

2021 - 2026 MANAGEMENT PLAN

LANDGUARD NATURE RESERVE

SITE OF SPECIAL SCIENTIFIC INTEREST

FELIXSTOWE LANDGUARD PENINSULA



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1. INTRODUCTION

Landguard Nature Reserve is designated as a Local Nature Reserve (LNR), Site of Special Scientific Interest (SSSI), and a Scheduled Monument (SM). Ownership of the site is split between East Suffolk Council (ESC), and Harwich Haven Authority (HHA) and is under entry-and higher-level stewardship with Natural England (NE) until 2023.

This Management Plan is intended to inform and advise on the management of the area in relation to its LNR, SSSI and SM status and management obligations under NE stewardship.

The plan aims to conserve and enhance the sites biodiversity interest and acts under the Landguard Partnership to ensure that the Landguard peninsula is managed in a sustainable manner, contributing to nationally important environmental conservation, cultural heritage, educational resources, and economic prosperity of the area, in ways that are sensitive to the wildlife present whilst considering the needs of the local community.

The Reserve is divided up into 16 compartments, divided along habitat types and / or management requirements (Appendix VIII). Habitat and plant community descriptions can be found in section 5 and 6.

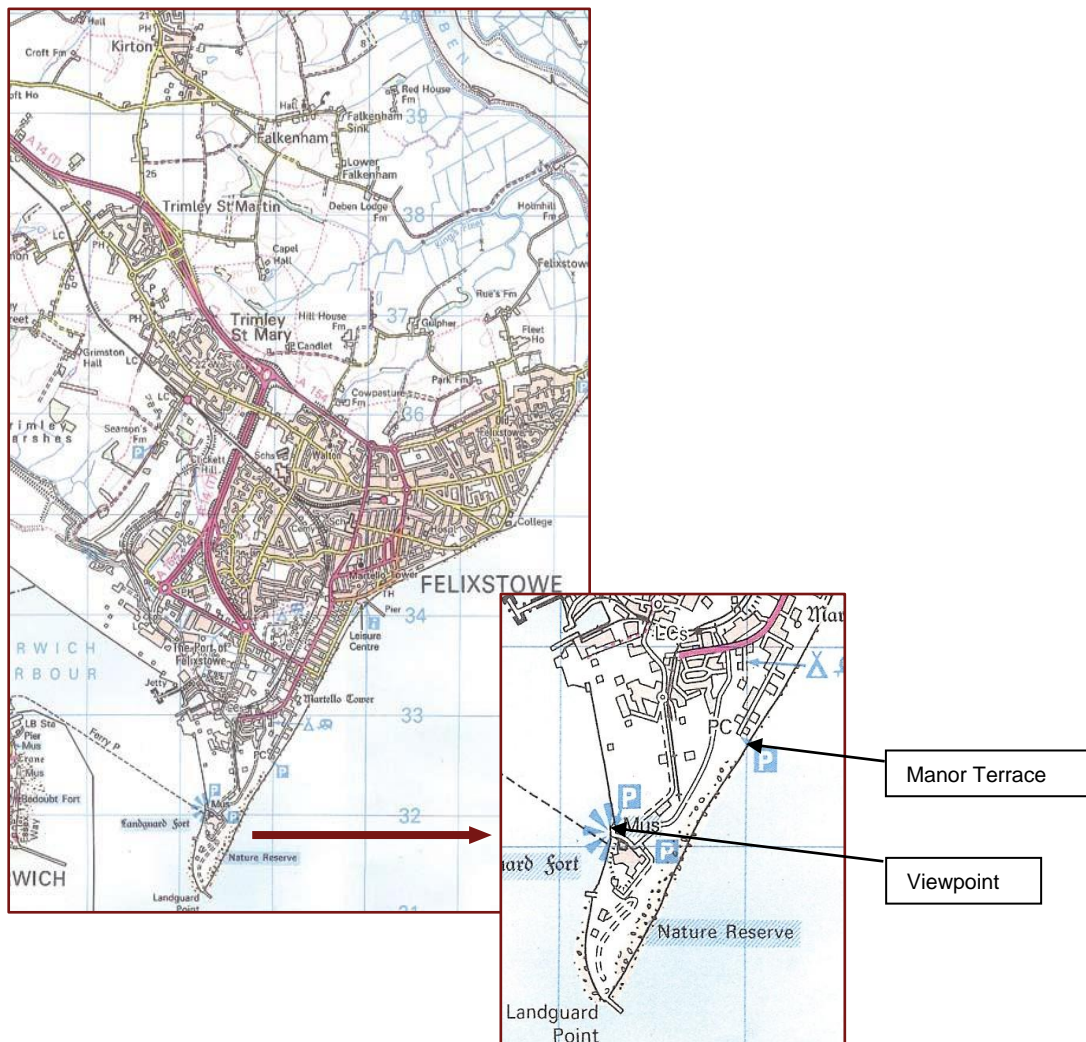
2. GENERAL INFORMATION

2.1 Location

Grid reference: TM 285320. OS Sheet 169, 1:50 000 Landranger Series

Address: HHBC Landguard Bungalow
Viewpoint Road
Felixstowe
Suffolk
IP11 3TW

Landguard Nature Reserve is located south of Felixstowe on the Landguard Peninsula, at the mouth of the Harwich Haven Harbour. The Reserve is accessed via Manor Terrace and Viewpoint Road. Public parking is available at the main pedestrian access points to the Reserve.



2.2 Designations

Local Nature Reserve (LNR)
 Site of Special Scientific Interest (SSSI)
 Scheduled Monument (SM)
 (See appendix I and II)

2.3. Area of Land

Landowner	Size (ha)	of which LNR	of which SSSI	of which SM
East Suffolk Council	25.4	Most	Most	Most
Harwich Haven Authority	6	None	Most	All
English Heritage (right battery)	1.5	None	All	All
English Heritage (left battery)	0.8	None	All	All
Total (ha)	33.7	24	31	34.9

2.4. Land Tenure (see appendix III)

Multiple owners are associated with the Nature Reserve as highlighted above, comprising Harwich Haven Authority (HHA), English Heritage (EH) and East Suffolk Council (ESC).

Harwich Harbour Authority own 6 hectares of land to the west of the Nature Reserve adjacent to the mouth of the Harwich Harbour.

English Heritage own 2.3 hectares of land predominantly associated with the Left and Right Batteries.

ESC owns the largest area of land (25.4 hectares) spanning almost the length of the Reserve from Manor Terrace car park to the HHA boundary at the southernmost tip of Reserve known as Landguard Point.

2.5. Surrounding Land Use

The complex of historic buildings along the western boundary of the Reserve are owned by the Historic Buildings and Monuments Commission of England and managed on their behalf by the English Heritage Trust.

The sites are occupied under agreement or licence by: Landguard Bird Observatory (LBO), Landguard Fort Trust (LFT) and the Felixstowe History and Museum Society (FHMS).

Both the Fort and the Museum are open to the public from April to November. The LBO operates a programme of bird ringing and recording all year round and is closed to the public except by appointment. Additionally, the LBO runs a paid membership scheme which allows access to members.

West of Viewpoint Road is the Port of Felixstowe. This is currently the busiest container port in the United Kingdom owing to its deep-water shipping channel that runs around the Point, out of the harbour to the north-west out to sea.

North of the Museum and Fort, adjacent to the Port is the Viewpoint car park, café and small information point. Manor Terrace car park is situated to the north of the Reserve and south of the town of Felixstowe.

To the north of the Reserve is Suffolk Sands Holiday Park, offering both residential and holiday lets.

The Peninsula is bordered to the east by the North Sea, to the west by the Orwell Estuary and to the north by the Port and town of Felixstowe.

2.6. Legal Information

Landguard Nature Reserve is covered by various byelaws and access rights as highlighted below and detailed in appendices IV and V:

Byelaws (Appendix IV)	Suffolk County Council byelaws cover the southern half of the Reserve and ESC byelaws cover the northern half.
Third Party Wayleaves and Easements (Appendix V)	Telephone wires/poles and buried, mains water pipes and electricity cables
Public Rights of Way	The Sustran's National Cycle Route 51 enters the Reserve at Manor Terrace car park and exits through the gates adjacent to the Fort. There are currently no other Rights of Way however NE are implementing the 'England Coastal Footpath' which, will incorporate some of the Reserve.
Rights of Access	HHA require use of concrete tracks to access HHA land and facilities. An informal agreement is in place for supervised vehicle access to the aggregate yard for overspill car parking during Landguard Peninsula events (unless yard is being used by breeding shorebirds). The Environment Agency (EA) has coastal defence structures on ESC land and therefore access for maintenance and the emergency services have access as required. The Nature Reserve is 'Public Open Access'
Public Space Protection Order	A Public Space Protection Order (PSPO) intended to deal with nuisance and or anti-social behaviour such as dog fouling, dogs off leads, the use of drones, metal detectors and fires, is in place across the site as per the Anti-social Behaviour Crime & Policing Act 2014.

3. ENVIRONMENTAL & ARCHAEOLOGICAL INFORMATION

3.1. Soil and Geology

The site is largely a sand and shingle spit, overlying estuarine mud deposits.

The southern shingle deposits are up to sixteen metres deep and overlaid by thin, free draining soils.

The northern area is a mosaic of loose shingle, sandy soils, and deeper nutrient rich soils. Man-made earthworks found here comprise of imported soils resulting in localised nutrient enrichment.

3.2. Climate

Annual sunshine hours, variable coastal winds and free draining substrate contribute to the often-dry conditions experienced at Landguard. Long term trends are masked by short term extremes e.g., the extreme hot and dry weather of 2020 and unusual wet spring of 2021.

The effect of low rainfall and drought conditions on the botany of the Reserve is further impacted by salty coastal winds, creating harsh conditions for plant germination and survival.

3.3. Hydrology/hydrography

Fresh water availability occurs mainly from precipitation. The topography offers little opportunity for run-off from surrounding land, and the soil type and substrate present allow precipitation to drain away quickly.

Shingle structures are very efficient at retaining water and limiting evaporation. Stones just a short depth below the surface (0.3m), are often found to remain damp throughout the day (Burnham & Cook, 2001). This ability to retain water within the matrix is a vital component in the development of rich floral communities (Fuller, 1987).

There are three man-made ponds on the Reserve; a fenced hand dug pond, fringed with Divided sedge (*Carex divisa*) (P1) situated in Compartment 11, a raised lined pond in the outdoor education area (P2) and a small shallow lined pond in the bungalow garden (P3). P1 is the only naturally occurring wetland area on site, the waterbody is ephemeral, spring fed and replenished by precipitation.

Additionally, two small ponds exist within the footprint of the Right Battery (SSSI and SM). One occurs where the concrete pit of a disused gun emplacement has filled with rainwater (P4) and the second, a lined pond (P5) at ground level within the Helgoland bird trap. (See appendix VIII for pond locations)

3.4. Archaeology & Built Environment

Much of the Peninsula is designated as Scheduled Monument (SM). There have been successive military fortifications constructed on and around the site since 1543, and up until the mid-20th Century.

The visible historic features include a Grade 1 listed Georgian Fort, and Victorian outer batteries and a Submarine Mining Station. Other smaller buildings, their foundations and some earthworks can be found across the site.

There are also substantial remains of buried earthworks and buildings. However, some have been lost to the sea, as the spit has changed shape due to a combination of erosion and accretion. Extensive surveys of the area have been conducted by Historic England (Appendix VII).

4. ECOLOGY

4.1. Flora

The main growing seasons at Landguard are during the spring and autumn. The unique location and climate associated with the Landguard Peninsula create favourable conditions for specialist coastal flora and limit the encroachment of more generalist species. This makes the botanical interest of the site special and comprises pioneer stages of vegetated sea-washed shingle, rich grassland, lichen dominated vegetation on stabilised shingle, and earthworks with scrub.

