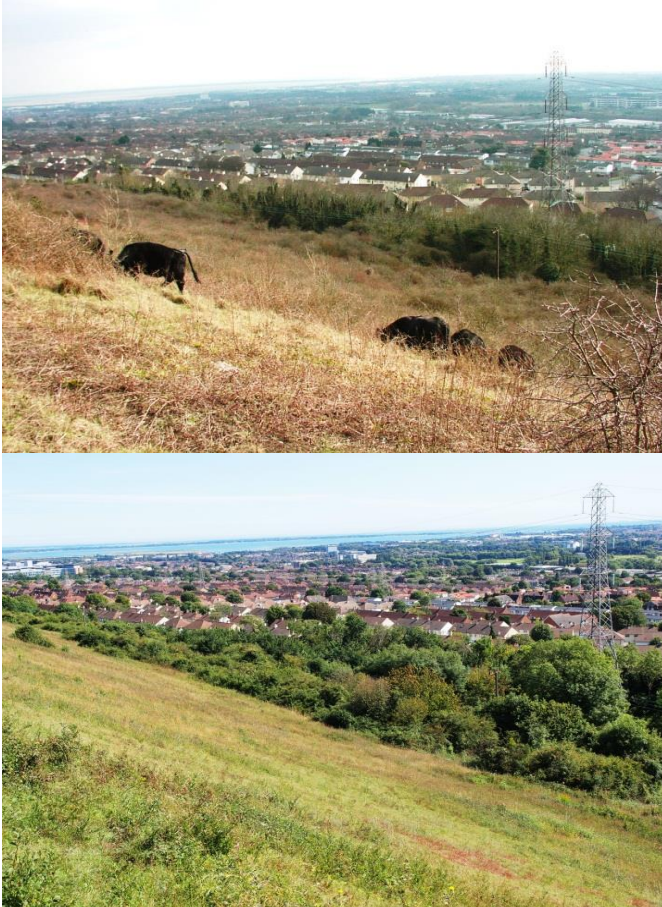


Figure 15 Cattle grazing scrubby slopes in 2004 (top) and the view in 2015 (below)

Subsequent five-year plans saw the maintenance phase. Much of the grassland is kept short through grazing with horses and mowing of scrub. Management concentrates on improving grassland biodiversity control of invasive species and the prevention of scrub expansion.

3.4 People, Stakeholders, Access

3.4.1 Stakeholders

A volunteer group under the umbrella of the [Friends of Portsdown Hill](#) work closely with site manager. Activities include habitat management, monitoring and infrastructure maintenance.

There are numerous visitors, often concentrated near the car parking nearest to the eastern compartments. Dog walking is a frequent purpose for visit but increasingly people are on site to see wildlife. The SSSI status means Natural England are stakeholders in site management.

3.4.2 Access and tourism

Under the Crow Act 2000, the site is Open Access. Dog Control Order covers the site. Portsmouth City Council has [two separate](#) web pages that provide information. The SSSI is the centre of a network of [paths and open space](#) that extend to adjacent PCC land and the wider land scape.

3.4.3 Interpretation provisions

[Interpretation panels](#) are positioned at several points.

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3.4.4 Educational use

The Hill has been used by students at different academic levels and on non-vocational courses. Resulting projects are produced of which copies are kept at the PHCS office. Wildlife courses organised by PCC museums occur as do informal community and school events. Offsite events are attended by staff and volunteers where Portsdown's wildlife is brought to a wider audience.

3.5 Landscape

Using the National Character Area (NCA) profile approach, Natural England, (2014) Portsdown Hill sits within the South Hampshire Lowlands 128 as an atypical chalk ridge in a coastal/urban/Hampshire lowland setting.

In the NCA profile the Statement of Environmental Opportunity (SEO 4) identifies management consistent with this plan, and the plan for the adjacent PCC managed land, e.g., grazing, arable reversion to chalk grassland, encouragement of sympathetic public use and raising awareness of the hill's ecological and historical interest.

3.6 Environmental relationships which may have implications for management

3.6.1 Human induced issues

The proximity of a large centre of population brings about the well-known urban fringe problems. Damage to the site is foreseeable and has been a regular occurrence. Vigilance is required to ensure all is well with livestock and the associated infrastructure. Measures will be needed to attend to and deter littering, disturbance through digging, metal detecting, vehicle use and fires.

Dog walking, including commercial dog walking, contributes unwanted nutrients and the associated insect toxic neonicotinoids, (Perkins, *et al* 2021), (de Lima e Silva, *et al* 2017). It also generates conflict when uncontrolled dogs are allowed to run across the site.

Low level grazing by sheep and goats would be an effective management technique. If it gave rise to the local production of fibre or meat it would be a considerable sustainability credit thus further supporting the practice. However, dogs prevent the use of sheep or goats on the site as dogs would almost certainly attack the livestock.

The accumulation of a considerable amount of past fly-tipping and the daily addition of new litter of various types is a factor in site management. The removal of rubbish and discouragement of those who add it requires action.

The local community make a considerable contribution to the management of the site through voluntary conservation work, e.g., habitat improvement and litter clearance.

3.6.2 Vegetation dynamics

The cover of grassland, scrub, woodland and transitional communities is a product of the normal successional progress to woodland which is opposed by the management. The greater the intensity of the intervention the more grassland and less woody vegetation. This process is distorted by the presence of established invasive non-native species that often out-compete the native vegetation. An absence of management would result in a dense cover of scrub with a large proportion of holm oak and cotoneaster. An assessment of the relative ecological value and aesthetic value of the different types of vegetation has to be assessed in deciding priorities.

3.6.2.1 Calcareous grassland

Chalk grassland is one of Britain's most diverse habitats. Many plant species can occur in close proximity. A diversity of plants in turn supports an even greater variety of insects and other invertebrates, especially those that require pollen and nectar. In addition, the sparse sun-baked vegetation allows the sun to warm the soil that in turn encourages warmth demanding invertebrates. Jukes, (2021), described key features for sites rich in terrestrial invertebrates as mosaics/juxtaposition of habitats, structural variation, topographical variation, strong flower abundancies and areas of sunlight.

The floristic diversity of calcareous grassland is due to restricted plant competition, (Grime, 1990). The conditions found in chalk downland favour low-growing perennials and other species that can tolerate the chronic environmental stress associated with chalk grassland. Therefore, many species of small stature can grow together.

Environmental stress on plants is due to the interaction of centuries of grazing on an inherently infertile soil. Grazing animals remove nutrients from the pasture and incorporate them into their bodies so when they leave the nutrients leave with them. In the absence of nutrient replacement, *e.g.*, fertiliser application, downland developed a characteristically impoverished soil.

In addition, the site's geology has influenced the vegetation because soils derived from chalk have high calcium levels and a high pH, but tend to be low in nitrogen, phosphorous and potassium. The combination of thin, infertile, basic soil with a poor water holding capacity, plus continual moderate defoliation by grazing leads to the suppression of dominant competitive plants.

The ecology of Portsdown Hill, like all chalk grassland sites, is therefore strongly modified by centuries of extensive grazing and to some extent intermittent cultivation which followed the clearance of any primeval forest by Neolithic farmers five to six thousand years ago. Other human activities have led to the variations in soil depth through the formation of trackways and excavations. Adjacent patches of thin and deep soil give rise to distinct abrupt variations in vegetation. This is a common feature of chalk grassland,

(Ratcliffe, 1977). There is a relationship between vegetation types and soil depth. On the site it was found that the deeper the topsoil the more vigorous and less diverse the plant assemblage, (McIntosh, 1997).

Without grazing, organic material builds up from uneaten vegetation. Organic matter retains water and nutrients and therefore encourages more vigorous plant growth and therefore the dominance of a few competitive species, especially those which are intolerant of grazing. If grazing is not re-established scrub invades and dominates until it is replaced by woodland. Chalk grassland is considered a plagio-climax in which natural succession is held in check by the human intervention of grazing. There has been a dramatic loss and fragmentation of chalk downland during the 20th century (Keymer and Leach, 1990, Ridding *et al*, 2015). The JNCC (2004) guidance on conservation objectives for calcareous grassland sites suggests a scrub cover of no more than 5%.

Intervention (grazing and scrub control) is required if calcareous grassland is to be maintained. Management techniques for increasing the diversity and reducing the vigour of coarse grassland on chalk are mowing and grazing, (Kirby, 2001). A rewilding approach is gaining traction in conservation management thinking, (Fuller and Gilroy, 2021). An interpretation of rewilding would be that wild large grazers are allowed to live on the site and grassland is maintained by adjusting the population of these grazers. This rewilding approach is not appropriate for this site it as is too small, has too much public access and is separated from the wider countryside by busy roads. It is not necessary to engage semi-permanent resident herbivores to control the rank grassland. There are already wild grazers on site which have a noticeable effect, *i.e.*, rabbits and to a lesser extent deer. The remaining grazing effort is achieved by short periods of suitable horses or cattle.

There is a direct relationship between grazing pressure and vegetation type. Only since the 1960s has coarser and taller vegetation been allowed to develop, when grazing by livestock and rabbits stopped. The vegetation cover of 1995 of mostly scrub and relatively tall grassland communities was historically unusual. Today's vegetation cover of around 50% scrub and 50% species rich grassland mixed with cleared scrub regrowth is even more unusual. In the 1950s the hill's landscape was open with short grassland maintained by grazing, see fig 12. All the evidence suggests this was the case for many centuries previously.

Chalk downland is a much threatened, ecologically diverse habitat. However, there are also considerable positive ecological attributes to scrub and taller grassland ecotone communities. Both scrub and coarse grassland provide suitable habitats for many species that would not flourish on open downland. They also improve the wider habitat for some species by providing shelter in adverse weather conditions when downland insects are on the wing.

Taller grassland and tall herb communities have a lower botanical diversity than the short downland communities they replace. However, they do add to the overall habitat range. For instance, they provide larval food for species like *Melanargia galathea* (Marbled white butterfly) and essential over-wintering sites for many invertebrates. Tall grassland also provides shelter and food for small mammals, which in turn supports a range of predators such as *Falco tinnunculus* (Kestrel) and other raptors. If a full complement of downland wildlife is to be retained, the site should be managed to retain some taller grass and scrubby regrowth communities in order to add structural diversity to the site.

3.6.2.1.1 Calcareous grassland - Mowing

As a short-term measure mowing is a useful management technique that can retain the short-turf species and prevent scrub invasion. The benefits of mowing can be further increased by harrowing to break up the dense *Bromopsis* sward. Breaking up the sward is necessary to produce gaps for the seeds of downland plants to germinate.

The aim is to have a suppressive effect on the *Bromopsis erecta*, Wells, (1971) recommends mowing the first growth of the year in an effort to deplete the plant's energy reserves. Most research recommends that conservation mowing is carried out in autumn after seed is set, Crofts and Jefferson, (1999).

Mowing has a catastrophic effect on invertebrates and its use (timing) has to recognise this. As the site is now adequately grazed so mowing of grassland is only needed to control scrub invasion. This means most of the scrub regrowth habitat has to be mown once a year to keep it as grassland and once every two years or three years to stop it reverting back to scrub. Currently around 50 hrs a year are spend doing this. Mowing involves the use of oil powered machinery so it has to be considered in the carbon budget of site

3.6.2.1.2 Calcareous grassland - Grazing

From an ecological standpoint, grazing is the most effective management tool. It was continuous grazing with a variety of animals that produced downland and maintained it for many hundreds of years. The response of grassland to grazing centres the timing, intensity and duration of grazing and the type of grazing animal, [see appendix 5](#).

The case has been made for carefully considering the need to graze as it has been shown to have an adverse effect on the range of species and numbers of invertebrate species (Helden, 2018). From the perspective of invertebrate conservation there is a case for the maintenance of some longer grass within or adjacent to the site.

The grazing intensity should be adjusted to keep the calcareous grassland in a favourable condition and sufficient ungrazed (within that season) vegetation onsite, or immediately off site, to maintain structured habitat for invertebrates. Ongoing defoliation and nutrient removal by grazing animals is the best way promoting a grassland habitat. The

choice of livestock and grazing regime should reflect the aim of gradually reducing coarse vegetation without damaging the remaining patches of species-rich grassland.

3.6.2.2 Scrub

Once scrub is established its further spread is self-perpetuating as it increases the fertility of adjacent soil through leaf and seed fall. Shrubs are deep-rooted and so can draw moisture from deeper in the soil profile than grass and herbs. This means that plant growth and organic accumulation continues, even when drought restricts the growth of herbaceous plants.

Several non-native scrub species are invasive and are capable spreading more vigorously than native ones. Retained scrub blocks can be a reservoir for these plants.

Scrub is a valuable habitat for many insects and birds. Many species are associated with the scrub edge habitat and downland species benefit from the shelter provided by bushes. Scrub adds value to a site's conservation value. However, the habitat associated with scrub, changes as it grows. If scrub is to be retained on a site there is a case for managing it on a coppice cycle, (Oates, 1990).

Wild graziers such as deer rest during the day in scrub, and rabbits require the shelter scrub provides for their burrows. If the grazing action of rabbits is to be maintained, scrub will be beneficial. It is possible to influence the rabbit population by scrub management.

3.6.2.3 Woodland

Woodland has developed on the deeper soil at the base of the slope. Trees occupy a small area of the site, adding both visual and ecological interest. It would be difficult and undesirable to attempt to return woodland to grassland and so these areas have been designated as woodland in the plan.

Where seed-bearing *Acer pseudoplatanus* (Sycamore) and *Quercus ilex* (Holm oak) occur they are spreading to both grassland and scrub and are capable of dominating any stands of trees. Both trees have few associated invertebrates and their presence has serious implications on the site's biodiversity. Unless Sycamore and Holm oak are controlled before they are old enough to set seed, they will spread to other habitats. Both species have effective means of spreading and coppice vigorously when cut down.

Native tree species with many associated insects *e.g.*, *Fraxinus excelsior* and *Ulmus* sp. have established themselves and where woodland is to be retained species such as these can be left whilst Sycamore and Holm oak are felled. Felled timber or standing dead trees killed by pathogens (notably *Ulmus* and *Fraxinus*) that are left will support a host of deadwood dependant invertebrates and fungi. If there is little risk of trees falling on

walkers consideration can be given to producing standing dead timber by ring barking trees that are to be removed.

Trees and bushes often support epiphytic lichens and bryophytes, especially as they age. The presence or absence of them informs the decision-making process that occurs when considering scrub clearance. Although Sycamore is invasive the bark of older trees is often covered in lichens and bryophytes.

The strip of woodland at the base of compartments 4 and 5 has 132kw and 33kw overhead power lines running through it. The wayleave clearance of the trees to prevent electrical shorting can be factored into the woodland management on the site. There is scope to increase the current uncommon deadwood habitat on the site and stacked scrub can be used to reduce motorcycle access.

3.6.3 External considerations - climate change, wider landscape biodiversity and the maintenance of ecosystem services

Any land management plan has to consider wider environmental issues, notably climate change, the loss of biodiversity from the surrounding landscape and sustainable land management. It would be possible, but undesirable to have an effectively managed site with a disproportionately large carbon footprint or other polluting effects that failed to address loss of biodiversity in the adjacent area and beyond. Any land management must have reference to these issues, even if the land is managed for conservation.

It is important to remove contamination and invasive species from the site and this approach should be encouraged on adjacent land as well. Harmful land use that results in agriculturally-related contamination e.g., agrochemicals, excessive faecal bacteria, phosphate and nitrogen, has no place on the site. Likewise, it would be better if it doesn't occur in the neighbourhood.

3.6.3.1 Climate change

The contribution to climate change of site works through the emission of greenhouse gases should be weighed against the benefits to biodiversity of the habitat management. The climate change impacts are likely to be modest but they should be evaluated and compared with other land management practices, the [Farm Carbon Calculator](#) is of assistance with this. The software suggests the organisation's operations across the hill sequester more carbon than they release. A continued increase in the use of battery-powered machinery, which is charged using sustainable electricity, will reduce the carbon footprint. Some of the management work is done by hand, using carbohydrates rather than hydrocarbons. Evaluation of the climate change effects of site management activities is ongoing.

Permanent undisturbed grassland is recognised as an effective carbon sink. (Alonso *et al*, 2012). This is especially true if the vegetation is botanically diverse, (Fornara and Tilman,

2008). On that basis calcareous grassland is compatible with the amelioration of climate change. Planting trees or leaving the hill to scrub over again would not necessarily sequester substantially more carbon than managing it as grassland. In the past, fires have been a frequent consequence of more a continuous dense scrub/tall grassland vegetation cover. This situation would lead to the loss of the rich biodiversity associated with chalk grassland and then the re-release of the carbon.

The promotion of climate change embodied in grassland maintenance activities should be considered. The retention of grassland requires mowing and/or grazing. Mowing with oil-powered equipment will of course release fossil carbon. Livestock generate potent greenhouse gases such as methane and nitrous oxide.

Grazing animals (ruminants or not) will release methane, which is a much more potent (but shorter lived) greenhouse gas than CO₂. Concentration of dung into heaps produces gases that have a range of polluting effects, e.g., CH₄, N₂O and NH₃. The climate effect of grazing can be minimised by only grazing for enough time to have the desired effect. No supplemental feeding should be permitted and the creation of poached ground (that releases soil carbon) should be avoided. There is a strong case for the site's grassland to be incorporated into the agricultural system of the local area. This would reduce the need for conventional intensive agricultural practices on adjacent land because the animals are able to graze extensively on the large area of grassland on the site.

The avoidance of soil disturbance and the promotion of botanical diversity is the aim of the management plan thus it is compatible with climate objectives.

3.6.3.2 Wider biodiversity

The merits of habitat connectivity across the landscape to allow wildlife migration, gene flow and environmental adaptation are stated by Lawton, *et al* (2010). The SSSI is influenced by the biodiversity of adjacent landscape and it in turn influences the biodiversity of the rest of the hill. The SSSI can be considered a core part of a discrete landscape unit. Land elsewhere on Portsdown has been recognised as of potential for adding to an intact ecological network, (HBIC, 2020) see appendix 7. There are other sites that on the escarpment that retain species-rich calcareous grassland, some of which have wildlife designations and are managed. There are also areas of the hill that retain a diverse flora and the environmental conditions to retain it without deliberate regular management.

The obvious purpose of the plan is to conserve biodiversity on Portsdown Hill SSSI. With the landscape-wide loss of species and bio-abundance (RSPB, 2019) simply conserving what is within the site boundaries is not sufficient. Regards must to be given to the adjacent environment, elsewhere on Portsdown and further afield. The chalk grassland reestablishment work done on the SSSI is complemented by activities described in the non-SSSI management plan (Jones, 2016). The SSSI designation status prevents activities

that might benefit a wider range of biodiversity supporting works, e.g., tree establishment, rare arable plant provision and pond establishment. Projects on adjacent land has achieved these outcomes with the potential for more.

Portsmouth Hill (taking the definition to be land higher the 60m contour) is around 500 ha (see Appendix 7). It extends to around 2.5 km to the west and east and 500 m to the north of the SSSI. The SSSI is well positioned to act as the centre of any biodiversity reconnection initiative especially as it sits in an area of 150 ha that is managed in a way that has regard for its biodiversity. Encouragement could be given to the various land management agencies that currently make no reference to conservation management of their land with emphasis on making habitat connections. A related issue is the control of large stands of invasive plants on nearby sites e.g., cotoneaster, to prevent re-infestation of the SSSI.

There is scope to integrate management across the whole Portsmouth landscape, across different ownerships and administrative boundaries such that different components of a healthy functioning ecosystem occur in the optimal locations. Liaison and outreach to landowners such as farmers, local government, Highways and the MoD is suggested so benefits can be co-ordinated.

3.6.3.3 Ecosystem Services

As the site is not intensively managed for human purposes, such as agriculture or recreation, it can be considered a natural resource that provides ecosystem services to benefit the wider environment.

Ecosystem services have been placed into four categories (Hains-Young and Potchin, 2017) 1 **Provisioning** e.g. Food, fibre, 2 **Regulating and maintenance**, e.g. water quality, pollination, 3 **Cultural Services** e.g. Wellbeing, health. 4 **Supporting or enabling** e.g. Biodiversity that allows the ecosystem to function so that oxygen is generated, nutrients are recycled or carbon is sequestered.

When considering how environmental relationships influence management the site's contribution to ecosystem services should be factored in. The four categories above are interconnected and it would seem likely that management likely to achieve a diverse calcareous grassland-dominated site will also maintain a healthy natural resource. However, it is reasonable not to assume this and that any management actions should review their implications.

3.6.4. Summary of environmental relationships which may have implications for management

Portsmouth Hill SSSI has several species-rich chalk grassland communities along with varied scrub communities and grassland/scrub ecotone communities. Without management, scrub, with a large proportion of scrubby non-native species, would

dominate within a few years. The main consideration is identifying the most beneficial proportion of different vegetation types. The ideal percentage coverage is affected by the value of each vegetation type; how easy it is to re-establish, the abundance in the local area and the historical presence.

Extensive grazing by multispecies groups of animals that form part of the local agricultural economy of the area would be the most effective and sustainable management practise. Sheep, goats, cattle would have the desired effect of controlling the vegetation with minimal use of machinery and fossil fuels. However, the limited availability of a full range of suitable livestock and the prevalence of dog walking on the site make this unlikely. Winter grazing with robust animals to complement that of grazing by wild grazers, has been sufficient to remove the annual growth of herbaceous material and is having the desired outcome on the grassland.

In the absence of browsing animals, scrub control can only be achieved by extensive phased cutting largely outside the growing season augmented by cautious localised clearance when it is growing. Mowing regrowth outside the growing season reduces the impact on invertebrates and it is important that is phased so that substantial areas are left uncut each year for the over wintering stages of their life cycle.

When light scrub is cleared it produces a low open scrub habitat where grasses, herbs and scrub regrowth compete for light. If managed by grazing and mowing then herbaceous plants will dominate and the area will become grassland. If left unmanaged the scrub will re-establish itself. Low intensity management produces an ecologically valuable variety of intermediate vegetation types. It is a dynamic equilibrium.

Recognition of the climate impacts of management works so that minimal climate affecting gases are released whilst maintaining a favoured vegetation cover. A consideration of land use that is sustainable and promotes biodiversity and bio-abundance on adjacent areas of the escarpment play a role deciding onsite priorities.

3.6.5 Species considerations

It is difficult to identify all the environmental requirements of a single species let alone all the species present. Managing the site to achieve the desired botanical composition may have undesirable consequences for the invertebrate population, (Kirby, 2001). For the purposes of illustration, important environmental factors associated with several of the key species are in [appendix 5](#).

The key point is to maintain continuity of grassland and scrub habitats across the site. Mowing necessary to control scrub regrowth must always leave a large proportion of uncut vegetation in any single cutting episode but the regrowth must be cut before the scrub establishes itself. Site features that are associated with invertebrate diversity are

described by Jukes, (2021). Areas of high biodiversity and sensitivity require protection from damage caused by the public or utility firms.

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4 EVALUATION AND OBJECTIVES

4.1 Evaluation of features

This chapter evaluates the information from the preceding description. It identifies and confirms the important features and finally identifies and allocates the priorities of the site management objectives.

4.1.1 Evaluation

Several criteria are commonly used when assessing nature reserves and when these are applied to Portsdown Hill it is clearly a valuable site, despite a previous considerable decline. The conservation value of the site increases when other examples of the same habitat are lost; this is especially true for chalk downland. The site is a good example of a priority habitat in good condition.

The S.S.S.I. is positioned halfway along the length of the hill and therefore it has the important role of as an intact biodiverse core and ecological corridor for the numerous calcareous grassland fragments to either side of it. It can be seen as a biological reserve for re-colonisation operations in the locality.

The site is extremely valuable as it contains intact viable short grassland communities notably (NVC communities CG3a/CG2/CG7), as a host to numerous pollinator species and their supporting habitats. Portsdown has a high value as a site in which large numbers of people can encounter wildlife and benefit from the well-being generated by contact with the natural environment.

4.1.1.1 Size

The importance of a site generally increases with size. Larger sites can maintain larger, more viable populations and provide a wider range of habitats. Portsdown Hill S.S.S.I. is important because it is one of the larger expanses of semi-natural vegetation on chalk in Hampshire. The land covered by this plan is augmented by adjacent sites under complementary management (by PCC) and the most western compartment of the SSSI, Portchester Common.

4.1.1.2 Diversity

The extensive species list and variety of habitats show the site to be diverse before restoration began in the 1990s. Since then, habitat management has increased the diversity. The past land use has given rise to a varied topography, aspect, and soil depth. Therefore, there is a commensurate variety in vegetation and the insect life it supports.

Diversity is one of the most important attributes of high-quality sites, and on this criterion Portsdown Hill can be considered especially valuable.

4.1.1.3 Potential

The potential to improve the conservation and recreational value of the site that was identified in earlier plans has to a large extent been met in recent years. The factors that may have dissuaded legitimate usage in the past have been reduced. Vandalism, litter and inaccessible expanses of scrub have been replaced by open flower-rich grassland in which quiet enjoyment of the views and the natural environment are possible.

A safe, well-managed site enhances the quality of life for local people and visitors and the local authority can be proud of an attractive and significant landscape feature. There is potential for increased legitimate use of the hill which would raise appreciation and further discourage misuse.

An opportunity exists to provide a valuable educational resource close to a large centre of population. There is considerable scope for environmental education as there is both abundant biodiversity and easily demonstrated ecological processes. Historical, archaeological, geographical principles can be conveniently conveyed on site.

4.1.1.4 Intrinsic value

The intrinsic value of the site is extremely high as it offers excellent views over Portsmouth, the Solent and Isle of Wight. Contact with the natural world is recognised as promoting wellbeing and improving mental and physical health to visitors. The open spaces and the views are extremely uplifting and chalk grassland supports many attractive species, such as butterflies, and colourful flowers. It is the nearest open countryside to the Portsmouth area and if made more accessible, by continued scrub clearance and promotion the public usage will almost certainly increase. The intrinsic value could be increased if the well cared for, attractive environment on Portsdown Hill is refined with increased access features, signage and off-site literature.

4.1.1.5 Rarity

The chalk grassland habitats found on Portsdown Hill are now very rare. Almost all flower rich grassland has been lost from the countryside since the 1940s.

4.1.2 Summary of Important Features

4.1.2.1 Vegetation

The vegetation with the highest ecological interest is a range of species-rich calcareous grassland, with short species rich grassland being most valuable. The ecotones and transitional areas of taller vegetation also contribute to the overall value. It is a scarce priority habitat and is restricted to a limited set of historic and environmental circumstances. Therefore, most of the site should be managed to promote this habitat and its deterioration prevented.

The scrubby and woody vegetation that currently occupies half of the site is also of substantial ecological and aesthetic value and in conjunction with the shorter vegetation supports more biodiversity than either vegetation category would on their own.

It is not easy or desirable to remove a significant amount of the woody vegetation, approximately 9 ha. It often consists of well-established trees and shrubs on deeper soil, or in some places post-war building rubble, that will not readily produce species rich grassland. On the edge of the site, it often forms a barrier to unwanted access. Much of it lies outside the fences so it cannot be grazed. Much of the scrub is diverse and of interest its own right.

From this, a judgment needs to be made regarding the ideal proportions of the different vegetation types. A range of values with calcareous grassland dominating would seem acceptable however as scrub is reduced to below 40% it will become more difficult to profitably further clear it and expect to revert to calcareous grassland as the soil nutrients will be high.

The first assessment of the idealised desirable cover occurred in 1994. The proposal was to aim for 70% species rich grassland and the rest a mix of scrub habitats. UK JNCC guidance on conservation objectives for monitoring designated sites on the management of chalk grassland suggested much lower levels of scrub cover (5%). The precedent from the recent historical record (1960s) was that of little scrub. On that basis getting the scrub down to 30% cover from around 70%, as it was at the time, seemed a reasonable aspiration. Especially as the plan then included Portchester Common, which had a much lower proportion of scrub.

For reasons detailed above the cover of 70% short grassland has proven difficult to achieve and should be revised downwards as it would require the removal of a substantial amount of woodland and mature scrub at the cost of the associated wildlife habitat and carbon release. There would also be a requirement to mow an increased area of regrowth, equating to more climate impacts.

It is unlikely that species rich grassland would establish on all of the cleared ground. In light of the ecological value of taller grassland / scrub mosaic communities for invertebrates and the benefit of shelter given to grassland species given by scrub there is less need to aim for 70% short grassland. Especially as there is now an extra 10 ha of sympathetically-managed grassland is now on adjacent sites, e.g., the Top Field, north of compartment 4. A viable contribution to chalk grassland conservation and habitat and visual diversity benefits can be achieved with 40% of the site under scrub.

The distribution of the retained scrub/permanent woodland should overlay that of the enriched soils, non-grazed areas, and buffer zones with houses and roads that do not favour species-rich grassland.

4.1.2.2 Species

Chalk grassland, in conjunction with other habitats, supports a rich fauna and flora. Portsdown Hill is a reservoir for many uncommon species that were formerly widespread. Many rare insects that are dependent on food plants and other habitat features restricted to chalk grassland retain breeding populations on the site. The long-term retention of these chalk grassland species is dependent on the effective management of the vegetation especially the control of localised scrub.

4.1.2.3 Access and recreation

Unrestricted public access on the urban fringe means that damaging activities such as arson, exercising uncontrolled dogs, camping, vandalism, rubbish dumping and illegal vehicle use are likely without vigilance. The most effective form of management is grazing, but it is particularly vulnerable to the above problems. There is also the constraint of maintaining access, as the site is an important area for informal recreation which has to be recognised and accommodated in such a way that it does not have a detrimental effect on the site's ecological value.

Anything that reduces the input of canine-associated nutrients and veterinary pesticides is of assistance in maintaining the site in a favourable condition. There are bins for dog waste immediately off site, it is important that they are visible, accessible and regularly emptied. Signage relating to their use should be clearly displayed.

4.1.2.4 External considerations

The contribution to climate change of site management and its role in reversing wider biodiversity losses should form part of the plan. The impact on climate of management should be described and reduced if it is thought to be unacceptably high. Management should reflect the conservation status of the wider landscape and seek to improve the whole of Portsdown's biodiversity and in so doing improve the situation on the site.

4.1.3 Long-term Management Objectives

(The ideal objectives in the absence of constraints)

- 1. To improve, maintain and increase (to 60%) the area of species-rich calcareous grassland dominated habitats**
- 2. To retain existing habitats, apart from those dominated by invasive non-native species**
- 3. To safeguard all notable species**

4. **To provide for public access and educational use of the site and to enhance public awareness and appreciation of Portsdown's habitats, except where it compromises other objectives**
5. **Incorporate wider environmental considerations into the plan by: ensuring climate change considerations are accounted for; opportunities to improve and connect biodiversity across Portsdown are defined and sought; land management is sustainable**

4.2 Factors influencing the achievement of long-term management objectives

4.2.1 Owners objectives

The landowner's overall objective is that of safeguarding the ecology of Portsdown Hill SSSI, whilst simultaneously promoting its recreational use. See section 2.2

4.2.2 Internal natural factors

Seral succession from grassland to scrub is the most important factor on the site.

Where scrub has been cleared in the last twenty years the soil contains the viable roots of the cleared bushes ready to repopulate the area with more scrub. There is also increased fertility associated with the increased organic matter. The scrub that established itself in the last 30 years of the 20th century has left a mark that will take many decades to remove.

Continuous management pressure (grazing and mechanical scrub control) is required to counter the tendency for scrub and rank grass to dominate the vegetation. If management ceases, succession will once again lead to the loss of chalk grassland. Annual scrub clearance is required to maintain the current vegetation cover. Invasive alien species require vigorous control to prevent them from taking over much of the vegetation.

4.2.3 Internal human-induced factors

The site has the status of public open space. Some areas have many visitors, e.g., the eastern compartments, 9 and 10. People radiate out from car parks and nearby housing. There is a requirement to maintain open paths.

Legitimate public usage brings the serious problem of accommodating people and their dogs whilst grazing livestock are present. It is unlikely that will be sheep grazed on the site for fear of attack. Dogs may worry larger animals or chase them so that they escape enclosures and stray onto roads. Those dog walkers who fail to comply with the dog 'pick up' laws that apply to the site add unwanted and damaging enrichment and veterinary chemicals to the soil.

Any management work on the site must accommodate legitimate access to the hill by utility firms and the public within relevant legal constraints. Enclosures that contain livestock also have to minimise the restriction to access they cause, so that less agile people can negotiate gates and stiles, *etc.* Unobtrusive fencing and access points reduce the complaints and lessen the workload of vandalism repair.

There are several damaging activities that are prohibited under legislation such as, metal detecting, encampments, vehicle use and arson. The proximity of housing increases the likelihood of such issues and requires that the site be checked regularly, especially when livestock are present. This creates a staffing shortage that is so far only overcome by the efforts and goodwill of staff and volunteers.

Motorcycling and horse-riding is damaging to species-rich grassland. Shod horses damage the vegetation. Any access point that will permit a horse to enter or leave a stocked, fenced area will also allow a livestock to escape. The droppings of horses import nutrients and therefore lead to soil enrichment and thus reduce botanical diversity.

There is a substantial amount of rubbish on the southern boundary of the site. It appears to have been thrown over the fence from nearby housing. There is considerable input of dropped and windborne litter from the roads that run adjacent to the site.

4.2.4 Physical Constraints

Like many grassland sites on steep slopes, only specialist tractor-mounted machinery can be used and then with caution and when the ground is dry enough. Suitable machinery is owned. Access on to roads is often difficult because site security is required to prevent unauthorised entry.

4.2.5 Resources

Reducing the scrub cover down to 40% by clearing over 6 ha of scrub in the next 5 years is unlikely. 3 ha of clearance is a more realistic target as scrub clearance is necessary to keep the scrub/grassland ratio constant.

The landowners, Portsmouth City Council, provide no direct budget, other than staff costs for the management of the area of the S.S.S.I. that falls within the administrative boundary. Although assistance with some undertakings is available.

The site is in a Countryside Stewardship Higher Tier scheme, see [appendix 3](#) which provides adequate funds for maintenance works but not further scrub clearance from the current levels.

The active Countryside Stewardship agreement recognises the current proportion of scrub as desirable, thus before significant scrub clearance can continue it will be

necessary to engage with Natural England to amend the agreement or draw up a new one.

The costs of maintaining the ongoing grazing and mowing pressure will need this funding. The presence of livestock generates administration and animal welfare considerations that cannot easily be sustained without extra funding assistance.

Operations likely to achieve all the management objectives will require more resources than are currently available to the PHCS. Habitat management is achievable through external grants but the removal of the rubbish is not yet costed.

It is essential to monitor the effects of management and this process has been greatly assisted by commissioned surveys, student projects and volunteer surveyors. The extent of future volunteer assistance in this area is unknown, but the likelihood is that it will continue.

The provision of suitable livestock is dependent on good relations with trustworthy graziers who are willing and able to supply, transport and attend to livestock and deal with the associated compliance and administration. This has been possible so far.

Staff availability falls a long way short of what is necessary, see table 2. In common with many sites of nature conservation interest, the volunteer input is greater than that of paid staff and contractors.

4.2.6 Summary of factors influencing the achievement of long-term objectives

4.2.6.1 Internal natural trends

Without suitable mowing of scrub regrowth and grazing, natural succession will lead to the loss of species rich chalk grassland through the encroachment by scrub and the coarsening of the remaining grassland.

4.2.6.2 Resources

The site is grazed, and a local grazier is currently able to provide livestock to augment the natural grazing provided by rabbits. A specialist mower machinery has recently been acquired and its running costs are covered. The input of a large and well-motivated volunteer group is a valuable asset in managing the site.

Portsmouth City Council's contribution (staff costs and other support) is insufficient to cover all expenditure, however external funding (Countryside Stewardship Scheme) is available to fund core habitat and basic site management costs. Currently the grant system is changing and it is hoped the replacement Environmental Land Management scheme will continue to support management.

The partially concealed longstanding rubbish concentrations will require extra resources and thus the removal process has to be described and costed.

4.2.6.3 Internal human-induced trends

Public usage will continue to affect management in that irresponsible dog owners and vandals prevent the use of the optimal grazing regime, *i.e.*, the use of sheep and goats. Individuals and organisations wish to carry out recreational activities that damage the site. Undesirable behaviour, has to be monitored, dealt with and taken into account when planning any management. Litter and encampments require attendance.

4.3 Operational Objectives

This section considers how the long-term objectives may be modified by the impact of trends and constraints. This leads to the formulation of short term or Operational Objectives that can be achieved by the end of the plan period *i.e.*, January 2025. The operational objectives present a route by which the long-term objectives can ultimately be achieved.

4.3.1 Rationale and Operational Objectives

Long Term Objectives and Operational Objectives derived from them (See 4.3.1.1 - 4.3.1.4 for discussion)	
Long Term Objectives	Operational Objectives
1. To improve, maintain and increase (to 60%) the area of species-rich calcareous grassland dominated habitats	1. Manage 57% of the site as species-rich calcareous grassland dominated habitats to produce and maintain, throughout the site, a mosaic of the existing habitats with their associated flora and fauna (apart from those dominated by invasive non-native species)
2. To retain existing habitats, apart from those dominated by invasive non-native species	
3. Safeguard notable species.	2. Safeguard notable species
4. To provide for public access and educational use of the site and to enhance public awareness and appreciation of Portsdown's habitats, except where it compromises other objectives	3. To provide for public access and educational use of the site and to enhance public awareness and appreciation of Portsdown's habitats, except where it compromises other objectives

<p>5 Incorporate wider environmental considerations into the plan by: ensuring climate change considerations are accounted for; opportunities to improve and connect biodiversity across Portsdown are defined and sought; ensuring land management is sustainable</p>	<p>4. Incorporate wider environmental considerations into the plan by: ensuring climate change considerations are accounted for; opportunities to improve and connect biodiversity across Portsdown are defined and sought; ensuring land management is sustainable</p>
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4.3.1.1 Rationale Long Term Objectives 1 and 2

- 1. To improve, maintain and increase (to 60%) the area of species-rich calcareous grassland**
- 2. To retain existing habitats, apart from those dominated by invasive non-native species**

These long-term objectives can be considered together as they both relate to the dominant vegetation cover. The seral progression of short, species-rich chalk grassland, to coarse, species-poor grassland, to scrub and then woodland, is undesirable in terms of both conservation and public access. Neither scrub nor tall grassland is rare or restricted to a single soil type. They are comparatively easily replicated elsewhere, whereas species-rich calcareous grassland only occurs where chalk outcrops and where there has been long standing management involving grazing.

As there are so many species associated with chalk grassland there is the strongest case for maintaining it at the expense of scrub. This is especially true as most of England's chalk grassland has disappeared WWII and it has been a key landscape feature on chalk hills for many centuries.

In common with most sites of wildlife interest in Lowland Britain, chalk grassland is a semi-natural habitat - it is artificial and is a response to management. However, the species that depend on it are natural parts of our biodiversity. The original post-glacial forest cover was removed over 6 thousand years ago and cannot be restored as the soil conditions have changed. Even before early humans arrived and cleared the trees it seems likely that areas of grassland existed due to concentrations of wild herbivores and soil slippage on steep slopes. Grassland species would have been restricted to these areas across a predominantly wooded landscape.

As there is little merit, in terms of grassland conservation, of reducing the scrub to less than 40% cover. A reasonable aim would be to have 60% of the site covered by a range of calcareous grassland dominated habitats. This would require 6.2 ha from the scrub /clematis-bramble. A realistic goal of the gradual removal of 4 ha over the next 5 years is an achievable target, producing a 57% grassland cover. The removal of the remaining 2.2 ha of scrub is a consideration for the next plan to achieve the long term objective.

The habitat created by the regrowth that follows scrub clearance is of interest in its own right. A small amount, about 15-20%, will add diversity to the site and so the work programme should always aim to retain this habitat in conjunction with scrub control.

Scrub should be retained as a visual and physical barrier. The use of maintained hedges to: protect and obscure livestock fences, give trample-free zones in the scrub and give a managed appearance to the site should be pursued.

Where small areas of mature trees have established on the lower slopes they should be retained, but not allowed to spread. Management should aim to reduce invasive species such as holm oak, and sycamore and encourage other species such as ash, hawthorn, elm and oak.

Grazing and scrub control is necessary to retain the species-rich plant communities and to encourage them to expand over ground that until recently was coarse grassland or scrub. Under appropriate management pressure, the vegetation types take up different proportions. Management techniques *e.g.* those of scrub clearing machinery, can inadvertently damage perilously small populations. Therefore, careful planning and supervision will be required for the remaining scrub clearance work.

The landowners agree with the above objectives and it is a legal requirement to manage Sites of Special Scientific Interest to maintain their features.

The ideal management to achieve the objectives is some form of grazing. The use of livestock will reproduce the conditions that originally brought about the site's wildlife interest. Grazing is a sustainable and ecologically effective option, a conclusion that meets with the support of Natural England and is in line with the proposals within the Hampshire Biodiversity Action Plan. All relevant conservation bodies, *e.g.* The Hampshire Wildlife and Isle of Wight Trust and the RSPB endorse this approach to chalk grassland management.

Other positive considerations of grazing are that it creates interest and a pleasant rural atmosphere and therefore engenders a positive public attitude towards the site. The obvious presence of livestock demonstrates a management commitment that removes the perception of Portsdown Hill being an untidy urban fringe site. For hundreds of years the site has been maintained as open downland, the restoration of grazing recreates its

historic usage. A more open chalk downland landscape provides fewer opportunities for undesirable activities such as rubbish dumping and arson. Short grassland does not burn, even in a drought, unlike tall grass and scrub; therefore the Fire and Rescue call out rate is much reduced when downland occupies most of the site.

Winter grazing reduces the vigour of the *Bromopsis erecta* and removes the thatch of the dead vegetation. This allows desirable species to grow and thus botanical diversity increases. However, this grazing regime has a limited effect on the scrub and there are areas outside the stock fences which require grassland management in the form of cut and clearance.

Although grazing benefits the grassland at low levels, it requires higher stocking rates and different species to control scrub. Incidents of vandalism have decreased in recent years so that is now possible to graze at an intensity likely to achieve a suitable sward height and effect some control over the scrub. However, a considerable mechanical and manual scrub clearance effort will still be required to augment the scrub control achieved by grazing animals because sheep and goats cannot be used.

The current practice of winter and spring grazing with cattle and unshod horses should continue to produce the improvements seen in grassland diversity but more needs to be done to control scrub. Further scrub clearance and the ongoing prevention of regrowth is necessary.

Management that will produce downland in the long term will create a range of intermediate low scrub and grassland vegetation types in the short term. Future Operational Objectives should be devised in the light of the response of the vegetation to the management.

Long-term objective 1 can be modified to increase grassland to 57% (rather than 60%) and combined with Long-term objective 2 as the desired proportions of each vegetation type can be achieved and maintained. They can be combined in a single operational objective.

4.3.1.2. Rationale Long term Objective 3

Safeguard all notable species

The long-term retention of all notable species (as defined by recent surveys) can best be achieved by successfully fulfilling long-term objectives 1 and 2. It is essential that fragments of species-rich grassland are not damaged during any scrub clearance and fencing operations and the opportunity to connect adjacent ones is taken.

It would require fewer resources to simply maintain many of the notable species in small, carefully managed areas without attempting to manage habitats across the entire site. However, this is undesirable in the long term as genetic diversity is likely to be reduced and small populations are vulnerable to sudden extinction. Where notable species are threatened, they should be retained by intensive local management. Saving desirable species from immediate extinction, *e.g.*, scrub encroachment onto an area of bastard toadflax, should be part of a strategy to retain them until appropriate long term management can be implemented.