To date more than 600 species of vascular and gramineae species have been recorded on the Peninsula including over a third of British grasses as well as 65 bryophyte and 125 lichen species, a number of which are listed as Red List, NERC S.41 and UK BAP species Prickly saltwort (*Salsola kali* subsp. *Kali*), Ray's knotgrass (*Polygonum oxyspermum*) and the extremely rare Stinking Goosefoot (*Chenopodium vulvaria*).

The flora of Landguard was well documented in the late 70's and early 80's by Mr A Copping, and in an NVC survey carried out in 1998. But, since the 1970's, the actual extent of vegetated land has reduced due to surrounding development and recreational expansion. Therefore, the status of many previously recorded species is uncertain, and it is essential that thorough surveys should continue to be carried out regularly.

4.1.1. Stinking goosefoot (*Chenopodium vulvaria*)

A species of note is the nationally rare species Stinking goosefoot (*Chenopodium Vulvaria*), which is protected under Schedule 8 of the Wildlife and Countryside Act 1981.



The first verified recording of Stinking goosefoot at Landguard according to data obtained from the Suffolk Biological Information Service (SBIS) dates back to 1963 and has since then been regularly recorded, predominantly in compartment 11 but also in compartment 5.

Germination of the plant has historically occurred in rabbit latrines and scrapes, in areas disturbed by water inundation and in areas deliberately disturbed by mechanical means, supporting the theory that ground disturbance plays a vital role in the germination and distribution of the plant.

Stinking Goosefoot	
Year	Count
2016	c.19
2017	c.31
2018	None counted
2019	c.118
2020	c.65

Individual counts are estimates as it is difficult to identify if grouped plants are individual or from the same rootstock.

Plants identified over the last five years have only been recorded in compartment 11.

Stinking goosefoot in recent years has not been observed in other previously recorded locations. As there is now only one remaining area supporting this plant, which is frequently inundated with saline water, potentially impacting its success and longevity, the

population is considered at risk.

Following consent from English Heritage and advice from Natural England, ground disturbance will be reinstated in previously recorded locations and monitored for germination.

Consent will also be sought from Natural England to undertake a programme of seed collection, seed storage and cultivation.

4.2. Fungi

Acid grassland often supports a rich array of mosses, lichens and fungi, to date 93 species of fungi have been recorded and the list for this genus continues to grow, including rarely seen species such as the Field earthstar (*Geastrum campestre*) and Sandy mushroom (*Agaricus devoniensis*).



Geastrum campestre and *Agaricus devoniensis*. ©Chris Ryde

4.3. Fauna

4.3.1. Birds

Landguard Nature Reserve is an important site for migratory, nesting and vagrant species. Detailed daily records of birds have been kept by the Landguard Bird Observatory (LBO) since 1983 (www.lbo.org.uk). Landguard has become a nationally important migration watch point and landfall site, as well as an important breeding and wintering site. Linnets (*Linaria cannabina*) and House Sparrows (*Passer domesticus*) are known to regularly breed on the reserve and are classified as Red Data species due to decreasing populations.

Ringed Plover (*Charadrius hiaticula*), listed as a Red List species due to declining breeding numbers, nest on site; an average of 5 breeding pairs have successfully reared 18 young on the reserve over the 5-year period 2016 to 2020. In 2018 and 2020 the efforts of breeding pairs did not result in the successful rearing of young and it is likely that this is a result of increased visitor pressure and or predation.



Ringed plover © P.R. Boak

4.3.2. Reptiles & Amphibians

Common lizard (*Zootoca vivipara*), Slow worm (*Anguis fragilis*), Smooth newt (*Lissotriton vulgaris*) and Common frog (*Rana temporaria*) are regularly recorded on site. Grass snake (*Natrix natrix*) and Common toad (*Bufo bufo*) have previously been observed but not recorded since 2017 and 1989 respectively.

Amphibians on site utilise available ponds for breeding and the understory of mature trees and scrub with associated tall grass fringe for shelter around Right and Left Battery.



Slow worm under monitoring mat and Common lizard © Leonie Washington

Slow worm and Common lizard have been observed in grassland adjacent to pond habitats and man-made features such as the Rifle Butts, found north of the Reserve. Slow worm take advantage of a small number of reptile mats to shelter and warm. Common lizard is known to bask on sunny path margins and concrete close to dense cover for shelter. Most sightings have occurred to the north of the Nature Reserve, within the Bird Observatory (Right battery), around the pond and in the cottage garden.

Increased visitor pressure is potentially displacing species to fenced areas with less disturbance.

4.3.3. Pinnipeds and Cetacean's

Sightings of Cetacean's; Harbour porpoise (*Phocoena phocoena*) and Dolphin sp. and Pinnipeds; Common seal (*Phoca vitulina*) and Grey seal (*Halichoerus grypus*) are becoming more common in Felixstowe and observations of seals on the shores of Landguard is becoming more frequent.

The Ranger trained as a British Divers Marine Life Rescue (BDMLR) Marine Mammal Medic in October 2020 and during the period January 2021 to May 2021 approximately 20 Grey seals were observed on the shores of Landguard. Some requiring medical attention and rescue because of injury, illness, or entrapment but the majority just needing to rest undisturbed.



The arrival of seals at Landguard is welcome as they are a characteristic species that visitors and the local community engage with, however being a large animal, they attract a lot of attention and managing visitors and dogs when present, can be a challenge and time consuming.

Generally, the peak periods for seal activity coincide with pupping seasons: Grey seal – December to May and Common seal – June to October.

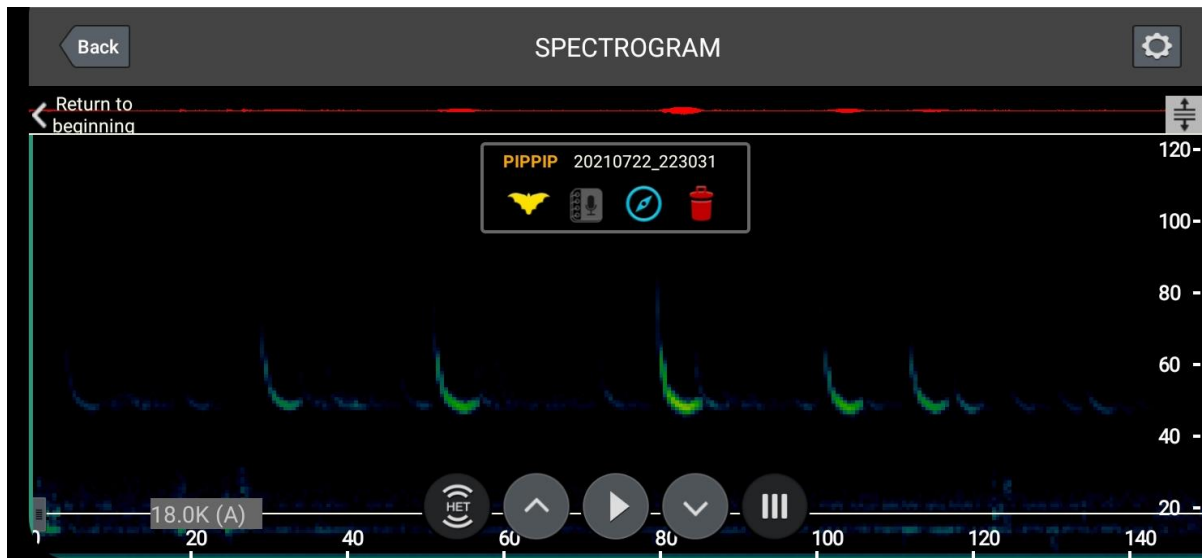
Grey seal © Wildlife with Tom

A small number of animals have been cared for in the Rangers garage. Going forward, they will be cared for in a small seal sanctuary (converted horse box) next to the Rangers garage to assist with the care of animals when needed. This resource has been provided by BDMLR.

4.3.4. Bats

The buildings and habitats associated with the Nature Reserve potentially offer many opportunities for roosting and foraging bats.

Migrating *Nathusius' pipistrelle* are tracked and studied by the Wageningen University & Research Institution using a Motus tower (Wildlife tracking system) anchored to the Landguard Bird Observatory (see Motus.org for further information) and Suffolk Bat Group have recorded both *Nathusius'* and *Natterers* bat in the cellar of the Observatory.



Common pipistrelle recorded at Landguard

Noctule, Common pipistrelle and Soprano pipistrelle have been recorded foraging and passing over the bungalow garden.

Little study has been made of the other military buildings associated with the Nature Reserve, such as the Fort, Museum, Left Battery, Mine Station and other smaller structures on site or how bats use the wider landscape.

Further surveys will be undertaken to better understand how bats use the Nature Reserve to better inform future management.

4.3.5. Rabbit

Rabbit (*Oryctolagus cuniculus*) are in abundance on the nature reserve and their grazing habits are an essential part of the conservation management of the site.

Historically, Weasels (*Mustela nivalis*) were a known predator but have not been recorded since 2017. Other known predators include Fox (*Vulpes vulpes*), and domestic cat and dogs. It has also been observed that Herring gull (*Larus argentatus*) successfully predate small rabbits on site.

Drought conditions, predation from corvids, gulls and fox and outbreaks of myxomatosis, impact rabbit populations and breeding success but the latter has not been an influencing factor since 2009.

If rabbit numbers are low, then a mowing regime will need to be instigated until numbers have again increased. If the vegetation is being damaged by excessive grazing, then rabbit numbers will need to be reduced. The last cull occurred in 2016 and removed 117 individuals.

4.3.6. Other Mammals (Muntjac, Fox, Hedgehog)

Muntjac (*Muntiacus reevesi*), Red fox (*Vulpes vulpes*) and European hedgehog (*Erinaceus europaeus*) have been observed on the Reserve in low numbers. Fox onsite make use of Left and Right Battery for their dens where mature trees, scrub and accessible buildings occur.



Hedgehog have been observed in Right Battery, Compartments 2, 4, and 5, AY and HHA2, although likely forage across the entire Reserve.

Hedgehog captured on wildlife camera at Landguard

4.3.7. Invertebrates

A great number of invertebrate species have been recorded at Landguard (i.e., Odonata, Arachnids, Hymenoptera, Coleoptera, Hemiptera and Lepidoptera) including notable species such as Scarce emerald damselfly (*Lestes dryas*), *Prostemma (prostemma) guttula*, Grayling butterfly (*Hipparchia Semele*) and Wall butterfly (*Lasiommata megera*).



Some of the Butterflies found at Landguard Nature Reserve

Additional study of species on site will provide a better understanding of their habitat requirement and potentially influence future management.

5. HABITATS

Landguard Nature Reserve's habitat mosaic is predominantly comprised of coastal vegetated shingle, lowland dry acid grassland and associated scrub.

There is no longer a UK Biodiversity Action Plan (BAP), this has been replaced by the UK Post-2010 Biodiversity Framework (2012). However, the UK BAP and the Habitat Action Plans (HAP) therein are still enshrined in law through the Natural Environment Rural Communities Act 2006 (NERC 2006) and the National Planning Policy Framework (NPPF).

5.1. Coastal Vegetated Shingle

Approximately 8.5 hectares of vegetated coastal shingle can be found onsite. It is a rare habitat, globally restricted with few occurrences outside north-west Europe, Japan and New Zealand. Many shingle features in Suffolk are protected and designated as SSSI's and are listed under Annex 1 of the EC Habitats Directive. Coastal vegetated shingle is also a Suffolk Priority habitat.

Shingle beaches are one of the few habitats which experience primary succession caused by their harsh environment and small amounts of soil. Initially plant communities are ephemeral, consisting of Oraches (*Atriplex sp.*), an annual species adapted to the conditions. Slowly a thin layer of soil forms from detritus allowing colonisation by Sea Kale (*Crambe maritima*), Yellow-horned Poppy (*Glaucium flavum*), Curled Dock (*Rumex crispus*) and Sea Pea (*Lathyrus japonicus*). Then, as the shingle stabilises a more complex community develops with an increased diversity of plant species including bryophytes, lichens, grasses, hawthorn (*Crataegus sp*) and other vascular plants. These are the rarest communities, often taking hundreds of years to develop (T. Smith, 2009).

The coastal vegetated shingle habitat at Landguard is colonised by many species including characteristic plants such as Sea kale, Yellow horned-poppy, Sea spurge (*Euphorbia paralias*), Sea pea, Prickly saltwort (*Salsola kali*) and Sea sandwort (*Honckenya peploides*) with developing stands of Marram grass (*Ammophila arenaria*).

The Coastal Vegetated Shingle HAP includes specific objectives and targets, that are still relevant today, including:

'To prevent further loss and further exploitation of, or damage to, existing sites through human activities and to maintain the quality of existing plant and invertebrate communities.'

5.2. Lowland Dry Acid Grassland

A large proportion of the Nature Reserve is classified as lowland dry acid grassland, owing to much of the soil being overlaid with large deposits of sand and shingle, giving rise to its acidic nature and creating a generally nutrient poor and free draining substrate.

Flora characteristic of acid grassland found on site include Sheep's fescue (*Festuca ovina*), Mossy stonecrop (*Crassula tillaea*), Bird's-foot trefoil (*Lotus corniculatus*), Biting stonecrop (*Sedum acre*), Common stork's-bill (*Erodium cicutarium*), Lady's bedstraw (*Galium verum*) plus many lichens, mosses and fungi.

Lowland acid grassland can also support many specialist ground-dwelling and burrowing invertebrates such as wasps and solitary bees.

The Lowland Dry Acid Grassland HAP includes specific objectives and targets, that are still relevant today, including:

‘To improve knowledge of extent and quality of lowland heathland and dry acid grassland and maintain the current extent’

5.3. Associated Scrub

Scrub found on site is comprised predominantly of Bramble (*Rubus sp.*) with Elder (*Sambucus nigra*), Hawthorn (*Crataegus monogyna*) and Privet (*Ligustrum sp.*) and covers an approximate 15% extent. As well as being an important breeding habitat for resident birds and summer visitors, scrub is an important source of food for autumn/winter migrants (Day. J. Et al. 2003).

Scrub adds structure and valuable diversity, is important for a number of priority invertebrates and birds and provides a refuge for a variety of common species. Scrub on site is therefore maintained as a component of the site’s habitat mosaic with the aim of maintaining all growth stages to provide different environments for different species.

6. HABITAT COMPARTMENTS & DESCRIPTIONS

6.1. Compartment HHA1 (SM and SSSI)

Lichen rich grassland with large stands of Sea Spurge, areas of bare ground and patches of Bramble (*Fructus sp.*). Pockets of Marram grass are developing on sandier substrate parallel to the river wall. Around the southern edges of the compartment an L-shaped earth bank (max 2m in height) provides shelter and reduces disturbance for Ringed plover when breeding.; this was also the last recorded location for breeding Little Terns (*Sterna albifrons*) in the 1990's. Permanent post and rope barriers restrict public access to this area. Rabbit from large warrens situated beside the Mine Station and North of the permanently fenced area at the point, graze this and neighbouring compartments. The scrub associated with the Mine Station is considered an important feature as cover for migrating passerines.

A concrete track runs into the compartment from Compartment 2, but the main desire lines run alongside the sea wall joining Viewpoint car park to the tip of the Peninsula, resulting in a metre-wide strip of vegetation free shingle and a well-worn track from the end bungalow road, across the grassland, crossing a concrete track and then joining to a section of grass matting that directs visitors to the end of the plastic boardwalk.

A boardwalk was added to this compartment in 2011. Originally starting from the concrete track on the western perimeter of the permanent Conservation Area and continuing around the L-shaped earth bank. The boardwalk was installed to aid access to the Point for walkers and those with impaired mobility including wheelchair users. It was also the intention to concentrate footfall on the board walk and reduce trampling of vegetation. In 2013 a storm surge undermined the boardwalk by removing much of the shingle that it was laid on leaving it tilted towards the estuary mouth in sections. Repairs were carried out, but subsequent storms resulted in half of the boardwalk being permanently removed as maintaining this section for safe use became unsustainable. Efforts are being made to investigate how this removed section of boardwalk may be replaced with something more robust to withstand tidal surges and how accumulated shingle in this area may be managed.

6.2. Compartment HHA2 (Scheduled Monument)

Lichen rich grassland with open shingle on the harbour side of the compartment. The bungalow, office and double garage building are contained within this compartment. The bungalow is the residence for the Ranger, with office space for the Landguard Partnership team.

The detached garage is currently used as storage and workshop space. Workshop space is limited due to one half of the garage being used to store sections of removed boardwalk. Once removed the garage will be better utilised as a more functional workshop space and volunteer base.

A small area in front of the garage enclosed by concrete areas historically retained a small man-made pond which was removed in 2014. To the rear of the garage is a fenced area. This area is being cleared and an education garden is planned. A lined raised pond, planters and benches have been built utilising materials from the now dismantled sections of boardwalk.

Also located within this compartment is the HHA Radar tower. HHA propose to rebuild and upgrade the deteriorating office building and improve road access to this compartment.

A concrete track runs into the compartment from Compartment 2, but the main desire lines run alongside the sea wall joining Viewpoint car park to the tip of the Peninsula, resulting in a metre-wide strip of vegetation free shingle and a well-worn track from the end bungalow road, across the grassland, crossing a concrete track and then joining to a section of grass matting that directs visitors to the end of the plastic boardwalk.

The land and scrub in and around the garden offer landfall for migratory passerines and is known to be a stop off point for Black Redstart. A colony of Sparrow (*Passer domesticus*) occupy terrace nesting boxes and use feeding stations within the garden. On the foreshore, large mobile shingle deposits occasionally form banks and temporary lagoons, creating habitat for tide line flora and fauna and marine organisms, which then provide food for wintering shore birds, however the shingle banks have not been exploited by breeding shore birds, most likely due to frequent disturbance because of increased visitor pressure and favoured dog walking route along the river wall.

6.3. Compartment AY (Aggregate Yard) (Scheduled monument)

Previously used as an aggregate yard the land is mainly concrete and hard packed aggregate. Areas of loose shingle (including berm) are being colonised by Yellow-horned Poppy, Sea Spurge and Mayweed (*Tripeurospermum sp.*). Beach shingle here is replenished annually by the Port of Felixstowe to prevent flooding.

The compartment was previously used by Oystercatcher (*Haematopus ostralegus*) and Ringed plover for breeding however since 2012, there have been no observations of nesting birds in this area. This is likely due to continued disturbance caused by increased visitor pressure following the removal of the old AY fence and the use of this area by visitors to allow their dogs off lead. Migratory species such as the Black Redstart (*Phoenicurus ochruros*) use the post and rail fence marking the southern boundary between AY and HHA2 as perching points.

Desire lines run alongside the river wall and to an access point onto the reserve at the SW corner of Right Battery. The AY has in the past been used occasionally as an overflow car park for Landguard events providing no breeding birds are present.

6.4. Compartment 1 (Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

Sandy beach and loose shingle habitat. The intertidal stretch containing pioneer vegetated shingle plants, runs on to more stabilised shingle habitat at and above the high tide line. Isolated patches of low scrub and nitrophilous plants along the transition line of loose shingle to the short grassland of the neighbouring compartments.

Within this compartment, at the southern end, nationally and locally scarce species occur; Sea Pea (*Lathyrus japonicus spp. maritimus*) occurs on the highest ridge and occasional Ray's Knotgrass (*Polygonum oxyspermum*), occurs near the boundary to HHA1 and more recently alongside the eastern tip of the wooden boardwalk in compartment 1. Dittander (*Lepidium latifolium L.*), Sea Kale (*Crambe maritima L.*), Sea Spurge (*Euphorbia paralias*) and vulnerable Prickly Saltwort (*Salsola kali*) are also spread throughout compartment 1.

The boardwalks have reduced the impact of visitor footfall on the flora in this area by guiding visitors along specific routes and providing opportunities for vegetation to recover. Diverse, and some habitat specific, invertebrates exist on the shingle vegetation which warrant further study and surveys to develop a greater data set of the species present and possibly influence future management in this area.

The southern end is regularly used by breeding Ringed plover and has previously been used by Oystercatcher and Little Tern, but increased recreational pressure creates problems for wildlife due to disturbance.

Marram Grass is now establishing along the shingle ridge running parallel with the foreshore which have collected enough sand to provide the right conditions for this plant's needs. Several plants were noted in 2014 and since then they have rapidly progressed in this compartment in a southerly direction. The spread of

Marram grass is being monitored and individual plants may be removed going forward as part of annual scrub management activities to reduce its spread.

6.5 Compartment 2 (Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

Open landscape made up of lichen and bryophyte rich, short acid grassland with occasional stands of scrub. Rabbits provide the essential grazing that maintain this habitat in contrast to the fenced rabbit exclusion zone in the north-west corner that highlights a taller sward containing rank grasses and a lower diversity of species. This fenced conservation area provides habitat for small mammals and voles, hunting opportunities for birds of prey and attracts a great number of invertebrates which warrant future study. Compartment 2 is used as stop over for migrating birds such as Wheatear (*Oenanthe oenanthe*) and Meadow Pipit (*Anthus pratensis*), with the elder at the southern corner being well used as a perch and cover for bird life.

Heavily trampled along main desire lines, though chronic erosion of the ground is lessened by the seasonal bird sanctuary post and rope cordons (March to October) forcing walkers from the tank trap line and out onto the grassland, then back again once the cordon is removed.

6.6 Compartment 3 (Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

Grassland similar to compartment 2 with fewer lichen species. More regular stands of bramble scrub and tall nitrophilous plants occur here and the compartment is used as a stopover for migrating birds such as Wheatear and Meadow Pipit.

The route from Viewpoint carpark through the main gate to the northern beach is heavily used with erosion of vegetation and soils evident throughout the year. A wooden boardwalk guides visitors to the foreshore reducing trampling in this area.

6.7 Compartment 4 (Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

Short grassland like Compartment 2 and 3. Stands of well-established Bramble with occasional Elder (*Sambucus nigra*) provide cover and food for migrating birds and nesting sites for breeding passerines, including Red Data list species such as Linnet. The dense, tall scrub alongside the footpaths and earth banks provide shelter from disturbance and form a natural windbreak.

A managed level of scrub is essential here for birds such as the Linnet (Red Data Species) that are known to nest in this location and use scrub species for protection from predators.

Scrub within this compartment creates a micro-habitat and climate that provides ideal conditions for butterflies such as the Green hairstreak (*Callophrys rubi*), moths and other invertebrates.

6.8 Compartment 5 (Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

A small area of short grassland with occasional scrub species comprising Bramble, Privet and Elder and an area previously managed for Schedule 8 species Stinking Goosefoot.

Disturbance for Stinking goosefoot in recent years has lapsed and will be reinstated as per discussions with Natural England and English Heritage to increase the occurrence and genetic diversity of the plant across the site.

Stinking goosefoot is an annual species, evolved to germinate when the seed is brought to the surface of the soil, therefore ground disturbance is an important element associated with its survival.

6.9 Compartment 6 (Scheduled Monument)

A linear compartment containing a planted strip of tree species alongside a short stretch of cycle path and footpath, with a lesser used entrance to the Reserve coming in between Left Battery and Compartment 7.

A small triangle of land at its southern end, west of the entrance contains planted and self-seeded shrub species. The landscaping and shrubs provide an effective suntrap and wind break, this along with the flowering shrubs, including Buddleia (*Buddleja sp.*), provide an excellent habitat for butterflies. It was here that a High Brown Fritillary butterfly (*Fabriciana adeppe*) was recorded July 2014, not previously seen in Suffolk since 1959.

6.10 Compartment 7 (Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

A man-made earth bank with imported soils, reinforced to the east with rock filled gabions. The seaward bankside is vegetated, with patches of Bramble and Privet. The landward side, parallel to Viewpoint Road is densely vegetated with Hawthorn scrub and an understory of rank grasses.

A footpath runs along the top, with wooden steps built into the bank sides.