It is foreseeable that operations by utility companies will threaten notable species. For instance, the routing or repair of buried services may impact on areas of particularly rich grassland. The impact will need to be identified and avoidance or mitigation agreed.

For the most part it will be necessary to rely on the successful fulfilment of preceding objectives to maintain all the notable species. The work of surveying the more cryptic species may be suited to student projects and enthusiastic amateur naturalists, thus this should be actively encouraged. It is important that invertebrate and plant surveys are conducted and status of Red Data Book species be investigated, so if necessary, they should be commissioned. A NVC vegetation survey (Phase 2) and an insect survey should be conducted every 10 years.

The only amendment necessary to long term objective 3 is one to reflect the fact that there is limited value in attempting to locate all notable species associated with the site, as they will almost certainly benefit from the proposed management. A sufficiently accurate guide to the short-term well-being of these species can be inferred from the ongoing butterfly transects and other surveys as well as opportunistic survey work that arises out of any interest shown by students. A longer-term aim would be a more thorough review of the sites biodiversity, notably the invertebrates. The outline prescriptions reflect the points raised in the discussion of long-term objectives 1 and 2.

4.3.1.3 Rationale Long term Objective 4

To provide for public access and educational use of the site and to enhance public awareness and appreciation of Portsdown's habitats, except where it compromises other objectives

Portsdown's location on the urban fringe gives it a valuable role for informal countryside recreation. Extensive scrub and tall vegetation are incompatible with this and so the maintenance of open grassland and easily negotiated paths is desirable from a public access point of view. This approach accords with operational objectives 1 and 2 that seek to conserve landscape and biodiversity interest. The provision of public access is likely to be met with the achievement of operational objectives 1 and 2 so there is no need to amend long-term objective 4 as it relates to public access.

The achievement of long-term objective 4 assists in the previous objectives as public interest plays an essential role in safeguarding the site's nature conservation interest. A major constraint on the grazing programme has been vandalism and livestock worrying. Misuse of the site is discouraged by a well informed and interested visiting public. Pressure on sensitive vegetation can be avoided by the careful routing of paths and positioning of access points.

The local communities will only support and tolerate management that includes grazing and extensive scrub clearance if they have an appreciation of the downland habitat and the threat caused by the lack of management. Grazing is necessary to achieve the operational objectives 1, 2 and 3. It is highly desirable to form an association of the site with grazing livestock in the public perception.

Damaging activities should be discouraged through a considered interpretation programme that points out the damage and legislative position of such behaviour.

The resources required to achieve the long-term objective (often just talking to people) are less than those associated with the previous objectives and many of these are in place. Therefore, to some extent the long-term objective need not be modified. Many more resources could be used to produce ever more effective literature, signage and media presence.

4.3.1.4 Rationale Long term Objective 5

- 5 Incorporate wider environmental considerations into the plan by: ensuring climate change considerations are accounted for; opportunities to improve and connect biodiversity across Portsdown are defined and sought; ensuring land management is sustainable**

It is important that the work programme and its underlying aims are not in conflict with wider environmental aspirations such as pollution avoidance, sustainability and regional/local biodiversity conservation. Through outline prescriptions, projects can be described that:

Evaluate how works contribute to climate change and how this can be avoided;

Assess the how local biodiversity conservation can be complemented by onsite works and how offsite works could benefit onsite biodiversity;

Access how works contribute to the site's role as a provider of ecological services and ensure that operations are sustainable;

The intention is to ensure wider environmental concerns are addressed as management proceeds. As much how things are to be done as what will be done. This means assessing and mitigating contributions to climate change and other polluting activities. In a similar vein the value of the land as an ecological service provider is something that should be defined and incorporated in descriptions of the site.

It is appropriate to seek opportunities to increase biodiversity beyond the plan area that complement the habitats within the SSSI. It requires an assessment of the potential to join and enlarge wildlife supporting land management across the Portsdown escarpment. This objective is mirrored in the management plan for the non-SSSI land it is anticipated that works will integrate to maximise benefits.

4.3.2 Limits

The following limits can be identified:

No dumping of rubbish and cars

No paths or other routes should be directed over remaining areas of species-rich downland turf.

No encampments

No horse riding

5 ACTION PLAN

The operational objectives are achieved by the completion of a series of outline prescriptions each of which in turn are achieved through a group of projects. To enable comparison with other organisations' projects they have standardised codes and names written in a stylised form.

The project codes begin with R (record) M (management) or A (administration). A second letter subdivides them *e.g.* V (archive) F (flora). A number further subdivides codes to the level where the short stylised description of the project is added.

e.g. RV10 List/collect photographs ground

The project is further qualified by a site specific number and may be subdivided further with a short phrase. Unlike the project code, the project number and associated phrase are devised by the management planner. The final project identification may appear like this:

RV10/01 List/collect photographs ground - fixed point

5.1 Project register

The project register lists all projects within the hierarchical structure of:

Operational objective > Outline prescription > Project

The CMS handbook recommends a full description and details of costs, time spent, *etc.* This time consuming and rather precise approach is not possible within management structure of this site. To prevent the unnecessary diversion of resources into providing and updating a detailed list of projects and the achievement of each project a simplified approach has been adopted. The simplified project register, description and review are held in the form of a spreadsheet.

5.2 Project records and review

The Operational Objectives and the Outline Prescriptions arising from them are given below. The full project list, records and project reviews are held in a spreadsheet.

Operational Objectives and Outline Prescriptions		
Operation objectives	Outline Prescriptions	Projects/review/records
Operational objective 1 Manage 57% of the site as species-rich calcareous grassland habitats to produce and maintain, throughout the site, a mosaic of the existing habitats with their associated flora and fauna (apart from those dominated by invasive non-native species)	Outline prescription 1.1 Monitor habitats	See project spreadsheet
	Outline prescription 1.2 Maintain grazing	
	Outline prescription 1.3 Reduce by 2025, the scrub cover to 43%	
Operational objective 2 - Safeguard notable species	Outline prescription 2.1 Collate existing records and establish status of notable species	
	Outline prescription 2.2 Prevent human activity from threatening notable species	
	Outline prescription 2.3 Protect notable species	
Operational objective 3 To provide for public access and educational use of the site and to enhance public awareness and appreciation of Portsdown's habitats, except where it compromises other objectives	Outline prescription 3.1 Monitor public use of the site	
	Outline prescription 3.2 Maintain footpaths and other access, interpretative features	

	Outline prescription 3.3 Maintain programme of walks, talks and other events that inform public and interest groups about the site	
	Outline prescription 3.4 Ensure the site is a pleasant, welcoming, safe place to visit	
Operational objective 4 Incorporate wider environmental considerations into the plan by: ensuring climate change considerations are accounted for; opportunities to improve and connect biodiversity across Portsdown are defined and sought; ensuring land management is sustainable	Outline Prescription 4.1 Incorporate climate change prevention and adaptation into management projects	
	Outline Prescription 4.2 Assess how biodiversity provision on adjacent land can be improved with the aim of producing ecological network across Portsdown	
	Outline Prescription 4.3 Incorporate sustainable land management practices into plan projects	
	Outline Prescription 4.4 Plan for removal of accumulated rubbish from site	

5.3 Projects

Outline prescription 1.1 Monitor habitats

Project Name	Project description	Progress by date
RV10/01 List/collect photographs	Take photographs of site from fixed points and archive with existing ones	By 2025
RF03/01 Collect data, monitor vegetation - carry out survey to investigate effect of grazing on botanical composition	Take quadrat data from grazed and ungrazed sites to describe the effect of grazing. Re-sample quadrats every five years. Prepare student projects to help with data gathering. See projects.	By 2025
RF03/02 Collect data, monitor vegetation - update vegetation map	For an illustrative proportion of the site update scrub map / GIS layer that describes the extent of scrub and grassland.	By 2025

Outline prescription 1.2 Maintain grazing

Project Name	Project description	Progress by date
MG00/01 Manage grazing animals, general	Graze with cattle/horses sufficiently to remove annual growth of grass. Winter-graze with no more than 1.5 livestock units per ha.	Each winter/spring
MG00/02 Husband grazing stock,	Check animals daily when on site. Ensure all are in good condition and have water available. Assess level of fodder and ensure that animals will be moved before they run out to avoid supplemental feeding. Follow DEFRA animal welfare guidance notes.	Daily when livestock are on site.
AF01/02 Grant application - claim /renew comply with funding scheme	Claim grants according to schedule. Pursue new/replacement agreement when it is likely to be available.	Ongoing
ME01/02 Boundary structures - maintain existing fences, fence remaining compartments	Ensure that fences and gates are kept in good repair. Refer to findings of MP00/01	As necessary
ML80/01 Liaise other, graziers	Maintain contact with graziers. Ensure contact is maintained with established graziers, maintain contact to ensure livestock will be available.	Ongoing
MP00/01 Protect site by patrol	Check fence line, daily when site is stocked, monthly otherwise, and ensure that fences and gates are in good repair. Record locked gates and infrastructure. Report anyone committing damaging behaviour to the Police.	Daily when livestock on site.

Outline prescription 1.3 Reduce by 2025, the scrub cover to 43%

Project Name	Project description	Progress by date
AP10/01 Prepare/revise work programme - plan mowing and scrub removal	Produce updated report showing how further scrub clearance and scrub regrowth control will achieve species-rich grassland. Use scrub map from 2020 phase 2 survey. Mow and clear, at least annually, 90% of all scrub regrowth. Always mow less than 25% of the possible area of any compartment at any one time. Allow at least 2 weeks between mowing operations when mowing outside the winter.	May 2021
ME07/01 Manage habitat, woodland/scrub, by scrub control	Following AP10/01 Clear scrub and scrub regrowth	End of plan
MS00/01 Manage species tree/shrub /control invasive alien species	When clearing scrub cut and remove all Sycamore, Cotoneaster, Manna ash and Holm Oak from the work site and the immediate area. Fell/ring bark and poison seed bearing sycamore. Poison or dig up <i>Cotoneaster horizontalis</i> , remove and destroy, in fire, plants producing berries. Following AP10/01 aim to remove invasive cotoneaster from the site.	Until it is under control
MH14/01 Manage habitat, grassland - by mowing	Mow annually up to 25% of the ungrazed grassland to diversify the sward and prevent scrub growth. For any compartment always mow less than 25% of the possible area at any one time. Allow at least 2 weeks between mowing. Clear and compost (off-site) the arisings.	Annually
MM/01 Manage machinery and equipment, general	Maintain vehicles and tools. Keep record of maintenance of significant items. Time spent using vibrating hand tools. Pesticide usage.	Annually or as necessary

Outline prescription 2.1 Collate existing records and establish status of notable species

Project Name	Project description	Progress by date
RB06/01 Collect data, biological, list species	Update species list for site.	As new records are received
RA44/01 Collect data, Lepidoptera, count/estimate/measure/census - continue butterfly transect	Staff and volunteers to carry out two butterfly transect in compartments 1, 2 and 3 and 8, 9 and 10. Send data to Butterfly Conservation.	Weekly during the transect season (April-September)
RA70/01 Collect data, other insects, general	Carry out bumblebee transect in compartment. 7, 8 and 9. Send data to Bumblebee Conservation.	Monthly during the transect season (April-September)
RA10/01 Collect data on birds	Note and record occurrence of significant birds	As they occur. Record annually
RA70/02 Collect data, other insects, general	Note and record occurrence of significant insects.	Add species to list annually
RV70/01 Collect data, other vascular plants survey - <i>Hippocrepis</i> / <i>Helianthemum</i> , <i>Thesium</i>	Map extent of <i>Hippocrepis</i> , <i>Helianthemum</i> , <i>Thesium</i> , <i>Gentianella anglica</i> GPS produce GIS layers	Over plan period
RF62 Collect Data fungi , survey	Record all grassland fungi findings	Over plan period

Outline prescription 2.2 Prevent human activity from threatening notable species

Project Name	Project description	Progress by date
ME04/01 Remove litter	Remove litter, encourage agencies that are responsible for clearance on adjacent land to carry out their responsibilities, support volunteers who assist.	Clear litter as it is found. Ongoing repeating activity
ML20 Liaise stakeholders, right-holders - prevent utility firms from damaging site during operations.	When utility firms e.g. SSE approach to carry out work on SSSI ensure plans are agreed to avoid damage. Log contact.	When approached

Outline prescription 2.3 Protect notable species

Project Name	Project description	Progress by date
MS10/01 Manage species, other vascular plants	Dedicated tasks to prevent encroachment onto <i>Hippocrepis</i> , <i>Thesium</i> and <i>Helianthemum</i> . Informed by project AP10/01.	As necessary
MH19/01 Manage habitat, grassland, by other activities dung collection.	Collect and remove dung from grazing animals to prevent localised concentrations of nutrients encouraging growth of rank vegetation on species rich grassland. Aim to collect around 200 sacks (25kg bags) over the course of the year.	Each spring
AT50/01 Liaise/supervise volunteers - supervise volunteers that clear scrub	Following AP10/01 ensure scrub removal by volunteers does not inadvertently damage intact species-rich grassland.	Every task

Outline prescription 3.1 Monitor public use of the site

Project Name	Project description	Progress by date
RH34 Collect data, public use, count visitors	Count people using the site, modal description. Volunteer project. How many people use the site, what are they doing, how often. Transect format	Within plan period

Outline prescription 3.2 Maintain footpaths and other access, interpretative features

Project Name	Project description	Progress by date
ME06/01 Erect/maintain signs/interpretation boards	Keep information boards and signs in good condition.	Check in Jan and June. Replace as necessary. Consider updates biannually
ME00/01 Site infrastructure, general	Monitor path network and infrastructure. Walk paths and record activity on GPS.	Annually

Outline prescription 3.3 Maintain programme of walks, talks and other events that inform public and interest groups about the site

Project Name	Project description	Progress by date
MI50/01 Provide interpretation	Prepare literature and interpretation e.g., update websites Keep PCC and FoPH websites updated	Review annually.
MI20/01 Inform visitors, educational	Prepare and update notes for educational visits. Input in to visits. Talk to lecturers and teachers. Carry out walks and bug hunts, attend events.	Up to 5 events a year.
MI00/01 Inform public off site- attend events and fora.	Provide slide shows, provide material for exhibitions and attend fairs and similar events. Attend Solent Ranger Forum. Provide events at museums and other venues.	Up to 5 events a year.
MI10/01 Inform visitors, general - explanatory notices to cover practical work	Place notices advising of presence of livestock.	When livestock are present

Outline prescription 3.4 Ensure the site is a pleasant, welcoming, safe place to visit

Project Name	Project description	Progress by date
MP00/02 Patrol general to investigate site misuse	Link in with path inspection observations ME00/01 and incident specific patrols	Monthly visits to all areas
ML80 Liaise stakeholders others. Use External agencies to control misuse	Report problematic issues and incidents to Community Wardens and Police. Attend meetings.	As necessary
MI10 Inform visitors, onsite information	Signage to welcome visitors to the site and remind them of the requirements not to damage it. Remind people of bylaws regarding dogs, metal detecting and camping.	In plan period

Outline Prescription 4.1 Evaluate climate change impact of operations and comply with carbon neutral targets

Project Name	Project description	Progress by date
AR60 Prepare report - other	Subject work programme to carbon accounting, such as Farm Carbon tool kit. Establish carbon footprint and make comparisons with other land use.	Jan 2022

Outline prescription 4.2 Assess biodiversity provision on adjacent land can be improved with the aim of producing ecological network across Portsdown

Project Name	Project description	Progress by date
RF04/01 Collect data, vegetation estimate	Produce an assessment with a GIS layer of intact calcareous grassland and other wildlife habitats on the Portsdown escarpment managed by other agencies. Describe opportunities how habitats may be connected, enlarged and enhanced.	Jan 2023
AP21/01 Prepare plan strategic	Based on product of RF04/01 produce priorities for integrating wildlife-based management along Portsdown.	Jan 2023

Outline Prescription 4.3 Report how the management effects the site's ecological services provision

Project Name	Project description	Progress by date
AR01 Prepare report, project review, new projects	List in report how ecological services (Provisioning, Regulating and Maintenance, Cultural Services Supporting or enabling) are delivered by site	Jan 2023

Outline Prescription 4.4 Plan for removal of accumulated rubbish

Project Name	Project description	Progress by date
RH07 Collect data, human impact, pollution	Assess the requirements of removing rubbish build ups, predominantly at base of slope	Jan 2023
ME04/02 Remove litter	Remove rubbish identified by RH07	In plan period

6 APPENDICES

Appendix 1 Species list

Portsdown Hill SSSI Hampshire

LOCAL PLANNING AUTHORITIES: Hampshire County Council

Portsmouth City Council; Fareham Borough Council

NATIONAL GRID REFERENCE SU 618065-SU 666064

ORDNANCE SURVEY SHEET 1:50 000:196 1:25000:SU 60

HECTARES/ACRES: 80.67/199.36

DATE NOTIFIED (1949 ACT) : 1978 DATE OF LAST REVISION:

DATE NOTIFIED (1981 ACT) 1984 DATE OF LAST REVISION:

OTHER INFORMATION

Owned mainly by Fareham Borough Council and Portsmouth City Council and managed as open space. A small part is registered and confirmed as common land.

REASONS FOR NOTIFICATION:

Portsdown Hill is an isolated east-west chalk anticline with a long south-facing escarpment which remains unreclaimed. On the lower south-facing slopes raised beaches mark former sea levels and it is postulated that former wave erosion has removed the Tertiary deposits and some of the chalk, leaving very steep slopes. Despite the absence of grazing and extensive disturbance, these slopes still support a rich chalk grassland flora and a rich and diverse insect fauna. Hawthorn *Crataegus mongyna* scrub is extensive and much of the grassland is dominated by Upright brome *Bromus erectus*, a tall vigorous species which responds rapidly to lack of grazing. Areas of finer turf dominated by Red Fescue *Festuca rubra*, Sheep's Fescue *F. ovina* and a wide range of small herbs, remains widespread, however, whilst the site supports a number of species of limited distribution, including Hairy Rock-cress *Arabis hirsuta*, Pale Flax *Linum bienne*, Meadow Cranesbill *Geranium pratense*, Horseshoe Vetch *Hippocrepis comosa*, Bastard Toadflax *Thesium humifusum*, Early gentian *Gentianella anglica*, Knapweed Broomrape *Orobancha elatior*, Bee Orchid *Ophrys apifera*, and Fly Orchid *O. insectifera*

The insect fauna has been studied in detail and includes a comprehensive range of chalk downland butterflies (Lepidoptera), beetles (Coleoptera), bees and allied insects (Hymenoptera). Of interest is the occurrence in an atypical habitat of the Bush Cricket *Conocephalus discolor* and a substantial population of the largest of the British Bush Crickets *Tettigonia viridissima*.

**STATUS: SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI) NOTIFIED ~
SECTION 28 OF THE WILDLIFE AND COUNTRYSIDE ACT 1981**

PORTSDOWN SITE OF SPECIAL SCIENTIFIC INTEREST HAMPSHIRE
OPERATIONS REQUIRING PRIOR CONSULTATION WITH THE NATURE ~
CONSERVANCY COUNCIL

Standard Type of Operation

Ref. No.

- 1 Cultivation, including ploughing, rotovating, harrowing and re-seeding
- 2 The introduction of grazing and subsequent changes in the grazing regime (including changes in type of stock or the intensity or seasonal pattern of grazing and cessation of grazing).
- 3 The introduction of stock feeding.
- 4 The introduction of mowing etc. , and subsequent changes in the mowing or cutting regime.
- 5 Application of manure, fertilisers and lime.
- 6 Application of pesticides, including herbicides (weedkillers).
- 7 Dumping, spreading or discharge of any materials.
- 8 Burning of vegetation.
- 9 The release into the site of any wild, feral or domestic animal, plant or seed. ("Animal" includes any mammal, reptile, amphibian, bird, fish or invertebrate).
- 11 The destruction, displacement, removal or cutting of any tree, shrub or turf.
- 12 The introduction of tree and/or woodland management (including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management).
- 14 Water abstraction through boreholes.
- 20 Extraction of minerals, including topsoil, sub-soil and chalk.
- 21 Construction of roads, tracks, walls, fences, hardstands, banks, ditches or other earth works, 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 vegetation.
- 27 Recreational or other activities likely to damage vegetation.
- 28 Introduction of game or waterfowl management.

Appendix 3 Countryside Stewardship options

Higher tier Countryside Stewardship agreement relating to Portsdown Hill SSSI

- Agreement number 310166

Parcel Name	Sheet Number	Parcel Number	Option Code	Option Title	Total Parcel Area ha	Option Area/length	Area length	Option Duration	Option Start Date	Option End Date
SSSI 1-6	SU6406	2852	GS6	Management of species-rich grassland	41.49	20.46	ha	5	01/01/2017	31/12/2021
SSSI 7-10	SU6506	7931	GS6	Management of species-rich grassland	18.35	10.35	ha	5	01/01/2017	31/12/2021
SSSI 1-6	SU6406	2852	SP1	Difficult sites supplement	41.49	20.46	ha	5	01/01/2017	31/12/2021
SSSI 1-6	SU6506	7931	SP1	Difficult sites supplement	18.35	10.35	ha	5	01/01/2017	31/12/2021
SSSI 1-6	SU6406	2852	SP4	Control of invasive plant species supplement	41.49	1.5	ha	5	01/01/2017	31/12/2021
SSSI 7-10	SU6506	7931	SP4	Control of invasive plant species supplement	18.35	0.3	ha	5	01/01/2017	31/12/2021
SSSI 1-6	SU6406	2852	WD7	Management of successional areas and scrub	41.49	20.65	ha	5	01/01/2017	31/12/2021
SSSI 7-10	SU6506	7931	WD7	Management of successional areas and scrub	18.35	7.9908	ha	5	01/01/2017	31/12/2021

Appendix 4 Bylaws

DATED 4 April 1995



BYELAWS

Made under Section 164 of the Public Health Act 1875,
Section 15 of the Open Spaces Act 1906 and
Sections 12 and 15 of the Open Spaces Act 1906

- relating to -

Portsmouth Hill, Portsmouth

CITY OF PORTSMOUTH
PORTSDOWN HILL BYELAWS

BYELAWS made by the Council of the City of Portsmouth under section 164 of the Public Health Act 1875, section 15 of the Open Spaces Act 1906 and sections 12 and 15 of the Open Spaces Act 1906, with respect to part of Portsdown Hill, Portsmouth.

Interpretation

1. In these byelaws:

"the Council" means the Council of the City of Portsmouth;

"the land" means such of Portsdown Hill, Portsmouth, as is within the administrative area of the Council, as shown shaded in grey on the plan attached to these byelaws;

"officer of the Council" means any person employed by or acting with the authority of the Council for the purposes of these byelaws.

Vehicles

2. (1) No person shall, without reasonable excuse, ride or drive a motor cycle, motor vehicle or any other mechanically propelled vehicle on the land, or bring or cause to be brought on to the land a motor cycle, motor vehicle, trailer or any other mechanically propelled vehicle, except on any part of the land where there is a right of way for that class of vehicle.

- (2) If the Council has set apart a space on the land for use by vehicles of any class, this byelaw shall not prevent the riding or driving of those vehicles in the space so set apart, or on a route, indicated by signs placed in conspicuous positions, between it and the entrance to the land.

- (3) This byelaw shall not extend to cycles or invalid carriages.

- (4) In this byelaw:

"cycle" means a bicycle, a tricycle, or a cycle having four or more wheels, not being in any case a motor cycle or motor vehicle;

"invalid carriage" means a vehicle, whether mechanically propelled or not, the unladen weight of which does not exceed 150 kilograms, the width of which does not exceed 0.85 metres and which has been constructed or adapted for use for the carriage of one person, being a person suffering from some physical defect or disability and is used solely by such a person;

"motor cycle" means a mechanically propelled vehicle, not being an invalid carriage, with less than four wheels and the weight of which unladen does not exceed 410 kilograms;

"motor vehicle" means a mechanically propelled vehicle, not being an invalid carriage, intended or adapted for use on roads;

"trailer" means a vehicle drawn by a motor vehicle, and includes a caravan.

Camping

3. No person shall on the land, without the consent of the Council, bivouac or erect a tent or use any vehicle, including a caravan, or any other structure for the purpose of camping, except on any area which may be set apart and indicated by notice as a place where camping is permitted.

Overnight Parking

4. No person shall, without the consent of the Council, leave or cause or permit to be left any vehicle on the land between the hours of 12.00 midnight and 6.00 am.

Fires

5. (1) No person shall on the land intentionally light a fire, or place, throw or let fall a lighted match or any other thing so as to be likely to cause a fire.
(2) This byelaw shall not prevent the lighting or use of a properly constructed camping stove or cooker in any area set aside for the purpose, in such a manner as not to cause danger of or damage by fire.

Protection of Wildlife

6. No person shall on the land intentionally kill, injure, take or disturb any animal, or engage in hunting or shooting, or the setting of traps or nets, or the laying of snares.

Grazing

7. No person shall, without the consent of the Council, turn out or permit any animal to graze on the land.

Climbing

8. No person shall, without reasonable excuse, climb any wall or fence on or enclosing the land, or any tree, or any barrier, railing, post or other structure.

Removal of Structures

9. No person shall, without reasonable excuse, remove from or displace on the land any barrier, railing, post or seat, or any part of any structure or ornament, or any implement provided for use in the laying out or maintenance of the land.

Removal of Substances

10. No person shall remove from or displace on the land any stone, soil or turf, or the whole or any part of any plant or tree.

Metal Detectors

11. No person shall on the land use any device designed or adapted for detecting or locating any metal or mineral in the ground, except in any area which may be set apart and indicated by notice as an area where the use of such devices is permitted.

Noise

12. (1) No person on the land shall, after being requested to desist by an officer of the Council, or by any person annoyed or disturbed, or by any person acting on his behalf:
- (a) by shouting or singing;
 - (b) by playing on a musical instrument; or
 - (c) by operating or permitting to be operated any radio, gramophone, amplifier, tape recorder or similar instrument;
- cause or permit to be made any noise which is so loud or so continuous or repeated as to give reasonable cause for annoyance to other persons on the land.
- (2) This byelaw shall not apply to properly conducted religious services.
- (3) This byelaw shall not apply to any person holding or taking part in any entertainment held with the consent of the Council.

Trading

13. No person shall on the land, without the consent of the Council, sell, or offer or expose for sale, or let to hire, or offer or expose for letting to hire, any commodity or article.

Aircraft

14. No person shall, except in case of emergency or with the consent of the Council, take off from or land upon the land in an aircraft, helicopter, hang-glider or hot-air balloon.

Obstruction

15. No person shall on the land:
- (a) intentionally obstruct any officer of the Council in the proper execution of his duties;
 - (b) intentionally obstruct any person carrying out an act which is necessary to the proper execution of any contract with the Council; or
 - (c) intentionally obstruct any other person in the proper use of the land, or behave so as to give reasonable grounds for annoyance to other persons on the land.

Savings

16. (1) An act necessary to the proper execution of his duty on the land by an officer of the Council, or any act which is necessary to the proper execution of any contract with the Council, shall not be an offence under these byelaws.

- (2) Nothing in or done under any of the provisions of these byelaws shall in any respect prejudice or injuriously affect any public right of way through the land, or the rights of any person acting legally by virtue of some estate, right or interest in, over or affecting the land or any part thereof.

Removal of Offenders

17. Any person offending against any of these byelaws may be removed from the land by an officer of the Council or a constable.

Penalty

18. Any person offending against any of these byelaws shall be liable on summary conviction to a fine not exceeding level 2 on the standard scale.

Revocation

19. The following byelaws are hereby revoked insofar as they apply to the land:
- (a) the byelaws made by the Lord Mayor, Aldermen and Citizens of the City of Portsmouth acting by the Council on 23 February 1934 and allowed by the Minister of Health on 16 April 1934 in respect of various pleasure grounds and open spaces;
 - (b) the byelaws made by the Council on 3 November 1977 and confirmed by the Secretary of State for the Home Department on 5 January 1978 in respect of various pleasure grounds and open spaces; and
 - (c) the byelaws made by the Council on 20 February 1985 and confirmed by the Secretary of State for the Home Department on 1 October 1985 with respect to the prevention of nuisances caused by motor cycles and other vehicles.

DATED the 4th day of April 1995

THE COMMON SEAL of the PORTSMOUTH)
CITY COUNCIL was hereunto affixed) L.S.
in pursuance of a resolution of the)
Council passed at a meeting duly)
convened and held:-)

(Signed) S Mitchell
Authorised Signatory

The foregoing byelaws are hereby confirmed by the Secretary of State and shall come into operation on 4 September 1995.

Signed by authority of the Secretary of State

(Signed) M E Head
M E HEAD
An Assistant Under-Secretary of State
8 August 1995
Home Office
LONDON, SW1

DRAFT

Grazing

Grazing - defoliation

The herbage that livestock choose to eat affects botanical composition. Some plants flourish in grazed grassland because they are tolerant of, or resistant to herbivory. Tolerant species such as plantains (*Plantago*) have growing points close to the ground while other species simply grow quickly and produce many seeds. Plants that are resistant to grazing are often unpalatable *e.g.* *Thymus* (thyme) and *Senecio jacobaea* (ragwort) or are spiny *e.g.* *Cirsium* (thistles). Plants that are actively selected by grazers and are unable to grow back quickly will eventually be driven from the site.

The nature of the grazing has important implications for the invertebrate fauna. The correct grazing pressure can retain short species-rich turf whilst maintaining areas of tall grass habitat. An uneven sward, with a variety of microhabitats is suitable for a wider range of species. Livestock remove vegetation gradually and so do not have the catastrophic effect on invertebrates, as mowing. Small mammals and reptiles also benefit from a range of vegetation densities.

The timing of any grazing will also affect the grassland's response. Many plant species have flowering periods restricted to only part of the growing season. If grazing animals remove all the flowers then the recruitment of new seedlings will be adversely affected. In plants with long-lived seeds and/or perennial species the loss of a year's seed will not affect the population; however, it may affect any invertebrates that are dependent on the seeds or flowers. *Rhinanthus minor* (Yellow rattle) is an example of an annual plant with short-lived seed that will be reduced by early summer grazing. The grazing preferences of different stock are another important factor.

Grazing - trampling

Livestock, especially cattle, break up accumulated dead vegetation and create bare ground as they move about the site. A low level of such ground disturbance is beneficial as it stimulates the regeneration of plants from the seed bank. Patches of soil exposed to the sun's warmth are important during the underground larval stage of many invertebrates. Where excessive trampling by heavy livestock occurs susceptible plants may be lost.

Plants are more sensitive to disturbance when they are actively growing. Therefore, the timing of grazing has important considerations. Heavy grazing at the beginning of the growing season will adversely affect one suite of species whilst leaving other (late growing) species little affected.

There are small areas of species-rich grassland scattered across the site. Where animals are obliged to walk over these areas due to the funnelling effect of scrub the risk of damage by trampling is increased. Bushes have been cleared to open these bottlenecks and alternative routes through cleared scrub made available.

Grazing - manuring

Chalk grassland is a nutrient-poor habitat. Livestock deposit urine and dung and therefore have the potential to raise the nutrient status and thus cause a shift in the vegetation towards coarse competitive species. Provided that supplementary feeding does not occur and livestock only eat vegetation from the site all they are doing is concentrating some of the nutrients that are already present. When they leave the site they are, in effect, removing nutrients and perpetuating conditions that give rise to downland by reducing soil fertility.

Whilst grazing animals lower the nutrients within a system they can increase the rate at which they are recycled. Nutrients locked up in dead or old vegetation are available for new growth. Where grazing has

been established cattle have cleared much of the ivy from the scrub and deposited a proportion of the nutrients on other parts of the site.

The physical removal of dung may speed up the export of nutrients although it has to be remembered that there are many invertebrates and fungi that benefit from dung, as do the predators that in turn feed on them. It is important that livestock are not wormed using a prophylactic bolus that administers an Avermectin based compound. This drug persists in the dung and prevents invertebrates from colonising.

With the right grazing pressure all habitats can be retained and the need for other active management greatly reduced.

Stocking rates and timing of grazing

From the experience of the first 15 years it takes approximately 8 weeks of winter grazing at the stocking rate of 1 cow per ha to remove the annual growth of grass. The time taken to do this is less than it was at the outset of grazing because the dominant grass is now less vigorous and produces less biomass. Also much of the fodder value associated with the scrub (ivy) has been eaten and it is unable to regenerate to pre-grazing levels.

A guide to the carrying capacity of calcareous grassland is 0.25 LU/ha/yr, see Crofts and Jefferson, (1999). A LU (livestock unit) is 550 kg of animal and is a means of comparing livestock of differing age and species. e.g. 4 adult ewes at 60 kg are equal to a 1 year old beef animal at 240 kg – both equal approximately 0.5 LU, Crofts and Jefferson, (1999).

The cattle and horses that have grazed Portsdown Hill have been approximately equivalent to 1 LU, giving a stocking level of 0.16 LU/ha/yr. Agriculturally improved grassland rates are several times higher (2.0 LU/ha/yr) than this, which suggests that the grassland on Portsdown is unproductive. However, it has to be remembered that much of the area is covered in scrub and there is limited grass regrowth during the winter when the site is grazed.

On dry south-facing slopes like Portsdown Hill, winter grazing with cattle has produced the desired effect of suppressing the *Bromopsis erectus* (upright brome), and opened up the sward and allowed other species to grow. Grazing has been restricted to a relatively short time during a time of year when most plants and animals are dormant. Although there is some evidence of poaching on paths there seems to be little trampling damage on the best areas of grassland. Existing areas of fine downland turf retain their characteristic species e.g. *Thesium humifusum* (bastard toadflax).

From a grassland management perspective winter grazing at one cow or large unshod horse per ha is increasing botanical diversity and suppressing *Bromopsis*. Scrub is not controlled by cattle grazing, neither are scrub seedlings that have established themselves in the grassland. In order to control scrub a more elaborate grazing regime is necessary for example grazing during the growing season and the use of scrub-eating livestock such as goats.

Grazing - choice of livestock

Each livestock species has unique grazing characteristics that will in turn have a distinct effect on the vegetation. The essential characteristics for sheep, cattle, goats and ponies are given below. Differences in breed and age also affect grazing behaviour.

Sheep

Sheep are the preferred animal at many sites, (Bacon, 1990, 1993). Their nibbling mouth action is recognised as producing the best (*i.e.* finer) downland turf. They are capable of grazing on steep

slopes and cause less soil erosion than larger animals. They are not as susceptible to the toxic effects of ragwort as other livestock and some breeds will eat a certain amount of scrub.

They are selective feeders that tend to take flower spikes but leave grass stems, tussocky grass and dead vegetation. Unpalatable species tend to be avoided. A management consideration of sheep is the threat of dog worrying and likelihood of becoming entangled in brambles.

Cattle

Cattle are good at removing coarse grass and feed non-selectively by wrapping their tongue around the vegetation and biting it off. Feeding in this way they have produced a short sward on Portsdown. They are less susceptible than sheep to dog worrying and other problems caused by the close proximity of an urban area. Cattle will push deep into scrub looking for ivy and therefore make subsequent scrub clearance much easier. If droppings are to be removed, they make this procedure much easier by producing cowpats. They can easily cause excessive trampling, especially in wet weather.

Goats

Goats graze, strip bark and browse. They will eat a variety of scrub and herbaceous vegetation often concentrating on one particular type of vegetation for a while before turning their attention to something different. From trials with domestic goats on the site and in Fort Widley as well as with semi-feral goats in Fort Southwick it is clear they are efficient at controlling scrub of any type and grazing off rank grass. There is plenty of scope for their use on the site. Like sheep, they are vulnerable to dog worrying.

Goats heft, that is they tend not to stray from a chosen location. On Portsdown they moved barely 200 m from where they first introduced to the site in 3 months. This means they graze and browse a small area thoroughly.

Horses and ponies

Horses can graze very close to the ground due to their forward pointing incisors and so potentially have a role in managing chalk grassland. On a nearby field a good mixture of downland species is maintained by low level horse grazing. However, they are not usually recognised as suitable grazing animals. A commonly seen situation is that of poached overgrazed horse paddocks that are prone to *Senecio jacobaea* (Ragwort) invasion. They are known to produce localised concentrations of nutrients by dunging in selected areas. This would be a problem if they were to choose a patch of species-rich grassland. Shod horses would soon damage sensitive grassland so are not suitable.

Low level horse grazing may be an appropriate option provided adequate control is maintained, (Gibson, 1996).

Grazing - wild grazers

There are roe deer (*Capreolus capreolus*) on the site, but too few to have a noticeable effect on the vegetation. Rabbit grazing has been significant at the western end of the site, *i.e.* compartments, 1 and 2 from the being in of the plan period, 1995. The rabbit population has increased considerably in the last ten years to the extent that it has reduced the need for grazing. By 2010 compartments 9 and 10 also developed a large rabbit population so that the grass is short all year.

The potential for rabbits to influence the need for grazing management is considerable and rabbit numbers should be monitored. Over most of the site the rabbits make beneficial contribution to the grazing effort

and their presence is welcome. It is significant that the rabbits live within the blocks of scrub. There is the potential to influence rabbit numbers by adjusting the area of scrub.

Scrub management

Advantages and effects of coppicing scrub:

- it prevents retained scrub from becoming over-mature and degenerate, thus losing most of its conservation value;
- it promotes vigorous regrowth which benefits those butterflies that have scrub species as food-plants;
- it prevents retained scrub areas from maturing and thus producing seeds which lead to colonisation of nearby grassland sites;
- it retains scrub as an impenetrable barrier, which can be desirable in some situations;

Scrub regrowth forms a distinct, if temporary, habitat in its own right and benefits invertebrates such as Bush Crickets. The flowering ruderal plants that occupy recently cleared ground provide nectar and pollen for a variety of insects. For much of the year they appear to support more flowers than the adjacent grassland. In addition the taller vegetation offers more shelter from bad weather and opportunities for invertebrates to overwinter.

Whilst a programme of long-term scrub coppice may have some advantages it poses the problem of disposal of arisings. They cannot be left on site as they will lead to a localised build-up of nutrients and so encourage coarse vegetation.

Converting scrub back to grassland

Effective scrub clearance is difficult. Most scrub species coppice vigorously when cut and so it has to be uprooted, poisoned or repeatedly defoliated in order to kill it - sometimes all three as it often regenerates from severed roots. If it can be removed, it leaves behind an area of enriched soil (laden with scrub seeds) that does not favour re-colonisation by downland species.

The most appropriate method of clearance depends on the structure of the scrub. Individual bushes or discrete scrub blocks surrounded by intact grassland are best felled and removed intact and the stumps treated or extracted. Large expanses of springy thickets are best shredded *in situ* with a tractor-mounted flail.

Disposal of arisings creates as much work as cutting down the scrub. They cannot be left on site so they have to be burnt on an area that was previously dense scrub, and the ashes removed. Otherwise, the material has to be removed for composting. Slope permitting a collection machine can be used; otherwise they have to be raked up or scraped with together with a front-end loader.

Inevitably, much of the scrub is a mixture of established shrubs surrounded by a younger halo of privet, clematis and bramble. Therefore, a staged clearance is more appropriate. The mass of tangled, pliable scrub can be flailed out of the way revealing the more substantial bushes that can be treated separately. The steepness of the slope and the proximity of extraction point and/or species-rich grassland influence the choice of technique.

The scrub is concentrated on the lower slopes suggesting there is a positive relationship between soil depth and scrub growth, McIntosh, (1997). The removal of scrub and reversion to chalk grassland is likely to be more successful if the scrub control reflects the distribution of the least overgrown areas. Where scrub is to be retained the densest scrub should be left or coppiced as this will be the most difficult to return to grassland.

Where scrub has been cleared to ground level the site has been smothered in vigorous bramble-dominated regrowth after a growing season. There will also be opportunistic ruderal species, *e.g.* groundsel and thistles. There will also be a small number of downland plants which germinate from the seed bank, *e.g.* violets. In order to achieve grassland on these areas regular mowing with clearance and/or grazing is necessary to stunt the scrub species and favour grassland plants. This can take years or even decades.

Mechanical excavation of scrub roots and the enriched soil has the advantage of reducing the follow up work necessary to regenerate grassland. It is straightforward (and beneficial, see below) to reseed the stripped ground with seed collected from the same site and so retain genetic variation associated with the site. It poses the problem of extraction and disposal of material. The scale of the operation also requires vehicular access. It is important that transportation routes are aligned to avoid areas of intact species-rich grassland.

It should be noted that the removal of large areas of scrub and roots with an excavator will dramatically alter the vegetation, the soil structure and the appearance of an area. It should be used with caution. Scrub may contain viable plants and seeds of grass and grassland species that will be buried by the scrub removal process. They may not be able to recolonise the bare soil if buried too deep. If the scrub is cut at ground level and the roots left, grass will establish more readily than if the roots are dug out and the ground disturbed.

Soil is a complex environment with many interacting living and mineral components. Soil fungi and bacteria are fundamental to the functioning of the soil. Scrub removal that disturbs the soil will have a dramatic effect on microbiological life. As the soil dries out mycorrhizae will be damaged or killed.

Goat grazing can quickly reduce the vigour of scrub, and given time even kill it. In a relatively short while it can make it easier to clear scrub. For comments on goat grazing see the discussion on grazing.

Whilst it is clear scrub cover should be reduced, the previous comments also suggest that some scrub should be retained, but if it is left unmanaged many of its positive aspects will be lost. The conservation benefits of scrub can be maintained in a much-reduced area. The greatest biological value of the site is found in chalk grassland.

Species considerations

Using *Polyommatus coridon* (Chalkhill Blue Butterfly) as an illustrative example, it illustrates the complexity of insect life cycles. *Hippocrepis comosa* (horseshoe vetch) is necessary as a larval food-plant. This plant requires open grassland and is lost when scrub encroaches. Ants belonging to the genus *Lasius* and *Myrmica* protect the larvae, a range of flowers are needed to provide nectar sources for the adults. Sheltered roosting sites in tall vegetation greatly assist its survival. Other controlling factors are predators and pathogens that attack it throughout its life cycle. In addition, the weather has a dramatic effect on the breeding success. A very bad year can wipe out a weak colony. Once insects have failed to breed on a site they have to re-colonise from elsewhere. Unlike plants, insects cannot survive local extinctions as seed, however being mobile they may recolonise, or be persuaded to.

Management has to provide an appropriate habitat in which the desired species can live in association with everything else in an ecosystem. The ecosystem that developed on Portsdown Hill did so under a form of low-intensity livestock based agriculture and the best way of retaining it is to reintroduce and maintain a similar form of management. Small areas of species-rich grassland supporting vulnerable, hard to replace species have a particularly high value.

Hippocrepis comosa (horseshoe vetch) - Dependant on recently disturbed areas or short turf, free from shade. Slow to colonise new sites.

Ophrys apifera (bee orchid) - This plant is dependent on similar conditions to those favoured by the Horseshoe Vetch, but has the extra complications of at least an eight- year life cycle and a monocarpic flowering strategy. Early devolvment is in the form of an underground callus in association with a symbiotic fungus.

Adrabis hirsuta (hairy rockcross) - Dependant on bare patches of soil and disturbed ground. Benefits from the environment found next to paths, thus a certain level of trampling encourages this plant.

Orobanche elatior (knapweed broomrape) - This parasitic plant is totally dependent on the well-being of its host, *Centaurea scabiosa* (greater knapweed). The two plants grow best on the edge of scrub in taller grass.