6.11 Compartment 8 (Site of Special Scientific Interest & Scheduled monument)

This compartment receives relatively little footfall as scrub forms a barrier between the Reserve and Viewpoint Road, therefore damage caused by trampling is minimal. Stonecrop (*sedum sp.*) is abundant here, on the thin soils formed on top of concrete.

6.12 Compartment 9 (Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

The sea wall has created an area of stabilised shingle no longer washed by the highest tides. Shingle habitat species such as Sea Campion (*Silene uniflora*) and Sticky Groundsel (*Senecio viscosus*) are abundant in this zone, along with Sea Sandwort (*Honckenya peploides*), Sea kale and occasional Yellow horned-poppy.

Short, stabilised grassland has established on the flat ground at the bottom of the earth banks.

6.13 Compartment 10 (Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

Man-made earth banks containing imported heavy soils, historically used as the backdrop of shooting ranges and referred to locally as the Rifle Butts. The landward side of compartment 10 is covered by a patchwork of grasses, wildflowers such as teasel (*Dipsacus fullonum*), Thistle sp., Wild clary (*Salvia horminoides*), Bramble scrub and occasional stunted trees including Elder and Tamarisk (*Tamarix sp.*). On the seaward side the development of scrub is less, enabling a variety of diverse graminiae and wildflower communities to colonise.

Alexanders (*Smyrniolum olusatrum*) dominate the northern banks in spring. Due to the steep bank sides and dense areas of scrub vegetation, disturbance by dogs and walkers is minimal although increasing use by cyclists has been noted.

Ground nesting birds such as Meadow pipits and scrub-nesting birds such as Lesser whitethroats (*Sylvia curruca*) occasionally breed here. A well-used pathway runs along the top of the earth banks, with occasional desire lines running down the sides. Levels of erosion limit how these desire lines are used.

6.14 Compartment 11 (includes Local Nature Reserve, Site of Special Scientific Interest & Scheduled monument)

Made up of a variety of natural and imported soils, this compartment is the most diverse of all in sward density and vegetation height. The verge side of Viewpoint Road is banked and covered in a variety of rank grasses and dense scrub with occasional elder and apple tree (*Malus sp.*).

Tall nitrophilous plants are abundant where the concrete path and verge side bank run close together. Between the car park and Viewpoint Road, wide swathes of tall rank grasses interspersed with shorter sward occur, and a variety of desire lines linking track way, car park and caravan site.

A persistent patch of Sea Holly (*Eryngium maritimum*) on the site is located to the southwest of the car park. Along the level ground beside compartment 10 the grasses are much shorter mainly due to heavy trampling, but also affected by the high sand content of the soil.

In this compartment Stinking goosefoot has been recorded, on the seaward side of the rifle butts, historically alongside the southernmost section of the concrete track and south of Manor Terrace car park where foot pressure is significant. Rabbit density is lower in this Compartment than elsewhere. This is likely due to greater visitor numbers on this part of the reserve as dog walkers can have their dogs off the lead creating greater levels of disturbance.

Fewer rabbits and therefore less grazing, allows for the development of denser and taller sward as described above. Also, as the vegetation follows its natural cycle, decomposition of plant material adds nutrients to the soil allowing more nutrient demanding species to establish. Nutrifaction because of dog fouling is also an influencing factor.

A man-made pond (P1), dug into the only small wetland area of the site, surrounded by *Juncus sp.* and Divided sedge is also located within this compartment. Sward heterogeneity and diverse structure (differing species and sward heights) benefit reptiles, amphibians, and small mammals here, creating basking areas, refuge from predators and habitat for foraging. A well-used concrete trackway runs along the western edge of this compartment with well-worn desire lines creating circular routes.

6.15 Right Battery (Site of Special Scientific Interest & Scheduled monument)

This compartment consists of late 19thC and 20thC gun batteries and associated earthworks. On the seaward side Holm oak (*Quercus ilex*) and shrub species provide shelter and nesting sites for birdlife. On the level ground behind the earthworks and Right Battery there is a small stand of Poplars (*Populus sp.*), open short grassland, and scrub.

On the southernmost bank, vegetation is sparse and short, due to rabbit grazing and seaward winds. Security fencing runs around the English Heritage site including Right Battery, The Fort, Darrell's Battery Towers, and the Submarine Mining Station.

Landguard Bird Observatory (LBO) volunteers operate bird ringing activities within this compartment using several Mist Nets on the bank sides and a Helgoland Trap set up on level ground behind the military buildings to trap the birds. Volunteer's trap and ring birds daily from early March and late October and available records date back to the 1980's (see <https://www.lob.org.uk>).

As well as recording birds the LBO also extensively records moths, butterflies, reptiles, and mammals. Volunteers run moth traps throughout the moth season. Public access here is restricted to occasional guided tours and members only.

6.16 Left Battery (Site of Special Scientific Interest & Scheduled monument)

Consists of a 19th Century gun battery (excavated in 2000) built into an earth bank. It contains a rich mosaic of plant communities including dense, tall scrub short grassland, and patches of shingle vegetation on imported gravel.

The scrub, including Tamarisk, provides an important habitat for migrating birds and scrub nesting passerines offers an undisturbed haven for reptiles and mammals such as slow worm, common lizard, fox and hedgehog. Additionally, the habitat and built environment offer roosting and foraging opportunities for bats.

English Heritage contractors (with NE consent) cut back scrub on an occasional basis to protect the buildings that are part of the SM. Public access is restricted to occasional guided tours only.

6.17. Landguard Fort and Felixstowe Museum (Scheduled Monument)

Landguard Fort and Felixstowe Museum are located Northwest of Right Battery and North of the Aggregate Yard, each bordered by metal security fencing.

Within and around these fences valuable scrub and acid grassland habitats occur and although not within the footprint of Landguard Nature Reserve or SSSI, provide many opportunities for varied flora, fauna and fungi.

Much of the habitat found within the fence line is rarely disturbed by visitors and so provides a haven for wildlife and acts as a species reservoir feeding the wider habitat mosaic.

7. MANAGEMENT

7.1. Factors Influencing Management

7.1.1. Past Management

- i. Stinking Goosefoot: Previously a small area of Compartment 5 in front of Right Battery was managed for Stinking goosefoot, the area was fenced, rotavated by hand in March/ April and weeded during the summer from 1990. Following deterioration of the perimeter fencing, individual plants were protected with fencing from 1996. In 2002 fencing was installed to exclude rabbits, and a mechanical rotavator used instead of soil disturbance by hand.

A lack of ranger in 2007 and 2008 meant that there was no management and plant numbers declined until no longer recorded.

In 2009 it was noticed that rabbits could be beneficial to the germination and success of the plant in other areas by creating natural soil disturbance and grazing surrounding vegetation thus reducing competition. This was even noticed during drought conditions with reduced plant growth available for rabbits to graze.

Ground disturbance was reinstated in 2014 and 2015 but without subsequent records in the following growing seasons.

Stinking goosefoot also previously occurred at the southern tip of Compartment 11 but has not been recorded in this area for approximately four years.

- ii. Shorebirds: Seasonal post and rope cordons are erected from March to October (Appendix VIII map 1&2) south of the wooden boardwalk protecting areas of compartment 1 and 2 to provide a sanctuary area for breeding shorebirds and their young and reduce trampling of the vegetated shingle plant community. Signs on posts are used to deter access.

The size of the enclosures varies each year depending on where breeding birds favour and the condition of the breeding habitat. However, breeding success is very much dependant on reducing disturbance from increased visitor pressure, constantly reinforcing the need to keep dogs on short, fixed leads and encouraging anglers not to fish on the beach directly in front of the enclosures. The persistent presence of increased visitors, anglers and dogs displaces the adults and deters them from returning to their nest. As a direct consequence, eggs become cold, and the clutch fails. The waste visitors and anglers produce attracts species such as gulls, corvids and fox, bringing them within close proximity to Ringed plover nests and their young, resulting in subsequent predations.

In 2016 anglers were requested not to fish in front of the enclosures until the end of June. Interpretation was deployed at key points. An estimate of 95% of angler's co-operated with apparent positive results on the breeding success of Ringed plover. Angler's and bathers are asked to move if positioned too close to the bird cordons.

- iii. Grazing control: Rabbit were last controlled in 2016 when 117 individuals were removed using ferrets and nets. Prior to this numbers were controlled in 1999. Effects of grazing continue to be monitored.
- iv. Brown-tail moth (*Euproctis chrysorrhoea*): In seasons when Brown tailed moth colonies were abundant, their larvae can decimate host plants such as Bramble and Hawthorn and have a long-term effect on the slow growing bushes and shrubs on site.

The species overwinters communally as larvae within a tough silken tent. In areas where the species is abundant, these tents are a familiar sight and can be seen on a huge range of plants.

The hairs of the caterpillar can have an irritant effect, cause skin rashes, headaches and breathing difficulties. In prolific years, signs are used to warn visitors,

Spread of the moth is controlled by removing the cocoons in autumn/ winter using protective gloves at all stages of its life cycle.

7.1.2. Biological / Environmental Trends

- i. Coastal processes affect the size and shape of the beach by eroding or depositing sand and shingle. Storms bring salt spray, which can have a desiccating effect on the vegetation and occasional flooding can impact submerged vegetation. In previous years flooding has greatly impacted and sometimes killed large areas of Bramble and caused localised soil erosion.
 - ii. Variations in rainfall, can have a significant effect on the vegetation in the short-term, but as the habitats here are mainly made up of specialised species in the long term it is relatively stable.
 - iii. Throughout the site the environmental conditions are harsh, favouring coastal flora over the more generalist species. Localised build up in nutrient levels has enabled invasive species such as bramble and privet to encroach across the site. Although some scrub vegetation is desirable, levels need to be limited through scrub management methods. Any increase in scrub equally means losses in land coverage of the scarce habitat that the site is SSSI designated for.
 - iv. A consistent approach to scrub management is important. Methods such as fixed-point photography and more recently annual drone photography helps the Ranger and those assisting with management of the site to know if the level of scrub is exceeding the norm and therefore adjust any scrub management plan accordingly.
- (II) Controlled grazing is an essential component of the conservation management of the reserve. The rabbit-free enclosure has demonstrated that without rabbit grazing the vegetation on site would change dramatically, greatly impacting the species diversity and structure and potentially losing many species that are key to the importance of the site. The population of Rabbit are monitored and controlled when necessary, so that the Nature Reserve benefits from an acceptable level of grazing rather than experiencing the negative impacts of over grazing.

7.1.3. Man-induced Trends

- i. Coastal protection works on both sides of the Reserve have affected deposition and long-shore drift which have in turn influenced the shoreline and beach make up. As part of the coastal protection carried out along Felixstowe's coastline in 2010, large boulder groynes were installed along the coastline to the northern half of the Reserve, which filter out the shingle and allow for large amounts of sand to be deposited on the beaches. It has been observed that after fierce storms such as those in 2013/14 and early 2021 many tonnes of sand were washed away from the Reserves northern beaches and deposited on the southern part of the most valuable habitat; coastal vegetated shingle, which inundated the shingle ridges and adjacent grassland.

Sand deposition allows for the establishment of Marram grass; a pioneer plant of Dune systems, which is now well established at this point and continues to encroach along the shingle ridges towards the point at the southernmost tip of the Reserve.

If the process continues the globally rare Coastal Vegetated Shingle habitat could largely be changed and the SSSI status be considered unfavourable. Advice from Natural England is to monitor its spread and remove small amounts each year as part of the sites scrub management plan.

- ii. Dredging work in the deep shipping channel and dock expansion work will affect sediment movement.
- iii. The sea wall dividing Compartment 1 from Compartment 9 has completely changed the natural factors influencing the vegetated shingle creating a permanently stabilised habitat in the latter.
- iv. Recreational pressure on the Reserve is high, with dog walkers creating the greatest disturbance to wildlife. With a rising local population this trend is likely to continue with birds, reptiles and vegetation being most affected, especially ground nesting birds. Increased visitor pressure brings with it an increase in activities prohibited by the PSPO, such as dog fouling, BBQ's and fires, use of drones and metal detectors, kite flying, motorised vehicles, camping and off-track cycling.

Disturbance to shorebirds is also high due to the common misconception that there are no restrictions to dog walkers on the beach and visitors ignoring signs

Parking charges have recently been introduced at Viewpoint Road and Manor Terrace car parks, which may reduce visitor pressure. The income generated from the former is ringfenced to benefit Landguard as a whole, including the conservation and management of the SSSI / nature reserve.

Efforts are being increased to liaise with local police and anti-social behaviour teams to help encourage visitor compliance and where possible enforce penalties for breaches of the PSPO. Appropriate interpretation, signage, Ranger patrols as well as police and Norse support to enforce the PSPO will continue to be used as a way of addressing the situation.

The northernmost half of the Reserve, where dogs can be off lead is clearly demonstrating a change in biodiversity due to nutrification from dog fouling, desire line erosion and reduced rabbit grazing. Indications include the development of a much taller sward in areas, dominated by rank species such as coarse grass plant communities.

7.1.4. Management Agreements, Obligations and Constraints

- i. Restrictions on works that can be carried out on the reserve exist due to the SM and SSSI designations. Consent for any operations that could possibly cause disturbance or damage to the natural environment, visible heritage and archaeological remains need to be sought from Natural England and / or Historic England. The Reserve entered entry level and higher-level stewardship with Natural England in December 2013, the schemes outline the practical work that must be undertaken for which the grant monies are provided will remain in place until November 30th, 2023.
- ii. The Wildlife and Countryside Act (1981) makes it an offence to intentionally kill, injure or take any wild bird, or eggs or nests. Special penalties are available for offences related to birds listed in Schedule 1 for which there are additional offences of disturbing these birds at their nests or their dependent young. Schedule 12 of the Countryside and Rights of Way Act (CRoW 2000) strengthens

the protection of threatened species by creating a new offence of reckless disturbance and is relevant throughout the United Kingdom.

- iii. The Wildlife and Countryside Act (1981) also makes it an offence (subject to exceptions) to pick, uproot, trade in or possess (for purpose of trade) any wild plant listed in Schedule 8 and prohibits the unauthorised intentional uprooting of such plants. (Relevant throughout the UK).
- iv. Schedule 9 of the CROW Act has amended SSSI notification procedures, providing increased powers for the protection and management of SSSI's (see www.jncc.gov.uk for up-to-date information).
- v. Coastal Vegetated Shingle is a habitat type listed under Annex I of the EC Habitats Directive and as such comes under Suffolk's Local Biodiversity Action Plan and is a priority habitat for conservation management.
- vi. Priorities for the site include, Ringed plover (Red Lists species) Stinking Goosefoot (Schedule 8 species under the Wildlife and Countryside Act 1981) and Prickly Saltwort (Suffolk Priority Species) Common lizard and Slow worm, both of which are on the updated UK List of Priority Species.
- vii. Harwich Haven Authority has a statutory responsibility to safeguard the harbour entrance through the maintenance of the groynes and has a right of access over ESC land to HHA properties. The Environment Agency also has right of access to maintain the sea defences.
- viii. East Suffolk Council is obliged via its contractors to provide waste services at the Landguard car parks and to keep the beach litter free in accordance with the Environment Protection Act 1991, of which the beach cleaning is contracted out to Landguard Bird Observatory.

8. COMPARTMENT MANAGEMENT PROPOSALS 2021 - 2026

8.1. Access

Objectives

Maintain access and encourage sensitive and responsible use of the Peninsula and Nature Reserve.

Provide updated, relevant and interesting information and interpretation to visitors.

Management Proposals

Maintain all paths with 0.5m clearance either side, free from scrub and overhanging vegetation using a robust mower with collection box, brush cutter, hedge trimmer and hand tools.

Maintain and repair 85 metre wooden board walk adjacent to main entrance of the Nature Reserve as required to concentrate visitor footfall across the shingle to the foreshore.

Liaise with Historic England and Natural England regarding repairing concrete trackways as part of access improvements across the site.

Repair and or replace wooden steps and barrier rails on the Rifle Butts as necessary and locate and uncover original stone steps to offer additional and more robust access.

Continue to encourage the proper use of the cycle track with interpretation to promote safe use and continue to discourage cycle access to the Rifle Butts to prevent detrimental erosion.

Motorised vehicles such as 4x4's and quads have on occasion gained access to the Reserve and caused damage to the grassland habitat. To prevent this, barriers have been installed in problem areas. These should be monitored and maintained to ensure that these access points remain inaccessible to vehicles.

Repair and replace the picnic benches located at Manor Terrace as necessary to enhance visitor enjoyment.

Review and reproduce Nature Reserve leaflet, and orientation and interpretation boards as necessary.

Regularly replace information within the sites notice boards to ensure that information is up to date.

8.2. Historic Buildings & Archaeology

Objectives

Enhance the interpretation and interest in the historic features of the reserve.

Gain a better understanding of the species potentially using the buildings for refuge, roosting and for overwintering.

Prevent unauthorized access to dangerous buildings.

Bring back into use Coastal Defence Searchlight building as a Sea hide.

Restore Searchlight building to accessible Sea hide.

Identify and monitor hazardous exposed metal work across the site.

Management Proposals

If necessary, maintain 0.5 to 1m clearance around all historic buildings, free from scrub and overhanging vegetation using a robust mower with collection box, brush cutter, hedge trimmer and hand tools.

Maintain a 1.5 to 2 metre scrub barrier on Reserve side of security fence line to increase security defences and provide breeding, perching and foraging opportunities for birds.

Continue to inform relevant owner i.e., EH, ESC or HHA of any damage or vandalism that occurs to any buildings or infrastructure.

Improve visitor information regarding historic buildings by revising and or producing new interpretation boards and installing at appropriate locations.

Undertake preliminary bat roost assessments of all buildings to determine use and future management requirements.

Explore funding opportunities and liaise with Historic England regarding repairing / restoring the Searchlight building to an accessible Sea hide as part of access and visitor improvements.

Where practically possible and with minimal disturbance remove or make safe any hazardous exposed metal work.

8.3. Education

Objectives

Increase and diversify the opportunities for education on the Nature Reserve to accommodate primary, secondary and university students and educate visitors.

Management Proposals

Further develop age-appropriate education activities and worksheets to be used independently by visiting schools or with the Ranger.

Liaise with local schools, colleges, and youth groups to promote available educational activities.

To work with stakeholders and explore funding opportunities to develop a visitor / education centre, to be located at the northernmost point of the Reserve at Manor Terrace on an area of currently non designated land to further enhance the Nature Reserves education and visitor offer.

Create an outdoor education area for use with visiting primary schools

Better utilise the fenced grassland conservation area to further develop education activities.

Create better teaching resources, including self-led activity bags that can be used with visiting schools and families

8.4. Volunteers

Objectives

Recruit and increase the number of Landguard Nature Reserve volunteers

Increase volunteer opportunities as Peninsula facilities grow.

Management Proposals

Develop an information pack, registration form and volunteer agreement to be shared with potential volunteers.

Put a process in place to meet with and interview interested parties, giving them an opportunity to ask questions and better understand the complexity of tasks before signing up to become a Reserve volunteer

Use social media to reach out to the wider community to recruit new volunteers to assist with management tasks, education activities and events on the Nature Reserve.

Liaise with other organisations to promote available volunteering opportunities.

Create a schedule of tasks and regularly share with volunteers via email, social media and notice boards

Encourage interested individuals to also consider volunteering at the Fort, Museum and LBO to broaden volunteer offer

Reinvent the volunteer Ranger scheme in a way that is more attractive to interested parties and more sustainable.

Recruit 'Seal Watch' volunteers to assist with the observation and protection of seals when resting on Landguard's shores

Develop other volunteer opportunities / tasks

8.5. Survey and Monitoring

Objectives

Update and build upon scientific surveys and enlist experts to survey more specialist species groups.

Maintain species records and share with relevant agencies.

Management Proposals

Monitor and document the coastal vegetated shingle to monitor any changes in species composition and abundance using fixed transects and fixed-point photography.

Each year monitor, map and document the occurrence of Stinking goosefoot on the Nature Reserve.

Liaise with county recorders and other experts in their field to survey specialist species groups such as bryophytes, lichens, vascular plants, invertebrates, arachnids, etc

Initiate a marine invasive species citizen science survey in conjunction with Harwich Harbour Authority.

Install corrugated bitumen mats to survey and monitor Common lizard and Slow worm in fenced areas

Carryout preliminary bat roost assessments of all historic structures to determine species use and identify any subsequent changes in habitat management.

Use transects surveys to identify foraging habits of bats across the Reserve

Continue trials using a licenced drone operator to annually photograph the Reserve to help monitor change over time and use images to create a map to be used for the purposes of a scrub management plan.

Share data with relevant agencies (Suffolk Biological Recording Office, Suffolk Naturalist Society, Botanical Society for the British Isles, Natural England)

Information gathered from surveys and ongoing observation, will continually inform and guide Reserve management practices. If any management methods are found to be ineffectual or have a negative impact, then changes to the Management Plan will be considered. Any changes will then to be added to the Plan with the reasoning and evidence behind them.

8.6. Interpretation

Objectives

Renew / enhance all site interpretation, signage and information boards.

Explore other interpretation method's including digital, as part of an integrated interpretation scheme.

Better inform visitors of sites designations, biodiversity, historical features and Public Space Protection Order to raise awareness, understanding and compliance.

Management Proposals

Undertake a review of all interpretation, signage, and information boards across the site. Redesign and replace as necessary.

Identify areas of improvement and consider providing information in additional locations.

Seek suppliers and funding to facilitate change.

Revise and replace 'dogs on leads' signage.

Review and reproduce Public Space Protection Order signage.

8.7. Social Media

Objectives

Increase visitor engagement and dissemination of information to raise awareness and understanding and promote the Nature Reserve using social media.

Management Proposals

Continue to utilise and upgrade 'Discover Landguard' web pages and update the 'Rangers Blog' regularly.

Create a Landguard Nature Reserve Facebook page to better engage with the local community.

Use social media to promote events, activities, and key messages.

8.8. Habitat Management -Tools and Equipment

Objectives

Ensure that tools and equipment are sufficient to carry out all practical habitat management prescriptions in a safe and efficient manner.

Management Proposals

Explore funding opportunities to purchase a small terrain suitable, motorised utility vehicle (electric or petrol) with trailer hitch to transport tools and materials around the site safely and efficiently and enable the Ranger to patrol more ground more often, therefore increasing visibility and offering more opportunities to deter breaches of the Public Space Protection Order, wildlife disturbance and damage to habitats.

Purchase robust ride on and or push mower with collection box to maintain a half meter strip of short sward either side of paths, around buildings and to facilitate rotational cutting and collection of arisings so as not to nutrify sward in areas where vegetation is longer, such as north of the Reserve and within the fenced grassland conservation area.

Carry out an evaluation of all hand tools, assess their condition and maintain or replace as necessary.

8.9. Habitat Management – Individual Compartments

8.9.1. Compartment HHA 1

Objectives

Maintain and enhance sea spurge and lichen dominated plant communities. Reduce disturbance to make conditions favourable for breeding shorebirds and migratory birds using the site as landfall.

Increase nesting opportunities for Shelduck and Ringed plover.

Maintain post and rope barrier around permanently enclosed conservation area.

Monitor condition of historical buildings.

Maintain boardwalk in good condition and improve access as necessary.

Management Proposals

Continue to enforce 'dogs on leads' to reduce wildlife disturbance and reinforce the existing site PSPO.

Increase nesting opportunities for Shelduck by burying a small number of nest boxes in the shingle and earth banks of the permanently fenced area.

Continue to replace rope around permanent enclosure with wooden rails and replace rotten posts as required.

Remove accumulated shingle from western boundary of the permanent enclosure to improve access and prevent the posts from becoming buried.

Top existing earth and shingle banks with removed accumulated shingle to replenish that eroded by wind and or create new bank within enclosure to create further shelter for Ringed plover

Remove undesirable scrub across the grassland area and maintain Elder to provide cover and perching opportunities for birds.