Thesium humifusum (bastard toadflax) - Only found in short turf. Like several other species *e.g.* *Rhinanthus minor* (yellow rattle), this plant is a semi-parasite. The close proximity of suitable host roots (*i.e.* downland grasses) is an important factor in this plant's success. This plant has very poor powers of distribution and therefore is an indicator of ancient downland.

Cupidio minimus (small blue butterfly) - Portsdown Hill has been described as supporting one of the largest colonies in Hampshire. It has benefited from the expansion of its larval food plant, *Anthyllis vulneraria* in recent years. The adults roost in the tall *Arrhenatherum elatis* (False oat grass).

Odonteus armiger - Notable A. Listed in a published Red Data Book as category "3" This beetle has larvae that are dependent on rabbit dung. They are restricted to warm grassland.

Bombus humilis - BAP species. Requires flower rich grassland rich in red clover and tall grass in which to nest.

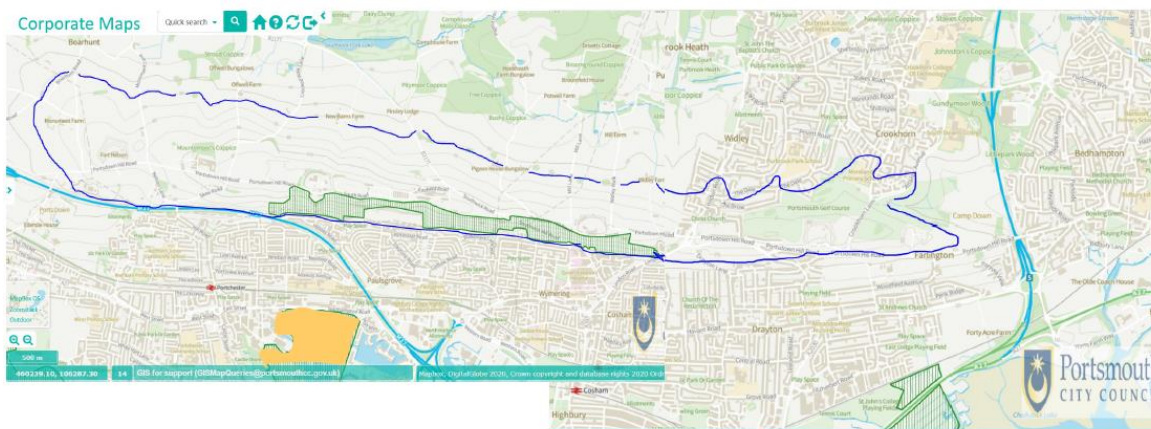
Asilus crabroniformis (hornet robber fly) - The fly's larvae are believed to prey on the larvae of large dung beetles and the adult flies feed on a variety of insects, including grasshoppers, dung beetles and flies. As such, it requires suitable grassland sward to support its prey community. As a dung species, it is thought to be adversely affected by the presence of persistent anti-parasite compounds (ivermectins) in animal dung.

Appendix 6 Infrastructure map

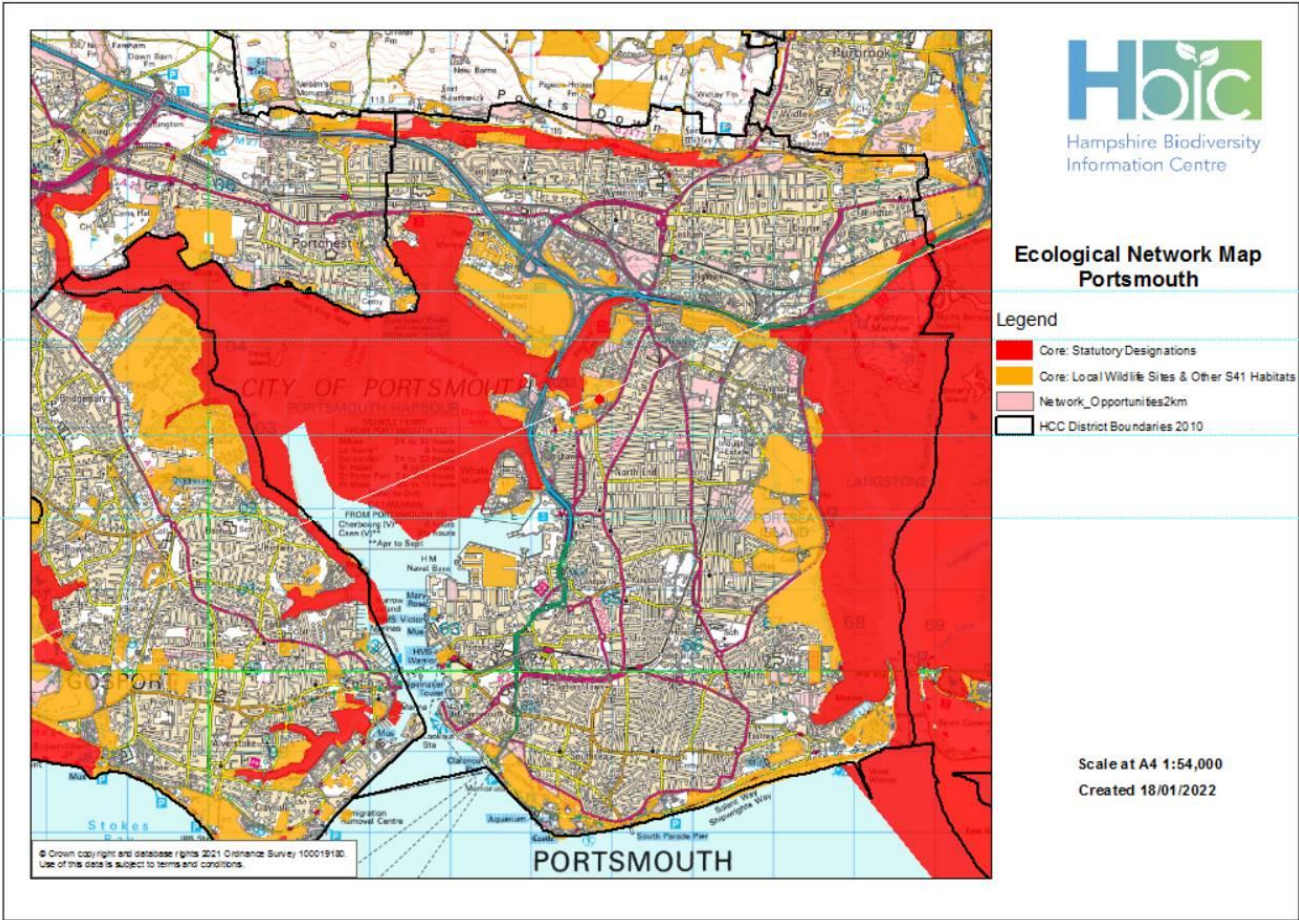
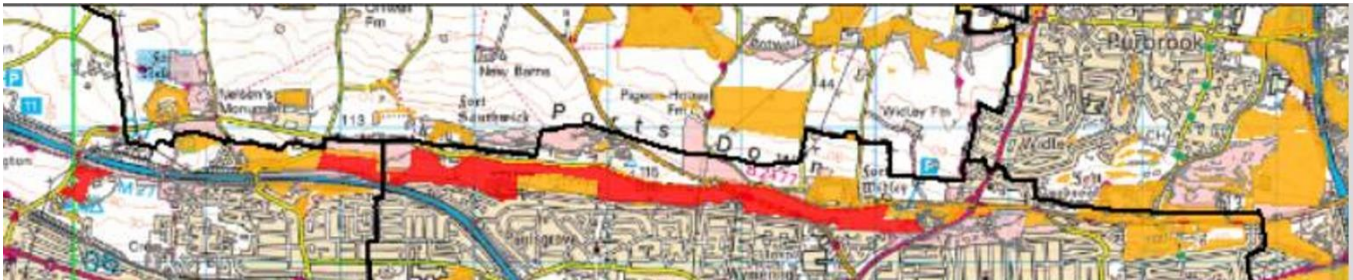


Appendix 7 Relative position of Portsdown Hill SSSI on Portsdown escarpment and HBIC Ecological Network Map for Portsmouth

Position of Portsdown Hill SSSI within the 60m contour shown in blue



Ecological Network Map held by HBIC



Appendix 8 Land ownership and responsibility

Land ownership and responsibility



Appendix 9 Soil analysis 2016

SSSI compartments 7-10

Analysis	Result	Guideline	Interpretation	Comments
pH	8.1	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	7	26	Very Low	(Index 0.7) 120 kg/ha P ₂ O ₅ (96 units/acre).
Potassium (ppm)	70	241	Low	(Index 1.1) 80 kg/ha K ₂ O (64 units/acre).
Magnesium (ppm)	61	50	Normal	(Index 2.2) Adequate level.
Organic Matter DUMAS (%)	4.4	3.0	Normal	Adequate level.

SSSI compartments 1 -6

Analysis	Result	Guideline	Interpretation	Comments
pH	8.0	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	6	26	Very Low	(Index 0.6) 120 kg/ha P ₂ O ₅ (96 units/acre).
Potassium (ppm)	83	241	Low	(Index 1.3) 80 kg/ha K ₂ O (64 units/acre).
Magnesium (ppm)	64	50	Normal	(Index 2.2) Adequate level.
Organic Matter DUMAS (%)	4.5	3.0	Normal	Adequate level.

Paulsgrove chalk pit

Analysis	Result	Guideline	Interpretation	Comments
pH	7.9	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	7	26	Very Low	(Index 0.7) 120 kg/ha P ₂ O ₅ (96 units/acre).
Potassium (ppm)	80	241	Low	(Index 1.3) 80 kg/ha K ₂ O (64 units/acre).
Magnesium (ppm)	55	50	Normal	(Index 2.0) Adequate level.
Organic Matter DUMAS (%)	2.2	3.0	Slightly Low	Incorporate organic material when possible.

Two Dells trail Mill Lane

Analysis	Result	Guideline	Interpretation	Comments
pH	7.7	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	5	26	Very Low	(Index 0.5) 120 kg/ha P ₂ O ₅ (96 units/acre).
Potassium (ppm)	104	241	Low	(Index 1.7) 80 kg/ha K ₂ O (64 units/acre).
Magnesium (ppm)	67	50	Normal	(Index 2.3) Adequate level.
Organic Matter DUMAS (%)	5.4	3.0	Normal	Adequate level.

Childrens Wood

Analysis	Result	Guideline	Interpretation	Comments
pH	8.0	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	10	26	Low	(Index 1.1) 80 kg/ha P ₂ O ₅ (64 units/acre).
Potassium (ppm)	95	241	Low	(Index 1.5) 80 kg/ha K ₂ O (64 units/acre).
Magnesium (ppm)	59	50	Normal	(Index 2.1) Adequate level.
Organic Matter DUMAS (%)	7.6	3.0	Normal	Adequate level.

Farlington Avenue

Analysis	Result	Guideline	Interpretation	Comments
pH	8.0	6.5	High	Possible interference on availability of P, K, Mn, B, Cu, Zn and Fe.
Phosphorus (ppm)	7	26	Very Low	(Index 0.7) 120 kg/ha P ₂ O ₅ (96 units/acre).
Potassium (ppm)	56	241	Very Low	(Index 0.9) 120 kg/ha K ₂ O (96 units/acre).
<u>Magnesium (ppm)</u>	54	50	Normal	(Index 2.0) Adequate level.
Organic Matter DUMAS (%)	3.4	3.0	Normal	Adequate level.

Milton Common Management Plan (Draft)

2019-2024



Milton Common Management Plan 2018-2023.

1 INTRODUCTION

1.1 PLAN SUMMARY

The site is a very large area of grassland, scrub and ponds located on the edge of Langstone Harbour, on the edge of Portsmouth. The site is predominantly reclaimed intertidal land from 1962-1970. The grassland present ranges from amenity to rough sward. The rough grassland has developed a good diversity of species, with a strong coastal element. There is extensive dense and scattered scrub throughout the site, especially to the east. There are three ponds present, which provide some stands of swamp. The coastal edge of the site supports salt-marsh vegetation. Overall the species diversity is excellent, with nearly 200 species noted within the common. These include 3 acid/neutral grassland indicators and the Nationally Rare *Bupleurum tenuissimum* and *Lathyrus aphaca*, the Nationally Scarce *Medicago polymorpha*, and the County Scarce *Smyrniolum olusatrum* and *Linum bienne*. The conservation management value of the site is especially important due to the proximity to the internationally important Langstone/Chichester Harbours which are designated as SSSI, SPA, SAC and Ramsar sites.

2 LEGISLATION AND POLICY

2.1 SITE DESIGNATION

Milton Common is designated as

- A Site of Interest for Nature Conservation (SINCs).
- Public Open Space

2.2 BYLAWS AND REGULATIONS

Milton Common is covered by Portsmouth City Councils Bye-laws and regulations.

- Wildlife and Countryside Act, 1981

Requires that no adverse management should be carried out which has a detrimental effect on wildlife provision.

- Occupiers Liability Act, 1981

As owners of Farlington Triangle the Council has a duty to ensure that every reasonable care is taken with regard to the safety of persons who visit or come into the Triangle.

- Health and Safety at Work Act, 1974

The council has a duty of care to ensure that, as far as practical, all employees, volunteers, contractors and visitors to the site are able to visit, work and enjoy the site in a safe and healthy environment.

- Disability Discrimination Act, 1998

Portsmouth City Council are required, where practical, to ensure that members of the public are not discriminated against when visiting or using the Triangle for recreation.

3 GENERAL DESCRIPTION

This chapter sets out the context within which Milton Common is managed.

The first section provides the **Management Background**, presenting information about location, tenure, past land use, and management structure.

The second section describes the key **Physical, Biological and Cultural Features** of the site providing information about topology, hydrology and the plants and animals found on the site.

3.1 GENERAL INFORMATION.

3.1.1 Location

(See Figure 1)

Milton Common is situated on the Eastern edge of Portsea Island. The area is approximately triangular in shape. The North West bounday is Eastern Rd (A2030), Moorings Way to the south and Langstone Harbour to the East (Langstone/Chichester Harbours are designated as SSSI, SPA, SAC and Ramsar sites). Public access is available by paths and grass verges along the entire North Western and Southern boundary.

3.1.1.1	Area:	46.5 Ha	
	OS Grid REF:	SU 673008	
	SBI:	107053158	
	Main CPH	15/130/8002	
	RLR Information:	Sheet ID: SU6700	Parcel ID: 3881
	HLS agreement:	AG00382454	

3.1.2 Compartments

(See Figure 2)

Compartment 1- Amenity Grassland (5.6Ha)

Compartment 2 - Grassland (26 Ha)

Compartment 3 – Wetlands (2.8 Ha)

Compartment 4 – Scrub (7.9 Ha)

3.1.3 Tenure

Please refer to the original tenure documents before taking any decision or action that may have legal implications. The site is owned by Portsmouth City Council and is managed by the Parks and Recreation and Culture department.

The site is Public Open Space and was also designated as a Site of Importance to Nature Conservation (SINC) in 2003. A Higher Level Stewardship (HLS) from Natural England has been awarded for the period 01/03/2012 to 28/2/2022 to cover prescribed management of the site. The site is presently under consideration as a Local Nature Reserve.

3.1.4 Relationship with any other plans and strategies.

This site cannot be seen in isolation but part of a unitary wide programme to develop and enhance the biodiversity and public recreational aspects of the city. The various Portsmouth City Council's environmental policies and strategies which are listed below:

Table 1 - Portsmouth City Council's environmental policies and strategies.

(Prefix)	WWW.portsmouth.gov.uk/yourcouncil/
Local Area Agreements	7345.html
Corporate Risk Management Process	7908.html
Community Strategy	4218.html
Cultural Services Business Plan	16263.html
Corporate Health and Safety Policy	10196.html
Corporate Plan 2008-2011	13295.html
Local Area Agreement – Vision into reality	7345.html
(Prefix)	WWW.Portsouth.gov.uk/visiting/
Parks Green Sustainability Policy	3737.html

3.1.5 Management Structure

The day to day practical wildlife management of the site is carried out by the Countryside section of Portsmouth City Council, volunteers and various community groups. Other work is carried out by PCC parks department, contractors and certain legal and administrative functions by other departments of Portsmouth City Council. The Countryside Service lies within the Culture Department of Portsmouth City Council.

3.1.6 Map Coverage:

OS Map 196 (1:50,000 Series)

OS Map 119 (1:25,000 Explorer Series)

3.1.7 Photographic Coverage

Aerial photographs are held by PCC in electronic format and are available via Map Info pro-viewer. General photographs are available in electronic format held on the PCC site files. Various photographs of pre and post reclamation are available at the Portsmouth City Records Office

3.2 ENVIRONMENTAL INFORMATION**3.2.1 Physical****3.2.1.1 Climate**

Being at sea level on the south coast of England the climate is generally mild. Rainfall is relatively low the area being to some extent in the rain shadow of high ground on the Isle of Wight to the south-west.

3.2.1.2 Geology

The geographical maps show that the bulk of the site is underlain by London Clay. The site itself is shown on the map as having a cover of made ground. Below which is estuarine sands, gravels and muds as occur in Langstone Harbour, to the East.

3.2.1.3 Soils / Substrates

The site was subjected to phases of land reclamation by infilling in the 18th and Early 20th Century. However, the majority of the landfilling took place between 1962 and 1970 when a bund was constructed across the mouth of Milton Lake and the confined area was progressively drained and in filled with domestic refuse. A borehole drilled in 1992 by the University of Portsmouth identified up to 5m of fill with a cap of 300- 400mm of clay and topsoil. The University

suggested that most of the organic matter would by now have degraded leaving an ashy soil like material with fragments of the more inert materials such as glass, polythene, metal, bricks etc. Degradation of the fill has led to settlement of the ground and the surface is very uneven.

3.2.1.4 Hydrology / Drainage

Surface hydrology on the majority of Portsea Island is largely negligible. Any groundwater on the island is locally held up in the estuarine sands and gravels overlying the London Clay. Portsmouth University have recorded water strikes within the artificial landfill deposits at depths of between 2-3 m, approximately mean sea level. The 3 lakes situated on the eastern boundary remain largely fresh water with little intrusion of sea water except that derived from occasional sea spray.

3.2.2 Biological

3.2.2.1 Flora Habitats / Communities (See Figure)

BAP Priority Habitats

- Coastal Saltmarsh
- Reedbeds

3.2.2.1.1 Area 1 – MG1v *Arrhenatherum elatius* grassland, variant (IHS GNZ.GM4)

The sward is rough with a good diversity of species, including a suite of coastal species. The most frequent species are false oat-grass, cock's-foot, red fescue, bents, wild carrot, bristly oxtongue, creeping cinquefoil and common couch. There is much tall fescue, hogweed, prickly lettuce, timothy, tansy, ribwort plantain, ragwort, mugwort, yarrow, aster, horseradish, thistles, fennel, yorkshire fog, rye grass and common mallow. Bramble scrub is locally frequent, with some elder and domestic apple shrubs. Other species present include false fox sedge, parsnip, amphibious bistort, hard rush, crow garlic, black knapweed, sea couch, perennial wall-rocket, sneezewort, grass vetchling, stone parsley, toothed medick, yellow vetching, alexanders and pale flax.

3.2.2.1.2 Area 2 – MG12a *Festuca arundinacea* grassland, *Lolium perenne-Holcus lanatus* sub-community (IHS GNZ.GM4)

The grassland is rough and dominated by tall fescue and other grasses. There is frequent couch, false oat-grass, cock's-foot, red fescue, bents and wild carrot. There is also some aster, bristly oxtongue, tufted vetch, hard rush, rye grass, clovers, mouse-ear, spotted medick, ribwort plantain, fennel, tansy and grass vetchling.

3.2.2.1.3 Area 3 – OV21c *Poa annua-Plantago major* community, *Polygonum aviculare-Ranunculus repens* sub-community (IHS GI0.GM1Z)

The grassland is very short from heavy wildfowl grazing and public use. The main species are creeping bent, toad rush, buck's-horn plantain, rye grass, annual meadow-grass, greater plantain, knotgrass, spotted medick, creeping cinquefoil and ribwort plantain.

3.2.2.1.4 Area 4 – OV23a *Lolium perenne-Dactylis glomerata* community, typical sub-community (IHS GI0.GM23)

The sward is mown continually short and used as amenity lawn. The grassland is composed of rye grass, clovers, daisy, dandelion, spotted medick, yarrow, cock's-foot and annual meadow-grass. There is also much wall barley, tall fescue, buck's-horn plantain, red fescue, creeping cinquefoil, hedgerow crane's-bill, smooth hawkbeard and wild carrot. The coastal sward have some sea beet, sea couch, perennial wall-rocket, common mallow and common orache.

3.2.2.1.5 Area 5 – OV24b *Urtica dioica-Galium aparine* community, *Arrhenatherum elatius-Rubus fruticosus* sub-community (IHS OT3)

This vegetation is found in the more recently disturbed areas, especially along the banks bordering the south-west of the site. The main species present are stinging-nettle, common mallow, hedge mustard, common orache, false oat-grass, cock's-foot, yarrow, wall barley and cooch. There is also some chickweed, annual meadow-grass, amphibious bistort, hedge bindweed, bramble, fennel, teasel, creeping bents, ragwort and prickly lettuce.

3.2.2.1.6 Area 6 – SM24 *Elymus pycanthus* salt-marsh community (IHS LS3)

Along the eastern edge of the site there is a thin strip of this salt-marsh community. It consists of a rough sward with some scrub. The main species are sea couch, false oat-grass, sea beet, aster, common mallow, common orache and wall barley. Rye grass and red fescue are locally abundant. Other species noted include perennial wall-rocket, buck's-horn plantain, fennel, grass-leaved orache, spear-leaved orache and slender hare's-ear.

3.2.2.1.7 Area 7 – S4b *Phragmites australis* swamp and reed-beds, *Galium palustre* sub-community (IHS EM11)

The ponds support areas swamp dominated by common reed. There is also some lesser bulrush, great willowherb, sea club-rush and stinging-nettle.

3.2.2.1.8 Area 8 – S21a *Scirpus maritimus* swamp, *Scirpus maritimus* sub-community (IHS EM1Z)

There are several small areas of swamp within the ponds dominated by sea club-rush.

3.2.2.1.9 Area 9 – S26b *Phragmites australis-Urtica dioica* tall-herb fen, *Arrhenatherum elatius* sub-community (IHS EM1Z)

Adjacent to the ponds there are a few stands of this fen community. Common reed, great willowherb and stinging-nettle are prominent. There is also some hedge bindweed, creeping bents, yorkshire fog, cooch, creeping buttercup and bramble present.

3.2.2.1.10 Area 10 – W22c *Prunus spinosa-Rubus fruticosus* scrub, *Dactylis glomerata* sub-community (IHS WB2)

Small thickets of denser blackthorn and english elm scrub are present throughout the site. There is also some elder, hawthorn, domestic apple, ash and roses. There is some rough grassland within the scrub.

3.2.2.1.11 Area 11 – W24b *Rubus fruticosus-Holcus lanatus* underscrub, *Arrhenatherum elatius-Heracleum sphondylium* sub-community (IHS WB2)

To the east there are some dense areas of bramble scrub. These contain locally abundant stinging-nettle and some elder, domestic apple, japanese knotweed, hedge bindweed and grasses.

3.2.2.1.12 Area 12 – W24b *Rubus fruticosus-Holcus lanatus* underscrub/MG1 *Arrhenatherum elatius* grassland (IHS WB2)

This area is a mix of scrub and rough grassland. Bramble is abundant and there is much elder and Japanese knotweed. The grass is composed of false oat-grass, cock's-foot, red fescue, bents, wild carrot, bristly oxtongue, field bindweed, horseradish, hedge bindweed and fennel.

3.2.2.1.13 Area 13 – Broad-leaved plantation (IHS WB3Z.WF22)

The plantations are formed of poplar or ash and have a species-poor, grassy or bramble dominated ground flora.

3.2.2.2 **Flora species** (See Appendix I)

BAP / Notable Species

Taxon Name	Common Name	Status
<i>Bupleurum tenuissimum</i>	Slender Hare's-Ear	UK BAP
<i>Lathyrus aphaca</i>	Yellow Vetchling	HBAP/NR
<i>Linum bienne</i>	Pale Flax	CS
<i>Medicago polymorpha</i>	Toothed medick	NS
<i>Smyrniolum olusatrum</i>	Alexanders	CS

3.2.2.3 Fauna Species (See Appendix II)

A number of records have been submitted to Hampshire Biological Information Centre (HBIC) based on Grid Square SU6700. Whilst a species may have been recorded at a site, this does not indicate that the species is resident. Many of the species, such as the birds, may be migrants and appear on the site for short periods. However, it gives an understanding of the importance of the site.

3.3 CULTURAL

3.3.1 Archaeology.

HER 41705 at SU 6700 0080 is recorded as the site of a searchlight battery in the last war. Whilst such things were relatively common at the time, few traces remain. The grid reference is a general reference taken from documentary evidence. In view of the land reclamation in that area it seems likely that traces will have been destroyed and also that the precise location would have been on the historic shoreline.

3.3.2 Past Land Use.

The area known as Milton Common was prior to complete reclamation an inlet of Langstone Harbour. 1962 saw major changes to the site with the construction of flood banks either side of the channel and a bund of chalk and clay across the lake mouth, with the likely inclusion of a sluice or penstock to allow water to drain out with the tide. The newly acquired land was then used as a municipal refuse site until its closure in 1970. Over the next few years the site was systematically capped and grassed over. As the organic matter decayed, settling occurred, resulting in a rather uneven ground level and the exposure of inorganic material.

3.3.3 Present Land Use.

The area is managed as a Public Open Space for nature conservation and quiet recreation, with an aim to promote the appreciation of wildlife conservation both for the site and more widely. Provision has been included for public access with the inclusion of a network of paths and mown family and play areas. This is particularly significant in the context of Portsmouth City which is one of the most densely populated urban areas in Britain. Most visitors are known to be local and are attracted to the site for its natural aspect and proximity to the city. The city council has a statutory duty under Part IIa ("Part 2a") of the Environmental Protection Act 1990 to identify any 'contaminated land', that is to say any land that could cause harm to people or the environment. Milton Common is a gassing landfill site with minimal cover originally added. As a precaution it has already had some further remedial work in 1996 with regard to the ground gas that the decomposing waste creates and also to add cover soil over areas where waste was found to be on the surface.

3.4 PEOPLE

3.4.1 Stakeholders

Periodic meetings and regular correspondence are carried out to bring together all facets of the community, local people, special interest groups and City Council Members. This helps to ensure, as far as possible, developments within the site are carried out in accordance with the wishes of the local community and others interested in the site.

The site was recently awarded a Higher Level Stewardship Grant (HLS) from Natural England for the management of the site. Management needs to follow the prescriptions set out in Agreement Number AG00382454.

3.4.2 Access and Education

The site is open to permissive public access, facilitated by a network of across and around its perimeter. The Countryside Service also provides talks and other promotional material to interested groups such as schools and local groups. The various forms of the media are used to promote the site, volunteering opportunities and events held by the Countryside Service. A number of interpretation and notice boards are in place to give information about the sites wildlife and other issues; they also contain contact details of the Countryside Service for those wishing to find out more about the site and its management.

3.4.3 Management Issues

A full time Countryside Officer is responsible for practical conservation of the site, but is also responsible for other sites in and around the city. Resources of time and money are therefore stretched and a heavy reliance is placed on volunteer time. We have set up an informal 'Volunteer Ranger Service' who act as the 'Eyes and Ears' for the countryside service reporting any incidents. The positioning of the site in an urban environment makes it a target for vandalism, anti-social behaviour and crime. The most common problems are fires, rubbish and illegal motorbike access. These problems peak during the summer months, especially during the weekends and evenings. The site is regularly patrolled by PCC Community Wardens who's responsibility it is to deal with this anti-social behaviour and traveller incursion.

4 MANAGEMENT POLICIES

This Chapter sets out what is hoped to be achieved throughout the course of this plan. These are the management **Aims** of the Plan. The second section explains in more detail the **Management Objectives** and how these are to be achieved.

Management Aims

4.1 Improve the visitor experience at Milton Common

4.1.1 By Keeping the site free from litter.

Litter not only make a site unsightly and deters visitors, but can actually attract more litter and vandalism and is also a risk to health and safety of visitors and wildlife alike. Therefore, it is important to encourage responsible disposal of litter and carrying out frequent litter picking. There is also an educational role of the site Ranger to inform visitors of the hazards of litter and dog fouling. Contractor's carryout a weekly litter scavenge and also empty dog and litter bins

4.1.2 By maintaining amenity grassland provision as family areas.

Areas are provided for family recreation regular mown areas are cut on a 2 weekly rota between mid-march and October this is carried out by the PCC ground maintenance team.

4.1.3 By maintaining site furniture and infrastructure such that it is in good condition, fit for purpose and safe to use.

Site furniture and infrastructure includes seats, fences, paths and steps. These are inspected periodically and checked for any damage or wear. Small repairs are usually carried out immediately, with larger repairs such as replacement of large sections of fencing, programmed into the works plan. A programme of renewal for such items is included in the five year work plan. In addition to inspecting furniture, preventative maintenance, such as oiling of hinges and painting of benches is included in the annual work plan to ensure the maximum lifespan before renewal. This work is carried out by the PCC grounds maintenance team.

4.1.4 By ensuring that the site is a welcoming and safe place for all.

Signage and interpretation boards are provided at the main entrance points to welcome and advise visitors of what to expect on the site. These boards also inform visitors of the presence and contact details of the Countryside Officer and Community Wardens. Risk assessments for the site and operations are carried out and these are reviewed annually. Inspections are carried out; frequency is dependent upon any ongoing issues. These inspections identify any health and safety issues and remedial work are organized accordingly. Portsmouth City Council regulations stipulate that the Countryside Officer must undergo enhanced CRB checks and also be First Aid certificated.

4.1.5 By developing volunteers, interested groups and community involvement, in an awareness and analysis of biodiversity.

The development of volunteering opportunities whether through the Volunteer Warden scheme and practical conservation groups gives the local community a sense of ownership and is pivotal in the management of the site. Meetings and correspondence with users ensures that, as far as possible, developments within the Common are carried out in accordance with the wishes of the local community and others interested in the site. Coordinated management of the site through liaison with statutory organisations and other interested parties, will ensure that the site is not seen in isolation but as part of a large overall picture. As the site develops an integral part of the plan is to promote the site and its wildlife to a wider audience through utilizing internal & external publications, attending local events with displays, the provision of Countryside Officer led guided walks and talks and also by supplying information to schools and other education bodies to encourage the sites use as an educational resource.

4.2 To improve the quality of the coastal grassland habitat.

4.2.1 By monitoring species groups and habitat development.

The habitat management is aimed at maximizing species diversity. Therefore it is crucial to monitor species to ensure management regimes are having the desired effect; there are a variety of ways to do this, such as photography to assess changes over time and species counts. It is not possible to survey every plant and animal group each year and so a rolling programme of surveys is included in the five year development plan. Results of the surveys are passed onto Hampshire Biodiversity

Information Centre (HBIC) who maintains the regional data base. This ensures that the habitats and species of Milton Common are not seen in isolation but part of a regional strategy.

4.2.2 By Monitoring and control of invasive species.

There are a number of patches of Japanese Knotweed on the site which have been treated in the past. These will be monitored and sensitively controlled to eliminate from the site as required. The sites Pesticides Statement can be found in Appendix 2.

4.2.3 By Restoration of Grassland for target species.

Since the initial capping of the site only the amenity grassland areas and the path edges have undergone any significant grassland management. Only low level intervention has been carried out on the majority of the rest of the site. Management of the grassland is essential to maintain its structure, balance and diversity. Without management grassland becomes coarse and rank, loses both diversity and interest, and will eventually turn into scrub as it has over a large part of the Common.

The overriding factor in the grassland management of the Common is the topology of the site. Since the initial capping there has been a great deal of resettling of the surface and subsurface as the organic material has decomposed. This has left the surface very uneven and difficult to work especially with machinery. It has also resulted in the exposure of a certain amount of the old dumped material such as concrete blocks, metal reinforcing bars and much more.

An initial assessment of the site will therefore be carried out to identify areas of the Common which after initial clearance could be managed as:

- Meadow grassland areas.
- 'Tussocky' grassland areas.
- Scrub management.

4.2.3.1 Initial assessment:

Initial assessment will involve the use of historical data, species surveys and also walking the site to ascertain areas that could be managed and at what level. As mentioned previously the overriding factor in this decision is the topology of the site. Areas which are reasonably even, which after initial clearance, could be managed mechanically could be designated as meadow grassland. Areas that could be managed with small machinery and hand tools could be managed as tussocky grassland. Finally areas which would be difficult to manage could be managed as scrub. Each of the major compartments would then be subdivided into sub-compartments for appropriate ongoing management.

4.2.3.2 Grassland management:

In the absence of effective management, short and species-rich swards can become dominated by a combination of coarse grasses, tall herbs and scrub. These species are able to out-compete the less vigorous herbs and fine-leaved grasses for water, light and nutrients. We are however, coming at this from the other direction as the area has already become dominated by these coarse grasses. By introducing a management regime it is hoped that the remaining desirable species will be stimulated to flourish. This is not too far-fetched as areas of the common which have had occasional cuts have been shown to be very species rich. In 2014 one such area produced 100's of Bee Orchid spikes.

From the second year after the initial cut, a management regime will be introduced to maintain maximum diversity and flowering interest within the grassland. This will be achieved by cutting in sections at different times from July to the end of August. This spread of cutting times not only maximizes variation and diversity on site but also spreads the workload over the summer making larger areas manageable even with simple equipment we have. Grassland should not be cut in May or June, so as not to disturb nesting birds. Parts of the grassland will be left into September so that late flowering species can seed. The character and composition of the meadow will continue to change with time and we will get an understanding of the best techniques and timings for the site. Eventually a relatively stable community will develop, the balance of which will reflect management, soil fertility and the natural environment of the site.

4.2.3.3 Tussocky Grassland:

Established grassland that is not mown regularly will become rough and "tussocky" in character. This grassland type is not as diverse or attractive as meadowland, but once established requires minimal maintenance. This can form useful refuge habitat on margins and areas difficult to manage

mechanically. To control scrub and bramble development tussocky areas will require cutting every few years between October and February. For wildlife this cutting is best done on a rotational basis so leaving part as an undisturbed refuge.

4.2.3.4 Scrub Management:

Scrub especially bramble has spread over much of this compartment at the expense of the grassland habitat. Although areas of scrub are often seen as some of the least valuable land for biodiversity, they can contain a number of habitats that support a variety of species especially invertebrates and songbirds if managed correctly. In general scrub management objectives will be aimed to creating as diverse a habitat as possible so as to increase the range of wildlife that it can support. Some species prefer open scrub whilst others such as the nightingale require dense thickets, so the management option for scrub within this compartment will therefore be aimed at providing variety in the age, height and density. Rotating the management will provide this mosaic of young and mature scrub ensuring the structural diversity that will appeal to a wider variety of species. Low intensity management at regular intervals is generally better and easier than major work every few years. Scrub generally takes about 15 years to reach maturity so cutting back 1/15th of the mature scrub each year with the overall eventual target aim of 10-15% scrub coverage.

4.2.3.5 Refuges/Hibernacula:

Where possible exposed material such as concrete blocks will be brought together in piles and made into hibernacula for reptiles, amphibians and small mammals. These rock piles are locations that can be great refuges and over-wintering sites (hibernacula) for reptiles and amphibians - providing habitat, cover, locations to bask, and food. Construction would involve bringing together inorganic and organic matter in piles which would then be partly turfed. Turfing is required to weather proof part of the structure and to also make it aesthetically acceptable to site users, 'less like a fly-tip', and also less vulnerable to disturbance by vandals.

4.2.4 By Regular scrub management.

Bramble has spread over much of the site at the expense of the grassland habitat. To combat this some clumps have to be removed whilst others need to be cut back to prevent further spread. Some of the removed clumps, around the edges of the compartment, can be allowed to re-grow to provide diversity in bramble age structure and whilst the others mown regularly in their first two to three growing seasons to prevent return. The overall target is to have a maximum of 10-15% scrub coverage.

4.2.5 Maintenance of reed beds.

Reedbeds supports a wide range wildlife. It is classified as a Priority Habitat within the UK Biodiversity Action Plan. They provide breeding and roosting site for a number of birds and are home to a variety of aquatic invertebrate. In context to the lakes at Milton Common they also reduce the number of access points for members of the public. Much of the lakes edges have exposed remnants of the dumps waste which constitute a health and safety issue. Management aims to enhance expansion of the reeds in certain areas whilst maintaining areas of open water. Encroaching scrub is also managed so as not to shade out the reeds.

4.3 Divert recreational pressure away from the coastal path on Milton Common

4.3.1 Coastal defence work

A large scale coastal defence scheme is presently underway across the north and east of Portsea Island, from Milton Common to the Tipner. Most of Milton Common coast was included in phase 2 of the project and was completed in 2016. These works comprised the construction of 750m of rock revetment to manage the erosion risk to the historic landfill area of Milton Common and two set back earth embankments to manage flood risk. The coastal footpath was reinstated upon completion of the coastal defences with strategic planting too offer some screening of the adjacent mud flats. It should be noted however that whilst the coastal path and coastal frontage clearly form part of Milton Common, this management framework does not propose any changes to that part of the site.

More details of the coastal defence scheme can be found at:

<http://www.escp.org.uk/coastal-schemes/portsmouth/protecting-future-north-portsea-island>

4.3.2 Cycle path.

A new cycle path is in the planning stage which would go through the south - west corner of Milton Common linking the present Eastern Rd cycle path with Moorings Way. As an adopted highway its construction and management is outside the scope of this management plan. However, its construction will hopefully have the beneficial effect of directing some of the present cycle footprint away from the coastal path. (See ###).

4.3.3 New Footpath

During the construction phase of the coastal sea defences a haulage-route was constructed to the west of the lakes to allow vehicular access. (See ###). Once the sea defence work had been completed this haulage-route was restored to grassland. However, it has become apparent that this route has become a well used desire line. A proposal has been put forward to surface this route to provide a link to the internal footpath network of Milton Common. Its construction would also provide a path parallel to the present coastal path but inland and out of view of the adjacent mudflats and consequently reducing the impact on the wildfowl.

4.3.4 Current Footpath network.

The current footpath network is believed to have been constructed as part of the original reinstatement when the site closed as a dump. In some areas a form of geotextile matting was used then covered in hoggin, in other areas hoggin was just placed over the top of the existing substrata. Over the years wear, damage and subsidence due to have left most of the paths uneven with various objects now poking through. Plans are to implement a series of rolling repairs to the paths initially concentrating on a circular route taking in the central section of the Common thus giving users of the site an alternative to the coastal path.

ANNUAL MANAGEMENT INFORMATION

This section details what work needs to be done each year, who will do it and what are the approximate costs. The tasks are linked to the management aims and objectives.

Key to the Tables

The following abbreviations are used in the following tables:

CS	Countryside service
Vol	Volunteers in association with CS
GM	Grounds Maintenance Contract
HLS	Higher Level Stewardship Grant
C	Contractors

Where the Countryside Service is carrying out project works the time is estimated.

Projects carried out by the Countryside Service and or Volunteers are costed for materials only.

Other works carried out using other budgets are indicated as to its source.

Each Task is prioritized with 1 being the highest and 3 the lowest.

Annual Work Plan - To improve the visitor experience of Milton Common.

Management objective	Method	Compartment	Priority	Agent	Ranger Time Estimate (Hours)	Cost (£)	Months active											
							A	M	J	J	A	S	O	N	D	J	F	M
	Site Inspection																	
Keep the lines free of Litter	Litter pick car park and picnic areas. • x3 weekly summer • x2 weekly spring autumn • x1 weekly winter			GM														
	Litter pick zones in rotation			GM														
	Empty Litter & Dog bins • x3 weekly summer • x2 weekly spring autumn • x1 weekly winter			C														
Maintain existing short mown amenity grass.	Cut grass with ride on mower, 15 times per year			GM														
	Strim around benches, bins, fingerposts etc			GM														
Maintain site furniture and infrastructure such that it is in good condition, fit for purpose and safe to use.	Maintain benches as part of rolling programme.			GM														
	Check way-marker routes and replace discs and posts as necessary.			GM														
	Replace fencing as necessary.			GM														
	Repair, re-hang gates as necessary.			GM														
Ensure paths are kept open and the surface is in	Cut back woody vegetation along paths.			GM														
	Cut low vegetation with strimmer or flail mower			GM														

Management objective	Method	Compartment	Priority	Agent	Ranger Time Estimate (Hours)	Cost (£)	Months active											
							A	M	J	J	A	S	O	N	D	J	F	M
an appropriate condition	Even out pot holes and remove possible trip hazards			GM														
	Maintain a high visible Ranger Service			CS														
Ensure the Lines are a welcoming and safe place for all.	Ensure that life belts are present and well maintained.			GM														
	Ensure entrances, interpretation and signage is kept clear and secure.			GM														
	Deliver school visits.			CS														
Develop the site for interested groups and community involvement.	Coordinate management with community and other interested groups.			CS														
	Provision of work placements or projects.			CS														
	Provide bespoke Ranger led walks, talks and activities for groups.			CS														

Annual work plan - To improve the quality and biodiversity of the site

Management objective	Method	Compartment	Priority	Agent	Ranger Time estimate	Cost (£)	Months active											
							A	M	J	J	A	S	O	N	D	J	F	M
Monitor species groups and habitat development	Carry out biological surveys.	All	2	CS														
	Support interested groups and individuals in their biological monitoring.	All	2	CS														
	Before and after photography of practical management.	All	2	CS														
	Report biological surveys to HBIC regional data base.	All	2	CS														
	Collect physical and biological data to determine effect management is having. • Indicator species • Distribution vegetation communities																	
Monitor and control of invasive species	Monitor and remove Japanese Knotweed as required.			GM														
Manage the grassland areas	Initial assessment of grassland areas			CS														
	Manage selected areas of grassland by mechanical cutting and collecting.			CS														
	Select and mechanically top grassland areas in rotation to gain required height and density.			CS														
	Initial cutting of selected bramble and scrub mechanically and then every 2-3 years to prevent re-growth.			CS														
	Select and manage areas of scrub within the grassland areas in rotation to maintain a diversity of age range.			CS														
Manage Scrub	Select and Manage areas of scrub in			CS														

Management objective	Method	Compartment	Priority	Agent	Ranger Time estimate	Cost (£)	Months active											
							A	M	J	J	A	S	O	N	D	J	F	M
areas	rotation.																	
	Rotational cutting of scrub and bramble to maintain coverage with a diversity of age range			CS														
Maintaining and enhancing the biodiversity of the sites water bodies	Encourage the spread of the reed beds within the water bodies.			CS														
	Where appropriate reed beds cut on rotation.			CS														
	Reduce overhanging tree branches and bramble to encourage marginal growth.			CS														
	Monitor for the presence of invasive alien species such as Crassula helmsii and algae growths.			CS														
	Maintain and keep clear the ephemeral water bodies.			CS														
	Collect physical and biological data to determine effect management is having:			CS														
	<ul style="list-style-type: none"> Water levels Salinity Other indicator species 																	

5 MANAGEMENT INFORMATION

This section details the maintenance and development work that only occurs in one year or is periodic. The tasks are linked to the Management Aims

Key to the Tables

The following abbreviations are used in the following tables:

CS	Countryside service
Vol	Volunteers
GM	Grounds Maintenance Contract
HLS	Higher level Stewardship Grant
C	Contractors

Where the Countryside Service is carrying out project works the time is estimated.
Projects carried out by the Countryside Service and or Volunteers are costed for materials only.
Other works carried out using other budgets are indicated as to its source.

Each Task is prioritized with 1 being the highest and 3 the lowest.

Budgetary constraints and priorities change from year to year, therefore this 5 year project plan is constantly updated to express these requirements and site priority. The majority of the projects are grouped in the early years to 1,20w for future maintenance needs.

Five Year Project Plan.

Management Aim	Project	Compartment	Priority	Agent	Ranger Time Estimate (Hours)	Cost (£)	Years active (2019-2024)					
							19	20	21	22	23	24

Figure 1. Location of Milton Common

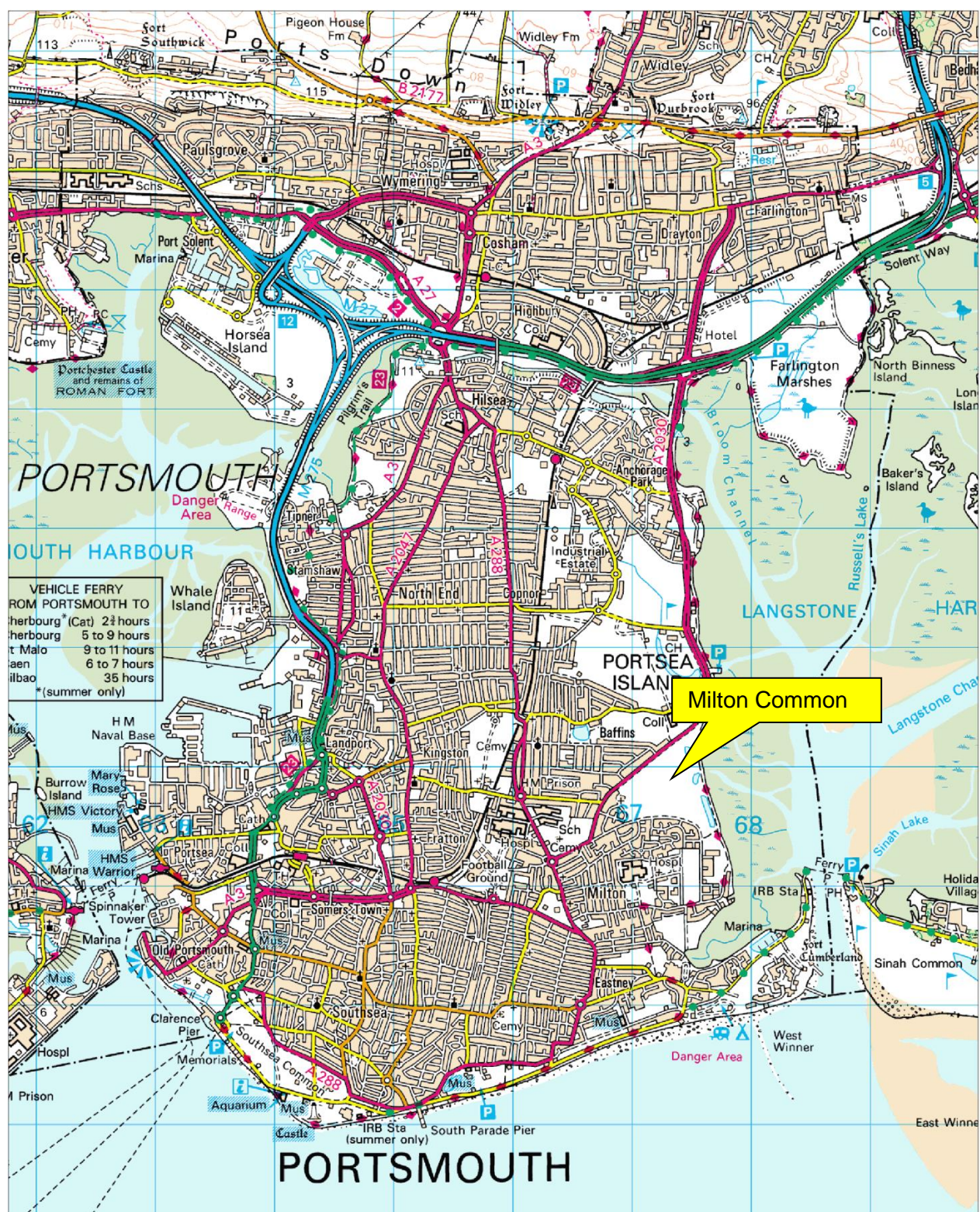
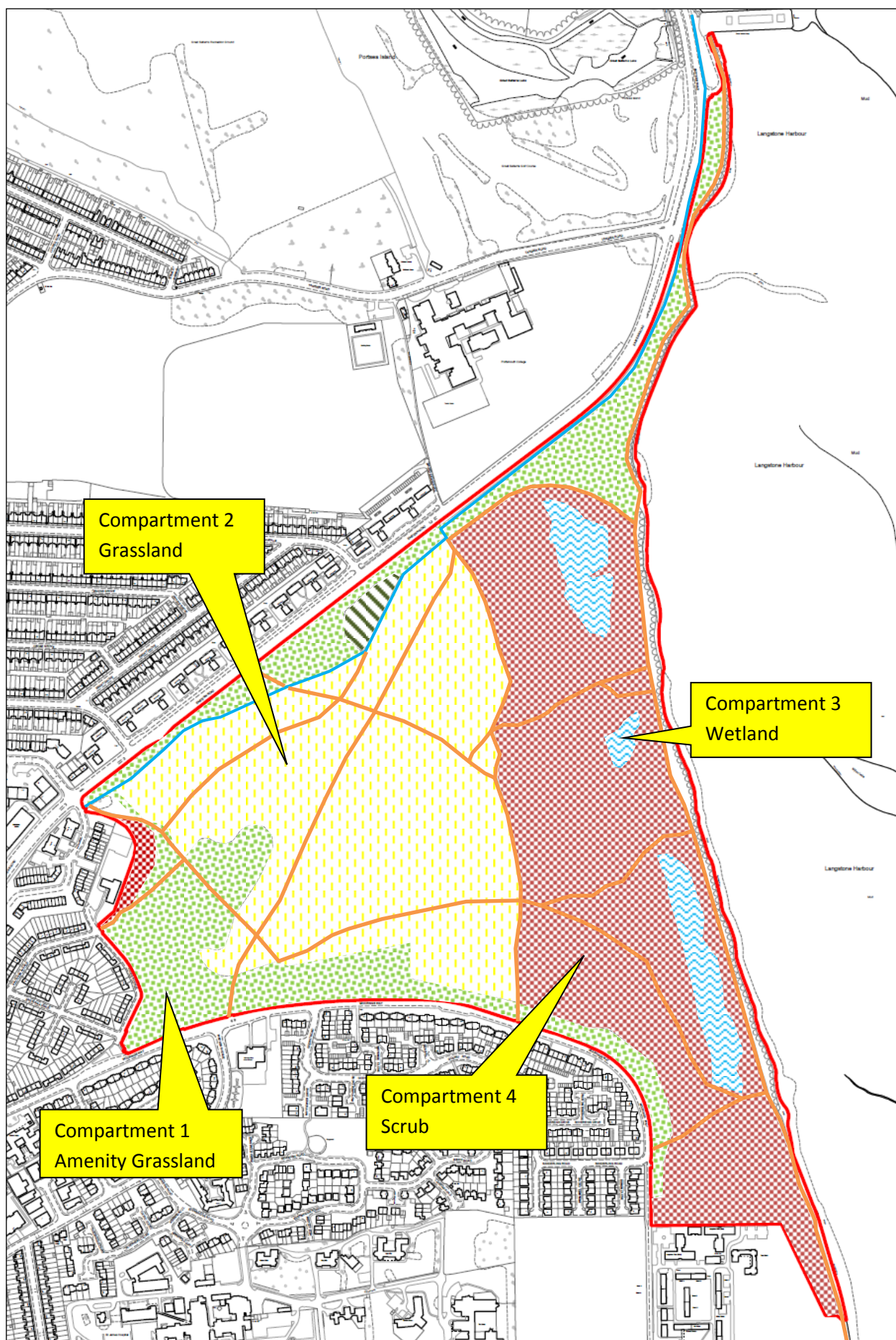
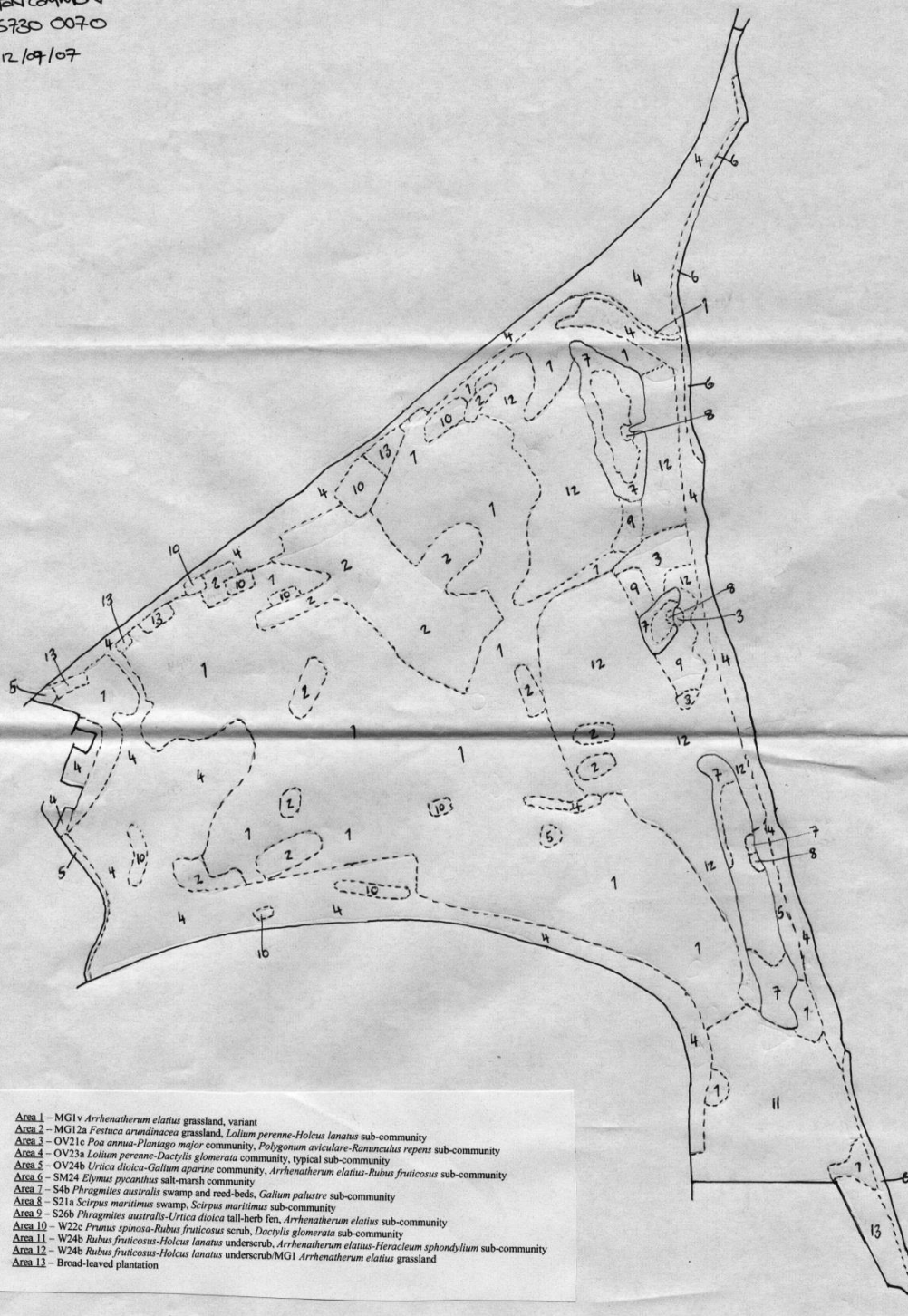


Figure 2. Compartments.

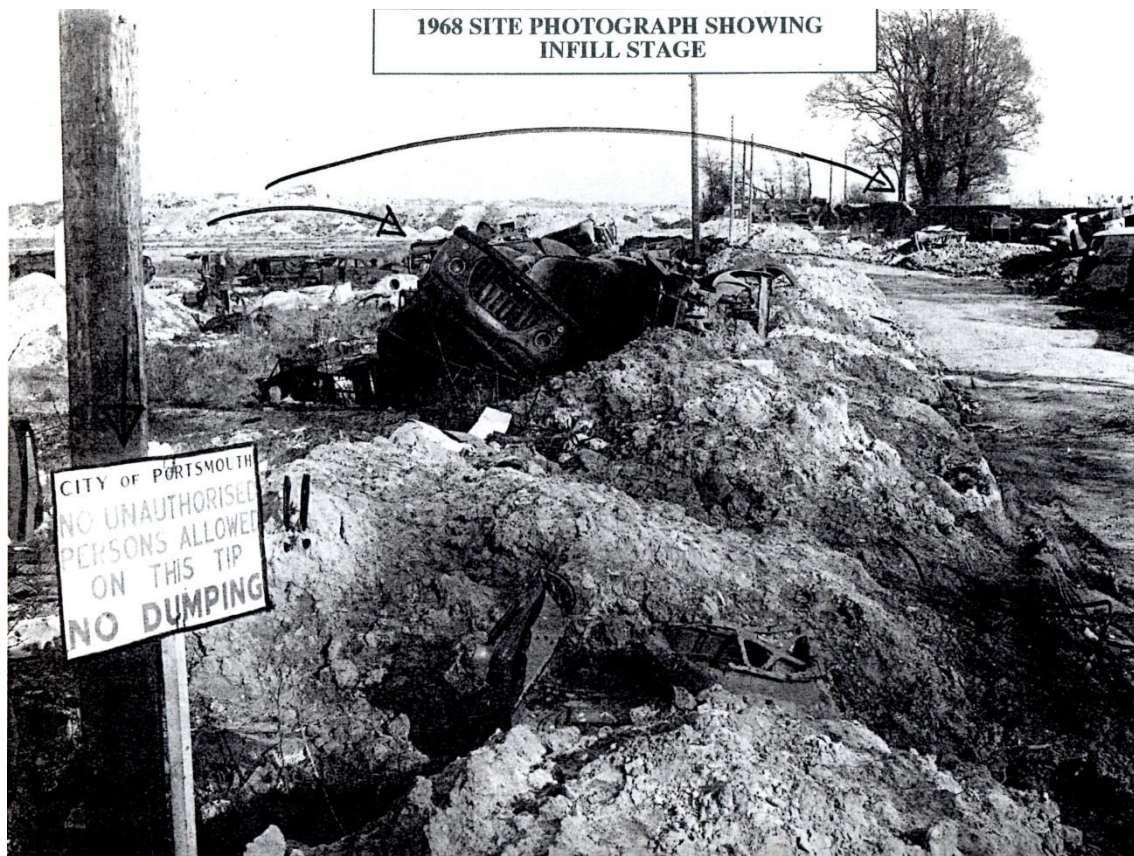


MILTON COMMON
 SJ 6730 0070
 10, 11, 12 / 09 / 07
 4N



1:4,000

Figure:



Species records:

The following records have been taken from HBIC surveys of the site and from datasets supplied to HBIC by specialist species recording groups.

Whilst a species may have been recorded at a site, this does not indicate that the species is still present. Equally, the absence of a species from a site does not signify that it is absent, only that it has not been recorded, that the site has not been surveyed for this species, or that HBIC has not been informed of its presence.

Flora of Milton Common.

Flora	Common Name
<i>Abutilon theophrasti</i>	Velvetleaf
<i>Acer pseudoplatanus</i>	Sycamore
<i>Achillea millefolium</i>	Yarrow
<i>Aegopodium podagraria</i>	Ground-elder
<i>Agrimonia eupatoria</i>	Agrimony
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Allium roseum</i>	Rosy Garlic
<i>Allium vineale</i>	Wild Onion
<i>Alopecurus aequalis</i>	Orange Foxtail
<i>Alopecurus geniculatus</i>	Marsh Foxtail
<i>Amaranthus graecizans</i>	Short-tepalled Pigweed
<i>Amaranthus hybridus</i>	Green Amaranth
<i>Amaranthus retroflexus</i>	Common Amaranth
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid
<i>Anisantha sterilis</i>	Barren Brome
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Apium graveolens</i>	Wild Celery
<i>Arctium minus subsp. minus</i>	Lesser Burdock
<i>Armoracia rusticana</i>	Horse-radish
<i>Arrhenatherum elatius</i>	False Oat-Grass
<i>Artemisia verlotiorum</i>	Chinese Mugwort
<i>Artemisia vulgaris</i>	Mugwort
<i>Arum maculatum</i>	Lords-and-Ladies
<i>Aster tripolium</i>	Sea Aster
<i>Aster x salignus</i>	Michaelmas Daisy (<i>A. lanceolatus</i> x <i>novi-belgii</i>)
<i>Atriplex laciniata</i>	Frosted Orache
<i>Atriplex littoralis</i>	Grass-leaved Orache
<i>Atriplex patula</i>	Common Orache
<i>Atriplex portulacoides</i>	Sea-purslane
<i>Atriplex prostrata</i>	Spear-leaved Orache
<i>Baldellia ranunculoides</i>	Lesser Water-plantain
<i>Ballota nigra</i>	Black Horehound
<i>Barbarea vulgaris</i>	Winter-cress
<i>Bellis perennis</i>	Daisy
<i>Beta vulgaris subsp. maritima</i>	Sea Beet
<i>Bolboschoenus maritimus</i>	Sea Club-rush

Flora	Common Name
<i>Borago officinalis</i>	Borage
<i>Brassica napus</i>	Rape
<i>Bromus commutatus</i>	Meadow Brome
<i>Bromus hordeaceus</i>	Soft-brome
<i>Buddleja davidii</i>	Butterfly-bush
<i>Bupleurum tenuissimum</i>	Slender Hare's-ear
<i>Cakile maritima</i>	Sea Rocket
<i>Calendula officinalis</i>	Pot Marigold
<i>Calystegia sepium</i>	Hedge Bindweed
<i>Calystegia silvatica</i>	Large Bindweed
<i>Cannabis sativa</i>	Hemp
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Capsicum annuum</i>	Sweet Pepper
<i>Carex divulsa</i>	Grey Sedge
<i>Carex hirta</i>	Hairy Sedge
<i>Carex otrubae</i>	False Fox-sedge
<i>Centaurea cyanus</i>	Cornflower
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cerinthe major</i>	Greater Honeywort
<i>Chenopodium album</i>	Fat-hen
<i>Chenopodium album agg.</i>	
<i>Chenopodium ficifolium</i>	Fig-leaved Goosefoot
<i>Chenopodium opulifolium</i>	Grey Goosefoot
<i>Chenopodium polyspermum</i>	Many-seeded Goosefoot
<i>Chenopodium probstii</i>	Probst's Goosefoot
<i>Chenopodium rubrum</i>	Red Goosefoot
<i>Chenopodium strictum</i>	Striped Goosefoot
<i>Cichorium intybus</i>	Chicory
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Clematis vitalba</i>	Traveller's-joy
<i>Conium maculatum</i>	Hemlock
<i>Convolvulus arvensis</i>	Field Bindweed
<i>Conyza sumatrensis</i>	Guernsey Fleabane
<i>Coronopus didymus</i>	Lesser Swine-cress
<i>Coronopus squamatus</i>	Swine-cress
<i>Crataegus monogyna</i>	Hawthorn
<i>Crepis vesicaria</i>	Beaked Hawk's-beard
<i>Crepis vesicaria subsp. taraxacifolia</i>	Beaked Hawk's-beard
<i>Cucumis melo</i>	Melon
<i>Cynodon dactylon</i>	Bermuda-grass
<i>Dactylis glomerata</i>	Cock's-foot
<i>Dactylorhiza fuchsii</i>	Common Spotted-orchid
<i>Daucus carota</i>	Carrot
<i>Diplotaxis tenuifolia</i>	Perennial Wall-rocket

Flora	Common Name
<i>Dipsacus fullonum</i>	Wild Teasel
<i>Echium plantagineum</i>	Purple Viper's-bugloss
<i>Elytrigia atherica</i>	Sea Couch
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Epilobium montanum</i>	Broad-leaved Willowherb
<i>Erodium cicutarium</i>	Common Stork's-bill
<i>Erodium cicutarium</i> agg.	Common Stork's-bill
<i>Eschscholzia californica</i>	Californian Poppy
<i>Euphorbia lathyris</i>	Caper Spurge
<i>Fallopia japonica</i>	Japanese Knotweed
<i>Festuca arundinacea</i>	Tall Fescue
<i>Festuca rubra</i> agg.	Red Fescue
<i>Ficus carica</i>	Fig
<i>Filago vulgaris</i>	Common Cudweed
<i>Foeniculum vulgare</i>	Fennel
<i>Fumaria officinalis</i> subsp. <i>officinalis</i>	Common Fumitory
<i>Galium aparine</i>	Cleavers
<i>Genista tinctoria</i>	Dyer's Greenweed
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Geranium pyrenaicum</i>	Hedgerow Crane's-bill
<i>Gladiolus communis</i>	Eastern Gladiolus
<i>Glyceria maxima</i>	Reed Sweet-grass
<i>Gnaphalium uliginosum</i>	Marsh Cudweed
<i>Guizotia abyssinica</i>	Niger
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hordeum murinum</i>	Wall Barley
<i>Hordeum secalinum</i>	Meadow Barley
<i>Hypericum perforatum</i>	Perforate St John's-wort
<i>Iris pseudacorus</i>	Yellow Iris
<i>Juncus gerardii</i>	Saltmarsh Rush
<i>Juncus inflexus</i>	Hard Rush
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lamium album</i>	White Dead-nettle
<i>Lamium purpureum</i>	Red Dead-nettle
<i>Lapsana communis</i>	Nipplewort
<i>Lathyrus aphaca</i>	Yellow Vetchling
<i>Lathyrus latifolius</i>	Broad-leaved Everlasting-pea
<i>Lathyrus nissolia</i>	Grass Vetchling
<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Lepidium draba</i>	Hoary Cress
<i>Lepidium ruderale</i>	Narrow-leaved Pepperwort
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Linaria purpurea</i>	Purple Toadflax

Flora	Common Name
<i>Lobularia maritima</i>	Sweet Alison
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil
<i>Lycopersicon esculentum</i>	Tomato
<i>Lycopus europaeus</i>	Gypsywort
<i>Malva neglecta</i>	Dwarf Mallow
<i>Malva sylvestris</i>	Common Mallow
<i>Matricaria discoidea</i>	Pineappleweed
<i>Matricaria recutita</i>	Scented Mayweed
<i>Medicago arabica</i>	Spotted Medick
<i>Medicago lupulina</i>	Black Medick
<i>Medicago polymorpha</i>	Toothed Medick
<i>Melilotus albus</i>	White Melilot
<i>Melilotus altissimus</i>	Tall Melilot
<i>Melilotus indicus</i>	Small Melilot
<i>Melilotus officinalis</i>	Ribbed Melilot
<i>Mentha spicata</i>	Spear Mint
<i>Mercurialis annua</i>	Annual Mercury
<i>Misopates orontium</i>	Weasel's-snout
<i>Nicandra physalodes</i>	Apple-of-Peru
<i>Nigella damascena</i>	Love-in-a-mist
<i>Nolana paradoxa</i>	Chilean-bellflower
<i>Odontites vernus</i>	Red Bartsia
<i>Oenanthe crocata</i>	Hemlock Water-dropwort
<i>Oenanthe pimpinelloides</i>	Corky-fruited Water-dropwort
<i>Oenothera x fallax</i>	O. glazioviana x biennis
<i>Ophrys apifera</i>	Bee Orchid
<i>Origanum vulgare</i>	Wild Marjoram
<i>Oxalis debilis</i>	Large-flowered Pink-sorrel
<i>Papaver rhoeas</i>	Common Poppy
<i>Parapholis strigosa</i>	Hard-grass
<i>Pastinaca sativa</i>	Wild Parsnip
<i>Persicaria amphibia</i>	Amphibious Bistort
<i>Persicaria hydropiper</i>	Water-pepper
<i>Persicaria lapathifolia</i>	Pale Persicaria
<i>Persicaria maculosa</i>	Redshank
<i>Petunia x hybrida</i>	Petunia
<i>Phalaris canariensis</i>	Canary-grass
<i>Phleum bertolonii</i>	Smaller Cat's-tail
<i>Phragmites australis</i>	Common Reed
<i>Picris echioides</i>	Bristly Oxtongue
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Plantago major</i>	Greater Plantain

Flora	Common Name
<i>Plantago maritima</i>	Sea Plantain
<i>Poa annua</i>	Annual Meadow-grass
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Puccinellia distans</i>	Reflexed Saltmarsh-grass
<i>Puccinellia maritima</i>	Common Saltmarsh-grass
<i>Puccinellia rupestris</i>	Stiff Saltmarsh-grass
<i>Puccinellia x pannonica</i>	P. distans x rupestris
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Pyrus communis sens. lat.</i>	Pear
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus ficaria subsp. ficaria</i>	Lesser Celandine
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup
<i>Rapistrum rugosum</i>	Bastard Cabbage
<i>Reseda lutea</i>	Wild Mignonette
<i>Reseda luteola</i>	Weld
<i>Rhinanthus minor</i>	Yellow-rattle
<i>Rorippa sylvestris</i>	Creeping Yellow-cress
<i>Rosa canina</i>	Dog-rose
<i>Rubus armeniacus</i>	
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex acetosa</i>	Common Sorrel
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus subsp. crispus</i>	Curled Dock
<i>Rumex maritimus</i>	Golden Dock
<i>Salix cinerea subsp. oleifolia</i>	Rusty Willow
<i>Sambucus nigra</i>	Elder
<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio squalidus</i>	Oxford Ragwort
<i>Setaria italica</i>	Foxtail Bristle-grass
<i>Silene latifolia</i>	White Campion
<i>Sinapis arvensis</i>	Charlock
<i>Sison amomum</i>	Stone Parsley
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Solanum dulcamara</i>	Bittersweet
<i>Solanum nigrum</i>	Black Nightshade
<i>Solanum physalifolium</i>	Green Nightshade
<i>Solanum villosum subsp. miniatum</i>	
<i>Sonchus arvensis</i>	Perennial Sow-thistle
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Sonchus oleraceus</i>	Smooth Sow-thistle
<i>Spartium junceum</i>	Spanish Broom
<i>Spergularia media</i>	Greater Sea-spurrey
<i>Stachys palustris</i>	Marsh Woundwort

Flora	Common Name
<i>Stachys sylvatica</i>	Hedge Woundwort
<i>Stellaria graminea</i>	Lesser Stitchwort
<i>Stellaria media</i>	Common Chickweed
<i>Symphytum x uplandicum</i>	Russian Comfrey (S. asperum x officinale)
<i>Tanacetum vulgare</i>	Tansy
<i>Taraxacum agg.</i>	Dandelion
<i>Thlaspi arvense</i>	Field Penny-cress
<i>Tragopogon porrifolius</i>	Salsify
<i>Tragopogon pratensis</i>	Goat's-beard
<i>Tragopogon pratensis subsp. minor</i>	Goat's-beard
<i>Trifolium campestre</i>	Hop Trefoil
<i>Trifolium incarnatum</i>	
<i>Trifolium incarnatum subsp. incarnatum</i>	Crimson Clover
<i>Trifolium micranthum</i>	Slender Trefoil
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Trifolium squamosum</i>	Sea Clover
<i>Tussilago farfara</i>	Colt's-foot
<i>Ulex europaeus</i>	Gorse
<i>Urtica dioica</i>	Common Nettle
<i>Veronica persica</i>	Common Field-speedwell
<i>Vicia hirsuta</i>	Hairy Tare
<i>Vicia sativa subsp. nigra</i>	Narrow-leaved Vetch
<i>Viola odorata</i>	Sweet Violet
<i>Vitis vinifera</i>	Grape-vine
<i>Vulpia bromoides</i>	Squirreltail Fescue
<i>Vulpia myuros</i>	Rat's-tail Fescue
<i>Zannichellia palustris</i>	Horned Pondweed
<i>Zostera angustifolia</i>	Narrow-leaved Eel-grass (Now sunk into Z marina)
<i>Zostera marina</i>	Eelgrass
<i>Zostera noltei</i>	Dwarf Eelgrass

The Birds of Milton Common

Birds	Common Name
<i>Accipiter nisus</i>	Eurasian Sparrowhawk
<i>Acrocephalus schoenobaenus</i>	Sedge Warbler
<i>Acrocephalus scirpaceus</i>	Eurasian Reed Warbler
<i>Actitis hypoleucos</i>	Common Sandpiper
<i>Aegithalos caudatus</i>	Long-tailed Tit
<i>Aix galericulata</i>	Mandarin Duck
<i>Alauda arvensis</i>	Sky Lark
<i>Alca torda</i>	Razorbill
<i>Alcedo atthis</i>	Common Kingfisher
<i>Alectoris rufa</i>	Red-legged Partridge
<i>Anas acuta</i>	Northern Pintail
<i>Anas bahamensis</i>	White-checked Pintail
<i>Anas clypeata</i>	Northern Shoveler
<i>Anas crecca</i>	Eurasian Teal
<i>Anas penelope</i>	Eurasian Wigeon
<i>Anas platyrhynchos</i>	Mallard
<i>Anas strepera</i>	Gadwall
<i>Anthus petrosus</i>	Rock Pipit
<i>Anthus pratensis</i>	Meadow Pipit
<i>Anthus trivialis</i>	Tree Pipit
<i>Apus apus</i>	Common Swift
<i>Ardea cinerea</i>	Grey Heron
<i>Arenaria interpres</i>	Ruddy Turnstone
<i>Asio flammeus</i>	Short-eared Owl
<i>Aythya ferina</i>	Common Pochard
<i>Aythya fuligula</i>	Tufted Duck
<i>Aythya marila</i>	Greater Scaup
<i>Branta bernicla</i>	Brent Goose
<i>Branta bernicla hrota</i>	Pale-bellied Brent Goose
<i>Branta bernicla nigricans</i>	Black Brant
<i>Branta canadensis</i>	Canada Goose
<i>Branta leucopsis</i>	Barnacle Goose
<i>Bubulcus ibis</i>	Cattle Egret
<i>Bucephala clangula</i>	Common Goldeneye
<i>Buteo buteo</i>	Common Buzzard
<i>Calidris alpina</i>	Dunlin
<i>Calidris canutus</i>	Red Knot
<i>Carduelis cabaret</i>	Lesser Redpoll
<i>Carduelis cannabina</i>	Common Linnet
<i>Carduelis carduelis</i>	European Goldfinch
<i>Carduelis chloris</i>	European Greenfinch
<i>Carduelis spinus</i>	Eurasian Siskin
<i>Cettia cetti</i>	Cetti's Warbler
<i>Charadrius hiaticula</i>	Ringed Plover

Birds	Common Name
<i>Chlidonias niger</i>	Black Tern
<i>Clangula hyemalis</i>	Long-tailed Duck
<i>Columba palumbus</i>	Common Wood Pigeon
<i>Corvus corone</i>	Carrion Crow
<i>Corvus monedula</i>	Eurasian Jackdaw
<i>Cuculus canorus</i>	Common Cuckoo
<i>Cygnus olor</i>	Mute Swan
<i>Delichon urbicum</i>	House Martin
<i>Dendrocopos major</i>	Great Spotted Woodpecker
<i>Egretta garzetta</i>	Little Egret
<i>Emberiza citrinella</i>	Yellowhammer
<i>Emberiza schoeniclus</i>	Reed Bunting
<i>Erithacus rubecula</i>	European Robin
<i>Falco peregrinus</i>	Peregrine Falcon
<i>Falco tinnunculus</i>	Common Kestrel
<i>Ficedula hypoleuca</i>	Pied Flycatcher
<i>Fringilla coelebs</i>	Chaffinch
<i>Fringilla montifringilla</i>	Brambling
<i>Fulica atra</i>	Common Coot
<i>Gallinago gallinago</i>	Common Snipe
<i>Gallinula chloropus</i>	Common Moorhen
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher
<i>Hirundo rustica</i>	Barn Swallow
<i>Larus argentatus</i>	Herring Gull
<i>Larus argentatus michahellis</i>	Yellow-legged Gull
<i>Larus canus</i>	Mew Gull
<i>Larus delawarensis</i>	Ring-billed Gull
<i>Larus fuscus</i>	Lesser Black-backed Gull
<i>Larus melanocephalus</i>	Mediterranean Gull
<i>Larus minutus</i>	Little Gull
<i>Larus ridibundus</i>	Black-headed Gull
<i>Limosa lapponica</i>	Bar-tailed Godwit
<i>Limosa limosa</i>	Black-tailed Godwit
<i>Locustella naevia</i>	Common Grasshopper Warbler
<i>Luscinia megarhynchos</i>	Common Nightingale
<i>Melanitta nigra</i>	Black Scoter
<i>Melopsittacus undulatus</i>	Budgerigar
<i>Mergus serrator</i>	Red-breasted Merganser
<i>Milvus milvus</i>	Red Kite
<i>Motacilla alba</i>	White / Pied Wagtail
<i>Motacilla alba alba</i>	White Wagtail
<i>Motacilla cinerea</i>	Grey Wagtail
<i>Motacilla flava</i>	Yellow Wagtail
<i>Muscicapa striata</i>	Spotted Flycatcher
<i>Netta rufina</i>	Red-crested Pochard

Birds	Common Name
<i>Numenius arquata</i>	Eurasian Curlew
<i>Numenius phaeopus</i>	Whimbrel
<i>Nymphicus hollandicus</i>	Cockatiel
<i>Oenanthe oenanthe</i>	Northern Wheatear
<i>Oxyura jamaicensis</i>	Ruddy Duck
<i>Pandion haliaetus</i>	Osprey
<i>Panurus biarmicus</i>	Bearded Tit
<i>Parus caeruleus</i>	Blue Tit
<i>Parus major</i>	Great Tit
<i>Passer domesticus</i>	House Sparrow
<i>Phalacrocorax aristotelis</i>	European Shag
<i>Phalacrocorax carbo</i>	Great Cormorant
<i>Phasianus colchicus</i>	Common Pheasant
<i>Phoenicurus ochruros</i>	Black Redstart
<i>Phoenicurus phoenicurus</i>	Common Redstart
<i>Phylloscopus collybita</i>	Common Chiffchaff
<i>Phylloscopus trochilus</i>	Willow Warbler
<i>Pica pica</i>	Black-billed Magpie
<i>Picus viridis</i>	Green Woodpecker
<i>Pluvialis squatarola</i>	Grey Plover
<i>Podiceps auritus</i>	Slavonian Grebe
<i>Podiceps cristatus</i>	Great Crested Grebe
<i>Podiceps grisegena</i>	Red-necked Grebe
<i>Prunella modularis</i>	Hedge Accentor
<i>Rallus aquaticus</i>	Water Rail
<i>Recurvirostra avosetta</i>	Pied Avocet
<i>Regulus ignicapilla</i>	Firecrest
<i>Regulus regulus</i>	Goldcrest
<i>Riparia riparia</i>	Sand Martin
<i>Saxicola rubetra</i>	Whinchat
<i>Saxicola torquatus</i>	Stonechat
<i>Scolopax rusticola</i>	Eurasian Woodcock
<i>Somateria mollissima</i>	Common Eider
<i>Sterna hirundo</i>	Common Tern
<i>Sterna sandvicensis</i>	Sandwich Tern
<i>Sternula albifrons</i>	Little Tern
<i>Streptopelia decaocto</i>	Eurasian Collared Dove
<i>Sturnus vulgaris</i>	Common Starling
<i>Sylvia atricapilla</i>	Blackcap
<i>Sylvia borin</i>	Garden Warbler
<i>Sylvia communis</i>	Common Whitethroat
<i>Sylvia curruca</i>	Lesser Whitethroat
<i>Sylvia undata</i>	Dartford Warbler
<i>Tachybaptus ruficollis</i>	Little Grebe
<i>Tadorna tadorna</i>	Common Shelduck

Birds	Common Name
<i>Tringa erythropus</i>	Spotted Redshank
<i>Tringa nebularia</i>	Common Greenshank
<i>Tringa ochropus</i>	Green Sandpiper
<i>Tringa totanus</i>	Common Redshank
<i>Turdus iliacus</i>	Redwing
<i>Turdus merula</i>	Common Blackbird
<i>Turdus philomelos</i>	Song Thrush
<i>Turdus pilaris</i>	Fieldfare
<i>Turdus viscivorus</i>	Mistle Thrush
<i>Uria aalge</i>	Common Guillemot
<i>Vanellus vanellus</i>	Northern Lapwing

The Butterflies of Milton Common

Species	Common Name
<i>Aglais urticae</i>	Small Tortoiseshell
<i>Anthocharis cardamines</i>	Orange Tip
<i>Celastrina argiolus</i>	Holly Blue
<i>Coenonympha pamphilus</i>	Small Heath
<i>Colias crocea</i>	Clouded Yellow
<i>Cupido minimus</i>	Small Blue
<i>Gonepteryx rhamni</i>	Brimstone
<i>Inachis io</i>	Peacock
<i>Lasiommata megera</i>	Wall Brown
<i>Lycaena phlaeas</i>	Small Copper
<i>Maniola jurtina</i>	Meadow Brown
<i>Melanargia galathea</i>	Marbled White
<i>Ochlodes faunus</i>	Large Skipper
<i>Pararge aegeria</i>	Speckled Wood
<i>Pieris brassicae</i>	Large White
<i>Pieris napi</i>	Green-veined White
<i>Pieris rapae</i>	Small White
<i>Polygonia c-album</i>	Comma
<i>Polyommatus icarus</i>	Common Blue
<i>Pyronia tithonus</i>	Gatekeeper
<i>Thymelicus lineola</i>	Essex Skipper
<i>Thymelicus sylvestris</i>	Small Skipper
<i>Vanessa atalanta</i>	Red Admiral

The Invertebrates of Milton Common.

Araneae	
<i>Steatoda nobilis</i>	
Coleoptera	
<i>Chrysolina banksi</i>	
Diptera	
<i>Anopheles claviger</i>	Mosquito
<i>Culex pipiens</i>	Mosquito
<i>Culiseta annulata</i>	Mosquito
<i>Epistrophe eligans</i>	
<i>Eristalinus sepulchralis</i>	
<i>Eristalis tenax</i>	
<i>Eupeodes luniger</i>	
<i>Helophilus pendulus</i>	
<i>Helophilus trivittatus</i>	
<i>Melanostoma mellinum</i>	
<i>Melanostoma scalare</i>	
<i>Ochlerotatus detritus</i>	Mosquito
<i>Platycheirus fulviventris</i>	
<i>Platycheirus peltatus</i>	
<i>Platycheirus scutatus sens. lat.</i>	
<i>Sphaerophoria scripta</i>	
<i>Syrphus ribesii</i>	
Hemiptera	
<i>Coreus marginatus</i>	
<i>Elasmostethus tristriatus</i>	
Hymenoptera	
<i>Lestiphorus bicinctus</i>	Digger wasp
<i>Vespula vulgaris</i>	Common Wasp
Odonata	
<i>Aeshna cyanea</i>	Southern Hawker
<i>Aeshna mixta</i>	Migrant Hawker
<i>Coenagrion puella</i>	Azure Damselfly
<i>Enallagma cyathigerum</i>	Common Blue Damselfly
<i>Ischnura elegans</i>	Blue-tailed Damselfly
<i>Libellula depressa</i>	Broad-bodied Chaser
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly
<i>Sympetrum striolatum</i>	Common Darter
Orthoptera	
<i>Chorthippus albomarginatus</i>	Lesser Marsh Grasshopper
<i>Chorthippus brunneus</i>	Field Grasshopper
<i>Chorthippus parallelus</i>	Meadow Grasshopper
<i>Conocephalus discolor</i>	Long-winged Conehead
<i>Meconema thalassinum</i>	Oak Bush Cricket
<i>Pholidoptera griseoptera</i>	Dark Bush Cricket
<i>Tettigonia viridissima</i>	Great Green Bush Cricket

The Moths of Milton Common.