Maintain fenced conservation area free from developing scrub.

Maintain 0.5 - 1m free of vegetation around the Mine Station and encourage the growth of Tamarisk and Elder beyond this for nesting birds, cover and landfall.

Monitor historical buildings for signs of deterioration, vandalism or access breaches and report accordingly to ESC, EH, HHA and or the police.

Monitor boardwalk and repair as necessary.

Install additional grass matting from the termination of the bungalow track where erosion occurs along a well-used desire line across the grassland, to meet existing matting in compartment 2.

8.9.2. Compartment HHA 2.

Objectives

Maintain bungalow, office, and garage for use by staff and volunteers

Maintain the fenced area behind garage as an outdoor education area/garden to include decking, planters, benches, wall displays and wildlife features to enhance the current education offer to visiting primary schools

Utilise the garage building for storage of materials and as a workshop for the Ranger and volunteers.

Maintain the surrounding area to encourage wildlife and enhance shingle and lichen rich habitat.
Support breeding sparrow and starling colony.

Monitor condition of historical buildings.

Maintain and improve access as necessary.

Management Proposals

Create bays and shelving within the garage for safe storage of timber and tools including a small area to store the Rangers personal equipment.

Repurpose material from removed plastic boardwalk within the new outdoor education area. Use to create a raised pond, benches, planters, and decking.

Maintain a workshop space to be used by the Ranger and volunteers.

Maintain vehicle access to HHA radar tower.

Remove undesirable scrub within this compartment.

Supplement food for Sparrow and Starling colony and install additional nesting boxes for both species on office and garage buildings.

Monitor historical buildings for signs of deterioration, vandalism or access breaches and report accordingly to HHA and or the police.

AS per HHA2, install additional grass matting from the termination of the bungalow track where erosion occurs along a well-used desire line across the grassland, to meet existing matting in compartment 2.

8.9.3. Compartment AY.

Objectives

Allow some scrub to develop for shelter, cover and security around LBO and Fort fencing.

Protect breeding birds and reduce disturbance.

Use as occasional overflow parking for events with permission from the Ranger and or Project Officer. When birds are known to be nesting/ rearing young in this area every attempt must be made not to cause disturbance.

Management Proposals

When intended for use as an overflow car park for events, ensure that all areas are checked for breeding birds by the Ranger and LBO members to prevent disturbance. If breeding birds are present, then the area should not be used.

Vehicle access through the Reserve to this area should be managed to ensure cars do not leave the concrete track or drive on the lichen rich grassland.

All works should be planned to take place outside of bird breeding seasons.

8.9.4. Compartment 1

Objectives

Maintain and enhance the valuable vegetated shingle communities.

Reduce the negative impact from recreational use on both the vegetation and on breeding birds.

Survey and monitor coastal vegetated shingle plant community.

Management Proposals

Remove by hand, undesirable invasive species such as Bramble, Nettle (*Urtica dioica*) and Thistle sp. to prevent their spread along the shingle habitat.

Control the spread of Marram grass by removing patches each year and include within scrub management plan. Allow Marram to continue to establish at the northern most area of the vegetated shingle to help trap sand and reduce deposition further south.

Reduce the level of enrichment caused by dog fouling, through education, interpretation, patrols and social media.

Maintain and repair boardwalk as necessary to direct footfall and reduce trampling of vegetation.

Monitor and document the coastal vegetated shingle to monitor any changes using fixed-point photography.

Protect nesting shorebirds and associated vegetated habitat by installing seasonal exclusion zones using post and rope cordons with information and prohibitive signs from March to October.

Trial the use of electric fencing to reduce disturbance to and predation of nesting Ringed plover and monitor impact.

Use interpretation and patrols by the Ranger and volunteers to reinforce the rule that 'dogs must be kept on leads' across the entire southern section of the Reserve and that people and dogs should not enter the seasonal cordons.

Encourage anglers not to fish directly in front of the post and rope cordons during bird nesting season using signage and patrols.

Safeguard seals as necessary using cordons, signs and volunteers.

Increase public awareness of the importance of the habitat through education, interpretation, and social media.

8.9.5. Compartment 2

Objectives

Maintain and enhance lichen rich short grassland.

Maintain, monitor, and enhance the fenced grassland conservation area.

Reduce damage caused by excessive trampling.

Reduce the negative impact from recreational use on both the vegetation and on breeding birds.

Management Proposals

Remove all undesirable scrub within this compartment except in areas adjacent to favoured Shelduck nesting areas, to offer a cover and reduce disturbance.

Maintain the current small extent of Elder to provide perching and nesting opportunities for birds.

Monitor the rate of grazing. Rabbit grazing is an important management tool for the maintenance of this habitat, but its rate should be carefully observed for under and overgrazing. Overgrazing indicates that the existing population may need to be controlled and under grazing will result in the need for manual cutting and removal of arising to avoid nutrient loading and rank sward development.

Maintain the fenced conservation area. Cut initially twice yearly in Spring and late Summer to reduce the amount of developing Common couch (*Elymus repens*) and other rank grasses. After this period, the cutting regime should be reviewed and adjusted as necessary. Tools required include, brush cutter, robust mower with collection box and hay rake. All cuttings should be removed to avoid the development of thatch and nutrification.

Commission experts to survey and document invertebrates within the fenced conservation area.

Monitor hibernacula (log piles) for reptiles and amphibians in fenced grassland area.

Place a small number of reptile mats within the fenced area and monitor both for use by Common lizard, slow worm, Common frog and Common toad.

Use the fenced conservation area as an educational resource to compliment the education garden and further develop the education provision on site.

During periods of drought, consider temporary cordons to protect areas of grassland to prevent trampling and reduce erosion.

Trial retaining the western (landward) side of seasonal cordons all year round to help direct foot pressure around the vegetated shingle rather than across all year round and replace with permanent barrier if successful.

8.9.6. Compartment 3

Objectives

Maintain short grassland with isolated scrub.

Reduce damage caused by excessive trampling.

Management Proposals

Maintain regular stands of bramble scrub that predominantly occur along the western edge of Compartment 1 whereby the shingle habitat begins to stabilise for migrating birds such as Wheatear and Meadow Pipit.

Monitor changes in scrub abundance and rank vegetation development and take appropriate action to prevent long-term changes and maintain the current extent.

Maintain a 1.5 m to 2 m fringe of scrub species including Tamarisk along the fence line of left and right battery for shelter, bird cover, and security.

Maintain patches of bramble alongside concrete track to concentrate footfall and cyclists using the 'Sustrans' cycle route (Route 51) along the path.

Maintain the wooden boardwalk directing visitors from the main gate to the beach and repair, when necessary, to reduce vegetation trampling.

During periods of drought, consider temporary cordons to protect areas of grassland to prevent trampling and reduce erosion.

8.9.7. Compartment 4

Objectives

Maintain and monitor scrub and associated micro-climate created by it.

Management Proposals

Maintain Bramble and Elder scrub and the micro-climate it creates at approximately 20% to 30% coverage in this area, for migratory and breeding birds and invertebrates.

Encourage growth to form a natural barrier between the paths and the interior of the compartment to reduce disturbance by people and dogs.

Monitor scrub density and growth and prevent it from encroaching and dominating the short grassland by removing as necessary.

8.9.8. Compartment 5

Objectives

Maintain short grassland with scrub fringe.

Recommence ground disturbance for Stinking goosefoot population

Management Proposals

Maintain a fringe of scrub species including Tamarisk along the fence line of Right Battery and isolated patches of scrub for shelter, bird cover, and security.

Recommence annual soil disturbance for Stinking goosefoot by hand (March) to encourage germination of any stored seed. Disturbance and exposure to increased light will also encourage additional botanical diversity and any undesirable ruderals such as Thistle sp. and Nettle should be removed to reduce competition. Protect with posts and chestnut paling and weed competing species as required.

Monitor, record and map any subsequent Stinking goosefoot germination.

8.9.9. Compartment 6

Objectives

Maintain and enhance as a tree and shrub lined access route to the Reserve.

Maintain acceptable levels of scrub and prevent encroachment.

Management Proposals

Maintain footpath and cycle route free from overhanging and encroaching vegetation.

Maintain verge between the footpath and Viewpoint Road, by cutting and or removing scrub as necessary to retain open aspect and visibility of road for walkers and cyclists.

Retain enough of a scrub barrier to prevent vehicle access and illegal parking.

Maintain triangle of land where the footpath terminates before entering the Reserve between Left Battery and Compartment 7.

Remove brambles that encroach across the central area.

Prune buddleia annually (if necessary) in late March/ early April; take it back to 60cm stems. To encourage re-growth with many stems and larger flowers for nectar seeking invertebrates.

8.9.10. Compartments 7

Objectives

Maintain and enhance scrub cover for migrating and breeding birds.

Maintain higher sward length to provide structural diversity.

Prevent erosion of steep banks.

Maintain ridge top paths and wooden stepped access.

Management Proposals

Maintain current mosaic of tall sward and scrub on landward and seaward side to deter new paths being created by visitors and cyclist and therefore causing erosion.

Prevent further scrub encroachment from the base of the seaward side to compartment 3 and remove as necessary.

Monitor condition of path and steps, repair and replace as appropriate.

Monitor bankside erosion and install wooden revetments and/or barriers to prevent further erosion where necessary.

Prevent cyclists from using ridge top paths to reduce erosion and for the safety of walkers.

8.9.11. Compartment 8

Objectives

Maintain scrub and short grassland habitat.

Management Proposals

Monitor spread of scrub, maintain current extent and prevent encroachment on stonecrop rich grassland.

Maintain scrub alongside Viewpoint Road and standalone Gorse (*Ulex sp.*) as a barrier and bird cover.

8.9.12. Compartment 9

Objectives

Maintain and enhance the valuable (static) vegetated shingle communities.

Survey and monitor coastal vegetated shingle plant community.

Management Proposals

Remove by hand, undesirable invasive species such as Bramble, Nettle and Thistle sp. to prevent their spread along the shingle habitat.

Monitor and document the coastal vegetated shingle to monitor any changes in species composition and abundance using fixed transects and fixed-point photography.

Reduce the level of enrichment caused by dog fouling, through education, interpretation, patrols, and social media.

8.9.13. Compartment 10

Objectives

Maintain and enhance scrub cover for migrating and breeding birds.

Maintain higher sward length to provide structural diversity.

Prevent erosion of steep banks.

Maintain ridge top paths and wooden stepped access.

Recommence ground disturbance for Stinking goosefoot population

Management Proposals

Maintain current mosaic of tall sward and scrub on landward and seaward side to deter new paths being created by visitors and cyclist and therefore causing erosion.

Prevent further scrub encroachment from the base of the earth bank to Compartment 9 and 11 and remove as necessary.

Monitor condition of path and steps, repair and replace as appropriate.

Monitor bankside erosion and install wooden revetments and/or barriers to prevent further erosion where necessary.

Prevent cyclists from using ridge top paths to reduce erosion and for the safety of walkers.

Monitor spread of Alexanders and manage by removing plants by hand or reducing seed load if needed.

Recommence annual soil disturbance for Stinking goosefoot by hand (March) alongside southernmost edge of concrete track to encourage germination of any stored seed. Disturbance and exposure to increased light will also encourage additional botanical diversity and any undesirable ruderals such as Thistle sp. and Nettle should be removed to reduce competition. Protect with posts and chestnut paling as required.

Monitor, record and map any subsequent Stinking goosefoot germination.

8.9.14. Compartment 11

Objectives

Maintain a mosaic of plant communities with varying sward heights.

Monitor for invasive species.

Maintain and enhance pond and surrounding vegetation.

Monitor Common lizard and Slow worm population in this area.

Initiate grassland erosion control in areas worst affected by visitor pressure.

Monitor germination of Stinking goosefoot in south of Manor Terrace car park and protect and weed as necessary.

Management Proposals

Maintain pond, prevent natural succession to a drier area by removing bankside Willow, Bramble and developing dense stands of Divided sedge as necessary.