Moths	Common Name
<i>Abraxas grossulariata</i>	Magpie Moth
<i>Abrostola tripartita</i>	Spectacle
<i>Abrostola triplasia</i>	Dark Spectacle
<i>Acasis viretata</i>	Yellow-barred Brindle
<i>Acentria ephemerella</i>	Water Veneer
<i>Achroia grisella</i>	Lesser Wax Moth
<i>Acleris aspersana</i>	
<i>Acleris forsskaleana</i>	
<i>Acleris hastiana</i>	
<i>Acleris kochiella</i>	
<i>Acleris laterana</i>	
<i>Acleris rhombana</i>	Rhomboid Tortrix
<i>Acleris sparsana</i>	
<i>Acleris variegana</i>	Garden Rose Tortrix
<i>Acrobasis consociella</i>	
<i>Acrocercops brongniardella</i>	
<i>Acrolepia autumnitella</i>	
<i>Acrolepiopsis assectella</i>	Leek Moth
<i>Acronicta aceris</i>	Sycamore
<i>Acronicta alni</i>	Alder Moth
<i>Acronicta megacephala</i>	Poplar Grey
<i>Acronicta psi</i>	Grey Dagger
<i>Acronicta rumicis</i>	Knot Grass
<i>Acronicta sp.</i>	Acronicta species
<i>Acronicta tridens</i>	Dark Dagger
<i>Acronicta tridens/psi</i>	Grey Dagger / Dark Dagger
<i>Adaina microdactyla</i>	
<i>Adela reaumurella</i>	
<i>Aethes beatricella</i>	
<i>Aethes cnicana</i>	
<i>Aethes dilucidana</i>	
<i>Aethes francillana</i>	
<i>Aethes smeathmanniana</i>	
<i>Agapeta hamana</i>	
<i>Agapeta zoegana</i>	
<i>Agdistis bennetii</i>	
<i>Aglais urticae</i>	Small Tortoiseshell
<i>Agonopterix alstromeriana</i>	
<i>Agonopterix arenella</i>	
<i>Agonopterix assimilella</i>	
<i>Agonopterix heracliata</i>	
<i>Agonopterix nervosa</i>	
<i>Agonopterix purpurea</i>	
<i>Agonopterix subpropinquella</i>	
<i>Agonopterix yeatiana</i>	
<i>Agriopis aurantiaria</i>	Scarce Umber
<i>Agriopis marginaria</i>	Dotted Border
<i>Agriphila geniculea</i>	

Moths	Common Name
<i>Agriphila inquinatella</i>	
<i>Agriphila latistria</i>	
<i>Agriphila selasella</i>	
<i>Agriphila straminella</i>	
<i>Agriphila tristella</i>	
<i>Agrius convolvuli</i>	Convolvulus Hawk-moth
<i>Agrochola circellaris</i>	Brick
<i>Agrochola lota</i>	Red-line Quaker
<i>Agrochola lychnidis</i>	Beaded Chestnut
<i>Agrochola macilenta</i>	Yellow-line Quaker
<i>Agrotis cinerea</i>	Light Feathered Rustic
<i>Agrotis clavis</i>	Heart and Club
<i>Agrotis exclamationis</i>	Heart and Dart
<i>Agrotis ipsilon</i>	Dark Sword-grass
<i>Agrotis puta</i>	Shuttle-shaped Dart
<i>Agrotis ripae</i>	Sand Dart
<i>Agrotis segetum</i>	Turnip Moth
<i>Agrotis vestigialis</i>	Archer's Dart
<i>Aleimma loeflingiana</i>	
<i>Alsophila aescularia</i>	March Moth
<i>Altenia scriptella</i>	
<i>Alucita hexadactyla</i>	Twenty-plume Moth
<i>Amblyptilia acanthadactyla</i>	
<i>Amblyptilia punctidactyla</i>	
<i>Amphipoea fucosa</i>	Saltern Ear
<i>Amphipoea fucosa paludis</i>	Saltern Ear
<i>Amphipoea oculatea</i>	Ear Moth
<i>Amphipyra berbera</i>	Svensson's Copper Underwing
<i>Amphipyra berbera svenssoni</i>	Svensson's Copper Underwing
<i>Amphipyra pyramidea</i>	Copper Underwing
<i>Amphipyra tragopoginis</i>	Mouse Moth
<i>Anacampsis populella</i>	
<i>Anarsia lineatella</i>	Peach Twig Borer
<i>Anarsia spartiella</i>	
<i>Ancylis achatana</i>	
<i>Ancylis badiana</i>	
<i>Ancylis comptana</i>	
<i>Ancylosis oblitella</i>	
<i>Anthocharis cardamines</i>	Orange-tip
<i>Anthophila fabriciana</i>	
<i>Anticlea derivata</i>	Streamer
<i>Apamea lithoxylaea</i>	Light Arches
<i>Apamea monoglypha</i>	Dark Arches
<i>Apamea oblonga</i>	Crescent Striped
<i>Apamea remissa</i>	Dusky Brocade
<i>Apamea sordens</i>	Rustic Shoulder-knot
<i>Apamea sublustris</i>	Reddish Light Arches
<i>Aphomia sociella</i>	Bee Moth
<i>Aplocera efformata</i>	Lesser Treble-bar

Moths	Common Name
<i>Apodia bifractella</i>	
<i>Aporophyla lutulenta</i>	Deep-brown Dart
<i>Aporophyla nigra</i>	Black Rustic
<i>Apotomis betuletana</i>	
<i>Aproaerema anthyllidella</i>	
<i>Archana dissoluta</i>	Brown-veined Wainscot
<i>Archana geminipuncta</i>	Twin-spotted Wainscot
<i>Archana sparganii</i>	Webb's Wainscot
<i>Archips podana</i>	Large Fruit-tree Tortrix
<i>Archips xylosteana</i>	Variegated Golden Tortrix
<i>Arctia caja</i>	Garden Tiger
<i>Arctia villica</i>	Cream-spot Tiger
<i>Arenostola phragmitidis</i>	Fen Wainscot
<i>Argyresthia bonnetella</i>	
<i>Argyresthia brockeella</i>	
<i>Argyresthia dilectella</i>	
<i>Argyresthia goedartella</i>	
<i>Argyresthia pygmaeella</i>	
<i>Argyresthia retinella</i>	
<i>Argyresthia semifusca</i>	
<i>Argyresthia spinosella</i>	
<i>Argyrotaenia ljugiana</i>	
<i>Aristotelia brizella</i>	
<i>Aristotelia ericinella</i>	
<i>Aroga velocella</i>	
<i>Aspilapteryx tringipennella</i>	
<i>Assara terebrella</i>	
<i>Atolmis rubicollis</i>	Red-necked Footman
<i>Autographa gamma</i>	Silver Y
<i>Autographa jota</i>	Plain Golden Y
<i>Axylia putris</i>	Flame
<i>Bactra furfurana</i>	
<i>Bactra lacteana</i>	
<i>Bactra lancealana</i>	
<i>Bactra robustana</i>	
<i>Batia lambdella</i>	
<i>Batia lunaris</i>	
<i>Batia unitella</i>	
<i>Batrachedra praeangusta</i>	
<i>Bedellia somnulentella</i>	
<i>Bena bicolorana</i>	Scarce Silver-lines
<i>Biselachista scirpi</i>	
<i>Biston betularia</i>	Peppered Moth
<i>Biston strataria</i>	Oak Beauty
<i>Blastobasis adustella</i>	
<i>Blastobasis laticolella</i>	
<i>Blastodacna hellerella</i>	
<i>Bohemannia pulverosella</i>	
<i>Borkhausenia fuscescens</i>	

Moths	Common Name
<i>Brachmia blandella</i>	
<i>Bryotropha affinis</i>	
<i>Bryotropha domestica</i>	
<i>Bryotropha senectella</i>	
<i>Bryotropha terrella</i>	
<i>Bucculatrix albedinella</i>	
<i>Bucculatrix bechsteinella</i>	
<i>Bucculatrix cidarella</i>	
<i>Bucculatrix maritima</i>	
<i>Bucculatrix nigricomella</i>	
<i>Bucculatrix thoracella</i>	
<i>Bucculatrix ulmella</i>	
<i>Cabera exanthemata</i>	Common Wave
<i>Cabera pusaria</i>	Common White Wave
<i>Cacoecimorpha pronubana</i>	Carnation Tortrix
<i>Calamotropha paludella</i>	
<i>Callistege mi</i>	Mother Shipton
<i>Callisto denticulella</i>	
<i>Caloptilia alchimiella</i>	
<i>Caloptilia azaleella</i>	Azalea Leaf Miner
<i>Caloptilia elongella</i>	
<i>Caloptilia falconipennella</i>	
<i>Caloptilia populetorum</i>	
<i>Caloptilia robustella</i>	
<i>Caloptilia rufipennella</i>	
<i>Caloptilia semifascia</i>	
<i>Caloptilia stigmatella</i>	
<i>Caloptilia syringella</i>	
<i>Calybites phasianipennella</i>	
<i>Cameraria ohridella</i>	
<i>Campaea margaritata</i>	Light Emerald
<i>Camptogramma bilineata</i>	Yellow Shell
<i>Capperia britanniodactyla</i>	
<i>Caradrina morpheus</i>	Mottled Rustic
<i>Carcina quercana</i>	
<i>Carpatolechia fugitivella</i>	
<i>Caryocolum alsinella</i>	
<i>Caryocolum fraternella</i>	
<i>Caryocolum marmoreum</i>	
<i>Cataclysta lemnata</i>	Small China-mark
<i>Catocala nupta</i>	Red Underwing
<i>Catoptria falsella</i>	
<i>Cedestis subfasciella</i>	
<i>Celaena leucostigma</i>	Crescent
<i>Celastrina argiolus</i>	Holly Blue
<i>Celypha cespitana</i>	
<i>Celypha lacunana</i>	
<i>Celypha rivulana</i>	
<i>Celypha rosaceana</i>	

Moths	Common Name
<i>Celypha striana</i>	
<i>Cerura vinula</i>	Puss Moth
<i>Charanyca trigrammica</i>	Treble Lines
<i>Charissa obscurata</i>	Annulet
<i>Chiasmia clathrata</i>	Latticed Heath
<i>Chilo phragmitella</i>	
<i>Chilodes maritimus</i>	Silky Wainscot
<i>Chloroclysta siterata</i>	Red-green Carpet
<i>Chloroclysta truncata</i>	Common Marbled Carpet
<i>Chloroclystis v-ata</i>	V-Pug
<i>Choreutis pariana</i>	Apple Leaf Skeletoniser
<i>Chortodes pygmina</i>	Small Wainscot
<i>Chrysoesthia sexguttella</i>	
<i>Chrysoteuchia culmella</i>	Garden Grass-veneer
<i>Cidaria fulvata</i>	Barred Yellow
<i>Cilix glaucata</i>	Chinese Character
<i>Clavigesta purdeyi</i>	Pine Leaf-mining Moth
<i>Clepsis consimilana</i>	
<i>Clepsis spectrana</i>	Cyclamen Tortrix
<i>Clostera curtula</i>	Chocolate-tip
<i>Cnephasia asseclana</i>	Flax Tortrix
<i>Cnephasia communana</i>	
<i>Cnephasia genitalana</i>	
<i>Cnephasia incertana</i>	Light Grey Tortrix
<i>Cnephasia interjectana</i>	
<i>Cnephasia longana</i>	
<i>Cnephasia stephensiana</i>	Grey Tortrix
<i>Cochylidia implicitana</i>	
<i>Cochylimorpha straminea</i>	
<i>Cochylis atricapitana</i>	
<i>Cochylis dubitana</i>	
<i>Cochylis hybridella</i>	
<i>Cochylis molliculana</i>	
<i>Cochylis roseana</i>	
<i>Coenobia rufa</i>	Small Rufous
<i>Coenonympha pamphilus</i>	Small Heath
<i>Coleophora adjunctella</i>	
<i>Coleophora adspersella</i>	
<i>Coleophora albicosta</i>	
<i>Coleophora albitarsella</i>	
<i>Coleophora alcyonipennella</i>	
<i>Coleophora alcyonipennella/frischella</i>	
<i>Coleophora alticolella</i>	
<i>Coleophora anatipennella</i>	Pistol Case-bearer
<i>Coleophora argentula</i>	
<i>Coleophora artemisicolella</i>	
<i>Coleophora atriplicis</i>	
<i>Coleophora badiipennella</i>	
<i>Coleophora caespititiella</i>	

Moths	Common Name
<i>Coleophora clypeiferella</i>	
<i>Coleophora conyzae</i>	
<i>Coleophora coracipennella</i>	
<i>Coleophora deauratella</i>	
<i>Coleophora discordella</i>	
<i>Coleophora flavipennella</i>	
<i>Coleophora follicularis</i>	
<i>Coleophora gardesanella</i>	
<i>Coleophora glaucicolella</i>	
<i>Coleophora gryphipennella</i>	
<i>Coleophora inulae</i>	
<i>Coleophora laricella</i>	Larch Case-bearer
<i>Coleophora lassella</i>	
<i>Coleophora limosipennella</i>	
<i>Coleophora lineolea</i>	
<i>Coleophora lusciniapennella</i>	
<i>Coleophora lutipennella</i>	
<i>Coleophora maritimella</i>	
<i>Coleophora mayrella</i>	
<i>Coleophora peribenanderi</i>	
<i>Coleophora pyrrhulipennella</i>	
<i>Coleophora salicorniae</i>	
<i>Coleophora salinella</i>	
<i>Coleophora saxicolella</i>	
<i>Coleophora serratella</i>	
<i>Coleophora spinella</i>	Apple & Plum Case-bearer
<i>Coleophora striatipennella</i>	
<i>Coleophora taeniipennella</i>	
<i>Coleophora tamesis</i>	
<i>Coleophora therinella</i>	
<i>Coleophora trifolii</i>	Large Clover Case-bearer
<i>Coleophora trochilella</i>	
<i>Coleophora versurella</i>	
<i>Coleophora vibicella</i>	
<i>Coleophora viminetella</i>	
<i>Colias croceus</i>	Clouded Yellow
<i>Colocasia coryli</i>	Nut-tree Tussock
<i>Colostygia multistrigaria</i>	Mottled Grey
<i>Colostygia pectinataria</i>	Green Carpet
<i>Colotois pennaria</i>	Feathered Thorn
<i>Comibaena bajularia</i>	Blotched Emerald
<i>Conistra ligula</i>	Dark Chestnut
<i>Conistra vaccinii</i>	Chestnut
<i>Conobathra repandana</i>	
<i>Conobathra tumidana</i>	
<i>Cosmia affinis</i>	Lesser-spotted Pinion
<i>Cosmia trapezina</i>	Dun-bar
<i>Cosmiotes consortella</i>	
<i>Cosmiotes stabilella</i>	

Moths	Common Name
<i>Cosmopterix scribaiella</i>	
<i>Cosmorhoe ocellata</i>	Purple Bar
<i>Crambus lathoniellus</i>	
<i>Crambus pascuella</i>	
<i>Crambus perlella</i>	
<i>Craniophora ligustri</i>	Coronet
<i>Crocallis elinguaris</i>	Scalloped Oak
<i>Crociosema plebejana</i>	
<i>Cryphia algae</i>	Tree-lichen Beauty
<i>Cryphia domestica</i>	Marbled Beauty
<i>Cryphia muralis</i>	Marbled Green
<i>Cucullia chamomillae</i>	Chamomile Shark
<i>Cucullia umbratica</i>	Shark
<i>Cupido minimus</i>	Small Blue
<i>Cyclophora linearia</i>	Clay Triple-lines
<i>Cyclophora punctaria</i>	Maiden's Blush
<i>Cyclophora pupillaria</i>	Blair's Mocha
<i>Cydia amplana</i>	
<i>Cydia conicolana</i>	
<i>Cydia fagiglandana</i>	
<i>Cydia nigricana</i>	Pea Moth
<i>Cydia pomonella</i>	Codling Moth
<i>Cydia splendana</i>	
<i>Cydia strobilella</i>	Spruce Seed Moth
<i>Cydia ulicetana</i>	
<i>Cynaeda dentalis</i>	
<i>Deilephila elpenor</i>	Elephant Hawk-moth
<i>Deilephila porcellus</i>	Small Elephant Hawk-moth
<i>Deltaornix torquillella</i>	
<i>Depressaria daucella</i>	
<i>Depressaria heraclei</i>	Parsnip Moth
<i>Diachrysis chrysis</i>	Burnished Brass
<i>Diaphora mendica</i>	Muslin Moth
<i>Diarsia mendica</i>	Ingrailed Clay
<i>Diarsia rubi</i>	Small Square-spot
<i>Dichomeris marginella</i>	Juniper Webber
<i>Dichonia aprilina</i>	Merveille du Jour
<i>Dichrorampha acuminatana</i>	
<i>Dichrorampha alpinana</i>	
<i>Dichrorampha consortana</i>	
<i>Dichrorampha flavidorsana</i>	
<i>Dichrorampha petiverella</i>	
<i>Dichrorampha plumbagana</i>	
<i>Dichrorampha plumbana</i>	
<i>Dichrorampha sequana</i>	
<i>Dichrorampha simpliciana</i>	
<i>Dichrorampha vancouverana</i>	
<i>Digitivalva pulicariae</i>	
<i>Dioryctria abietella</i>	

Moths	Common Name
<i>Dipleurina lacustrata</i>	
<i>Discestra trifolii</i>	Nutmeg
<i>Ditula angustiorana</i>	Red-barred Tortrix
<i>Diurnea fagella</i>	
<i>Dolicharthria punctalis</i>	
<i>Donacaula forficella</i>	
<i>Donacaula mucronellus</i>	
<i>Drepana falcataria</i>	Pebble Hook-tip
<i>Dypterygia scabriuscula</i>	Bird's Wing
<i>Eana incanana</i>	
<i>Eana osseana</i>	
<i>Earias clorana</i>	Cream-bordered Green Pea
<i>Ectoedemia argyropeza</i>	
<i>Ectoedemia decentella</i>	
<i>Ectoedemia erythrogenella</i>	
<i>Ectoedemia heringella</i>	
<i>Ectoedemia heringi</i>	
<i>Ectoedemia intimella</i>	
<i>Ectoedemia lousella</i>	
<i>Ectoedemia occultella</i>	
<i>Ectoedemia septembrella</i>	
<i>Ectoedemia sericopeza</i>	
<i>Ectoedemia subbimaculella</i>	
<i>Ectropis bistortata</i>	Engrailed
<i>Eidophasia messingiella</i>	
<i>Eilema complana</i>	Scarce Footman
<i>Eilema depressa</i>	Buff Footman
<i>Eilema griseola</i>	Dingy Footman
<i>Eilema lurideola</i>	Common Footman
<i>Elachista argentella</i>	
<i>Elachista atricomella</i>	
<i>Elachista canapennella</i>	
<i>Elachista rufocinerea</i>	
<i>Elegia similella</i>	
<i>Emmelina monodactyla</i>	
<i>Emmetia marginea</i>	
<i>Enargia paleacea</i>	Angle-striped Sallow
<i>Enarmonia formosana</i>	Cherry Bark Moth
<i>Endothenia ericetana</i>	
<i>Endothenia gentianaeana</i>	
<i>Endothenia marginana</i>	
<i>Endothenia oblongana</i>	
<i>Endothenia quadrimaculana</i>	
<i>Endotricha flammealis</i>	
<i>Endrosis sarcitrella</i>	White-shouldered House Moth
<i>Ennomos alniaria</i>	Canary-shouldered Thorn
<i>Ennomos autumnaria</i>	Large Thorn
<i>Ennomos erosaria</i>	September Thorn
<i>Ennomos fuscantaria</i>	Dusky Thorn

Moths	Common Name
<i>Ennomos quercinaria</i>	August Thorn
<i>Epermenia aequidentellus</i>	
<i>Epermenia chaerophyllella</i>	
<i>Ephestia parasitella</i>	
<i>Epiblema cynosbatella</i>	
<i>Epiblema foenella</i>	
<i>Epiblema roborana</i>	
<i>Epiblema rosaecolana</i>	
<i>Epiblema trimaculana</i>	
<i>Epiblema uddmanniana</i>	Bramble Shoot Moth
<i>Epinotia abbreviana</i>	
<i>Epinotia bilunana</i>	
<i>Epinotia immundana</i>	
<i>Epinotia nisella</i>	
<i>Epinotia ramella</i>	
<i>Epinotia solandriana</i>	
<i>Epione repandaria</i>	Bordered Beauty
<i>Epiphyas postvittana</i>	Light Brown Apple Moth
<i>Epirrhoe alternata</i>	Common Carpet
<i>Epirrhoe galiata</i>	Galium Carpet
<i>Epirrita christyi</i>	Pale November Moth
<i>Epirrita dilutata</i>	November Moth
<i>Erannis defoliaria</i>	Mottled Umber
<i>Eremobia ochroleuca</i>	Dusky Sallow
<i>Eriocrania subpurpurella</i>	
<i>Esperia sulphurella</i>	
<i>Ethmia dodecea</i>	
<i>Eublemma parva</i>	Small Marbled
<i>Eublemma purpurina</i>	Beautiful Marbled
<i>Euchoeca nebulata</i>	Dingy Shell
<i>Euchromius ocella</i>	
<i>Eucosma campoliliana</i>	
<i>Eucosma cana</i>	
<i>Eucosma conterminana</i>	
<i>Eucosma hohewartiana</i>	
<i>Eucosma obumbratana</i>	
<i>Eucosma tripoliana</i>	
<i>Eudemis profundana</i>	
<i>Eudonia angustea</i>	
<i>Eudonia delunella</i>	
<i>Eudonia mercurella</i>	
<i>Eudonia pallida</i>	
<i>Eudonia truncicolella</i>	
<i>Eulamprotes atrella</i>	
<i>Eulamprotes wilkella</i>	
<i>Euleioptilus carphodactyla</i>	
<i>Eulithis mellinata</i>	Spinach
<i>Eulithis prunata</i>	Phoenix
<i>Eulithis pyraliata</i>	Barred Straw

Moths	Common Name
<i>Eupithecia abbreviata</i>	Brindled Pug
<i>Eupithecia absinthiata</i>	Wormwood Pug
<i>Eupithecia assimilata</i>	Currant Pug
<i>Eupithecia centaureata</i>	Lime-speck Pug
<i>Eupithecia dodoneata</i>	Oak-tree Pug
<i>Eupithecia haworthiata</i>	Haworth's Pug
<i>Eupithecia icterata</i>	Tawny Speckled Pug
<i>Eupithecia insigniata</i>	Pinion-spotted Pug
<i>Eupithecia intricata</i>	Freyer's Pug
<i>Eupithecia inturbata</i>	Maple Pug
<i>Eupithecia linariata</i>	Toadflax Pug
<i>Eupithecia millefoliata</i>	Yarrow Pug
<i>Eupithecia nanata</i>	Narrow-winged Pug
<i>Eupithecia phoeniceata</i>	Cypress Pug
<i>Eupithecia simpliciata</i>	Plain Pug
<i>Eupithecia subfuscata</i>	Grey Pug
<i>Eupithecia subumbrata</i>	Shaded Pug
<i>Eupithecia succenturiata</i>	Bordered Pug
<i>Eupithecia tantillaria</i>	Dwarf Pug
<i>Eupithecia tenuiata</i>	Slender Pug
<i>Eupithecia tripunctaria</i>	White-spotted Pug
<i>Eupithecia ultimaria</i>	Channel Islands Pug
<i>Eupithecia vulgata</i>	Common Pug
<i>Euplagia quadripunctaria</i>	Jersey Tiger
<i>Euplexia lucipara</i>	Small Angle Shades
<i>Eupoecilia angustana</i>	
<i>Euproctis chrysorrhoea</i>	Brown-tail
<i>Euproctis similis</i>	Yellow-tail
<i>Eupsilia transversa</i>	Satellite
<i>Eurois occulta</i>	Great Brocade
<i>Eurrhpara hortulata</i>	Small Magpie
<i>Euthrix potatoria</i>	Drinker
<i>Euxoa tritici</i>	White-line Dart
<i>Euzophora pinguis</i>	
<i>Evergestis extimalis</i>	
<i>Evergestis forficalis</i>	Garden Pebble
<i>Exoteleia dodecella</i>	
<i>Falcaria lacertinaria</i>	Scalloped Hook-tip
<i>Furcula bifida</i>	Poplar Kitten
<i>Furcula furcula</i>	Sallow Kitten
<i>Galleria mellonella</i>	Wax Moth
<i>Glyphipterix simpliciella</i>	Cocksfoot Moth
<i>Glyphipterix thrasonella</i>	
<i>Gonepteryx rhamni</i>	Brimstone
<i>Goniodoma limoniella</i>	
<i>Grapholita caecana</i>	
<i>Grapholita compositella</i>	
<i>Grapholita funebrana</i>	Plum Fruit Moth
<i>Grapholita janthinana</i>	

Moths	Common Name
<i>Grapholita lobarzewskii</i>	
<i>Grapholita tenebrosana</i>	
<i>Gymnoscelis rufifasciata</i>	Double-striped Pug
<i>Gynnidomorpha vectisana</i>	
<i>Gypsonoma aceriana</i>	
<i>Gypsonoma dealbana</i>	
<i>Gypsonoma minutana</i>	
<i>Gypsonoma oppressana</i>	
<i>Gypsonoma sociana</i>	
<i>Habrosyne pyritoides</i>	Buff Arches
<i>Hada nana</i>	Shears
<i>Hada plebeja</i>	Shears
<i>Hadena bicruris</i>	Lychnis
<i>Hadena compta</i>	Varied Coronet
<i>Hadena confusa</i>	Marbled Coronet
<i>Hadena perplexa</i>	Tawny Shears
<i>Hadena rivularis</i>	Campion
<i>Hecatera bicolorata</i>	Broad-barred White
<i>Hedya nubiferana</i>	Marbled Orchard Tortrix
<i>Hedya pruniana</i>	Plum Tortrix
<i>Hedya salicella</i>	
<i>Helcystogramma rufescens</i>	
<i>Helicoverpa armigera</i>	Scarce Bordered Straw
<i>Heliothis peltigera</i>	Bordered Straw
<i>Hemistola chrysoprasaria</i>	Small Emerald
<i>Hemithea aestivaria</i>	Common Emerald
<i>Hepialus humuli</i>	Ghost Moth
<i>Hepialus lupulinus</i>	Common Swift
<i>Hepialus sylvina</i>	Orange Swift
<i>Herminia grisealis</i>	Small Fan-foot
<i>Hofmannophila pseudospretella</i>	Brown House Moth
<i>Homoeosoma nebulella</i>	
<i>Homoeosoma sinuella</i>	
<i>Hoplodrina alsines</i>	Uncertain
<i>Hoplodrina ambigua</i>	Vine's Rustic
<i>Hoplodrina blanda</i>	Rustic
<i>Horisme tersata</i>	Fern
<i>Horisme vitalbata</i>	Small Waved Umber
<i>Hydraecia micacea</i>	Rosy Rustic
<i>Hydrelia flammeolaria</i>	Small Yellow Wave
<i>Hydriomena furcata</i>	July Highflyer
<i>Hydriomena impluviata</i>	May Highflyer
<i>Hyles livornica</i>	Striped Hawk-moth
<i>Hyloicus pinastri</i>	Pine Hawk-moth
<i>Hypena proboscidalis</i>	Snout
<i>Hypena rostralis</i>	Buttoned Snout
<i>Hypsopygia costalis</i>	Gold Triangle
<i>Idaea aversata</i>	Riband Wave
<i>Idaea biselata</i>	Small Fan-footed Wave

Moths	Common Name
<i>Idaea dimidiata</i>	Single-dotted Wave
<i>Idaea fuscovenosa</i>	Dwarf Cream Wave
<i>Idaea rusticata</i>	Least Carpet
<i>Idaea seriata</i>	Small Dusty Wave
<i>Idaea subsericeata</i>	Satin Wave
<i>Idaea trigeminata</i>	Treble Brown Spot
<i>Inachis io</i>	Peacock
<i>Incurvaria masculella</i>	
<i>Ipimorpha subtusa</i>	Olive
<i>Isophrictis striatella</i>	
<i>Isotrias rectifasciana</i>	
<i>Lacanobia oleracea</i>	Bright-line Brown-eye
<i>Lacanobia suasa</i>	Dog's Tooth
<i>Lacanobia thalassina</i>	Pale-shouldered Brocade
<i>Lacanobia w-latinum</i>	Light Brocade
<i>Laothoe populi</i>	Poplar Hawk-moth
<i>Larentia clavaria</i>	Mallow
<i>Lasiocampa quercus</i>	Oak Eggar
<i>Lasiocampa trifolii</i>	Grass Eggar
<i>Lasiommata megera</i>	Wall
<i>Lathronympha strigana</i>	
<i>Leucoma salicis</i>	White Satin
<i>Leucoptera laburnella f. wailesella</i>	
<i>Leucospilapteryx omissella</i>	
<i>Ligdia adustata</i>	Scorched Carpet
<i>Limnaecia phragmitella</i>	
<i>Lithophane hepatica</i>	Pale Pinion
<i>Lithophane leautieri</i>	Blair's Shoulder-knot
<i>Lithophane leautieri hesperica</i>	Blair's Shoulder-knot
<i>Lithophane ornitopus lactipennis</i>	Grey Shoulder-knot
<i>Lithosia quadra</i>	Four-spotted Footman
<i>Lobesia abscisana</i>	
<i>Lobesia littoralis</i>	
<i>Lobophora halterata</i>	Seraphim
<i>Lomaspilis marginata</i>	Clouded Border
<i>Lomographa temerata</i>	Clouded Silver
<i>Loxostege sticticalis</i>	
<i>Lozotaeniodes formosanus</i>	
<i>Luffia ferchaultella</i>	
<i>Luperina testacea</i>	Flounced Rustic
<i>Luquetia lobella</i>	
<i>Lycaena phlaeas</i>	Small Copper
<i>Lygephila pastinum</i>	Blackneck
<i>Lymantria monacha</i>	Black Arches
<i>Lyonetia clerkella</i>	Apple Leaf Miner
<i>Macaria alternata</i>	Sharp-angled Peacock
<i>Macaria liturata</i>	Tawny-barred Angle
<i>Macaria notata</i>	Peacock Moth
<i>Macdunnoughia confusa</i>	Dewick's Plusia

Moths	Common Name
<i>Macroglossum stellatarum</i>	Humming-bird Hawk-moth
<i>Malacosoma neustria</i>	Lackey
<i>Mamestra brassicae</i>	Cabbage Moth
<i>Maniola jurtina</i>	Meadow Brown
<i>Marasmarcha lunaedactyla</i>	
<i>Mecyna flavalis subsp. flaviculalis</i>	
<i>Meganola albula</i>	Kent Black Arches
<i>Melanchra persicariae</i>	Dot Moth
<i>Menophra abruptaria</i>	Waved Umber
<i>Mesapamea didyma</i>	Lesser Common Rustic
<i>Mesapamea secalis</i>	Common Rustic
<i>Mesapamea secalis agg.</i>	Common Rustic agg.
<i>Mesoligia furuncula</i>	Cloaked Minor
<i>Mesoligia literosa</i>	Rosy Minor
<i>Metriotes lutarea</i>	
<i>Metzneria lappella</i>	
<i>Metzneria metzneriella</i>	
<i>Micropterix tunbergella</i>	
<i>Miltochrista miniata</i>	Rosy Footman
<i>Mimas tiliae</i>	Lime Hawk-moth
<i>Mirificarma mulinella</i>	
<i>Mompha epilobiella</i>	
<i>Mompha ochraceella</i>	
<i>Mompha propinquella</i>	
<i>Mompha raschkiella</i>	
<i>Mompha subbistrigella</i>	
<i>Monochroa cytisella</i>	
<i>Monochroa hornigi</i>	
<i>Monochroa lucidella</i>	
<i>Monochroa moyses</i>	
<i>Monochroa niphognatha</i>	
<i>Monochroa palustrella</i>	
<i>Monopis crocicapitella</i>	
<i>Monopis imella</i>	
<i>Monopis laevigella</i>	Skin Moth
<i>Monopis obviella</i>	
<i>Monopis weaverella</i>	
<i>Mormo maura</i>	Old Lady
<i>Myelois circumvoluta</i>	Thistle Ermine
<i>Mythimna albipuncta</i>	White-point
<i>Mythimna comma</i>	Shoulder-striped Wainscot
<i>Mythimna conigera</i>	Brown-line Bright Eye
<i>Mythimna favicolor</i>	Mathew's Wainscot
<i>Mythimna ferrago</i>	Clay
<i>Mythimna impura</i>	Smoky Wainscot
<i>Mythimna l-album</i>	L-album Wainscot
<i>Mythimna loreyi</i>	Cosmopolitan
<i>Mythimna obsoleta</i>	Obscure Wainscot
<i>Mythimna pallens</i>	Common Wainscot

<i>Moths</i>	Common Name
<i>Mythimna straminea</i>	Southern Wainscot
<i>Mythimna unipuncta</i>	White-speck
<i>Mythimna vitellina</i>	Delicate
<i>Naenia typica</i>	Gothic
<i>Nemapogon cloacella</i>	Cork Moth
<i>Nemophora degeerella</i>	
<i>Neosphaleroptera nubilana</i>	
<i>Nephoterix angustella</i>	
<i>Noctua comes</i>	Lesser Yellow Underwing
<i>Noctua fimbriata</i>	Broad-bordered Yellow Underwing
<i>Noctua interjecta</i>	Least Yellow Underwing
<i>Noctua interjecta caliginosa</i>	Least Yellow Underwing
<i>Noctua janthe</i>	Lesser Broad-bordered Yellow Underwing
<i>Noctua janthina</i>	Langmaid's Yellow Underwing
<i>Noctua pronuba</i>	Large Yellow Underwing
<i>Nola confusalis</i>	Least Black Arches
<i>Nola cucullatella</i>	Short-cloaked Moth
<i>Nomophila noctuella</i>	Rush Veneer
<i>Nonagria typhae</i>	Bulrush Wainscot
<i>Notodonta dromedarius</i>	Iron Prominent
<i>Notodonta ziczac</i>	Pebble Prominent
<i>Nycteola revayana</i>	Oak Nycteoline
<i>Nymphula nymphaeata</i>	Brown China-mark
<i>Ochlodes faunus</i>	Large Skipper
<i>Ochropacha duplaris</i>	Common Lutestring
<i>Ochropleura plecta</i>	Flame Shoulder
<i>Ocnerostoma friesei</i>	
<i>Odontopera bidentata</i>	Scalloped Hazel
<i>Oegoconia quadripuncta</i>	
<i>Oligia fasciuncula</i>	Middle-barred Minor
<i>Oligia latruncula</i>	Tawny Marbled Minor
<i>Oligia sp.</i>	
<i>Oligia strigilis</i>	Marbled Minor
<i>Oligia strigilis agg.</i>	Marbled Minor agg.
<i>Oligia versicolor</i>	Rufous Minor
<i>Omphaloscelis lunosa</i>	Lunar Underwing
<i>Oncocera semirubella</i>	
<i>Operophtera brumata</i>	Winter Moth
<i>Opisthograptis luteolata</i>	Brimstone Moth
<i>Opostega salaciella</i>	
<i>Orgyia antiqua</i>	Vapourer
<i>Orthonama obstipata</i>	Gem
<i>Orthopygia glaucinalis</i>	
<i>Orthosia cerasi</i>	Common Quaker
<i>Orthosia cruda</i>	Small Quaker
<i>Orthosia gothica</i>	Hebrew Character
<i>Orthosia gracilis</i>	Powdered Quaker
<i>Orthosia incerta</i>	Clouded Drab
<i>Orthosia munda</i>	Twin-spotted Quaker

Moths	Common Name
<i>Orthosia populeti</i>	Lead-coloured Drab
<i>Orthotaenia undulana</i>	
<i>Orthotelia sparganella</i>	
<i>Ostrinia nubilalis</i>	European Corn Borer
<i>Ourapteryx sambucaria</i>	Swallow-tailed Moth
<i>Oxyptilus distans</i>	
<i>Palpita vitrealis</i>	
<i>Pammene aurita</i>	
<i>Pammene fasciana</i>	
<i>Pammene gallicana</i>	
<i>Pammene germana</i>	
<i>Pammene regiana</i>	
<i>Pandemis cerasana</i>	Barred Fruit-tree Tortrix
<i>Pandemis corylana</i>	Chequered Fruit-tree Tortrix
<i>Pandemis heparana</i>	Dark Fruit-tree Tortrix
<i>Panolis flammea</i>	Pine Beauty
<i>Papilio machaon</i>	Swallowtail
<i>Paradrina clavipalpis</i>	Pale Mottled Willow
<i>Pararge aegeria</i>	Speckled Wood
<i>Parastichtis suspecta</i>	Suspected
<i>Parastichtis ypsilon</i>	Dingy Shears
<i>Paraswammerdamia albicapitella</i>	
<i>Paraswammerdamia nebulosa</i>	
<i>Parectopa ononidis</i>	
<i>Parornix anglicella</i>	
<i>Parornix scoticella</i>	
<i>Pasiphila rectangulata</i>	Green Pug
<i>Pediasia aridella</i>	
<i>Pediasia contaminella</i>	
<i>Pelochrista caecimaculana</i>	
<i>Pelurga comitata</i>	Dark Spinach
<i>Pempelia genistella</i>	
<i>Pempeliella dilutella</i>	
<i>Peribatodes rhomboidaria</i>	Willow Beauty
<i>Peridroma saucia</i>	Pearly Underwing
<i>Perinephela lancealis</i>	
<i>Perizoma alchemillata</i>	Small Rivulet
<i>Perizoma bifaciata</i>	Barred Rivulet
<i>Perizoma flavofasciata</i>	Sandy Carpet
<i>Petrophora chlorosata</i>	Brown Silver-line
<i>Pexicopia malvella</i>	Hollyhock Seed Moth
<i>Phalera bucephala</i>	Buff-tip
<i>Phalonidia affinitana</i>	
<i>Phalonidia manniana</i>	
<i>Pheosia gnoma</i>	Lesser Swallow Prominent
<i>Pheosia tremula</i>	Swallow Prominent
<i>Phigalia pilosaria</i>	Pale Brindled Beauty
<i>Phlogophora meticulosa</i>	Angle Shades
<i>Phlyctaenia coronata</i>	

Moths	Common Name
<i>Phlyctaenia perlucidalis</i>	
<i>Photodes minima</i>	Small Dotted Buff
<i>Phragmatobia fuliginosa</i>	Ruby Tiger
<i>Phtheochroa inopiana</i>	
<i>Phycita roborella</i>	
<i>Phycitodes binaevella</i>	
<i>Phycitodes maritima</i>	
<i>Phycitodes saxicola</i>	
<i>Phyllocnistis ramulicola</i>	
<i>Phyllocnistis unipunctella</i>	
<i>Phyllocnistis xenia</i>	
<i>Phyllonorycter acerifoliella</i>	
<i>Phyllonorycter blaucardella</i>	
<i>Phyllonorycter corylifoliella</i>	
<i>Phyllonorycter emberizaepenella</i>	
<i>Phyllonorycter froelichiella</i>	
<i>Phyllonorycter geniculella</i>	
<i>Phyllonorycter kleemannella</i>	
<i>Phyllonorycter lantanella</i>	
<i>Phyllonorycter leucographella</i>	Firethorn Leaf Miner
<i>Phyllonorycter maestingella</i>	
<i>Phyllonorycter messaniella</i>	
<i>Phyllonorycter oxyacanthae</i>	
<i>Phyllonorycter platani</i>	
<i>Phyllonorycter platanoidella</i>	
<i>Phyllonorycter quercifoliella</i>	
<i>Phyllonorycter rajella</i>	
<i>Phyllonorycter salictella</i>	
<i>Phyllonorycter schreberella</i>	
<i>Phyllonorycter stettinensis</i>	
<i>Phyllonorycter strigulatella</i>	
<i>Phyllonorycter trifasciella</i>	
<i>Phyllonorycter tristrigella</i>	
<i>Phyllonorycter ulmifoliella</i>	
<i>Phytometra viridaria</i>	Small Purple-barred
<i>Pieris brassicae</i>	Large White
<i>Pieris napi</i>	Green-veined White
<i>Pieris rapae</i>	Small White
<i>Piniphila bifasciana</i>	
<i>Plagodis dolabraria</i>	Scorched Wing
<i>Platyedra subcinerea</i>	
<i>Platyperigea kadenii</i>	Clancy's Rustic
<i>Platyptilia gonodactyla</i>	
<i>Platyptilia ochrodactyla</i>	
<i>Platyptilia pallidactyla</i>	
<i>Platytes alpinella</i>	
<i>Platytes cerussella</i>	
<i>Plemyria rubiginata</i>	Blue-bordered Carpet
<i>Pleuroptya ruralis</i>	Mother of Pearl

Moths	Common Name
<i>Plodia interpunctella</i>	Indian Meal Moth
<i>Plusia festucae</i>	Gold Spot
<i>Plutella porrectella</i>	
<i>Plutella xylostella</i>	Diamond-back Moth
<i>Polychrysia moneta</i>	Golden Plusia
<i>Polygonia c-album</i>	Comma
<i>Polymixis lichenea</i>	Feathered Ranunculus
<i>Polyommatus icarus</i>	Common Blue
<i>Prays fraxinella</i>	Ash Bud Moth
<i>Prochoreutis myllerana</i>	
<i>Protodeltote pygarga</i>	Marbled White Spot
<i>Psammotis pulveralis</i>	
<i>Pseudargyrotoza conwagana</i>	
<i>Pseudoips prasinana</i>	Green Silver-lines
<i>Pseudoswammerdamia combinella</i>	
<i>Pseudotelphusa paripunctella</i>	
<i>Psyche casta</i>	
<i>Pterophorus pentadactyla</i>	White Plume Moth
<i>Pterostoma palpina</i>	Pale Prominent
<i>Ptocheuusa paupella</i>	
<i>Ptycholoma lecheana</i>	
<i>Pyralis farinalis</i>	Meal Moth
<i>Pyrausta aurata</i>	
<i>Pyrausta despicata</i>	
<i>Pyronia tithonus</i>	Gatekeeper
<i>Pyrrhia umbra</i>	Bordered Sallow
<i>Recurvaria nanella</i>	
<i>Rhizedra lutosa</i>	Large Wainscot
<i>Rhodometra sacraria</i>	Vestal
<i>Rhopobota naevana</i>	Holly Tortrix
<i>Rhyacionia buoliana</i>	Pine Shoot Moth
<i>Rhyacionia pinivorana</i>	Spotted Shoot Moth
<i>Rivula sericealis</i>	Straw Dot
<i>Schoenobius gigantella</i>	
<i>Schrankia costaestrigalis</i>	Pinion-streaked Snout
<i>Schreckensteinia festaliella</i>	
<i>Sciota adelphella</i>	
<i>Scoliopteryx libatrix</i>	Herald
<i>Scoparia ambigualis</i>	
<i>Scoparia basistrigalis</i>	
<i>Scoparia pyralella</i>	
<i>Scoparia subfusca</i>	
<i>Scopula emutaria</i>	Rosy Wave
<i>Scopula floslactata</i>	Cream Wave
<i>Scopula imitaria</i>	Small Blood-vein
<i>Scopula immutata</i>	Lesser Cream Wave
<i>Scopula marginepunctata</i>	Mullein Wave
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar
<i>Scrobipalpa acuminatella</i>	

Moths	Common Name
<i>Scrobipalpa atriplicella</i>	
<i>Scrobipalpa costella</i>	
<i>Scrobipalpa nitentella</i>	
<i>Scrobipalpa ocellatella</i>	Beet Moth
<i>Scrobipalpa salinella</i>	
<i>Scythropia crataegella</i>	Hawthorn Moth
<i>Selenia dentaria</i>	Early Thorn
<i>Selenia tetralunaria</i>	Purple Thorn
<i>Semiaspilates ochrearia</i>	Yellow Belle
<i>Sesia bembeciformis</i>	Lunar Hornet Moth
<i>Shargacucullia verbasci</i>	Mullein
<i>Sideridis albicolon</i>	White Colon
<i>Simyra albovenosa</i>	Reed Dagger
<i>Sitochroa palealis</i>	
<i>Smerinthus ocellata</i>	Eyed Hawk-moth
<i>Sophronia semicostella</i>	
<i>Sparganothis pilleriana</i>	
<i>Spatalistis bifasciana</i>	
<i>Sphinx ligustri</i>	Privet Hawk-moth
<i>Spilonota laricana</i>	
<i>Spilonota ocellana</i>	Bud Moth
<i>Spilosoma lubricipeda</i>	White Ermine
<i>Spilosoma luteum</i>	Buff Ermine
<i>Spodoptera exigua</i>	Small Mottled Willow
<i>Spuleria flavicaput</i>	
<i>Stenoptilia bipunctidactyla</i>	
<i>Stenoptilia pterodactyla</i>	
<i>Stigmella alnetella</i>	
<i>Stigmella anomalella</i>	Rose Leaf Miner
<i>Stigmella atricapitella</i>	
<i>Stigmella aurella</i>	
<i>Stigmella basiguttella</i>	
<i>Stigmella centifoliella</i>	
<i>Stigmella hybnerella</i>	
<i>Stigmella lemniscella</i>	
<i>Stigmella microtheriella</i>	
<i>Stigmella obliquella</i>	
<i>Stigmella oxyacanthella</i>	
<i>Stigmella perpygmaeella</i>	
<i>Stigmella plagicolella</i>	
<i>Stigmella roborella</i>	
<i>Stigmella ruficapitella</i>	
<i>Stigmella salicis</i>	
<i>Stigmella suberivora</i>	
<i>Stigmella tityrella</i>	
<i>Stigmella trimaculella</i>	
<i>Stigmella ulmivora</i>	
<i>Stigmella viscerella</i>	
<i>Swammerdamia caesiella</i>	

Moths	Common Name
<i>Swammerdamia pyrella</i>	
<i>Synaphe punctalis</i>	
<i>Syndemis musculana</i>	
<i>Tachystola acroxantha</i>	
<i>Taleporia tubulosa</i>	
<i>Teleiodes vulgella</i>	
<i>Tethea ocularis</i>	Figure of Eighty
<i>Tethea ocularis octogesimea</i>	Figure of Eighty
<i>Thalophila matura</i>	Straw Underwing
<i>Thera britannica</i>	Spruce Carpet
<i>Thera cupressata</i>	Cypress Carpet
<i>Thera obeliscata</i>	Grey Pine Carpet
<i>Thiodia citrana</i>	
<i>Tholera cespitis</i>	Hedge Rustic
<i>Tholera decimalis</i>	Feathered Gothic
<i>Thumatha senex</i>	Round-winged Muslin
<i>Thyatira batis</i>	Peach Blossom
<i>Thymelicus lineola</i>	Essex Skipper
<i>Thymelicus sylvestris</i>	Small Skipper
<i>Timandra comae</i>	Blood-vein
<i>Tinagma ocnerostomella</i>	
<i>Tinea pellionella</i>	Case-bearing Clothes Moth
<i>Tinea semifulvella</i>	
<i>Tinea trinotella</i>	
<i>Tineola bisselliella</i>	Common Clothes Moth
<i>Tischeria ekebladella</i>	
<i>Tortrix viridana</i>	Green Oak Tortrix
<i>Trachycera advenella</i>	
<i>Trachycera marmorea</i>	
<i>Trachycera suavella</i>	
<i>Triaxomera parasitella</i>	
<i>Trichoplusia ni</i>	Ni Moth
<i>Tyria jacobaeae</i>	Cinnabar
<i>Udea ferrugalis</i>	Rusty-dot Pearl
<i>Udea lutealis</i>	
<i>Udea olivalis</i>	
<i>Udea prunalis</i>	
<i>Vanessa atalanta</i>	Red Admiral
<i>Vanessa cardui</i>	Painted Lady
<i>Watsonalla binaria</i>	Oak Hook-tip
<i>Xanthia aurago</i>	Barred Sallow
<i>Xanthia gilvago</i>	Dusky-lemon Sallow
<i>Xanthia ictoria</i>	Sallow
<i>Xanthia ocellaris</i>	Pale-lemon Sallow
<i>Xanthia togata</i>	Pink-barred Sallow
<i>Xanthorhoe birivata</i>	Balsam Carpet
<i>Xanthorhoe designata</i>	Flame Carpet
<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet
<i>Xanthorhoe fluctuata</i>	Garden Carpet

<i>Moths</i>	Common Name
<i>Xanthorhoe fluctuata fluctuata</i>	Garden Carpet
<i>Xanthorhoe montanata</i>	Silver-ground Carpet
<i>Xanthorhoe spadicearia</i>	Red Twin-spot Carpet
<i>Xestia c-nigrum</i>	Setaceous Hebrew Character
<i>Xestia sexstrigata</i>	Six-striped Rustic
<i>Xestia triangulum</i>	Double Square-spot
<i>Xestia xanthographa</i>	Square-spot Rustic
<i>Xylocampa areola</i>	Early Grey
<i>Yponomeuta cagnagella</i>	Spindle Ermine
<i>Yponomeuta evonymella</i>	Bird-cherry Ermine
<i>Yponomeuta malinellus</i>	Apple Ermine
<i>Yponomeuta padella</i>	Orchard Ermine
<i>Yponomeuta rorella</i>	Willow Ermine
<i>Ypsolopha alpella</i>	
<i>Ypsolopha dentella</i>	Honeysuckle Moth
<i>Ypsolopha scabrella</i>	
<i>Ypsolopha vittella</i>	
<i>Zeiraphera griseana</i>	Larch Tortrix
<i>Zeiraphera isertana</i>	
<i>Zeuzera pyrina</i>	Leopard Moth
<i>Zygaena filipendulae</i>	Six-spot Burnet

The Mamals of Milton Common.