Place refugia to monitor Common lizard and Slow worm within fenced pond area.

Clear vegetation around the base of pond fence and repair rabbit barrier.

Cut and remove patches of coarse vegetation around the pond creating scalloped edging and maintain structural diversity to benefit reptiles, amphibians and small mammals.

Manage vegetation in this compartment as a mosaic of short grassland, scrub and tall grasses to provide opportunities for reptiles, invertebrates, birds and small mammals.

Liaise with County Recorders and other experts in their field to survey specialist species groups such as bryophytes, lichens, vascular plants, invertebrates, arachnids and identify and invasive species for management.

Monitor area for erosion caused by heavy trampling and assess whether areas need to be cordoned off to allow regeneration.

Initiate grassland erosion control in areas worst affected by visitor pressure using posts and chestnut paling where necessary.

In areas worst affected by visitor pressure where Stinking goosefoot occurs protect with posts and chestnut paling as required.

8.9.15. Management Tasks Table

Work Area / Compartment	Management Task	Timing	Ranger -R Project Officer-PO Volunteers-V	Years				
				1	2	3	4	5
Access	Maintain 0.5m either side of surfaced access routes free from scrub and overhanging vegetation	Nov to Feb or as necessary	R,V	*	*	*	*	*
	Maintain and repair wooden boardwalk	As necessary	R,V	*	*	*	*	*
	Repair and replace steps on Rifle Butts	As necessary	R,V	*	*	*	*	*
	Locate and uncover original stone steps on Rifle Butts	Nov to Feb	R,V		*			
	Maintain barriers to prevent vehicle access	As necessary	R,V	*	*	*	*	*
	Repair or replace round picnic table and bench at Manor Terrace	As necessary	R,V	*	*	*	*	*
	Review and reproduce Nature Reserve leaflet, interpretation boards and orientation maps	As necessary	R,PO	*	*	*	*	*
	Ensure notice boards are maintained up to date	All year round	R	*	*	*	*	*
Historic Buildings & Archaeology	If necessary, maintain 0.5 – 1m clear of vegetation around buildings	Nov to Feb	R,V	*	*	*	*	*
	Maintain scrub barrier around security fencing	All year round	R,V	*	*	*	*	
	Survey buildings for use by bats	Mar to Oct	R,V	*	*	*		*
Education	Revise education provision and promote to schools	Ongoing	R	*	*	*	*	*
	Create and develop education area behind the bungalow garage	Ongoing	R,V	*	*			
	Utilise fenced grassland for education opportunities	Ongoing	R		*	*		
	Create improved teaching resources	Ongoing	R		*			
	Develop educational activities for different age groups	Ongoing	R	*	*	*	*	*
Volunteers	Develop and share volunteer information pack, registration form and volunteer agreement	Ongoing	R,PO	*				
	Recruit LNR volunteers through social media	Ongoing	R	*	*	*	*	*
	Create schedule of tasks for volunteers	Annually	R	*	*	*	*	*
	Develop additional volunteer opportunities	Ongoing	R	*	*	*	*	*

Surveys and monitoring	Install reptile mats in fenced areas and left battery. Survey for slow worm and common lizard each year	Apr to Sept	R		*	*		
	Carry out building emergence bat surveys using handheld detector's	Mar to Oct	R,V		*	*		
	Identify foraging routes of bats using handheld detector along transect routes	Mar to Oct	R,V		*	*		
	Seek experts to conduct detailed surveys of specialist flora and fauna	As required	R and Experts		*	*		
	Record species records and share with SBIS	Ongoing	R	*	*	*	*	*
	Use drone photography to map site, create scrub management map and monitor change	Ongoing	R and drone operator	*	*	*	*	*
	Locate, count, and map stinking goosefoot plants	May to Oct	R	*	*	*	*	*
	Use fixed point photography to monitor change	Ongoing	R	*	*	*	*	*
	Initiate marine invasive species survey with HHA and volunteers	Ongoing	R, V		*	*	*	*
	Following survey and observation, revise management as necessary	Ongoing	R, PO	*	*	*	*	*
Interpretation	Review all interpretation and signage and renew or replace	As required	R, PO	*	*			
	Revise dogs on leads signage	As required	R, PO	*				
	Review and reproduce PSPO signage	As required	R, PO		*			
	Seek funding to facilitate change	As required	R, PO	*	*	*	*	*
Social Media	Continue to utilise Ranger's blog on Discover Landguard webpages	Ongoing	R	*	*	*	*	*
	Create LNR Community Facebook page and promote to raise awareness and understanding	Ongoing	R	*				
	Organise events during school holidays to engage with local community	Ongoing	R	*	*	*	*	*
Tools & Equipment	Carry out tools condition assessment and evaluate future needs	Ongoing	R	*	*	*	*	*

	Seek funding to purchase robust mower with collection box and Ranger utility vehicle	Ongoing	PO	*	*	*	*	*
HHA1	Remove undesirable scrub across grassland	All year round	R,V	*	*	*	*	*
	Continue to enforce dog on leads	All year round	R	*	*	*	*	*
	Maintain fenced conservation areas free from developing scrub	All year round	R,V	*	*	*	*	*
	Remove accumulated shingle and replace permanent post and rope cordons with post and rails	Nov to Feb	R,V		*	*		
	Install shelduck boxes in fenced shingle berms	Nov to Feb	R,V			*		
	Install grass matting to meet proposed grass matting in HHA2 and compartment 2	Nov to Feb	R,V	*	*	*	*	*
	Replenish shingle on top of eroded berms in fenced conservation area	Nov to Feb	R,V		*			
	Monitor condition of historical buildings	Ongoing	R,PO	*	*	*	*	*
	Maintain vegetation around mine station	All year round	R,V	*	*	*	*	*
	Monitor and maintain plastic boardwalk	As required	R, V	*	*	*	*	*
HHA2	Further develop education area behind garage	Ongoing	R,V	*	*			
	Recycle old boardwalk and repurpose in education area	Ongoing	R,V	*	*			
	Create additional space in garage for volunteers and improved workshop space	Ongoing	R		*			
	Supplement food for sparrow colony with seed	All year round	R	*	*	*	*	*
	Install more bird boxes with cameras and use footage for social media on garage	Mar to Sept	R		*			
	Install grass matting to meet concrete track and grass matting in compartment 2	Nov to Feb	R,V	*	*	*	*	*
	Monitor condition of historical buildings	Ongoing	R,PO	*	*	*	*	*
	Remove undesirable scrub	All year round	R,V	*	*	*	*	*

	Maintain vehicle access to HHA Radar tower	Nov to Feb	R,V	*	*	*	*	*
Compartment AY	Monitor for breeding birds prior to any planned overflow parking use	Mar to Oct	R,V, PO	*	*	*	*	*
Compartment 1	Protect shingle nesting birds and vegetation with cordons as necessary	Mar to Oct	R,V	*	*	*	*	*
	Trial the use of electric fencing to reduce within seasonal cordon	Mar to Oct	R,V		*	*		
	Remove undesirable scrub, nettle and thistle by their roots	Oct to Feb	R,V	*	*	*	*	*
	Encourage anglers not to fish directly in front of post and rope cordons to reduce disturbance to birds	Mar to Oct	R	*	*	*	*	*
	Repair wooden boardwalk as necessary	All year round	R,V	*	*	*	*	*
	Remove patches of Marram grass each year to reduce spread	All year round	R,V	*	*	*	*	*
	Safeguard seals as necessary with cordon, signs and volunteers	All year round	R,V	*	*	*	*	*
	Reinforce key messages through signage and social media	As required	R	*	*	*	*	*
	Monitor vegetated shingle and Marram grass using fixed point photography	All year round	R	*	*	*	*	*
Compartment 2	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
	Cut and remove arisings from fenced grassland area twice in the first two years and then annually if couch grass reduced	Late Summer and Spring	R,V	*	*	*	*	*
	Monitor log piles and reptile mats for reptiles in fenced grassland area	Ongoing	R,V		*			
	Seek expert invertebrate survey of fenced grassland area	Summer	R		*			
	Monitor rabbit grazing and seek advice when needed	Ongoing	R	*	*	*	*	*
	Trial retaining western (landward) side of seasonal cordon all year round.	All year round	R,V		*	*	*	*

Compartment 3	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
	Maintain scrub barrier along security fencing	All year round	R,V	*	*	*	*	*
	Maintain bramble alongside concrete track	All year round	R,V	*	*	*	*	*
	Maintain wooden boardwalk	All year round	R,V	*	*	*	*	*
	Monitor, maintain and or reduce, when necessary, stands of bramble adjacent to stabilised shingle	Oct to Feb	R,V	*	*	*	*	*
	Protect heavily eroded areas with temporary fencing	As required	R,V	*	*	*	*	*
Compartment 4	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
	Maintain a 20% to 30% extent of scrub in this area	Ongoing	R	*	*	*	*	*
Compartment 5	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
	Recommence ground disturbance in small area stinking goosefoot, monitor and record germination and protect as necessary	March	R,V	*	*	*	*	*
Compartment 6	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
	Maintain footpath and verge free from encroaching and overhanging vegetation	All year round	R,V	*	*	*	*	*
	Prune Buddleia as necessary	March	R	*	*	*	*	*
Compartment 7	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
	Repair or replace wooden steps and barriers	As required	R,V	*	*	*	*	*
Compartment 8	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
Compartment 9	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*

	Monitor vegetated shingle community	All year round	R	*	*	*	*	*
Compartment 10	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
	Recommence ground disturbance in small areas adjacent to path for stinking goosefoot	March	R,V	*	*	*	*	*
	Repair or replace steps and barriers on Rifle Butts	As necessary	R,V	*	*	*	*	*
	Monitor spread of Alexanders and take action when needed	As necessary	R	*	*	*	*	*
Compartment 11	Remove undesirable scrub by their roots or treat with selective herbicide	Oct to Feb	R,V	*	*	*	*	*
	Monitor and record stinking goosefoot plants	May to Oct	R	*	*	*	*	*
	Fence stinking goosefoot if grazing or trampling is impacting the plant	May to Oct	R,V	*	*	*	*	*
	Divide areas of longer sward into sub compartments and cut on rotation	October November	R,V		*	*	*	*
	Maintain areas of short and long sward in fenced pond area to benefit reptiles and invertebrates	As necessary	R,V	*	*	*	*	*
	Recommence ground disturbance along track toward southern end	March	R,V	*	*	*	*	*
	Enhance fence pond area for reptiles and amphibians with small log pile and reptile mats for refuge and monitoring	Autumn	R,V		*			
	Cut and remove arisings from fenced pond area twice in the first two years and then annually if thistle reduced	Autumn and Spring	R,V	*	*	*	*	*
	Reduce Divided sedge around the pond	Nov to Feb	R,V		*			*
	Cut vegetation around pond fence line to facilitate fence repairs	Nov to Feb	R,V	*	*	*	*	*
	Protected eroded areas with temporary fencing	As required	R,V	*	*	*	*	*

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Day, J. Et al. (2003). **The Scrub Management Handbook**: Guidance on the management of scrub on nature conservation sites. The Forum for the Application of Conservation Techniques (FACT).

Fuller, R.M. (1987). **Vegetation Establishment on Shingle Beaches**. *Journal of Ecology*, Vol. 75, No 4, 1077-1089.

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APPENDICIES

Appendix I

SSSI Citation

File Ref: EA/S/59/14 WLX

SITE NAME: LANDGUARD COMMON, FELIXSTOWE

Status: Site of Special Scientific Interest [SSSI] notified under Section 28 of the Wildlife and Countryside Act 1981

Loc91 Nature Reserve [LNR] established under Section 21 of the National Parks and Access to the Countryside Act 1949

Local Planning Authority: Suffolk Coastal District Council

National Grid Reference: TM 285315

Area: 31.4 [ha.] ~ 77.6 [ac.]