Mamal	Common Name
Erinaceus europaens	Hedgehog
Sorex araneus	Common Shrew
Microtus agrestis	Field Vole
Vulpus vulpus	Fox
Oryctolagus cuniculus	Rabbit
Sciurus carolinensis	Grey Squirrel
Rattus norvegicus	Brown Rat
Myotis daubentonii	Daubenton's Bat
Nyctalus noctula	Noctule Bat
Pipistrellus pipistrellus	Pipistrelle
Clethrionomys glareolus	Bank vole
Apodemus sylvaticus	Wood mouse

Appendix 1. Higher Level Stewardship financial breakdown

[illegible]

Milton Common Management Plan (Draft)

2019-2024



Milton Common Management Plan 2018-2023.

1 INTRODUCTION

1.1 PLAN SUMMARY

The site is a very large area of grassland, scrub and ponds located on the edge of Langstone Harbour, on the edge of Portsmouth. The site is predominantly reclaimed intertidal land from 1962-1970. The grassland present ranges from amenity to rough sward. The rough grassland has developed a good diversity of species, with a strong coastal element. There is extensive dense and scattered scrub throughout the site, especially to the east. There are three ponds present, which provide some stands of swamp. The coastal edge of the site supports salt-marsh vegetation. Overall the species diversity is excellent, with nearly 200 species noted within the common. These include 3 acid/neutral grassland indicators and the Nationally Rare *Bupleurum tenuissimum* and *Lathyrus aphaca*, the Nationally Scarce *Medicago polymorpha*, and the County Scarce *Smyrniolum olusatrum* and *Linum bienne*. The conservation management value of the site is especially important due to the proximity to the internationally important Langstone/Chichester Harbours which are designated as SSSI, SPA, SAC and Ramsar sites.

2 LEGISLATION AND POLICY

2.1 SITE DESIGNATION

Milton Common is designated as

- A Site of Interest for Nature Conservation (SINCs).
- Public Open Space

2.2 BYLAWS AND REGULATIONS

Milton Common is covered by Portsmouth City Councils Bye-laws and regulations.

- Wildlife and Countryside Act, 1981

Requires that no adverse management should be carried out which has a detrimental effect on wildlife provision.

- Occupiers Liability Act, 1981

As owners of Farlington Triangle the Council has a duty to ensure that every reasonable care is taken with regard to the safety of persons who visit or come into the Triangle.

- Health and Safety at Work Act, 1974

The council has a duty of care to ensure that, as far as practical, all employees, volunteers, contractors and visitors to the site are able to visit, work and enjoy the site in a safe and healthy environment.

- Disability Discrimination Act, 1998

Portsmouth City Council are required, where practical, to ensure that members of the public are not discriminated against when visiting or using the Triangle for recreation.

3 GENERAL DESCRIPTION

This chapter sets out the context within which Milton Common is managed.

The first section provides the **Management Background**, presenting information about location, tenure, past land use, and management structure.

The second section describes the key **Physical, Biological and Cultural Features** of the site providing information about topology, hydrology and the plants and animals found on the site.

3.1 GENERAL INFORMATION.

3.1.1 Location

(See Figure 1)

Milton Common is situated on the Eastern edge of Portsea Island. The area is approximately triangular in shape. The North West bounday is Eastern Rd (A2030), Moorings Way to the south and Langstone Harbour to the East (Langstone/Chichester Harbours are designated as SSSI, SPA, SAC and Ramsar sites). Public access is available by paths and grass verges along the entire North Western and Southern boundary.

3.1.1.1	Area:	46.5 Ha	
	OS Grid REF:	SU 673008	
	SBI:	107053158	
	Main CPH	15/130/8002	
	RLR Information:	Sheet ID: SU6700	Parcel ID: 3881
	HLS agreement:	AG00382454	

3.1.2 Compartments

(See Figure 2)

Compartment 1- Amenity Grassland (5.6Ha)

Compartment 2 - Grassland (26 Ha)

Compartment 3 – Wetlands (2.8 Ha)

Compartment 4 – Scrub (7.9 Ha)

3.1.3 Tenure

Please refer to the original tenure documents before taking any decision or action that may have legal implications. The site is owned by Portsmouth City Council and is managed by the Parks and Recreation and Culture department.

The site is Public Open Space and was also designated as a Site of Importance to Nature Conservation (SINC) in 2003. A Higher Level Stewardship (HLS) from Natural England has been awarded for the period 01/03/2012 to 28/2/2022 to cover prescribed management of the site. The site is presently under consideration as a Local Nature Reserve.

3.1.4 Relationship with any other plans and strategies.

This site cannot be seen in isolation but part of a unitary wide programme to develop and enhance the biodiversity and public recreational aspects of the city. The various Portsmouth City Council's environmental policies and strategies which are listed below:

Table 1 - Portsmouth City Council's environmental policies and strategies.

(Prefix)	WWW.portsmouth.gov.uk/yourcouncil/
Local Area Agreements	7345.html
Corporate Risk Management Process	7908.html
Community Strategy	4218.html
Cultural Services Business Plan	16263.html
Corporate Health and Safety Policy	10196.html
Corporate Plan 2008-2011	13295.html
Local Area Agreement – Vision into reality	7345.html
(Prefix)	WWW.Portsouth.gov.uk/visiting/
Parks Green Sustainability Policy	3737.html

3.1.5 Management Structure

The day to day practical wildlife management of the site is carried out by the Countryside section of Portsmouth City Council, volunteers and various community groups. Other work is carried out by PCC parks department, contractors and certain legal and administrative functions by other departments of Portsmouth City Council. The Countryside Service lies within the Culture Department of Portsmouth City Council.

3.1.6 Map Coverage:

OS Map 196 (1:50,000 Series)

OS Map 119 (1:25,000 Explorer Series)

3.1.7 Photographic Coverage

Aerial photographs are held by PCC in electronic format and are available via Map Info pro-viewer. General photographs are available in electronic format held on the PCC site files. Various photographs of pre and post reclamation are available at the Portsmouth City Records Office

3.2 ENVIRONMENTAL INFORMATION**3.2.1 Physical****3.2.1.1 Climate**

Being at sea level on the south coast of England the climate is generally mild. Rainfall is relatively low the area being to some extent in the rain shadow of high ground on the Isle of Wight to the south-west.

3.2.1.2 Geology

The geographical maps show that the bulk of the site is underlain by London Clay. The site itself is shown on the map as having a cover of made ground. Below which is estuarine sands, gravels and muds as occur in Langstone Harbour, to the East.

3.2.1.3 Soils / Substrates

The site was subjected to phases of land reclamation by infilling in the 18th and Early 20th Century. However, the majority of the landfilling took place between 1962 and 1970 when a bund was constructed across the mouth of Milton Lake and the confined area was progressively drained and in filled with domestic refuse. A borehole drilled in 1992 by the University of Portsmouth identified up to 5m of fill with a cap of 300- 400mm of clay and topsoil. The University

suggested that most of the organic matter would by now have degraded leaving an ashy soil like material with fragments of the more inert materials such as glass, polythene, metal, bricks etc. Degradation of the fill has led to settlement of the ground and the surface is very uneven.

3.2.1.4 Hydrology / Drainage

Surface hydrology on the majority of Portsea Island is largely negligible. Any groundwater on the island is locally held up in the esturine sands and gravels overlying the London Clay. Portsmouth University have recorded water strikes within the artificial landfill deposits at depths of between 2-3 m, approximately mean sea level. The 3 lakes situated on the eastern boundary remain largely fresh water with little intrusion of sea water except that derived from occasional sea spray.

3.2.2 Biological

3.2.2.1 Flora Habitats / Communities (See Figure)

BAP Priority Habitats

- Coastal Saltmarsh
- Reedbeds

3.2.2.1.1 Area 1 – MG1v *Arrhenatherum elatius* grassland, variant (IHS GNZ.GM4)

The sward is rough with a good diversity of species, including a suite of coastal species. The most frequent species are false oat-grass, cock's-foot, red fescue, bents, wild carrot, bristly oxtongue, creeping cinquefoil and common couch. There is much tall fescue, hogweed, prickly lettuce, timothy, tansy, ribwort plantain, ragwort, mugwort, yarrow, aster, horseradish, thistles, fennel, yorkshire fog, rye grass and common mallow. Bramble scrub is locally frequent, with some elder and domestic apple shrubs. Other species present include false fox sedge, parsnip, amphibious bistort, hard rush, crow garlic, black knapweed, sea couch, perennial wall-rocket, sneezewort, grass vetchling, stone parsley, toothed medick, yellow vetching, alexanders and pale flax.

3.2.2.1.2 Area 2 – MG12a *Festuca arundinacea* grassland, *Lolium perenne-Holcus lanatus* sub-community (IHS GNZ.GM4)

The grassland is rough and dominated by tall fescue and other grasses. There is frequent couch, false oat-grass, cock's-foot, red fescue, bents and wild carrot. There is also some aster, bristly oxtongue, tufted vetch, hard rush, rye grass, clovers, mouse-ear, spotted medick, ribwort plantain, fennel, tansy and grass vetchling.

3.2.2.1.3 Area 3 – OV21c *Poa annua-Plantago major* community, *Polygonum aviculare-Ranunculus repens* sub-community (IHS GI0.GM1Z)

The grassland is very short from heavy wildfowl grazing and public use. The main species are creeping bent, toad rush, buck's-horn plantain, rye grass, annual meadow-grass, greater plantain, knotgrass, spotted medick, creeping cinquefoil and ribwort plantain.

3.2.2.1.4 Area 4 – OV23a *Lolium perenne-Dactylis glomerata* community, typical sub-community (IHS GI0.GM23)

The sward is mown continually short and used as amenity lawn. The grassland is composed of rye grass, clovers, daisy, dandelion, spotted medick, yarrow, cock's-foot and annual meadow-grass. There is also much wall barley, tall fescue, buck's-horn plantain, red fescue, creeping cinquefoil, hedgerow crane's-bill, smooth hawkbeard and wild carrot. The coastal sward have some sea beet, sea couch, perennial wall-rocket, common mallow and common orache.

3.2.2.1.5 Area 5 – OV24b *Urtica dioica-Galium aparine* community, *Arrhenatherum elatius-Rubus fruticosus* sub-community (IHS OT3)

This vegetation is found in the more recently disturbed areas, especially along the banks bordering the south-west of the site. The main species present are stinging-nettle, common mallow, hedge mustard, common orache, false oat-grass, cock's-foot, yarrow, wall barley and cooch. There is also some chickweed, annual meadow-grass, amphibious bistort, hedge bindweed, bramble, fennel, teasel, creeping bents, ragwort and prickly lettuce.

3.2.2.1.6 Area 6 – SM24 *Elymus pycanthus* salt-marsh community (IHS LS3)

Along the eastern edge of the site there is a thin strip of this salt-marsh community. It consists of a rough sward with some scrub. The main species are sea couch, false oat-grass, sea beet, aster, common mallow, common orache and wall barley. Rye grass and red fescue are locally abundant. Other species noted include perennial wall-rocket, buck's-horn plantain, fennel, grass-leaved orache, spear-leaved orache and slender hare's-ear.

3.2.2.1.7 Area 7 – S4b *Phragmites australis* swamp and reed-beds, *Galium palustre* sub-community (IHS EM11)

The ponds support areas swamp dominated by common reed. There is also some lesser bulrush, great willowherb, sea club-rush and stinging-nettle.

3.2.2.1.8 Area 8 – S21a *Scirpus maritimus* swamp, *Scirpus maritimus* sub-community (IHS EM1Z)

There are several small areas of swamp within the ponds dominated by sea club-rush.

3.2.2.1.9 Area 9 – S26b *Phragmites australis-Urtica dioica* tall-herb fen, *Arrhenatherum elatius* sub-community (IHS EM1Z)

Adjacent to the ponds there are a few stands of this fen community. Common reed, great willowherb and stinging-nettle are prominent. There is also some hedge bindweed, creeping bents, yorkshire fog, cooch, creeping buttercup and bramble present.

3.2.2.1.10 Area 10 – W22c *Prunus spinosa-Rubus fruticosus* scrub, *Dactylis glomerata* sub-community (IHS WB2)

Small thickets of denser blackthorn and english elm scrub are present throughout the site. There is also some elder, hawthorn, domestic apple, ash and roses. There is some rough grassland within the scrub.

3.2.2.1.11 Area 11 – W24b *Rubus fruticosus-Holcus lanatus* underscrub, *Arrhenatherum elatius-Heracleum sphondylium* sub-community (IHS WB2)

To the east there are some dense areas of bramble scrub. These contain locally abundant stinging-nettle and some elder, domestic apple, japanese knotweed, hedge bindweed and grasses.

3.2.2.1.12 Area 12 – W24b *Rubus fruticosus-Holcus lanatus* underscrub/MG1 *Arrhenatherum elatius* grassland (IHS WB2)

This area is a mix of scrub and rough grassland. Bramble is abundant and there is much elder and Japanese knotweed. The grass is composed of false oat-grass, cock's-foot, red fescue, bents, wild carrot, bristly oxtongue, field bindweed, horseradish, hedge bindweed and fennel.

3.2.2.1.13 Area 13 – Broad-leaved plantation (IHS WB3Z.WF22)

The plantations are formed of poplar or ash and have a species-poor, grassy or bramble dominated ground flora.

3.2.2.2 **Flora species** (See Appendix I)

BAP / Notable Species

Taxon Name	Common Name	Status
<i>Bupleurum tenuissimum</i>	Slender Hare's-Ear	UK BAP
<i>Lathyrus aphaca</i>	Yellow Vetchling	HBAP/NR
<i>Linum bienne</i>	Pale Flax	CS
<i>Medicago polymorpha</i>	Toothed medick	NS
<i>Smyrniolum olusatrum</i>	Alexanders	CS

3.2.2.3 Fauna Species (See Appendix II)

A number of records have been submitted to Hampshire Biological Information Centre (HBIC) based on Grid Square SU6700. Whilst a species may have been recorded at a site, this does not indicate that the species is resident. Many of the species, such as the birds, may be migrants and appear on the site for short periods. However, it gives an understanding of the importance of the site.

3.3 CULTURAL

3.3.1 Archaeology.

HER 41705 at SU 6700 0080 is recorded as the site of a searchlight battery in the last war. Whilst such things were relatively common at the time, few traces remain. The grid reference is a general reference taken from documentary evidence. In view of the land reclamation in that area it seems likely that traces will have been destroyed and also that the precise location would have been on the historic shoreline.

3.3.2 Past Land Use.

The area known as Milton Common was prior to complete reclamation an inlet of Langstone Harbour. 1962 saw major changes to the site with the construction of flood banks either side of the channel and a bund of chalk and clay across the lake mouth, with the likely inclusion of a sluice or penstock to allow water to drain out with the tide. The newly acquired land was then used as a municipal refuse site until its closure in 1970. Over the next few years the site was systematically capped and grassed over. As the organic matter decayed, settling occurred, resulting in a rather uneven ground level and the exposure of inorganic material.

3.3.3 Present Land Use.

The area is managed as a Public Open Space for nature conservation and quite recreation, with an aim to promote the appreciation of wildlife conservation both for the site and more widely. Provision has been included for public access with the inclusion of a network of paths and mown family and play areas. This is particularly significant in the context of Portsmouth City which is one of the most densely populated urban areas in Britain. Most visitors are known to be local and are attracted to the site for its natural aspect and proximity to the city. The city council has a statutory duty under Part IIa ("Part 2a") of the Environmental Protection Act 1990 to identify any 'contaminated land', that is to say any land that could cause harm to people or the environment. Milton Common is a gassing landfill site with minimal cover originally added. As a precaution it has already had some further remedial work in 1996 with regard to the ground gas that the decomposing waste creates and also to add cover soil over areas where waste was found to be on the surface.

3.4 PEOPLE

3.4.1 Stakeholders

Periodic meetings and regular correspondence are carried out to bring together all facets of the community, local people, special interest groups and City Council Members. This helps to ensure, as far as possible, developments within the site are carried out in accordance with the wishes of the local community and others interested in the site.

The site was recently awarded a Higher Level Stewardship Grant (HLS) from Natural England for the management of the site. Management needs to follow the prescriptions set out in Agreement Number AG00382454.

3.4.2 Access and Education

The site is open to permissive public access, facilitated by a network of across and around its perimeter. The Countryside Service also provides talks and other promotional material to interested groups such as schools and local groups. The various forms of the media are used to promote the site, volunteering opportunities and events held by the Countryside Service. A number of interpretation and notice boards are in place to give information about the sites wildlife and other issues; they also contain contact details of the Countryside Service for those wishing to find out more about the site and its management.

3.4.3 Management Issues

A full time Countryside Officer is responsible for practical conservation of the site, but is also responsible for other sites in and around the city. Resources of time and money are therefore stretched and a heavy reliance is placed on volunteer time. We have set up an informal 'Volunteer Ranger Service' who act as the 'Eyes and Ears' for the countryside service reporting any incidents. The positioning of the site in an urban environment makes it a target for vandalism, anti-social behaviour and crime. The most common problems are fires, rubbish and illegal motorbike access. These problems peak during the summer months, especially during the weekends and evenings. The site is regularly patrolled by PCC Community Wardens who's responsibility it is to deal with this anti-social behaviour and traveller incursion.

4 MANAGEMENT POLICIES

This Chapter sets out what is hoped to be achieved throughout the course of this plan. These are the management **Aims** of the Plan. The second section explains in more detail the **Management Objectives** and how these are to be achieved.

Management Aims

4.1 Improve the visitor experience at Milton Common

4.1.1 By Keeping the site free from litter.

Litter not only make a site unsightly and deters visitors, but can actually attract more litter and vandalism and is also a risk to health and safety of visitors and wildlife alike. Therefore, it is important to encourage responsible disposal of litter and carrying out frequent litter picking. There is also an educational role of the site Ranger to inform visitors of the hazards of litter and dog fouling. Contractor's carryout a weekly litter scavenge and also empty dog and litter bins

4.1.2 By maintaining amenity grassland provision as family areas.

Areas are provided for family recreation regular mown areas are cut on a 2 weekly rota between mid-march and October this is carried out by the PCC ground maintenance team.

4.1.3 By maintaining site furniture and infrastructure such that it is in good condition, fit for purpose and safe to use.

Site furniture and infrastructure includes seats, fences, paths and steps. These are inspected periodically and checked for any damage or wear. Small repairs are usually carried out immediately, with larger repairs such as replacement of large sections of fencing, programmed into the works plan. A programme of renewal for such items is included in the five year work plan. In addition to inspecting furniture, preventative maintenance, such as oiling of hinges and painting of benches is included in the annual work plan to ensure the maximum lifespan before renewal. This work is carried out by the PCC grounds maintenance team.

4.1.4 By ensuring that the site is a welcoming and safe place for all.

Signage and interpretation boards are provided at the main entrance points to welcome and advise visitors of what to expect on the site. These boards also inform visitors of the presence and contact details of the Countryside Officer and Community Wardens. Risk assessments for the site and operations are carried out and these are reviewed annually. Inspections are carried out; frequency is dependent upon any ongoing issues. These inspections identify any health and safety issues and remedial work are organized accordingly. Portsmouth City Council regulations stipulate that the Countryside Officer must undergo enhanced CRB checks and also be First Aid certificated.

4.1.5 By developing volunteers, interested groups and community involvement, in an awareness and analysis of biodiversity.

The development of volunteering opportunities whether through the Volunteer Warden scheme and practical conservation groups gives the local community a sense of ownership and is pivotal in the management of the site. Meetings and correspondence with users ensures that, as far as possible, developments within the Common are carried out in accordance with the wishes of the local community and others interested in the site. Coordinated management of the site through liaison with statutory organisations and other interested parties, will ensure that the site is not seen in isolation but as part of a large overall picture. As the site develops an integral part of the plan is to promote the site and its wildlife to a wider audience through utilizing internal & external publications, attending local events with displays, the provision of Countryside Officer led guided walks and talks and also by supplying information to schools and other education bodies to encourage the sites use as an educational resource.

4.2 To improve the quality of the coastal grassland habitat.

4.2.1 By monitoring species groups and habitat development.

The habitat management is aimed at maximizing species diversity. Therefore it is crucial to monitor species to ensure management regimes are having the desired effect; there are a variety of ways to do this, such as photography to assess changes over time and species counts. It is not possible to survey every plant and animal group each year and so a rolling programme of surveys is included in the five year development plan. Results of the surveys are passed onto Hampshire Biodiversity

Information Centre (HBIC) who maintains the regional data base. This ensures that the habitats and species of Milton Common are not seen in isolation but part of a regional strategy.

4.2.2 By Monitoring and control of invasive species.

There are a number of patches of Japanese Knotweed on the site which have been treated in the past. These will be monitored and sensitively controlled to eliminate from the site as required. The sites Pesticides Statement can be found in Appendix 2.

4.2.3 By Restoration of Grassland for target species.

Since the initial capping of the site only the amenity grassland areas and the path edges have undergone any significant grassland management. Only low level intervention has been carried out on the majority of the rest of the site. Management of the grassland is essential to maintain its structure, balance and diversity. Without management grassland becomes coarse and rank, loses both diversity and interest, and will eventually turn into scrub as it has over a large part of the Common.

The overriding factor in the grassland management of the Common is the topology of the site. Since the initial capping there has been a great deal of resettling of the surface and subsurface as the organic material has decomposed. This has left the surface very uneven and difficult to work especially with machinery. It has also resulted in the exposure of a certain amount of the old dumped material such as concrete blocks, metal reinforcing bars and much more.

An initial assessment of the site will therefore be carried out to identify areas of the Common which after initial clearance could be managed as:

- Meadow grassland areas.
- 'Tussocky' grassland areas.
- Scrub management.

4.2.3.1 Initial assessment:

Initial assessment will involve the use of historical data, species surveys and also walking the site to ascertain areas that could be managed and at what level. As mentioned previously the overriding factor in this decision is the topology of the site. Areas which are reasonably even, which after initial clearance, could be managed mechanically could be designated as meadow grassland. Areas that could be managed with small machinery and hand tools could be managed as tussocky grassland. Finally areas which would be difficult to manage could be managed as scrub. Each of the major compartments would then be subdivided into sub-compartments for appropriate ongoing management.

4.2.3.2 Grassland management:

In the absence of effective management, short and species-rich swards can become dominated by a combination of coarse grasses, tall herbs and scrub. These species are able to out-compete the less vigorous herbs and fine-leaved grasses for water, light and nutrients. We are however, coming at this from the other direction as the area has already become dominated by these coarse grasses. By introducing a management regime it is hoped that the remaining desirable species will be stimulated to flourish. This is not too far-fetched as areas of the common which have had occasional cuts have been shown to be very species rich. In 2014 one such area produced 100's of Bee Orchid spikes.

From the second year after the initial cut, a management regime will be introduced to maintain maximum diversity and flowering interest within the grassland. This will be achieved by cutting in sections at different times from July to the end of August. This spread of cutting times not only maximizes variation and diversity on site but also spreads the workload over the summer making larger areas manageable even with simple equipment we have. Grassland should not be cut in May or June, so as not to disturb nesting birds. Parts of the grassland will be left into September so that late flowering species can seed. The character and composition of the meadow will continue to change with time and we will get an understanding of the best techniques and timings for the site. Eventually a relatively stable community will develop, the balance of which will reflect management, soil fertility and the natural environment of the site.

4.2.3.3 Tussocky Grassland:

Established grassland that is not mown regularly will become rough and "tussocky" in character. This grassland type is not as diverse or attractive as meadowland, but once established requires minimal maintenance. This can form useful refuge habitat on margins and areas difficult to manage

mechanically. To control scrub and bramble development tussocky areas will require cutting every few years between October and February. For wildlife this cutting is best done on a rotational basis so leaving part as an undisturbed refuge.

4.2.3.4 Scrub Management:

Scrub especially bramble has spread over much of this compartment at the expense of the grassland habitat. Although areas of scrub are often seen as some of the least valuable land for biodiversity, they can contain a number of habitats that support a variety of species especially invertebrates and songbirds if managed correctly. In general scrub management objectives will be aimed to creating as diverse a habitat as possible so as to increase the range of wildlife that it can support. Some species prefer open scrub whilst others such as the nightingale require dense thickets, so the management option for scrub within this compartment will therefore be aimed at providing variety in the age, height and density. Rotating the management will provide this mosaic of young and mature scrub ensuring the structural diversity that will appeal to a wider variety of species. Low intensity management at regular intervals is generally better and easier than major work every few years. Scrub generally takes about 15 years to reach maturity so cutting back 1/15th of the mature scrub each year with the overall eventual target aim of 10-15% scrub coverage.

4.2.3.5 Refuges/Hibernacula:

Where possible exposed material such as concrete blocks will be brought together in piles and made into hibernacula for reptiles, amphibians and small mammals. These rock piles are locations that can be great refuges and over-wintering sites (hibernacula) for reptiles and amphibians - providing habitat, cover, locations to bask, and food. Construction would involve bringing together inorganic and organic matter in piles which would then be partly turfed. Turfing is required to weather proof part of the structure and to also make it aesthetically acceptable to site users, 'less like a fly-tip', and also less vulnerable to disturbance by vandals.

4.2.4 By Regular scrub management.

Bramble has spread over much of the site at the expense of the grassland habitat. To combat this some clumps have to be removed whilst others need to be cut back to prevent further spread. Some of the removed clumps, around the edges of the compartment, can be allowed to re-grow to provide diversity in bramble age structure and whilst the others mown regularly in their first two to three growing seasons to prevent return. The overall target is to have a maximum of 10-15% scrub coverage.

4.2.5 Maintenance of reed beds.

Reedbeds supports a wide range wildlife. It is classified as a Priority Habitat within the UK Biodiversity Action Plan. They provide breeding and roosting site for a number of birds and are home to a variety of aquatic invertebrate. In context to the lakes at Milton Common they also reduce the number of access points for members of the public. Much of the lakes edges have exposed remnants of the dumps waste which constitute a health and safety issue. Management aims to enhance expansion of the reeds in certain areas whilst maintaining areas of open water. Encroaching scrub is also managed so as not to shade out the reeds.

4.3 Divert recreational pressure away from the coastal path on Milton Common

4.3.1 Coastal defence work

A large scale coastal defence scheme is presently underway across the north and east of Portsea Island, from Milton Common to the Tipner. Most of Milton Common coast was included in phase 2 of the project and was completed in 2016. These works comprised the construction of 750m of rock revetment to manage the erosion risk to the historic landfill area of Milton Common and two set back earth embankments to manage flood risk. The coastal footpath was reinstated upon completion of the coastal defences with strategic planting too offer some screening of the adjacent mud flats. It should be noted however that whilst the coastal path and coastal frontage clearly form part of Milton Common, this management framework does not propose any changes to that part of the site.

More details of the coastal defence scheme can be found at:

<http://www.escp.org.uk/coastal-schemes/portsmouth/protecting-future-north-portsea-island>

4.3.2 Cycle path.

A new cycle path is in the planning stage which would go through the south - west corner of Milton Common linking the present Eastern Rd cycle path with Moorings Way. As an adopted highway its construction and management is outside the scope of this management plan. However, its construction will hopefully have the beneficial effect of directing some of the present cycle footprint away from the coastal path. (See ###).

4.3.3 New Footpath

During the construction phase of the coastal sea defences a haulage-route was constructed to the west of the lakes to allow vehicular access. (See ###). Once the sea defence work had been completed this haulage-route was restored to grassland. However, it has become apparent that this route has become a well used desire line. A proposal has been put forward to surface this route to provide a link to the internal footpath network of Milton Common. Its construction would also provide a path parallel to the present coastal path but inland and out of view of the adjacent mudflats and consequently reducing the impact on the wildfowl.

4.3.4 Current Footpath network.

The current footpath network is believed to have been constructed as part of the original reinstatement when the site closed as a dump. In some areas a form of geotextile matting was used then covered in hoggin, in other areas hoggin was just placed over the top of the existing substrata. Over the years wear, damage and subsidence due to have left most of the paths uneven with various objects now poking through. Plans are to implement a series of rolling repairs to the paths initially concentrating on a circular route taking in the central section of the Common thus giving users of the site an alternative to the coastal path.

ANNUAL MANAGEMENT INFORMATION

This section details what work needs to be done each year, who will do it and what are the approximate costs. The tasks are linked to the management aims and objectives.

Key to the Tables

The following abbreviations are used in the following tables:

CS	Countryside service
Vol	Volunteers in association with CS
GM	Grounds Maintenance Contract
HLS	Higher Level Stewardship Grant
C	Contractors

Where the Countryside Service is carrying out project works the time is estimated.

Projects carried out by the Countryside Service and or Volunteers are costed for materials only.

Other works carried out using other budgets are indicated as to its source.

Each Task is prioritized with 1 being the highest and 3 the lowest.

Annual Work Plan - To improve the visitor experience of Milton Common.

Management objective	Method	Compartment	Priority	Agent	Ranger Time Estimate (Hours)	Cost (£)	Months active											
							A	M	J	J	A	S	O	N	D	J	F	M
	Site Inspection																	
Keep the lines free of Litter	Litter pick car park and picnic areas. <ul style="list-style-type: none"> x3 weekly summer x2 weekly spring autumn x1 weekly winter 			GM														
	Litter pick zones in rotation			GM														
	Empty Litter & Dog bins <ul style="list-style-type: none"> x3 weekly summer x2 weekly spring autumn x1 weekly winter 			C														
Maintain existing short mown amenity grass.	Cut grass with ride on mower, 15 times per year			GM														
	Strim around benches, bins, fingerposts etc			GM														
Maintain site furniture and infrastructure such that it is in good condition, fit for purpose and safe to use.	Maintain benches as part of rolling programme.			GM														
	Check way-marker routes and replace discs and posts as necessary.			GM														
	Replace fencing as necessary.			GM														
	Repair, re-hang gates as necessary.			GM														
Ensure paths are kept open and the surface is in	Cut back woody vegetation along paths.			GM														
	Cut low vegetation with strimmer or flail mower			GM														

Management objective	Method	Compartment	Priority	Agent	Ranger Time Estimate (Hours)	Cost (£)	Months active											
							A	M	J	J	A	S	O	N	D	J	F	M
an appropriate condition	Even out pot holes and remove possible trip hazards			GM														
	Maintain a high visible Ranger Service			CS														
Ensure the Lines are a welcoming and safe place for all.	Ensure that life belts are present and well maintained.			GM														
	Ensure entrances, interpretation and signage is kept clear and secure.			GM														
	Deliver school visits.			CS														
Develop the site for interested groups and community involvement.	Coordinate management with community and other interested groups.			CS														
	Provision of work placements or projects.			CS														
	Provide bespoke Ranger led walks, talks and activities for groups.			CS														

Annual work plan - To improve the quality and biodiversity of the site

Management objective	Method	Compartment	Priority	Agent	Ranger Time estimate	Cost (£)	Months active											
							A	M	J	J	A	S	O	N	D	J	F	M
Monitor species groups and habitat development	Carry out biological surveys.	All	2	CS														
	Support interested groups and individuals in their biological monitoring.	All	2	CS														
	Before and after photography of practical management.	All	2	CS														
	Report biological surveys to HBIC regional data base.	All	2	CS														
	Collect physical and biological data to determine effect management is having. • Indicator species • Distribution vegetation communities																	
Monitor and control of invasive species	Monitor and remove Japanese Knotweed as required.			GM														
Manage the grassland areas	Initial assessment of grassland areas			CS														
	Manage selected areas of grassland by mechanical cutting and collecting.			CS														
	Select and mechanically top grassland areas in rotation to gain required height and density.			CS														
	Initial cutting of selected bramble and scrub mechanically and then every 2-3 years to prevent re-growth.			CS														
	Select and manage areas of scrub within the grassland areas in rotation to maintain a diversity of age range.			CS														
Manage Scrub	Select and Manage areas of scrub in			CS														

Management objective	Method	Compartment	Priority	Agent	Ranger Time estimate	Cost (£)	Months active											
							A	M	J	J	A	S	O	N	D	J	F	M
areas	rotation.																	
	Rotational cutting of scrub and bramble to maintain coverage with a diversity of age range			CS														
Maintaining and enhancing the biodiversity of the sites water bodies	Encourage the spread of the reed beds within the water bodies.			CS														
	Where appropriate reed beds cut on rotation.			CS														
	Reduce overhanging tree branches and bramble to encourage marginal growth.			CS														
	Monitor for the presence of invasive alien species such as Crassula helmsii and algae growths.			CS														
	Maintain and keep clear the ephemeral water bodies.			CS														
	Collect physical and biological data to determine effect management is having:			CS														
	<ul style="list-style-type: none"> Water levels Salinity Other indicator species 																	

5 MANAGEMENT INFORMATION

This section details the maintenance and development work that only occurs in one year or is periodic. The tasks are linked to the Management Aims

Key to the Tables

The following abbreviations are used in the following tables:

CS	Countryside service
Vol	Volunteers
GM	Grounds Maintenance Contract
HLS	Higher level Stewardship Grant
C	Contractors

Where the Countryside Service is carrying out project works the time is estimated.
Projects carried out by the Countryside Service and or Volunteers are costed for materials only.
Other works carried out using other budgets are indicated as to its source.

Each Task is prioritized with 1 being the highest and 3 the lowest.

Budgetary constraints and priorities change from year to year, therefore this 5 year project plan is constantly updated to express these requirements and site priority. The majority of the projects are grouped in the early years to 1,20w for future maintenance needs.

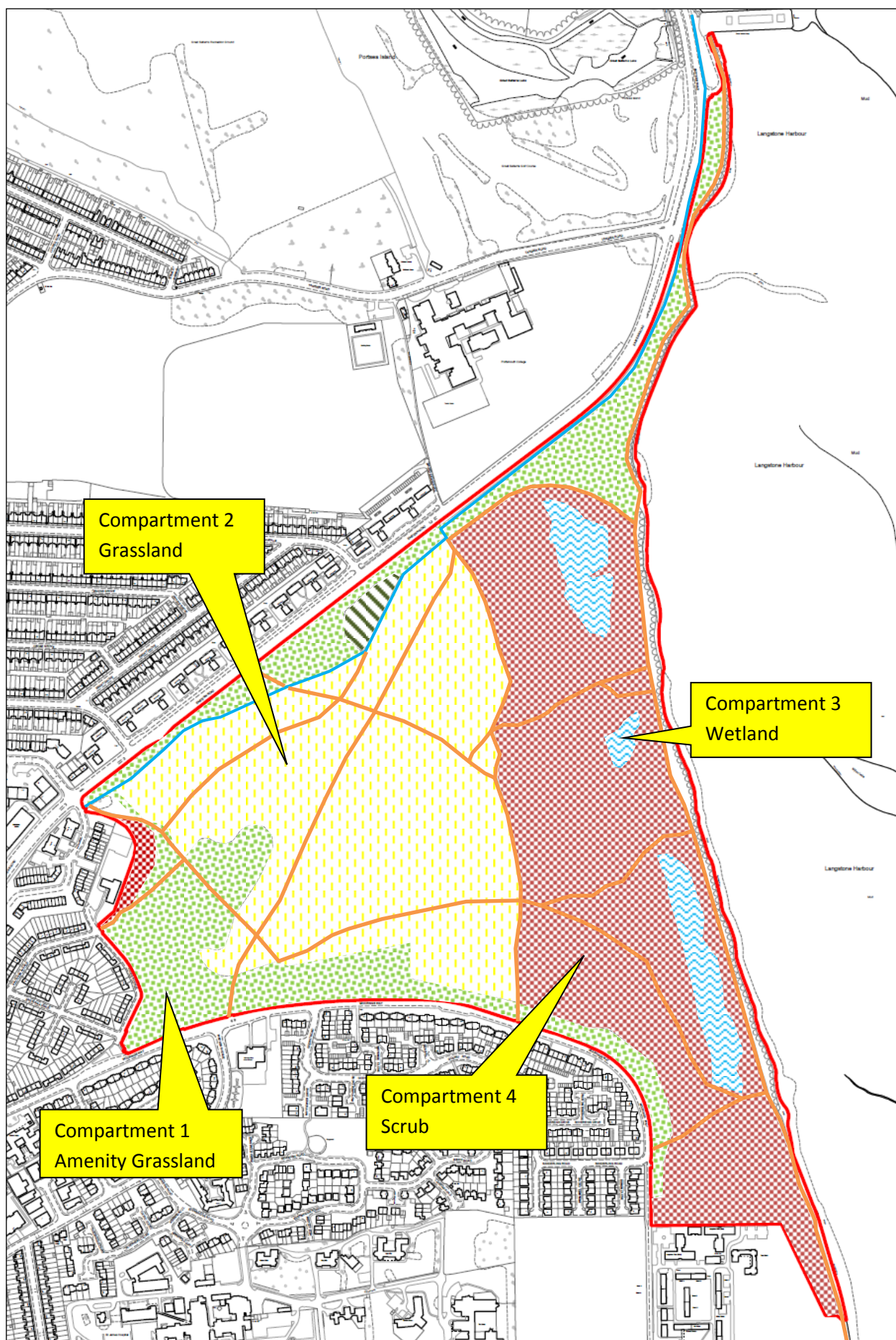
Five Year Project Plan.

Management Aim	Project	Compartment	Priority	Agent	Ranger Time Estimate (Hours)	Cost (£)	Years active (2019-2024)					
							19	20	21	22	23	24

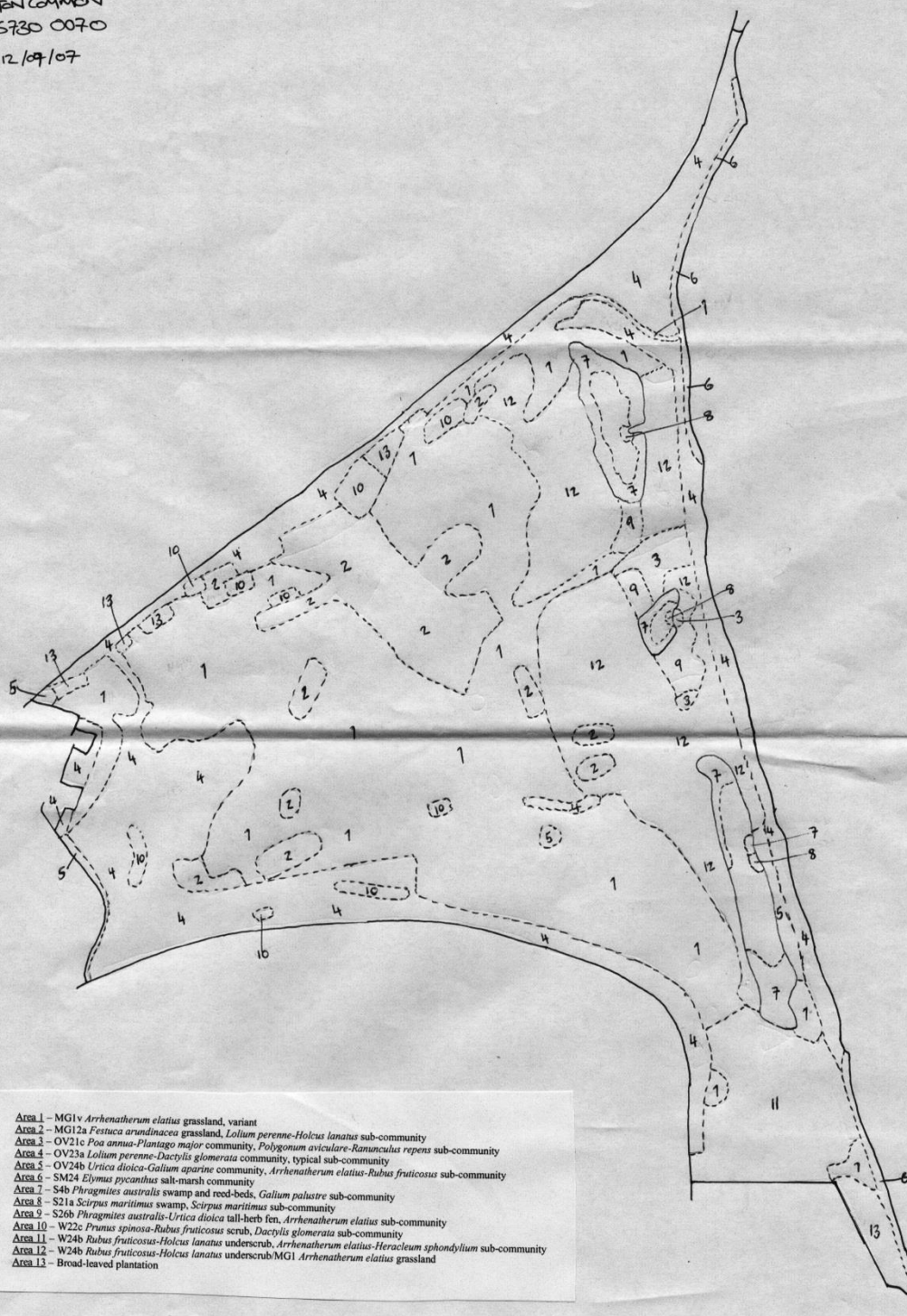
Figure 1. Location of Milton Common



Figure 2. Compartments.

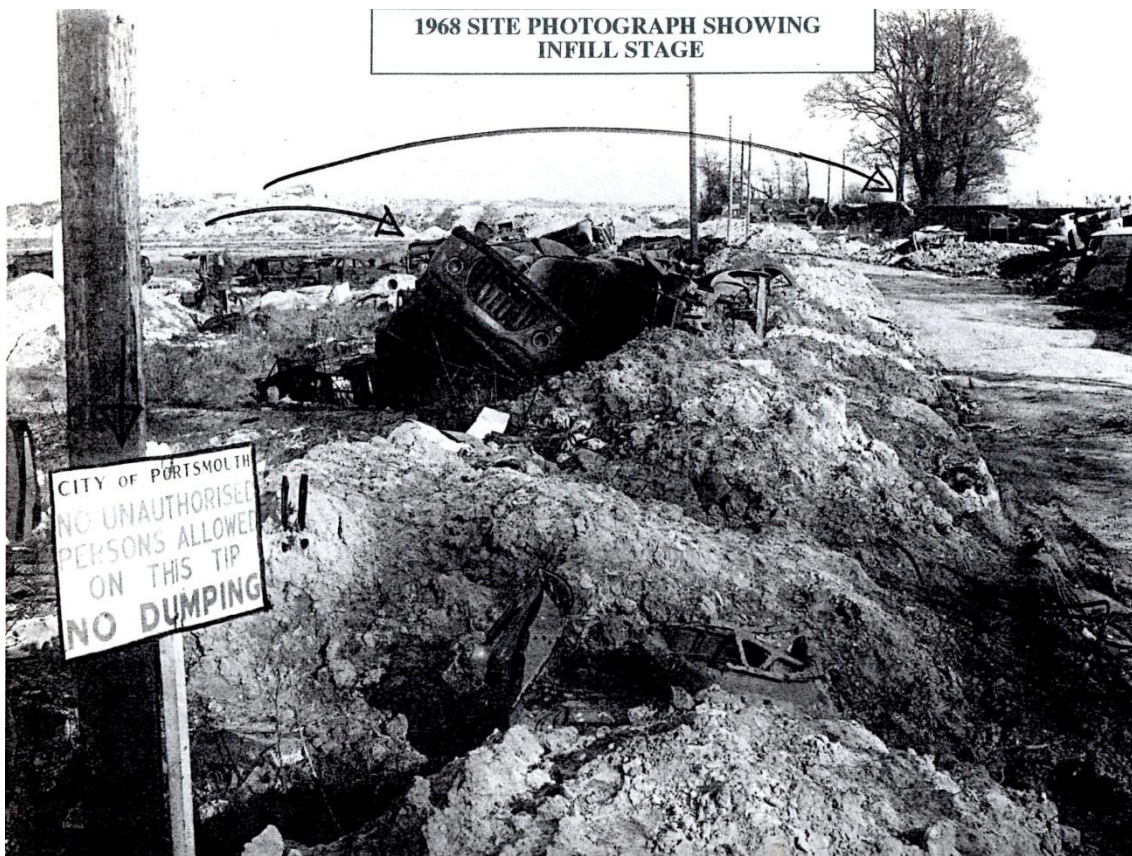


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Figure:



Species records:

The following records have been taken from HBIC surveys of the site and from datasets supplied to HBIC by specialist species recording groups.

Whilst a species may have been recorded at a site, this does not indicate that the species is still present. Equally, the absence of a species from a site does not signify that it is absent, only that it has not been recorded, that the site has not been surveyed for this species, or that HBIC has not been informed of its presence.

Flora of Milton Common.

Flora	Common Name
<i>Abutilon theophrasti</i>	Velvetleaf
<i>Acer pseudoplatanus</i>	Sycamore
<i>Achillea millefolium</i>	Yarrow
<i>Aegopodium podagraria</i>	Ground-elder
<i>Agrimonia eupatoria</i>	Agrimony
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Allium roseum</i>	Rosy Garlic
<i>Allium vineale</i>	Wild Onion
<i>Alopecurus aequalis</i>	Orange Foxtail
<i>Alopecurus geniculatus</i>	Marsh Foxtail
<i>Amaranthus graecizans</i>	Short-tepalled Pigweed
<i>Amaranthus hybridus</i>	Green Amaranth
<i>Amaranthus retroflexus</i>	Common Amaranth
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid
<i>Anisantha sterilis</i>	Barren Brome
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Apium graveolens</i>	Wild Celery
<i>Arctium minus subsp. minus</i>	Lesser Burdock
<i>Armoracia rusticana</i>	Horse-radish
<i>Arrhenatherum elatius</i>	False Oat-Grass
<i>Artemisia verlotiorum</i>	Chinese Mugwort
<i>Artemisia vulgaris</i>	Mugwort
<i>Arum maculatum</i>	Lords-and-Ladies
<i>Aster tripolium</i>	Sea Aster
<i>Aster x salignus</i>	Michaelmas Daisy (<i>A. lanceolatus</i> x <i>novi-belgii</i>)
<i>Atriplex laciniata</i>	Frosted Orache
<i>Atriplex littoralis</i>	Grass-leaved Orache
<i>Atriplex patula</i>	Common Orache
<i>Atriplex portulacoides</i>	Sea-purslane
<i>Atriplex prostrata</i>	Spear-leaved Orache
<i>Baldellia ranunculoides</i>	Lesser Water-plantain
<i>Ballota nigra</i>	Black Horehound
<i>Barbarea vulgaris</i>	Winter-cress
<i>Bellis perennis</i>	Daisy
<i>Beta vulgaris subsp. maritima</i>	Sea Beet
<i>Bolboschoenus maritimus</i>	Sea Club-rush

Flora	Common Name
<i>Borago officinalis</i>	Borage
<i>Brassica napus</i>	Rape
<i>Bromus commutatus</i>	Meadow Brome
<i>Bromus hordeaceus</i>	Soft-brome
<i>Buddleja davidii</i>	Butterfly-bush
<i>Bupleurum tenuissimum</i>	Slender Hare's-ear
<i>Cakile maritima</i>	Sea Rocket
<i>Calendula officinalis</i>	Pot Marigold
<i>Calystegia sepium</i>	Hedge Bindweed
<i>Calystegia silvatica</i>	Large Bindweed
<i>Cannabis sativa</i>	Hemp
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Capsicum annuum</i>	Sweet Pepper
<i>Carex divulsa</i>	Grey Sedge
<i>Carex hirta</i>	Hairy Sedge
<i>Carex otrubae</i>	False Fox-sedge
<i>Centaurea cyanus</i>	Cornflower
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cerinthe major</i>	Greater Honeywort
<i>Chenopodium album</i>	Fat-hen
<i>Chenopodium album</i> agg.	
<i>Chenopodium ficifolium</i>	Fig-leaved Goosefoot
<i>Chenopodium opulifolium</i>	Grey Goosefoot
<i>Chenopodium polyspermum</i>	Many-seeded Goosefoot
<i>Chenopodium probstii</i>	Probst's Goosefoot
<i>Chenopodium rubrum</i>	Red Goosefoot
<i>Chenopodium strictum</i>	Striped Goosefoot
<i>Cichorium intybus</i>	Chicory
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Clematis vitalba</i>	Traveller's-joy
<i>Conium maculatum</i>	Hemlock
<i>Convolvulus arvensis</i>	Field Bindweed
<i>Conyza sumatrensis</i>	Guernsey Fleabane
<i>Coronopus didymus</i>	Lesser Swine-cress
<i>Coronopus squamatus</i>	Swine-cress
<i>Crataegus monogyna</i>	Hawthorn
<i>Crepis vesicaria</i>	Beaked Hawk's-beard
<i>Crepis vesicaria</i> subsp. <i>taraxacifolia</i>	Beaked Hawk's-beard
<i>Cucumis melo</i>	Melon
<i>Cynodon dactylon</i>	Bermuda-grass
<i>Dactylis glomerata</i>	Cock's-foot
<i>Dactylorhiza fuchsii</i>	Common Spotted-orchid
<i>Daucus carota</i>	Carrot
<i>Diplotaxis tenuifolia</i>	Perennial Wall-rocket

Flora	Common Name
<i>Dipsacus fullonum</i>	Wild Teasel
<i>Echium plantagineum</i>	Purple Viper's-bugloss
<i>Elytrigia atherica</i>	Sea Couch
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Epilobium montanum</i>	Broad-leaved Willowherb
<i>Erodium cicutarium</i>	Common Stork's-bill
<i>Erodium cicutarium</i> agg.	Common Stork's-bill
<i>Eschscholzia californica</i>	Californian Poppy
<i>Euphorbia lathyris</i>	Caper Spurge
<i>Fallopia japonica</i>	Japanese Knotweed
<i>Festuca arundinacea</i>	Tall Fescue
<i>Festuca rubra</i> agg.	Red Fescue
<i>Ficus carica</i>	Fig
<i>Filago vulgaris</i>	Common Cudweed
<i>Foeniculum vulgare</i>	Fennel
<i>Fumaria officinalis</i> subsp. <i>officinalis</i>	Common Fumitory
<i>Galium aparine</i>	Cleavers
<i>Genista tinctoria</i>	Dyer's Greenweed
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Geranium pyrenaicum</i>	Hedgerow Crane's-bill
<i>Gladiolus communis</i>	Eastern Gladiolus
<i>Glyceria maxima</i>	Reed Sweet-grass
<i>Gnaphalium uliginosum</i>	Marsh Cudweed
<i>Guizotia abyssinica</i>	Niger
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hordeum murinum</i>	Wall Barley
<i>Hordeum secalinum</i>	Meadow Barley
<i>Hypericum perforatum</i>	Perforate St John's-wort
<i>Iris pseudacorus</i>	Yellow Iris
<i>Juncus gerardii</i>	Saltmarsh Rush
<i>Juncus inflexus</i>	Hard Rush
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lamium album</i>	White Dead-nettle
<i>Lamium purpureum</i>	Red Dead-nettle
<i>Lapsana communis</i>	Nipplewort
<i>Lathyrus aphaca</i>	Yellow Vetchling
<i>Lathyrus latifolius</i>	Broad-leaved Everlasting-pea
<i>Lathyrus nissolia</i>	Grass Vetchling
<i>Lathyrus pratensis</i>	Meadow Vetchling
<i>Lepidium draba</i>	Hoary Cress
<i>Lepidium ruderae</i>	Narrow-leaved Pepperwort
<i>Leucanthemum vulgare</i>	Oxeye Daisy
<i>Linaria purpurea</i>	Purple Toadflax

Flora	Common Name
<i>Lobularia maritima</i>	Sweet Alison
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil
<i>Lycopersicon esculentum</i>	Tomato
<i>Lycopus europaeus</i>	Gypsywort
<i>Malva neglecta</i>	Dwarf Mallow
<i>Malva sylvestris</i>	Common Mallow
<i>Matricaria discoidea</i>	Pineappleweed
<i>Matricaria recutita</i>	Scented Mayweed
<i>Medicago arabica</i>	Spotted Medick
<i>Medicago lupulina</i>	Black Medick
<i>Medicago polymorpha</i>	Toothed Medick
<i>Melilotus albus</i>	White Melilot
<i>Melilotus altissimus</i>	Tall Melilot
<i>Melilotus indicus</i>	Small Melilot
<i>Melilotus officinalis</i>	Ribbed Melilot
<i>Mentha spicata</i>	Spear Mint
<i>Mercurialis annua</i>	Annual Mercury
<i>Misopates orontium</i>	Weasel's-snout
<i>Nicandra physalodes</i>	Apple-of-Peru
<i>Nigella damascena</i>	Love-in-a-mist
<i>Nolana paradoxa</i>	Chilean-bellflower
<i>Odontites vernus</i>	Red Bartsia
<i>Oenanthe crocata</i>	Hemlock Water-dropwort
<i>Oenanthe pimpinelloides</i>	Corky-fruited Water-dropwort
<i>Oenothera x fallax</i>	O. glazioviana x biennis
<i>Ophrys apifera</i>	Bee Orchid
<i>Origanum vulgare</i>	Wild Marjoram
<i>Oxalis debilis</i>	Large-flowered Pink-sorrel
<i>Papaver rhoeas</i>	Common Poppy
<i>Parapholis strigosa</i>	Hard-grass
<i>Pastinaca sativa</i>	Wild Parsnip
<i>Persicaria amphibia</i>	Amphibious Bistort
<i>Persicaria hydropiper</i>	Water-pepper
<i>Persicaria lapathifolia</i>	Pale Persicaria
<i>Persicaria maculosa</i>	Redshank
<i>Petunia x hybrida</i>	Petunia
<i>Phalaris canariensis</i>	Canary-grass
<i>Phleum bertolonii</i>	Smaller Cat's-tail
<i>Phragmites australis</i>	Common Reed
<i>Picris echioides</i>	Bristly Oxtongue
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Plantago major</i>	Greater Plantain

Flora	Common Name
<i>Plantago maritima</i>	Sea Plantain
<i>Poa annua</i>	Annual Meadow-grass
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Puccinellia distans</i>	Reflexed Saltmarsh-grass
<i>Puccinellia maritima</i>	Common Saltmarsh-grass
<i>Puccinellia rupestris</i>	Stiff Saltmarsh-grass
<i>Puccinellia x pannonica</i>	P. distans x rupestris
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Pyrus communis sens. lat.</i>	Pear
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus ficaria subsp. ficaria</i>	Lesser Celandine
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup
<i>Rapistrum rugosum</i>	Bastard Cabbage
<i>Reseda lutea</i>	Wild Mignonette
<i>Reseda luteola</i>	Weld
<i>Rhinanthus minor</i>	Yellow-rattle
<i>Rorippa sylvestris</i>	Creeping Yellow-cress
<i>Rosa canina</i>	Dog-rose
<i>Rubus armeniacus</i>	
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex acetosa</i>	Common Sorrel
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus subsp. crispus</i>	Curled Dock
<i>Rumex maritimus</i>	Golden Dock
<i>Salix cinerea subsp. oleifolia</i>	Rusty Willow
<i>Sambucus nigra</i>	Elder
<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio squalidus</i>	Oxford Ragwort
<i>Setaria italica</i>	Foxtail Bristle-grass
<i>Silene latifolia</i>	White Campion
<i>Sinapis arvensis</i>	Charlock
<i>Sison amomum</i>	Stone Parsley
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Solanum dulcamara</i>	Bittersweet
<i>Solanum nigrum</i>	Black Nightshade
<i>Solanum physalifolium</i>	Green Nightshade
<i>Solanum villosum subsp. miniatum</i>	
<i>Sonchus arvensis</i>	Perennial Sow-thistle
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Sonchus oleraceus</i>	Smooth Sow-thistle
<i>Spartium junceum</i>	Spanish Broom
<i>Spergularia media</i>	Greater Sea-spurrey
<i>Stachys palustris</i>	Marsh Woundwort

Flora	Common Name
<i>Stachys sylvatica</i>	Hedge Woundwort
<i>Stellaria graminea</i>	Lesser Stitchwort
<i>Stellaria media</i>	Common Chickweed
<i>Symphytum x uplandicum</i>	Russian Comfrey (S. asperum x officinale)
<i>Tanacetum vulgare</i>	Tansy
<i>Taraxacum agg.</i>	Dandelion
<i>Thlaspi arvense</i>	Field Penny-cress
<i>Tragopogon porrifolius</i>	Salsify
<i>Tragopogon pratensis</i>	Goat's-beard
<i>Tragopogon pratensis subsp. minor</i>	Goat's-beard
<i>Trifolium campestre</i>	Hop Trefoil
<i>Trifolium incarnatum</i>	
<i>Trifolium incarnatum subsp. incarnatum</i>	Crimson Clover
<i>Trifolium micranthum</i>	Slender Trefoil
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Trifolium squamosum</i>	Sea Clover
<i>Tussilago farfara</i>	Colt's-foot
<i>Ulex europaeus</i>	Gorse
<i>Urtica dioica</i>	Common Nettle
<i>Veronica persica</i>	Common Field-speedwell
<i>Vicia hirsuta</i>	Hairy Tare
<i>Vicia sativa subsp. nigra</i>	Narrow-leaved Vetch
<i>Viola odorata</i>	Sweet Violet
<i>Vitis vinifera</i>	Grape-vine
<i>Vulpia bromoides</i>	Squirreltail Fescue
<i>Vulpia myuros</i>	Rat's-tail Fescue
<i>Zannichellia palustris</i>	Horned Pondweed
<i>Zostera angustifolia</i>	Narrow-leaved Eel-grass (Now sunk into Z marina)
<i>Zostera marina</i>	Eelgrass
<i>Zostera noltei</i>	Dwarf Eelgrass

The Birds of Milton Common

Birds	Common Name
<i>Accipiter nisus</i>	Eurasian Sparrowhawk
<i>Acrocephalus schoenobaenus</i>	Sedge Warbler
<i>Acrocephalus scirpaceus</i>	Eurasian Reed Warbler
<i>Actitis hypoleucos</i>	Common Sandpiper
<i>Aegithalos caudatus</i>	Long-tailed Tit
<i>Aix galericulata</i>	Mandarin Duck
<i>Alauda arvensis</i>	Sky Lark
<i>Alca torda</i>	Razorbill
<i>Alcedo atthis</i>	Common Kingfisher
<i>Alectoris rufa</i>	Red-legged Partridge
<i>Anas acuta</i>	Northern Pintail
<i>Anas bahamensis</i>	White-checked Pintail
<i>Anas clypeata</i>	Northern Shoveler
<i>Anas crecca</i>	Eurasian Teal
<i>Anas penelope</i>	Eurasian Wigeon
<i>Anas platyrhynchos</i>	Mallard
<i>Anas strepera</i>	Gadwall
<i>Anthus petrosus</i>	Rock Pipit
<i>Anthus pratensis</i>	Meadow Pipit
<i>Anthus trivialis</i>	Tree Pipit
<i>Apus apus</i>	Common Swift
<i>Ardea cinerea</i>	Grey Heron
<i>Arenaria interpres</i>	Ruddy Turnstone
<i>Asio flammeus</i>	Short-eared Owl
<i>Aythya ferina</i>	Common Pochard
<i>Aythya fuligula</i>	Tufted Duck
<i>Aythya marila</i>	Greater Scaup
<i>Branta bernicla</i>	Brent Goose
<i>Branta bernicla hrota</i>	Pale-bellied Brent Goose
<i>Branta bernicla nigricans</i>	Black Brant
<i>Branta canadensis</i>	Canada Goose
<i>Branta leucopsis</i>	Barnacle Goose
<i>Bubulcus ibis</i>	Cattle Egret
<i>Bucephala clangula</i>	Common Goldeneye
<i>Buteo buteo</i>	Common Buzzard
<i>Calidris alpina</i>	Dunlin
<i>Calidris canutus</i>	Red Knot
<i>Carduelis cabaret</i>	Lesser Redpoll
<i>Carduelis cannabina</i>	Common Linnet
<i>Carduelis carduelis</i>	European Goldfinch
<i>Carduelis chloris</i>	European Greenfinch
<i>Carduelis spinus</i>	Eurasian Siskin
<i>Cettia cetti</i>	Cetti's Warbler
<i>Charadrius hiaticula</i>	Ringed Plover

Birds	Common Name
<i>Chlidonias niger</i>	Black Tern
<i>Clangula hyemalis</i>	Long-tailed Duck
<i>Columba palumbus</i>	Common Wood Pigeon
<i>Corvus corone</i>	Carrion Crow
<i>Corvus monedula</i>	Eurasian Jackdaw
<i>Cuculus canorus</i>	Common Cuckoo
<i>Cygnus olor</i>	Mute Swan
<i>Delichon urbicum</i>	House Martin
<i>Dendrocopos major</i>	Great Spotted Woodpecker
<i>Egretta garzetta</i>	Little Egret
<i>Emberiza citrinella</i>	Yellowhammer
<i>Emberiza schoeniclus</i>	Reed Bunting
<i>Erithacus rubecula</i>	European Robin
<i>Falco peregrinus</i>	Peregrine Falcon
<i>Falco tinnunculus</i>	Common Kestrel
<i>Ficedula hypoleuca</i>	Pied Flycatcher
<i>Fringilla coelebs</i>	Chaffinch
<i>Fringilla montifringilla</i>	Brambling
<i>Fulica atra</i>	Common Coot
<i>Gallinago gallinago</i>	Common Snipe
<i>Gallinula chloropus</i>	Common Moorhen
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher
<i>Hirundo rustica</i>	Barn Swallow
<i>Larus argentatus</i>	Herring Gull
<i>Larus argentatus michahellis</i>	Yellow-legged Gull
<i>Larus canus</i>	Mew Gull
<i>Larus delawarensis</i>	Ring-billed Gull
<i>Larus fuscus</i>	Lesser Black-backed Gull
<i>Larus melanocephalus</i>	Mediterranean Gull
<i>Larus minutus</i>	Little Gull
<i>Larus ridibundus</i>	Black-headed Gull
<i>Limosa lapponica</i>	Bar-tailed Godwit
<i>Limosa limosa</i>	Black-tailed Godwit
<i>Locustella naevia</i>	Common Grasshopper Warbler
<i>Luscinia megarhynchos</i>	Common Nightingale
<i>Melanitta nigra</i>	Black Scoter
<i>Melopsittacus undulatus</i>	Budgerigar
<i>Mergus serrator</i>	Red-breasted Merganser
<i>Milvus milvus</i>	Red Kite
<i>Motacilla alba</i>	White / Pied Wagtail
<i>Motacilla alba alba</i>	White Wagtail
<i>Motacilla cinerea</i>	Grey Wagtail
<i>Motacilla flava</i>	Yellow Wagtail
<i>Muscicapa striata</i>	Spotted Flycatcher
<i>Netta rufina</i>	Red-crested Pochard

Birds	Common Name
<i>Numenius arquata</i>	Eurasian Curlew
<i>Numenius phaeopus</i>	Whimbrel
<i>Nymphicus hollandicus</i>	Cockatiel
<i>Oenanthe oenanthe</i>	Northern Wheatear
<i>Oxyura jamaicensis</i>	Ruddy Duck
<i>Pandion haliaetus</i>	Osprey
<i>Panurus biarmicus</i>	Bearded Tit
<i>Parus caeruleus</i>	Blue Tit
<i>Parus major</i>	Great Tit
<i>Passer domesticus</i>	House Sparrow
<i>Phalacrocorax aristotelis</i>	European Shag
<i>Phalacrocorax carbo</i>	Great Cormorant
<i>Phasianus colchicus</i>	Common Pheasant
<i>Phoenicurus ochruros</i>	Black Redstart
<i>Phoenicurus phoenicurus</i>	Common Redstart
<i>Phylloscopus collybita</i>	Common Chiffchaff
<i>Phylloscopus trochilus</i>	Willow Warbler
<i>Pica pica</i>	Black-billed Magpie
<i>Picus viridis</i>	Green Woodpecker
<i>Pluvialis squatarola</i>	Grey Plover
<i>Podiceps auritus</i>	Slavonian Grebe
<i>Podiceps cristatus</i>	Great Crested Grebe
<i>Podiceps grisegena</i>	Red-necked Grebe
<i>Prunella modularis</i>	Hedge Accentor
<i>Rallus aquaticus</i>	Water Rail
<i>Recurvirostra avosetta</i>	Pied Avocet
<i>Regulus ignicapilla</i>	Firecrest
<i>Regulus regulus</i>	Goldcrest
<i>Riparia riparia</i>	Sand Martin
<i>Saxicola rubetra</i>	Whinchat
<i>Saxicola torquatus</i>	Stonechat
<i>Scolopax rusticola</i>	Eurasian Woodcock
<i>Somateria mollissima</i>	Common Eider
<i>Sterna hirundo</i>	Common Tern
<i>Sterna sandvicensis</i>	Sandwich Tern
<i>Sternula albifrons</i>	Little Tern
<i>Streptopelia decaocto</i>	Eurasian Collared Dove
<i>Sturnus vulgaris</i>	Common Starling
<i>Sylvia atricapilla</i>	Blackcap
<i>Sylvia borin</i>	Garden Warbler
<i>Sylvia communis</i>	Common Whitethroat
<i>Sylvia curruca</i>	Lesser Whitethroat
<i>Sylvia undata</i>	Dartford Warbler
<i>Tachybaptus ruficollis</i>	Little Grebe
<i>Tadorna tadorna</i>	Common Shelduck

Birds	Common Name
<i>Tringa erythropus</i>	Spotted Redshank
<i>Tringa nebularia</i>	Common Greenshank
<i>Tringa ochropus</i>	Green Sandpiper
<i>Tringa totanus</i>	Common Redshank
<i>Turdus iliacus</i>	Redwing
<i>Turdus merula</i>	Common Blackbird
<i>Turdus philomelos</i>	Song Thrush
<i>Turdus pilaris</i>	Fieldfare
<i>Turdus viscivorus</i>	Mistle Thrush
<i>Uria aalge</i>	Common Guillemot
<i>Vanellus vanellus</i>	Northern Lapwing

The Butterflies of Milton Common

Species	Common Name
<i>Aglais urticae</i>	Small Tortoiseshell
<i>Anthocharis cardamines</i>	Orange Tip
<i>Celastrina argiolus</i>	Holly Blue
<i>Coenonympha pamphilus</i>	Small Heath
<i>Colias crocea</i>	Clouded Yellow
<i>Cupido minimus</i>	Small Blue
<i>Gonepteryx rhamni</i>	Brimstone
<i>Inachis io</i>	Peacock
<i>Lasiommata megera</i>	Wall Brown
<i>Lycaena phlaeas</i>	Small Copper
<i>Maniola jurtina</i>	Meadow Brown
<i>Melanargia galathea</i>	Marbled White
<i>Ochlodes faunus</i>	Large Skipper
<i>Pararge aegeria</i>	Speckled Wood
<i>Pieris brassicae</i>	Large White
<i>Pieris napi</i>	Green-veined White
<i>Pieris rapae</i>	Small White
<i>Polygonia c-album</i>	Comma
<i>Polyommatus icarus</i>	Common Blue
<i>Pyronia tithonus</i>	Gatekeeper
<i>Thymelicus lineola</i>	Essex Skipper
<i>Thymelicus sylvestris</i>	Small Skipper
<i>Vanessa atalanta</i>	Red Admiral

The Invertebrates of Milton Common.

Araneae	
<i>Steatoda nobilis</i>	
Coleoptera	
<i>Chrysolina banksi</i>	
Diptera	
<i>Anopheles claviger</i>	Mosquito
<i>Culex pipiens</i>	Mosquito
<i>Culiseta annulata</i>	Mosquito
<i>Epistrophe eligans</i>	
<i>Eristalinus sepulchralis</i>	
<i>Eristalis tenax</i>	
<i>Eupeodes luniger</i>	
<i>Helophilus pendulus</i>	
<i>Helophilus trivittatus</i>	
<i>Melanostoma mellinum</i>	
<i>Melanostoma scalare</i>	
<i>Ochlerotatus detritus</i>	Mosquito
<i>Platycheirus fulviventris</i>	
<i>Platycheirus peltatus</i>	
<i>Platycheirus scutatus sens. lat.</i>	
<i>Sphaerophoria scripta</i>	
<i>Syrphus ribesii</i>	
Hemiptera	
<i>Coreus marginatus</i>	
<i>Elasmostethus tristriatus</i>	
Hymenoptera	
<i>Lestiphorus bicinctus</i>	Digger wasp
<i>Vespula vulgaris</i>	Common Wasp
Odonata	
<i>Aeshna cyanea</i>	Southern Hawker
<i>Aeshna mixta</i>	Migrant Hawker
<i>Coenagrion puella</i>	Azure Damselfly
<i>Enallagma cyathigerum</i>	Common Blue Damselfly
<i>Ischnura elegans</i>	Blue-tailed Damselfly
<i>Libellula depressa</i>	Broad-bodied Chaser
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly
<i>Sympetrum striolatum</i>	Common Darter
Orthoptera	
<i>Chorthippus albomarginatus</i>	Lesser Marsh Grasshopper
<i>Chorthippus brunneus</i>	Field Grasshopper
<i>Chorthippus parallelus</i>	Meadow Grasshopper
<i>Conocephalus discolor</i>	Long-winged Conehead
<i>Meconema thalassinum</i>	Oak Bush Cricket
<i>Pholidoptera griseoptera</i>	Dark Bush Cricket
<i>Tettigonia viridissima</i>	Great Green Bush Cricket

The Moths of Milton Common.

Moths	Common Name
<i>Abraxas grossulariata</i>	Magpie Moth
<i>Abrostola tripartita</i>	Spectacle
<i>Abrostola triplasia</i>	Dark Spectacle
<i>Acasis viretata</i>	Yellow-barred Brindle
<i>Acentria ephemerella</i>	Water Veneer
<i>Achroia grisella</i>	Lesser Wax Moth
<i>Acleris aspersana</i>	
<i>Acleris forsskaleana</i>	
<i>Acleris hastiana</i>	
<i>Acleris kochiella</i>	
<i>Acleris laterana</i>	
<i>Acleris rhombana</i>	Rhomboid Tortrix
<i>Acleris sparsana</i>	
<i>Acleris variegana</i>	Garden Rose Tortrix
<i>Acrobasis consociella</i>	
<i>Acrocercops brongniardella</i>	
<i>Acrolepia autumnitella</i>	
<i>Acrolepiopsis assectella</i>	Leek Moth
<i>Acronicta aceris</i>	Sycamore
<i>Acronicta alni</i>	Alder Moth
<i>Acronicta megacephala</i>	Poplar Grey
<i>Acronicta psi</i>	Grey Dagger
<i>Acronicta rumicis</i>	Knot Grass
<i>Acronicta sp.</i>	Acronicta species
<i>Acronicta tridens</i>	Dark Dagger
<i>Acronicta tridens/psi</i>	Grey Dagger / Dark Dagger
<i>Adaina microdactyla</i>	
<i>Adela reaumurella</i>	
<i>Aethes beatricella</i>	
<i>Aethes cnicana</i>	
<i>Aethes dilucidana</i>	
<i>Aethes francillana</i>	
<i>Aethes smeathmanniana</i>	
<i>Agapeta hamana</i>	
<i>Agapeta zoegana</i>	
<i>Agdistis bennetii</i>	
<i>Aglais urticae</i>	Small Tortoiseshell
<i>Agonopterix alstromeriana</i>	
<i>Agonopterix arenella</i>	
<i>Agonopterix assimilella</i>	
<i>Agonopterix heracliata</i>	
<i>Agonopterix nervosa</i>	
<i>Agonopterix purpurea</i>	
<i>Agonopterix subpropinquella</i>	
<i>Agonopterix yeatiana</i>	
<i>Agriopis aurantiaria</i>	Scarce Umber
<i>Agriopis marginaria</i>	Dotted Border
<i>Agriphila geniculea</i>	

Moths	Common Name
<i>Agriphila inquinatella</i>	
<i>Agriphila latistria</i>	
<i>Agriphila selasella</i>	
<i>Agriphila straminella</i>	
<i>Agriphila tristella</i>	
<i>Agrius convolvuli</i>	Convolvulus Hawk-moth
<i>Agrochola circellaris</i>	Brick
<i>Agrochola lota</i>	Red-line Quaker
<i>Agrochola lychnidis</i>	Beaded Chestnut
<i>Agrochola macilenta</i>	Yellow-line Quaker
<i>Agrotis cinerea</i>	Light Feathered Rustic
<i>Agrotis clavis</i>	Heart and Club
<i>Agrotis exclamationis</i>	Heart and Dart
<i>Agrotis ipsilon</i>	Dark Sword-grass
<i>Agrotis puta</i>	Shuttle-shaped Dart
<i>Agrotis ripae</i>	Sand Dart
<i>Agrotis segetum</i>	Turnip Moth
<i>Agrotis vestigialis</i>	Archer's Dart
<i>Aleimma loeflingiana</i>	
<i>Alsophila aescularia</i>	March Moth
<i>Altenia scriptella</i>	
<i>Alucita hexadactyla</i>	Twenty-plume Moth
<i>Amblyptilia acanthadactyla</i>	
<i>Amblyptilia punctidactyla</i>	
<i>Amphipoea fucosa</i>	Saltern Ear
<i>Amphipoea fucosa paludis</i>	Saltern Ear
<i>Amphipoea oculatea</i>	Ear Moth
<i>Amphipyra berbera</i>	Svensson's Copper Underwing
<i>Amphipyra berbera svenssoni</i>	Svensson's Copper Underwing
<i>Amphipyra pyramidea</i>	Copper Underwing
<i>Amphipyra tragopoginis</i>	Mouse Moth
<i>Anacampsis populella</i>	
<i>Anarsia lineatella</i>	Peach Twig Borer
<i>Anarsia spartiella</i>	
<i>Ancylis achatana</i>	
<i>Ancylis badiana</i>	
<i>Ancylis comptana</i>	
<i>Ancylosis oblitella</i>	
<i>Anthocharis cardamines</i>	Orange-tip
<i>Anthophila fabriciana</i>	
<i>Anticlea derivata</i>	Streamer
<i>Apamea lithoxylaea</i>	Light Arches
<i>Apamea monoglypha</i>	Dark Arches
<i>Apamea oblonga</i>	Crescent Striped
<i>Apamea remissa</i>	Dusky Brocade
<i>Apamea sordens</i>	Rustic Shoulder-knot
<i>Apamea sublustris</i>	Reddish Light Arches
<i>Aphomia sociella</i>	Bee Moth
<i>Aplocera efformata</i>	Lesser Treble-bar

Moths	Common Name
<i>Apodia bifractella</i>	
<i>Aporophyla lutulenta</i>	Deep-brown Dart
<i>Aporophyla nigra</i>	Black Rustic
<i>Apotomis betuletana</i>	
<i>Aproaerema anthyllidella</i>	
<i>Archana dissoluta</i>	Brown-veined Wainscot
<i>Archana geminipuncta</i>	Twin-spotted Wainscot
<i>Archana sparganii</i>	Webb's Wainscot
<i>Archips podana</i>	Large Fruit-tree Tortrix
<i>Archips xylosteana</i>	Variegated Golden Tortrix
<i>Arctia caja</i>	Garden Tiger
<i>Arctia villica</i>	Cream-spot Tiger
<i>Arenostola phragmitidis</i>	Fen Wainscot
<i>Argyresthia bonnetella</i>	
<i>Argyresthia brockeella</i>	
<i>Argyresthia dilectella</i>	
<i>Argyresthia goedartella</i>	
<i>Argyresthia pygmaeella</i>	
<i>Argyresthia retinella</i>	
<i>Argyresthia semifusca</i>	
<i>Argyresthia spinosella</i>	
<i>Argyrotaenia ljugiana</i>	
<i>Aristotelia brizella</i>	
<i>Aristotelia ericinella</i>	
<i>Aroga velocella</i>	
<i>Aspilapteryx tringipennella</i>	
<i>Assara terebrella</i>	
<i>Atolmis rubicollis</i>	Red-necked Footman
<i>Autographa gamma</i>	Silver Y
<i>Autographa jota</i>	Plain Golden Y
<i>Axylia putris</i>	Flame
<i>Bactra furfurana</i>	
<i>Bactra lacteana</i>	
<i>Bactra lancealana</i>	
<i>Bactra robustana</i>	
<i>Batia lambdella</i>	
<i>Batia lunaris</i>	
<i>Batia unitella</i>	
<i>Batrachedra praeangusta</i>	
<i>Bedellia somnulentella</i>	
<i>Bena bicolorana</i>	Scarce Silver-lines
<i>Biselachista scirpi</i>	
<i>Biston betularia</i>	Peppered Moth
<i>Biston strataria</i>	Oak Beauty
<i>Blastobasis adustella</i>	
<i>Blastobasis laticolella</i>	
<i>Blastodacna hellerella</i>	
<i>Bohemannia pulverosella</i>	
<i>Borkhausenia fuscescens</i>	

Moths	Common Name
<i>Brachmia blandella</i>	
<i>Bryotropha affinis</i>	
<i>Bryotropha domestica</i>	
<i>Bryotropha senectella</i>	
<i>Bryotropha terrella</i>	
<i>Bucculatrix albedinella</i>	
<i>Bucculatrix bechsteinella</i>	
<i>Bucculatrix cidarella</i>	
<i>Bucculatrix maritima</i>	
<i>Bucculatrix nigricomella</i>	
<i>Bucculatrix thoracella</i>	
<i>Bucculatrix ulmella</i>	
<i>Cabera exanthemata</i>	Common Wave
<i>Cabera pusaria</i>	Common White Wave
<i>Cacoecimorpha pronubana</i>	Carnation Tortrix
<i>Calamotropha paludella</i>	
<i>Callistege mi</i>	Mother Shipton
<i>Callisto denticulella</i>	
<i>Caloptilia alchimiella</i>	
<i>Caloptilia azaleella</i>	Azalea Leaf Miner
<i>Caloptilia elongella</i>	
<i>Caloptilia falconipennella</i>	
<i>Caloptilia populetorum</i>	
<i>Caloptilia robustella</i>	
<i>Caloptilia rufipennella</i>	
<i>Caloptilia semifascia</i>	
<i>Caloptilia stigmatella</i>	
<i>Caloptilia syringella</i>	
<i>Calybites phasianipennella</i>	
<i>Cameraria ohridella</i>	
<i>Campaea margaritata</i>	Light Emerald
<i>Camptogramma bilineata</i>	Yellow Shell
<i>Capperia britanniodactyla</i>	
<i>Caradrina morpheus</i>	Mottled Rustic
<i>Carcina quercana</i>	
<i>Carpatolechia fugitivella</i>	
<i>Caryocolum alsinella</i>	
<i>Caryocolum fraternella</i>	
<i>Caryocolum marmoreum</i>	
<i>Cataclysta lemnata</i>	Small China-mark
<i>Catocala nupta</i>	Red Underwing
<i>Catoptria falsella</i>	
<i>Cedestis subfasciella</i>	
<i>Celaena leucostigma</i>	Crescent
<i>Celastrina argiolus</i>	Holly Blue
<i>Celypha cespitana</i>	
<i>Celypha lacunana</i>	
<i>Celypha rivulana</i>	
<i>Celypha rosaceana</i>	

Moths	Common Name
<i>Celypha striana</i>	
<i>Cerura vinula</i>	Puss Moth
<i>Charanyca trigrammica</i>	Treble Lines
<i>Charissa obscurata</i>	Annulet
<i>Chiasmia clathrata</i>	Latticed Heath
<i>Chilo phragmitella</i>	
<i>Chilodes maritimus</i>	Silky Wainscot
<i>Chloroclysta siterata</i>	Red-green Carpet
<i>Chloroclysta truncata</i>	Common Marbled Carpet
<i>Chloroclystis v-ata</i>	V-Pug
<i>Choreutis pariana</i>	Apple Leaf Skeletoniser
<i>Chortodes pygmina</i>	Small Wainscot
<i>Chrysoesthia sexguttella</i>	
<i>Chrysoteuchia culmella</i>	Garden Grass-veneer
<i>Cidaria fulvata</i>	Barred Yellow
<i>Cilix glaucata</i>	Chinese Character
<i>Clavigesta purdeyi</i>	Pine Leaf-mining Moth
<i>Clepsis consimilana</i>	
<i>Clepsis spectrana</i>	Cyclamen Tortrix
<i>Clostera curtula</i>	Chocolate-tip
<i>Cnephasia asseclana</i>	Flax Tortrix
<i>Cnephasia communana</i>	
<i>Cnephasia genitalana</i>	
<i>Cnephasia incertana</i>	Light Grey Tortrix
<i>Cnephasia interjectana</i>	
<i>Cnephasia longana</i>	
<i>Cnephasia stephensiana</i>	Grey Tortrix
<i>Cochylidia implicitana</i>	
<i>Cochylimorpha straminea</i>	
<i>Cochylis atricapitana</i>	
<i>Cochylis dubitana</i>	
<i>Cochylis hybridella</i>	
<i>Cochylis molliculana</i>	
<i>Cochylis roseana</i>	
<i>Coenobia rufa</i>	Small Rufous
<i>Coenonympha pamphilus</i>	Small Heath
<i>Coleophora adjunctella</i>	
<i>Coleophora adspersella</i>	
<i>Coleophora albicosta</i>	
<i>Coleophora albitarsella</i>	
<i>Coleophora alcyonipennella</i>	
<i>Coleophora alcyonipennella/frischella</i>	
<i>Coleophora alticolella</i>	
<i>Coleophora anatipennella</i>	Pistol Case-bearer
<i>Coleophora argentula</i>	
<i>Coleophora artemisicolella</i>	
<i>Coleophora atriplicis</i>	
<i>Coleophora badiipennella</i>	
<i>Coleophora caespititiella</i>	

Moths	Common Name
<i>Coleophora clypeiferella</i>	
<i>Coleophora conyzae</i>	
<i>Coleophora coracipennella</i>	
<i>Coleophora deauratella</i>	
<i>Coleophora discordella</i>	
<i>Coleophora flavipennella</i>	
<i>Coleophora follicularis</i>	
<i>Coleophora gardesanella</i>	
<i>Coleophora glaucicolella</i>	
<i>Coleophora gryphipennella</i>	
<i>Coleophora inulae</i>	
<i>Coleophora laricella</i>	Larch Case-bearer
<i>Coleophora lassella</i>	
<i>Coleophora limosipennella</i>	
<i>Coleophora lineolea</i>	
<i>Coleophora lusciniapennella</i>	
<i>Coleophora lutipennella</i>	
<i>Coleophora maritimella</i>	
<i>Coleophora mayrella</i>	
<i>Coleophora peribenanderi</i>	
<i>Coleophora pyrrhulipennella</i>	
<i>Coleophora salicorniae</i>	
<i>Coleophora salinella</i>	
<i>Coleophora saxicolella</i>	
<i>Coleophora serratella</i>	
<i>Coleophora spinella</i>	Apple & Plum Case-bearer
<i>Coleophora striatipennella</i>	
<i>Coleophora taeniipennella</i>	
<i>Coleophora tamesis</i>	
<i>Coleophora therinella</i>	
<i>Coleophora trifolii</i>	Large Clover Case-bearer
<i>Coleophora trochilella</i>	
<i>Coleophora versurella</i>	
<i>Coleophora vibicella</i>	
<i>Coleophora viminetella</i>	
<i>Colias croceus</i>	Clouded Yellow
<i>Colocasia coryli</i>	Nut-tree Tussock
<i>Colostygia multistrigaria</i>	Mottled Grey
<i>Colostygia pectinataria</i>	Green Carpet
<i>Colotois pennaria</i>	Feathered Thorn
<i>Comibaena bajularia</i>	Blotched Emerald
<i>Conistra ligula</i>	Dark Chestnut
<i>Conistra vaccinii</i>	Chestnut
<i>Conobathra repandana</i>	
<i>Conobathra tumidana</i>	
<i>Cosmia affinis</i>	Lesser-spotted Pinion
<i>Cosmia trapezina</i>	Dun-bar
<i>Cosmiotes consortella</i>	
<i>Cosmiotes stabilella</i>	

Moths	Common Name
<i>Cosmopterix scribaiella</i>	
<i>Cosmorhoe ocellata</i>	Purple Bar
<i>Crambus lathoniellus</i>	
<i>Crambus pascuella</i>	
<i>Crambus perlella</i>	
<i>Craniophora ligustri</i>	Coronet
<i>Crocallis elinguaris</i>	Scalloped Oak
<i>Crociosema plebejana</i>	
<i>Cryphia algae</i>	Tree-lichen Beauty
<i>Cryphia domestica</i>	Marbled Beauty
<i>Cryphia muralis</i>	Marbled Green
<i>Cucullia chamomillae</i>	Chamomile Shark
<i>Cucullia umbratica</i>	Shark
<i>Cupido minimus</i>	Small Blue
<i>Cyclophora linearia</i>	Clay Triple-lines
<i>Cyclophora punctaria</i>	Maiden's Blush
<i>Cyclophora pupillaria</i>	Blair's Mocha
<i>Cydia amplana</i>	
<i>Cydia conicolana</i>	
<i>Cydia fagiglandana</i>	
<i>Cydia nigricana</i>	Pea Moth
<i>Cydia pomonella</i>	Codling Moth
<i>Cydia splendana</i>	
<i>Cydia strobilella</i>	Spruce Seed Moth
<i>Cydia ulicetana</i>	
<i>Cynaeda dentalis</i>	
<i>Deilephila elpenor</i>	Elephant Hawk-moth
<i>Deilephila porcellus</i>	Small Elephant Hawk-moth
<i>Deltaornix torquillella</i>	
<i>Depressaria daucella</i>	
<i>Depressaria heraclei</i>	Parsnip Moth
<i>Diachrysis chrysis</i>	Burnished Brass
<i>Diaphora mendica</i>	Muslin Moth
<i>Diarsia mendica</i>	Ingrailed Clay
<i>Diarsia rubi</i>	Small Square-spot
<i>Dichomeris marginella</i>	Juniper Webber
<i>Dichonia aprilina</i>	Merveille du Jour
<i>Dichrorampha acuminatana</i>	
<i>Dichrorampha alpinana</i>	
<i>Dichrorampha consortana</i>	
<i>Dichrorampha flavidorsana</i>	
<i>Dichrorampha petiverella</i>	
<i>Dichrorampha plumbagana</i>	
<i>Dichrorampha plumbana</i>	
<i>Dichrorampha sequana</i>	
<i>Dichrorampha simpliciana</i>	
<i>Dichrorampha vancouverana</i>	
<i>Digitivalva pulicariae</i>	
<i>Dioryctria abietella</i>	

Moths	Common Name
<i>Dipleurina lacustrata</i>	
<i>Discestra trifolii</i>	Nutmeg
<i>Ditula angustiorana</i>	Red-barred Tortrix
<i>Diurnea fagella</i>	
<i>Dolicharthria punctalis</i>	
<i>Donacaula forficella</i>	
<i>Donacaula mucronellus</i>	
<i>Drepana falcataria</i>	Pebble Hook-tip
<i>Dypterygia scabriuscula</i>	Bird's Wing
<i>Eana incanana</i>	
<i>Eana osseana</i>	
<i>Earias clorana</i>	Cream-bordered Green Pea
<i>Ectoedemia argyropeza</i>	
<i>Ectoedemia decentella</i>	
<i>Ectoedemia erythrogenella</i>	
<i>Ectoedemia heringella</i>	
<i>Ectoedemia heringi</i>	
<i>Ectoedemia intimella</i>	
<i>Ectoedemia lousella</i>	
<i>Ectoedemia occultella</i>	
<i>Ectoedemia septembrella</i>	
<i>Ectoedemia sericopeza</i>	
<i>Ectoedemia subbimaculella</i>	
<i>Ectropis bistortata</i>	Engrailed
<i>Eidophasia messingiella</i>	
<i>Eilema complana</i>	Scarce Footman
<i>Eilema depressa</i>	Buff Footman
<i>Eilema griseola</i>	Dingy Footman
<i>Eilema lurideola</i>	Common Footman
<i>Elachista argentella</i>	
<i>Elachista atricomella</i>	
<i>Elachista canapennella</i>	
<i>Elachista rufocinerea</i>	
<i>Elegia similella</i>	
<i>Emmelina monodactyla</i>	
<i>Emmetia marginea</i>	
<i>Enargia paleacea</i>	Angle-striped Sallow
<i>Enarmonia formosana</i>	Cherry Bark Moth
<i>Endothenia ericetana</i>	
<i>Endothenia gentianaeana</i>	
<i>Endothenia marginana</i>	
<i>Endothenia oblongana</i>	
<i>Endothenia quadrimaculana</i>	
<i>Endotricha flammealis</i>	
<i>Endrosis sarcitrella</i>	White-shouldered House Moth
<i>Ennomos alniaria</i>	Canary-shouldered Thorn
<i>Ennomos autumnaria</i>	Large Thorn
<i>Ennomos erosaria</i>	September Thorn
<i>Ennomos fuscantaria</i>	Dusky Thorn

Moths	Common Name
<i>Ennomos quercinaria</i>	August Thorn
<i>Epermenia aequidentellus</i>	
<i>Epermenia chaerophyllella</i>	
<i>Ephestia parasitella</i>	
<i>Epiblema cynosbatella</i>	
<i>Epiblema foenella</i>	
<i>Epiblema roborana</i>	
<i>Epiblema rosaecolana</i>	
<i>Epiblema trimaculana</i>	
<i>Epiblema uddmanniana</i>	Bramble Shoot Moth
<i>Epinotia abbreviana</i>	
<i>Epinotia bilunana</i>	
<i>Epinotia immundana</i>	
<i>Epinotia nisella</i>	
<i>Epinotia ramella</i>	
<i>Epinotia solandriana</i>	
<i>Epione repandaria</i>	Bordered Beauty
<i>Epiphyas postvittana</i>	Light Brown Apple Moth
<i>Epirrhoe alternata</i>	Common Carpet
<i>Epirrhoe galiata</i>	Galium Carpet
<i>Epirrita christyi</i>	Pale November Moth
<i>Epirrita dilutata</i>	November Moth
<i>Erannis defoliaria</i>	Mottled Umber
<i>Eremobia ochroleuca</i>	Dusky Sallow
<i>Eriocrania subpurpurella</i>	
<i>Esperia sulphurella</i>	
<i>Ethmia dodecea</i>	
<i>Eublemma parva</i>	Small Marbled
<i>Eublemma purpurina</i>	Beautiful Marbled
<i>Euchoeca nebulata</i>	Dingy Shell
<i>Euchromius ocella</i>	
<i>Eucosma campoliliana</i>	
<i>Eucosma cana</i>	
<i>Eucosma conterminana</i>	
<i>Eucosma hohenwartiana</i>	
<i>Eucosma obumbratana</i>	
<i>Eucosma tripoliana</i>	
<i>Eudemis profundana</i>	
<i>Eudonia angustea</i>	
<i>Eudonia delunella</i>	
<i>Eudonia mercurella</i>	
<i>Eudonia pallida</i>	
<i>Eudonia truncicolella</i>	
<i>Eulamprotes atrella</i>	
<i>Eulamprotes wilkella</i>	
<i>Euleioptilus carphodactyla</i>	
<i>Eulithis mellinata</i>	Spinach
<i>Eulithis prunata</i>	Phoenix
<i>Eulithis pyraliata</i>	Barred Straw

Moths	Common Name
<i>Eupithecia abbreviata</i>	Brindled Pug
<i>Eupithecia absinthiata</i>	Wormwood Pug
<i>Eupithecia assimilata</i>	Currant Pug
<i>Eupithecia centaureata</i>	Lime-speck Pug
<i>Eupithecia dodoneata</i>	Oak-tree Pug
<i>Eupithecia haworthiata</i>	Haworth's Pug
<i>Eupithecia icterata</i>	Tawny Speckled Pug
<i>Eupithecia insigniata</i>	Pinion-spotted Pug
<i>Eupithecia intricata</i>	Freyer's Pug
<i>Eupithecia inturbata</i>	Maple Pug
<i>Eupithecia linariata</i>	Toadflax Pug
<i>Eupithecia millefoliata</i>	Yarrow Pug
<i>Eupithecia nanata</i>	Narrow-winged Pug
<i>Eupithecia phoeniceata</i>	Cypress Pug
<i>Eupithecia simpliciata</i>	Plain Pug
<i>Eupithecia subfuscata</i>	Grey Pug
<i>Eupithecia subumbrata</i>	Shaded Pug
<i>Eupithecia succenturiata</i>	Bordered Pug
<i>Eupithecia tantillaria</i>	Dwarf Pug
<i>Eupithecia tenuiata</i>	Slender Pug
<i>Eupithecia tripunctaria</i>	White-spotted Pug
<i>Eupithecia ultimaria</i>	Channel Islands Pug
<i>Eupithecia vulgata</i>	Common Pug
<i>Euplagia quadripunctaria</i>	Jersey Tiger
<i>Euplexia lucipara</i>	Small Angle Shades
<i>Eupoecilia angustana</i>	
<i>Euproctis chrysorrhoea</i>	Brown-tail
<i>Euproctis similis</i>	Yellow-tail
<i>Eupsilia transversa</i>	Satellite
<i>Eurois occulta</i>	Great Brocade
<i>Eurrhpara hortulata</i>	Small Magpie
<i>Euthrix potatoria</i>	Drinker
<i>Euxoa tritici</i>	White-line Dart
<i>Euzophora pinguis</i>	
<i>Evergestis extimalis</i>	
<i>Evergestis forficalis</i>	Garden Pebble
<i>Exoteleia dodecella</i>	
<i>Falcaria lacertinaria</i>	Scalloped Hook-tip
<i>Furcula bifida</i>	Poplar Kitten
<i>Furcula furcula</i>	Sallow Kitten
<i>Galleria mellonella</i>	Wax Moth
<i>Glyphipterix simpliciella</i>	Cocksfoot Moth
<i>Glyphipterix thrasonella</i>	
<i>Gonepteryx rhamni</i>	Brimstone
<i>Goniodoma limoniella</i>	
<i>Grapholita caecana</i>	
<i>Grapholita compositella</i>	
<i>Grapholita funebrana</i>	Plum Fruit Moth
<i>Grapholita janthinana</i>	

Moths	Common Name
<i>Grapholita lobarzewskii</i>	
<i>Grapholita tenebrosana</i>	
<i>Gymnoscelis rufifasciata</i>	Double-striped Pug
<i>Gynnidomorpha vectisana</i>	
<i>Gypsonoma aceriana</i>	
<i>Gypsonoma dealbana</i>	
<i>Gypsonoma minutana</i>	
<i>Gypsonoma oppressana</i>	
<i>Gypsonoma sociana</i>	
<i>Habrosyne pyritoides</i>	Buff Arches
<i>Hada nana</i>	Shears
<i>Hada plebeja</i>	Shears
<i>Hadena bicruris</i>	Lychnis
<i>Hadena compta</i>	Varied Coronet
<i>Hadena confusa</i>	Marbled Coronet
<i>Hadena perplexa</i>	Tawny Shears
<i>Hadena rivularis</i>	Campion
<i>Hecatera bicolorata</i>	Broad-barred White
<i>Hedya nubiferana</i>	Marbled Orchard Tortrix
<i>Hedya pruniana</i>	Plum Tortrix
<i>Hedya salicella</i>	
<i>Helcystogramma rufescens</i>	
<i>Helicoverpa armigera</i>	Scarce Bordered Straw
<i>Heliothis peltigera</i>	Bordered Straw
<i>Hemistola chrysoprasaria</i>	Small Emerald
<i>Hemithea aestivaria</i>	Common Emerald
<i>Hepialus humuli</i>	Ghost Moth
<i>Hepialus lupulinus</i>	Common Swift
<i>Hepialus sylvina</i>	Orange Swift
<i>Herminia grisealis</i>	Small Fan-foot
<i>Hofmannophila pseudospretella</i>	Brown House Moth
<i>Homoeosoma nebulella</i>	
<i>Homoeosoma sinuella</i>	
<i>Hoplodrina alsines</i>	Uncertain
<i>Hoplodrina ambigua</i>	Vine's Rustic
<i>Hoplodrina blanda</i>	Rustic
<i>Horisme tersata</i>	Fern
<i>Horisme vitalbata</i>	Small Waved Umber
<i>Hydraecia micacea</i>	Rosy Rustic
<i>Hydrelia flammeolaria</i>	Small Yellow Wave
<i>Hydriomena furcata</i>	July Highflyer
<i>Hydriomena impluviata</i>	May Highflyer
<i>Hyles livornica</i>	Striped Hawk-moth
<i>Hyloicus pinastri</i>	Pine Hawk-moth
<i>Hypena proboscidalis</i>	Snout
<i>Hypena rostralis</i>	Buttoned Snout
<i>Hypsopygia costalis</i>	Gold Triangle
<i>Idaea aversata</i>	Riband Wave
<i>Idaea biselata</i>	Small Fan-footed Wave

Moths	Common Name
<i>Idaea dimidiata</i>	Single-dotted Wave
<i>Idaea fuscovenosa</i>	Dwarf Cream Wave
<i>Idaea rusticata</i>	Least Carpet
<i>Idaea seriata</i>	Small Dusty Wave
<i>Idaea subsericeata</i>	Satin Wave
<i>Idaea trigeminata</i>	Treble Brown Spot
<i>Inachis io</i>	Peacock
<i>Incurvaria masculella</i>	
<i>Ipimorpha subtusa</i>	Olive
<i>Isophrictis striatella</i>	
<i>Isotrias rectifasciana</i>	
<i>Lacanobia oleracea</i>	Bright-line Brown-eye
<i>Lacanobia suasa</i>	Dog's Tooth
<i>Lacanobia thalassina</i>	Pale-shouldered Brocade
<i>Lacanobia w-latinum</i>	Light Brocade
<i>Laothoe populi</i>	Poplar Hawk-moth
<i>Larentia clavaria</i>	Mallow
<i>Lasiocampa quercus</i>	Oak Eggar
<i>Lasiocampa trifolii</i>	Grass Eggar
<i>Lasiommata megera</i>	Wall
<i>Lathronympha strigana</i>	
<i>Leucoma salicis</i>	White Satin
<i>Leucoptera laburnella f. wailesella</i>	
<i>Leucospilapteryx omissella</i>	
<i>Ligdia adustata</i>	Scorched Carpet
<i>Limnaecia phragmitella</i>	
<i>Lithophane hepatica</i>	Pale Pinion
<i>Lithophane leautieri</i>	Blair's Shoulder-knot
<i>Lithophane leautieri hesperica</i>	Blair's Shoulder-knot
<i>Lithophane ornitopus lactipennis</i>	Grey Shoulder-knot
<i>Lithosia quadra</i>	Four-spotted Footman
<i>Lobesia abscisana</i>	
<i>Lobesia littoralis</i>	
<i>Lobophora halterata</i>	Seraphim
<i>Lomaspilis marginata</i>	Clouded Border
<i>Lomographa temerata</i>	Clouded Silver
<i>Loxostege sticticalis</i>	
<i>Lozotaeniodes formosanus</i>	
<i>Luffia ferchaultella</i>	
<i>Luperina testacea</i>	Flounced Rustic
<i>Luquetia lobella</i>	
<i>Lycaena phlaeas</i>	Small Copper
<i>Lygephila pastinum</i>	Blackneck
<i>Lymantria monacha</i>	Black Arches
<i>Lyonetia clerkella</i>	Apple Leaf Miner
<i>Macaria alternata</i>	Sharp-angled Peacock
<i>Macaria liturata</i>	Tawny-barred Angle
<i>Macaria notata</i>	Peacock Moth
<i>Macdunnoughia confusa</i>	Dewick's Plusia

Moths	Common Name
<i>Macroglossum stellatarum</i>	Humming-bird Hawk-moth
<i>Malacosoma neustria</i>	Lackey
<i>Mamestra brassicae</i>	Cabbage Moth
<i>Maniola jurtina</i>	Meadow Brown
<i>Marasmarcha lunaedactyla</i>	
<i>Mecyna flavalis subsp. flaviculalis</i>	
<i>Meganola albula</i>	Kent Black Arches
<i>Melanchra persicariae</i>	Dot Moth
<i>Menophra abruptaria</i>	Waved Umber
<i>Mesapamea didyma</i>	Lesser Common Rustic
<i>Mesapamea secalis</i>	Common Rustic
<i>Mesapamea secalis agg.</i>	Common Rustic agg.
<i>Mesoligia furuncula</i>	Cloaked Minor
<i>Mesoligia literosa</i>	Rosy Minor
<i>Metriotes lutarea</i>	
<i>Metzneria lappella</i>	
<i>Metzneria metzneriella</i>	
<i>Micropterix tunbergella</i>	
<i>Mitotichia miniata</i>	Rosy Footman
<i>Mimas tiliae</i>	Lime Hawk-moth
<i>Mirificarma mulinella</i>	
<i>Mompha epilobiella</i>	
<i>Mompha ochraceella</i>	
<i>Mompha propinquella</i>	
<i>Mompha raschkiella</i>	
<i>Mompha subbistrigella</i>	
<i>Monochroa cytisella</i>	
<i>Monochroa hornigi</i>	
<i>Monochroa lucidella</i>	
<i>Monochroa moyses</i>	
<i>Monochroa niphognatha</i>	
<i>Monochroa palustrella</i>	
<i>Monopis crocicapitella</i>	
<i>Monopis imella</i>	
<i>Monopis laevigella</i>	Skin Moth
<i>Monopis obviella</i>	
<i>Monopis weaverella</i>	
<i>Mormo maura</i>	Old Lady
<i>Myelois circumvoluta</i>	Thistle Ermine
<i>Mythimna albipuncta</i>	White-point
<i>Mythimna comma</i>	Shoulder-striped Wainscot
<i>Mythimna conigera</i>	Brown-line Bright Eye
<i>Mythimna favicolor</i>	Mathew's Wainscot
<i>Mythimna ferrago</i>	Clay
<i>Mythimna impura</i>	Smoky Wainscot
<i>Mythimna l-album</i>	L-album Wainscot
<i>Mythimna loreyi</i>	Cosmopolitan
<i>Mythimna obsoleta</i>	Obscure Wainscot
<i>Mythimna pallens</i>	Common Wainscot

<i>Moths</i>	Common Name
<i>Mythimna straminea</i>	Southern Wainscot
<i>Mythimna unipuncta</i>	White-speck
<i>Mythimna vitellina</i>	Delicate
<i>Naenia typica</i>	Gothic
<i>Nemapogon cloacella</i>	Cork Moth
<i>Nemophora degeerella</i>	
<i>Neosphaleroptera nubilana</i>	
<i>Nephoterix angustella</i>	
<i>Noctua comes</i>	Lesser Yellow Underwing
<i>Noctua fimbriata</i>	Broad-bordered Yellow Underwing
<i>Noctua interjecta</i>	Least Yellow Underwing
<i>Noctua interjecta caliginosa</i>	Least Yellow Underwing
<i>Noctua janthe</i>	Lesser Broad-bordered Yellow Underwing
<i>Noctua janthina</i>	Langmaid's Yellow Underwing
<i>Noctua pronuba</i>	Large Yellow Underwing
<i>Nola confusalis</i>	Least Black Arches
<i>Nola cucullatella</i>	Short-cloaked Moth
<i>Nomophila noctuella</i>	Rush Veneer
<i>Nonagria typhae</i>	Bulrush Wainscot
<i>Notodonta dromedarius</i>	Iron Prominent
<i>Notodonta ziczac</i>	Pebble Prominent
<i>Nycteola revayana</i>	Oak Nycteoline
<i>Nymphula nymphaeata</i>	Brown China-mark
<i>Ochlodes faunus</i>	Large Skipper
<i>Ochropacha duplaris</i>	Common Lutestring
<i>Ochropleura plecta</i>	Flame Shoulder
<i>Ocnerostoma friesei</i>	
<i>Odontopera bidentata</i>	Scalloped Hazel
<i>Oegoconia quadripuncta</i>	
<i>Oligia fasciuncula</i>	Middle-barred Minor
<i>Oligia latruncula</i>	Tawny Marbled Minor
<i>Oligia sp.</i>	
<i>Oligia strigilis</i>	Marbled Minor
<i>Oligia strigilis agg.</i>	Marbled Minor agg.
<i>Oligia versicolor</i>	Rufous Minor
<i>Omphaloscelis lunosa</i>	Lunar Underwing
<i>Oncocera semirubella</i>	
<i>Operophtera brumata</i>	Winter Moth
<i>Opisthograptis luteolata</i>	Brimstone Moth
<i>Opostega salaciella</i>	
<i>Orgyia antiqua</i>	Vapourer
<i>Orthonama obstipata</i>	Gem
<i>Orthopygia glaucinalis</i>	
<i>Orthosia cerasi</i>	Common Quaker
<i>Orthosia cruda</i>	Small Quaker
<i>Orthosia gothica</i>	Hebrew Character
<i>Orthosia gracilis</i>	Powdered Quaker
<i>Orthosia incerta</i>	Clouded Drab
<i>Orthosia munda</i>	Twin-spotted Quaker

Moths	Common Name
<i>Orthosia populeti</i>	Lead-coloured Drab
<i>Orthotaenia undulana</i>	
<i>Orthotelia sparganella</i>	
<i>Ostrinia nubilalis</i>	European Corn Borer
<i>Ourapteryx sambucaria</i>	Swallow-tailed Moth
<i>Oxyptilus distans</i>	
<i>Palpita vitrealis</i>	
<i>Pammene aurita</i>	
<i>Pammene fasciana</i>	
<i>Pammene gallicana</i>	
<i>Pammene germana</i>	
<i>Pammene regiana</i>	
<i>Pandemis cerasana</i>	Barred Fruit-tree Tortrix
<i>Pandemis corylana</i>	Chequered Fruit-tree Tortrix
<i>Pandemis heparana</i>	Dark Fruit-tree Tortrix
<i>Panolis flammea</i>	Pine Beauty
<i>Papilio machaon</i>	Swallowtail
<i>Paradrina clavipalpis</i>	Pale Mottled Willow
<i>Pararge aegeria</i>	Speckled Wood
<i>Parastichtis suspecta</i>	Suspected
<i>Parastichtis ypsilon</i>	Dingy Shears
<i>Paraswammerdamia albicapitella</i>	
<i>Paraswammerdamia nebulosa</i>	
<i>Parectopa ononidis</i>	
<i>Parornix anglicella</i>	
<i>Parornix scoticella</i>	
<i>Pasiphila rectangulata</i>	Green Pug
<i>Pediasia aridella</i>	
<i>Pediasia contaminella</i>	
<i>Pelochrista caecimaculana</i>	
<i>Pelurga comitata</i>	Dark Spinach
<i>Pempelia genistella</i>	
<i>Pempeliella dilutella</i>	
<i>Peribatodes rhomboidaria</i>	Willow Beauty
<i>Peridroma saucia</i>	Pearly Underwing
<i>Perinephela lancealis</i>	
<i>Perizoma alchemillata</i>	Small Rivulet
<i>Perizoma bifaciata</i>	Barred Rivulet
<i>Perizoma flavofasciata</i>	Sandy Carpet
<i>Petrophora chlorosata</i>	Brown Silver-line
<i>Pexicopia malvella</i>	Hollyhock Seed Moth
<i>Phalera bucephala</i>	Buff-tip
<i>Phalonidia affinitana</i>	
<i>Phalonidia manniana</i>	
<i>Pheosia gnoma</i>	Lesser Swallow Prominent
<i>Pheosia tremula</i>	Swallow Prominent
<i>Phigalia pilosaria</i>	Pale Brindled Beauty
<i>Phlogophora meticulosa</i>	Angle Shades
<i>Phlyctaenia coronata</i>	

Moths	Common Name
<i>Phlyctaenia perlucidalis</i>	
<i>Photodes minima</i>	Small Dotted Buff
<i>Phragmatobia fuliginosa</i>	Ruby Tiger
<i>Phtheochroa inopiana</i>	
<i>Phycita roborella</i>	
<i>Phycitodes binaevella</i>	
<i>Phycitodes maritima</i>	
<i>Phycitodes saxicola</i>	
<i>Phyllocnistis ramulicola</i>	
<i>Phyllocnistis unipunctella</i>	
<i>Phyllocnistis xenia</i>	
<i>Phyllonorycter acerifoliella</i>	
<i>Phyllonorycter blaucardella</i>	
<i>Phyllonorycter corylifoliella</i>	
<i>Phyllonorycter emberizaepenella</i>	
<i>Phyllonorycter froelichiella</i>	
<i>Phyllonorycter geniculella</i>	
<i>Phyllonorycter kleemannella</i>	
<i>Phyllonorycter lantanella</i>	
<i>Phyllonorycter leucographella</i>	Firethorn Leaf Miner
<i>Phyllonorycter maestingella</i>	
<i>Phyllonorycter messaniella</i>	
<i>Phyllonorycter oxyacanthae</i>	
<i>Phyllonorycter platani</i>	
<i>Phyllonorycter platanoidella</i>	
<i>Phyllonorycter quercifoliella</i>	
<i>Phyllonorycter rajella</i>	
<i>Phyllonorycter salictella</i>	
<i>Phyllonorycter schreberella</i>	
<i>Phyllonorycter stettinensis</i>	
<i>Phyllonorycter strigulatella</i>	
<i>Phyllonorycter trifasciella</i>	
<i>Phyllonorycter tristigella</i>	
<i>Phyllonorycter ulmifoliella</i>	
<i>Phytometra viridaria</i>	Small Purple-barred
<i>Pieris brassicae</i>	Large White
<i>Pieris napi</i>	Green-veined White
<i>Pieris rapae</i>	Small White
<i>Piniphila bifasciana</i>	
<i>Plagodis dolabraria</i>	Scorched Wing
<i>Platyedra subcinerea</i>	
<i>Platyperigea kadenii</i>	Clancy's Rustic
<i>Platyptilia gonodactyla</i>	
<i>Platyptilia ochrodactyla</i>	
<i>Platyptilia pallidactyla</i>	
<i>Platytes alpinella</i>	
<i>Platytes cerussella</i>	
<i>Plemyria rubiginata</i>	Blue-bordered Carpet
<i>Pleuroptya ruralis</i>	Mother of Pearl

Moths	Common Name
<i>Plodia interpunctella</i>	Indian Meal Moth
<i>Plusia festucae</i>	Gold Spot
<i>Plutella porrectella</i>	
<i>Plutella xylostella</i>	Diamond-back Moth
<i>Polychrysia moneta</i>	Golden Plusia
<i>Polygonia c-album</i>	Comma
<i>Polymixis lichenea</i>	Feathered Ranunculus
<i>Polyommatus icarus</i>	Common Blue
<i>Prays fraxinella</i>	Ash Bud Moth
<i>Prochoreutis myllerana</i>	
<i>Protodeltote pygarga</i>	Marbled White Spot
<i>Psammotis pulveralis</i>	
<i>Pseudargyrotoza conwagana</i>	
<i>Pseudoips prasinana</i>	Green Silver-lines
<i>Pseudoswammerdamia combinella</i>	
<i>Pseudotelphusa paripunctella</i>	
<i>Psyche casta</i>	
<i>Pterophorus pentadactyla</i>	White Plume Moth
<i>Pterostoma palpina</i>	Pale Prominent
<i>Ptocheuusa paupella</i>	
<i>Ptycholoma lecheana</i>	
<i>Pyralis farinalis</i>	Meal Moth
<i>Pyrausta aurata</i>	
<i>Pyrausta despicata</i>	
<i>Pyronia tithonus</i>	Gatekeeper
<i>Pyrrhia umbra</i>	Bordered Sallow
<i>Recurvaria nanella</i>	
<i>Rhizedra lutosa</i>	Large Wainscot
<i>Rhodometra sacraria</i>	Vestal
<i>Rhopobota naevana</i>	Holly Tortrix
<i>Rhyacionia buoliana</i>	Pine Shoot Moth
<i>Rhyacionia pinivorana</i>	Spotted Shoot Moth
<i>Rivula sericealis</i>	Straw Dot
<i>Schoenobius gigantella</i>	
<i>Schrankia costaestrigalis</i>	Pinion-streaked Snout
<i>Schreckensteinia festaliella</i>	
<i>Sciota adelphella</i>	
<i>Scoliopteryx libatrix</i>	Herald
<i>Scoparia ambigualis</i>	
<i>Scoparia basistrigalis</i>	
<i>Scoparia pyralella</i>	
<i>Scoparia subfusca</i>	
<i>Scopula emutaria</i>	Rosy Wave
<i>Scopula floslactata</i>	Cream Wave
<i>Scopula imitaria</i>	Small Blood-vein
<i>Scopula immutata</i>	Lesser Cream Wave
<i>Scopula marginepunctata</i>	Mullein Wave
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar
<i>Scrobipalpa acuminatella</i>	

Moths	Common Name
<i>Scrobipalpa atriplicella</i>	
<i>Scrobipalpa costella</i>	
<i>Scrobipalpa nitentella</i>	
<i>Scrobipalpa ocellatella</i>	Beet Moth
<i>Scrobipalpa salinella</i>	
<i>Scythropia crataegella</i>	Hawthorn Moth
<i>Selenia dentaria</i>	Early Thorn
<i>Selenia tetralunaria</i>	Purple Thorn
<i>Semiaspilates ochrearia</i>	Yellow Belle
<i>Sesia bembeciformis</i>	Lunar Hornet Moth
<i>Shargacucullia verbasci</i>	Mullein
<i>Sideridis albicolon</i>	White Colon
<i>Simyra albovenosa</i>	Reed Dagger
<i>Sitochroa palealis</i>	
<i>Smerinthus ocellata</i>	Eyed Hawk-moth
<i>Sophronia semicostella</i>	
<i>Sparganothis pilleriana</i>	
<i>Spatalistis bifasciana</i>	
<i>Sphinx ligustri</i>	Privet Hawk-moth
<i>Spilonota laricana</i>	
<i>Spilonota ocellana</i>	Bud Moth
<i>Spilosoma lubricipeda</i>	White Ermine
<i>Spilosoma luteum</i>	Buff Ermine
<i>Spodoptera exigua</i>	Small Mottled Willow
<i>Spuleria flavicaput</i>	
<i>Stenoptilia bipunctidactyla</i>	
<i>Stenoptilia pterodactyla</i>	
<i>Stigmella alnetella</i>	
<i>Stigmella anomalella</i>	Rose Leaf Miner
<i>Stigmella atricapitella</i>	
<i>Stigmella aurella</i>	
<i>Stigmella basiguttella</i>	
<i>Stigmella centifoliella</i>	
<i>Stigmella hybnerella</i>	
<i>Stigmella lemniscella</i>	
<i>Stigmella microtheriella</i>	
<i>Stigmella obliquella</i>	
<i>Stigmella oxyacanthella</i>	
<i>Stigmella perpygmaeella</i>	
<i>Stigmella plagicolella</i>	
<i>Stigmella roborella</i>	
<i>Stigmella ruficapitella</i>	
<i>Stigmella salicis</i>	
<i>Stigmella suberivora</i>	
<i>Stigmella tityrella</i>	
<i>Stigmella trimaculella</i>	
<i>Stigmella ulmivora</i>	
<i>Stigmella viscerella</i>	
<i>Swammerdamia caesiella</i>	

Moths	Common Name
<i>Swammerdamia pyrella</i>	
<i>Synaphe punctalis</i>	
<i>Syndemis musculana</i>	
<i>Tachystola acroxantha</i>	
<i>Taleporia tubulosa</i>	
<i>Teleiodes vulgella</i>	
<i>Tethea ocularis</i>	Figure of Eighty
<i>Tethea ocularis octogesimea</i>	Figure of Eighty
<i>Thalophila matura</i>	Straw Underwing
<i>Thera britannica</i>	Spruce Carpet
<i>Thera cupressata</i>	Cypress Carpet
<i>Thera obeliscata</i>	Grey Pine Carpet
<i>Thiodia citrana</i>	
<i>Tholera cespitis</i>	Hedge Rustic
<i>Tholera decimalis</i>	Feathered Gothic
<i>Thumatha senex</i>	Round-winged Muslin
<i>Thyatira batis</i>	Peach Blossom
<i>Thymelicus lineola</i>	Essex Skipper
<i>Thymelicus sylvestris</i>	Small Skipper
<i>Timandra comae</i>	Blood-vein
<i>Tinagma ocnerostomella</i>	
<i>Tinea pellionella</i>	Case-bearing Clothes Moth
<i>Tinea semifulvella</i>	
<i>Tinea trinotella</i>	
<i>Tineola bisselliella</i>	Common Clothes Moth
<i>Tischeria ekebladella</i>	
<i>Tortrix viridana</i>	Green Oak Tortrix
<i>Trachycera advenella</i>	
<i>Trachycera marmorea</i>	
<i>Trachycera suavella</i>	
<i>Triaxomera parasitella</i>	
<i>Trichoplusia ni</i>	Ni Moth
<i>Tyria jacobaeae</i>	Cinnabar
<i>Udea ferrugalis</i>	Rusty-dot Pearl
<i>Udea lutealis</i>	
<i>Udea olivalis</i>	
<i>Udea prunalis</i>	
<i>Vanessa atalanta</i>	Red Admiral
<i>Vanessa cardui</i>	Painted Lady
<i>Watsonalla binaria</i>	Oak Hook-tip
<i>Xanthia aurago</i>	Barred Sallow
<i>Xanthia gilvago</i>	Dusky-lemon Sallow
<i>Xanthia ictertia</i>	Sallow
<i>Xanthia ocellaris</i>	Pale-lemon Sallow
<i>Xanthia togata</i>	Pink-barred Sallow
<i>Xanthorhoe biriviata</i>	Balsam Carpet
<i>Xanthorhoe designata</i>	Flame Carpet
<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet
<i>Xanthorhoe fluctuata</i>	Garden Carpet

<i>Moths</i>	Common Name
<i>Xanthorhoe fluctuata fluctuata</i>	Garden Carpet
<i>Xanthorhoe montanata</i>	Silver-ground Carpet
<i>Xanthorhoe spadicearia</i>	Red Twin-spot Carpet
<i>Xestia c-nigrum</i>	Setaceous Hebrew Character
<i>Xestia sexstrigata</i>	Six-striped Rustic
<i>Xestia triangulum</i>	Double Square-spot
<i>Xestia xanthographa</i>	Square-spot Rustic
<i>Xylocampa areola</i>	Early Grey
<i>Yponomeuta cagnagella</i>	Spindle Ermine
<i>Yponomeuta evonymella</i>	Bird-cherry Ermine
<i>Yponomeuta malinellus</i>	Apple Ermine
<i>Yponomeuta padella</i>	Orchard Ermine
<i>Yponomeuta rorella</i>	Willow Ermine
<i>Ypsolopha alpella</i>	
<i>Ypsolopha dentella</i>	Honeysuckle Moth
<i>Ypsolopha scabrella</i>	
<i>Ypsolopha vittella</i>	
<i>Zeiraphera griseana</i>	Larch Tortrix
<i>Zeiraphera isertana</i>	
<i>Zeuzera pyrina</i>	Leopard Moth
<i>Zygaena filipendulae</i>	Six-spot Burnet

The Mamals of Milton Common.

Mamal	Common Name
Erinaceus europaens	Hedgehog
Sorex araneus	Common Shrew
Microtus agrestis	Field Vole
Vulpus vulpus	Fox
Oryctolagus cuniculus	Rabbit
Sciurus carolinensis	Grey Squirrel
Rattus norvegicus	Brown Rat
Myotis daubentonii	Daubenton's Bat
Nyctalus noctula	Noctule Bat
Pipistrellus pipistrellus	Pipistrelle
Clethrionomys glareolus	Bank vole
Apodemus sylvaticus	Wood mouse

Appendix 1. Higher Level Stewardship financial breakdown

[illegible]

Milton Common:

Milton Common is a large area of grassland, scrub and ponds located on the west edge of Langstone Harbour. The site is predominantly reclaimed intertidal land used as a dump from 1962-1970. The grassland present ranges from amenity to rough sward. The rough grassland has developed a good diversity of species, with a strong coastal element. There is extensive dense and scattered scrub throughout the site, especially to the east. There are three ponds present, which provide some stands of reed-bed. The coastal edge of the site supports salt-marsh vegetation. Overall the species diversity is excellent, with nearly 200 species noted within the common. These include 3 acid/neutral grassland indicators and the Nationally Rare *Bupleurum tenuissimum* and *Lathyrus aphaca*, the Nationally Scarce *Medicago polymorpha*, and the County Scarce *Smyrniolum olusatrum* and *Linum bienne*. The conservation management value of the site is especially important due to the proximity to the internationally important Langstone/Chichester Harbours which are designated as SSSI, SPA, SAC and Ramsar sites.

Management of the grassland is essential to maintain its structure, balance and diversity. Without management grassland becomes coarse and rank, loses both diversity and interest, and will eventually turn into scrub as it has over a large part of the Common.

The overriding factor in the grassland management of the Common is the topology of the site. Since the initial capping there has been a great deal of resettling of the surface and subsurface as the organic material has decomposed. This has left the surface very uneven and difficult to work especially with machinery. It has also resulted in the exposure of a certain amount of the old dumped material such as concrete blocks, metal reinforcing bars and much, much more.



Eastney Beach:

Eastney Beach is classified as 'Coastal Vegetated Shingle' a Priority Habitat as defined under the UK Biodiversity Action Plan and a Habitat of Principal Importance in England under Section 41 of the Natural Environment and Rural Communities Act 2006. The site comprises areas of bare shingle, shingle vegetation and coastal grassland. There is an excellent diversity of shingle, sand dune and coastal species with approximately 100 species present. These include the County Scarce species *Rosa pimpinellifolia*, *Trifolium scabrum*, *Raphanus raphanistrum* ssp. *maritimum*, *Honkenya peploides*, *Glaucium flavum*, *Crithmum maritimum*, *Carex arenaria*, *Crambe maritima*, *Sedum anglicum* and *Atriplex glabriuscula*. The County Rare *Silene noctiflora* and the County of Interest *Medicago sativa* ssp. *falcata* are also present.

Ecological management of the site is limited to the control of invasive species and also the education of the many visitors that use the site. Portsmouth promotes itself as the 'Sea Front City' the ecological diversity of this site contributes to its social and natural feeling for visitors. Though it must also be mentioned that increased recreational pressure can result in the habitat degradation, especially around developments.



<i>Bupleurum tenuissimum</i>	Slender Hare's-Ear
<i>Lathyrus aphaca</i>	Yellow Vetchling
<i>Medicago polymorpha</i>	Toothed Medick
<i>Smyrniium olusatrum</i>	Alexanders
<i>Linum bienne</i>	Pale Flax
<i>Rosa pimpinellifolia</i>	Burnet Rose
<i>Trifolium scabrum</i> ,	Rough Clover
<i>Raphanus raphanistrum ssp maritimum</i>	Sea Radish
<i>Honkenya peploides</i>	Sea Sandwort
<i>Glaucium flavum</i>	Yellow Horned-Poppy
<i>Crithmum maritimum</i> ,	Rock Samphire
<i>Carex arenaria</i>	Sand Sedge
<i>Crambe maritima</i>	Sea Kale
<i>Sedum anglicum</i>	English Stonecrop
<i>Atriplex glabriuscula</i>	Babington's orache
<i>Silene noctiflora</i>	Night-Flowering Catchfly
<i>Silene nutans</i>	Nottingham Catchfly

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Information regarding the council's support for schools for the scrutiny review into the enhancement of biodiversity in urban Portsmouth.

Supplied by the Deputy Director of Children, Families and Education - Education

How well is it going?

I don't know enough of the detail of our work with schools in terms of green infrastructure but where schools have engaged. I know it has been very well received and the report gives some good examples of this. There is a lot of opportunity here and it fits well with the curriculum and the work schools are doing to make children aware of their environment and climate change.

What are the barriers to engaging with schools?

Schools are currently under a lot of pressure due to the impact of the pandemic and the number of children (and staff) who are absent, both in primary and secondary. This is the main barrier to engagement at the moment but hopefully this will improve as we go past the peak of the latest wave of infections.

Some of our primary schools have very little space and no green space so this will limit their engagement. It does vary across the city.

Is there normally just one person in the school who takes responsibility for the projects? Is there a consistent approach?

The main point of contact will be the Headteacher, particularly in primary schools. There will not be a consistent approach due to the diverse mix of schools and Multi Academy Trusts that we have.

What could be improved?

I'm not sure there is much more we can do to improve things. Communications have been good and the Education Service is more than happy to promote the work and support the engagement of schools through our weekly communications to schools (PEP bulletin and Friday message to Heads) and our monthly briefings with Headteachers.

Are there any policies that help/ hinder your work? Plus any other points you would like to make.

None.

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The Australia Blocks

Biodiversity Questionnaire for Chairs of Council Residents' Associations and Housing Block Representatives.

The Council, through its Transport, Environment and Community Safety Scrutiny Panel, is conducting a review into biodiversity enhancement in urban Portsmouth with the aim of positively contributing to re-wilding and support for other approaches to re "greening" Portsmouth.

The views of council residents' associations and block representatives are very important to us, so please keep reading and do complete our short questionnaire on behalf of your organisation.

Biodiversity is the variety of living things on earth, from the smallest insect to the largest mammal and tree. Allotments, especially those in a compact city such as Portsmouth, are important habitats for wildlife as they provide food, shelter and breeding sites for many species of insects and wildlife. By gardening in harmony with nature, even in the smallest of spaces, we benefit as much as pollinators and wild creatures.

In your experience, what proportion of resident members of your association:

(please tick relevant box):

	None	Some	Most
Grow plants or vegetables in tubs, containers, hanging baskets or planters, window boxes on their patio or balcony		/	
Provide a water source for wildlife.		/	
Provide nesting boxes/ insect hotels/ bee blocks/ bird feeders on their patio or balcony		/	
Please add any comments about other activities your residents take to improve biodiversity:			

In your communal gardens and areas, do you: (please tick relevant box)

	Yes	No
Provide communal space for residents to grow fruit and vegetables?	/	
Use fences as frames for climbers/ivy (to create wildlife havens)?		/
Grow hedges around the perimeter of the site (to encourage wildlife)?	/	
Grow native trees and/ or fruit trees within your communal areas?	/	
Cut grass only when it is 5cm+ long (leaving it for more than 2 weeks in the summer)?	/	
Have a <u>maintained</u> wild area for wildflowers and/ or wild grasses?		/

Think about enhancing biodiversity when planting children's play areas (if relevant)?		/
Have a log pile?		/
Provide nesting boxes/ hedgehog houses/ insect hotels/ bat boxes/ bird feeders?	/	
Please provide comments about other activities your Residents Association undertakes to improve biodiversity on your site:		

Thinking about your association and its residents:

	Not at all	A little	Quite a bit	A lot
To what extent would you say residents in your association/ block are concerned about biodiversity?			/	

	Yes	No
Has the issue of improving biodiversity been raised by residents?		/
Do you think it would be helpful for your residents to receive more information about the role they can play in increasing biodiversity in their outside spaces?	/	
Would you like help/ advice/ training on identifying biodiversity opportunities for your Residents' Association?		
Are there any projects you have in mind which would enhance the biodiversity of your site?		/
If yes, please provide a summary of what your project idea and any problems you are facing in achieving your aims:		
If you have any other comments about biodiversity enhancement, please include them here:		

Thank you very much for contributing to our review.

If you would like a link to the review report when it is published in March 2022, please insert your email address in the box below:

My email address is:

You can also follow the progress of our review by keeping an eye out on the Portsmouth Council website at [Browse meetings - Traffic, Environment & Community Safety Scrutiny Panel Portsmouth City Council](#) or subscribe for updates at [Logon to Subscribe to Updates Portsmouth City Council](#).