Ordnance Survey Sheet 1:50,000: 169 1:10,000: TM 23 SE

Date Notified [Under 1949 Act]: 1973

Date Notified [Under 1981 Act]: 1984

Reasons for notification

Landguard Common is a sand and shingle spit protecting the northern entrance to the haven ports of Harwich and Felixstowe. It consists of a loose shingle foreshore backed by a stabilized, vegetated beach, earth banks and scrub. Pioneer shingle plants and vegetated shingle are fragile and nationally scarce habitat type. The site is also of some ornithological interest as a landfall site for passage migrants and for breeding shore birds.

The north part of the foreshore is protected by sea defences but this and the beach crest further south is sea washed and provides bare shingle for colonizing shingle species. This includes a large population of Sea Kale [*Crambe maritima*] as well as Sea Pea [*Lathyrus japonicus*], Yellow-Horned Poppy, Sea Sandwort and Sea Campion. The bare shingle is also used by nesting Little Terns and Ringed Plover.

Inland the shingle is stabilized and vegetated. To the south Red Fescue, Early Hair Grass and Sand Sedge predominate whilst further north and on earthworks this merges with dry neutral grassland dominated by False Oat Grass, Cocksfoot and Sea Couch Grass. Other plants include Sea Holly, Sea Bindweed, Viper's Bugloss, English and Biting Stone crops, Slender Thistle and Crow Garlic together with naturalised species such as Rough Dog's Tail, Hoary Cress, Dittander and Red Valerian. Rare and local species include *Medicago minima*, *Trifolium ornithopodioides*, *T glomeratum*, *T suffocatum*, *T striatum* ~ *Poa bulbosa* and *Lathyrus nissolia*.

There are several wet areas which contain marsh or saltmarsh species including Sea Rush, Salt Rush, Sea Club-Rush and Sea Milkwort. Scrub, chiefly of Tamarisk, Elder, Rose and Bramble occur particularly on some earthworks. This provides cover for small birds and forms a favoured landfall for migrant species.

Appendix II
Designation Maps

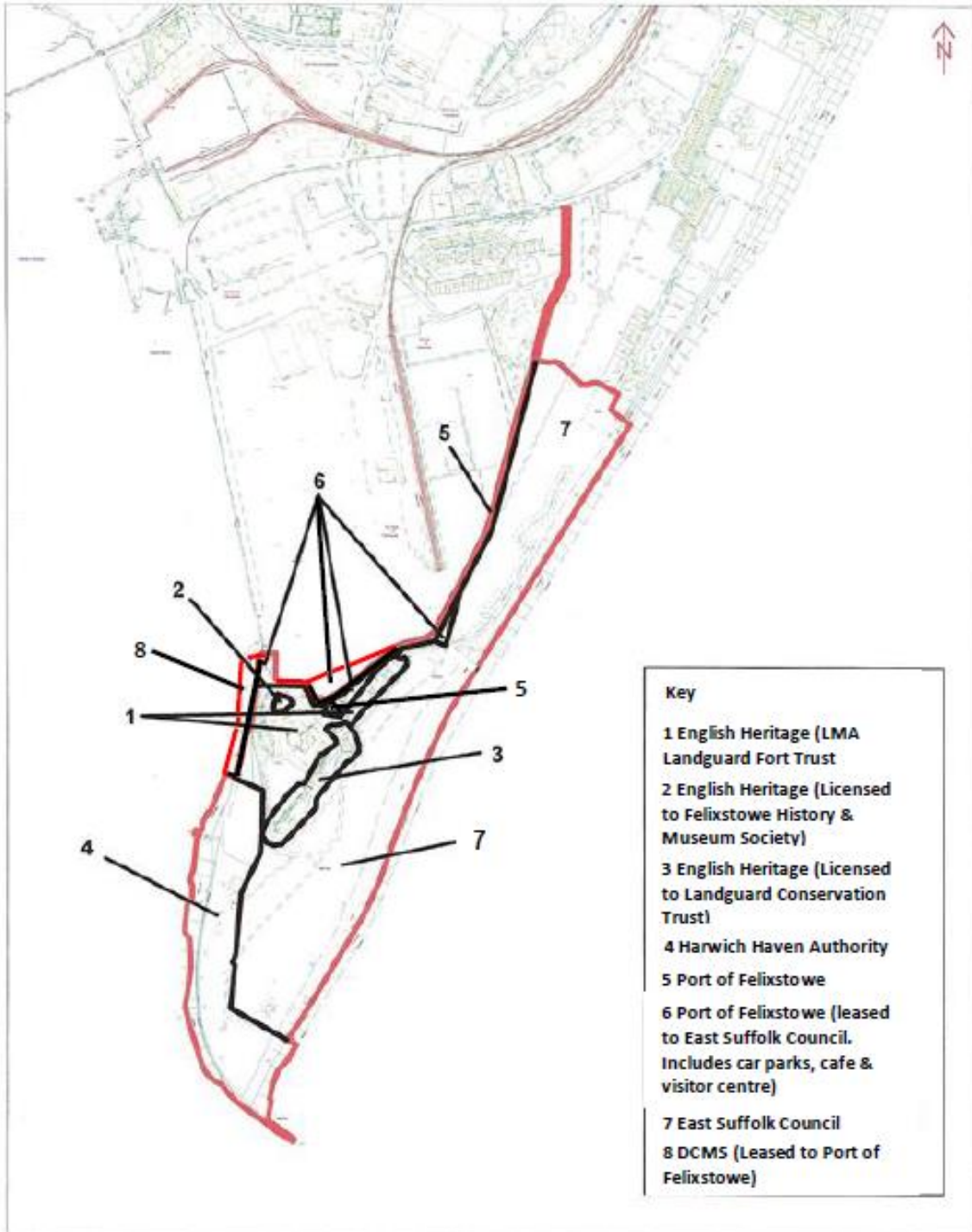


Above left: Area of SSSI designation

Above right: Area of Local Nature Reserve Designation

Left: Area of Scheduled Ancient Monument designation

Appendix III Land Tenure Map



Appendix IV Byelaws

The Suffolk County Council in exercise of the powers conferred upon them by Section 20, 21(4) and 106 of the National Parks and Access to the Countryside Act 1949 and in accordance with Section 236 of the Local Government Act 1972 hereby make the following byelaws for the protection of the Nature Reserve at Landguard Common in the Parish of Felixstowe in the County of Suffolk.

1. In these byelaws
 - (1) 'The Reserve' means the piece or parcel of land and foreshore containing in the whole 40 acres or thereabouts and situate in the Parish of Felixstowe in the County of Suffolk declared to be managed as a Nature Reserve by the Declaration dated the twenty-second day of February One thousand nine hundred and seventy-nine made by Suffolk County Council in pursuance of Section 19 of the National Parks and Access to the Countryside Act 1949 and the Reserve is for the purpose of identification shown as nearly as may be on the map annexed to these Byelaws and thereon edged blue
 - (2) 'The Council' shall mean the Suffolk County Council
 - (3) 'Firearm' shall have the same meaning as in Section 57 of the Firearms Act 1968
2. Within the Reserve the following acts are hereby prohibited, except insofar as they may be authorised by a permit issued in accordance with byelaw 3, and except insofar as they be necessary to proper execution of his duty by any person employed by the Council or a duly authorised agent of said Council

RESTRICTION OF ACCESS

- (I) entering at any time those parts of the Reserve where notice to keep out has been posted by order of the Council or their duly authorised agent

DAMAGE TO OR DISTURBANCE OF THINGS ON THE RESERVE

- (II) spreading or using any net, or setting or using any lamp, or any snare or lure, for the taking, injuring or destruction of any living creature
- (III) taking, molesting or willfully disturbing, injuring or killing any living creature
- (IV) taking, or willfully disturbing, injuring or destroying the eggs or nests of any living creature
- (V) willfully removing, cutting or damaging any plant or other vegetation whether living or dead
- (VI) willfully removing any soil, shingle, or rock, or defacing any rock
- (VII) climbing any tree

BRINGING ANIMALS INTO THE RESERVE

- (VIII) willfully bringing, or permitting to be brought, into the Reserve any living creature, or the egg of any living creature, or any plant, or any seed or any other part of any plant, in such circumstances that it is likely that such creature or plant will reproduce or propagate itself, or such egg will hatch. Or such seed will germinate
- (IX) bringing into, or permitting to remain within, the Reserve any dog or other animal unless it is kept under proper control, and is effectively restrained from injuring or disturbing any animal or bird
- (X) turning out any poultry to feed or graze

AREAS OF WATER

- (XI) any act which pollutes or is likely to pollute any water
- (XII) bathing or wading in any water in contravention of a notice exhibited beside that water by order of the Council or by a duly authorised agent of the Council
- (XIII) water skiing or skating
- (XIV) sailing of model boats
- (XV) propelling (by any means whatever) any boat elsewhere than on public waterway in contravention of a notice exhibited beside that water by the Council

- or by a duly authorised agent of the Council
- (XVI) mooring or leaving any boat elsewhere than on a beach or mooring site indicated as being available for the purpose by a notice exhibited by the Council or by a duly authorised agent of the Council

USE OF VEHICLES

- (XVII) driving, riding, propelling or leaving any mechanically propelled vehicle (including hovercraft) elsewhere than on a highway or on a road or parking place indicated by a notice as being available for that purpose
- (XVIII) landing any vehicle except in case of emergency

USE OF CERTAIN EQUIPMENT

- (XIX) erecting or using any camera mounted on a stand or concealing structure for the purpose of photographing or observing any wild animal or bird, or any apparatus for the transmission, reception, reproduction, or amplification of sound, speech or images by electrical or mechanical means, except apparatus used in a vehicle so as not to produce sound audibly by a person outside the vehicle
- (XX) using any device designed or adapted for detecting or locating any metal or mineral in the Reserve

USE OF FIREARMS, ETC

- (XXI) carrying a firearm, air weapon, catapult, or bow elsewhere than on a highway
- (XXII) discharging any firearm or air weapon, or projecting any missile manually or by artificial means

GENERAL PROHIBITIONS

- (XXIII) erecting, occupying or using any tent, shed or caravan or other structure for the purpose of camping elsewhere than in an area indicated by notice as being available for camping
- (XXIV) flying any kite or model aircraft
- (XXV) erecting any post, rail, fence, pole, booth, stand, building or other structure
- (XXVI) posting or placing any notice or advertisement
- (XXVII) selling or offering or exposing for sale, or letting for hire or offering or exposing for letting for hire, any commodity or article
- (XXVIII) playing any game likely to cause a disturbance or holding any show, performance, exhibition or sports or public meeting
- (XXIX) willfully or negligently removing or displacing, or negligently facing, damaging or destroying any notice board, notice exhibited by order of the Council or their duly authorised agent, apparatus, wall, boundary bank, fence, barrier, railing, post or hide
- (XXX) lighting any fire, stove, heater or other appliance capable of causing a fire, elsewhere than in an area indicated by notice as being available for camping
- (XXXI) letting fall or throwing any lighted match or lighted substance in a manner likely to cause fire
- (XXXII) willfully leaving items in a place other than a receptacle provided for deposit of litter refuse

INTERFERENCE WITH DULY AUTHORISED OFFICER PERSON OR AGENT

- (XXXIII) willfully obstructing any person employed by the Council or duly authorised agent of the Council in the execution of any research or scientific work or any work connected with the laying out, maintenance or management of the Reserve

3. (1) The Council or their duly authorised agent may issue permits authorising any person to do any act or class of acts within the Reserve or any part thereof which would otherwise be unlawful under these byelaws.
- (2) Any such permit shall be issued subject to the following conditions:
- (a) that it must be carried whenever a visit is made to the Reserve, and produced for the inspection when required by any duly authorised person, and
- (b) that it may be revoked by the Council or their duly authorised agent at any time

4. These byelaws shall not interfere with the exercise-
 - (a) by a person of: -
 - (I) a right vested in him as owner, lessee or occupier of land in the Reserve
 - (II) any easement or profit a prendre to which he is entitled
 - (III) any public right
 - (b) of any functions by a local authority, statutory undertaker, a river board or other drainage authority and the HarwichHarbour Conservation Board
 - (c) by a constable, coastguard or a member of the armed forces or of any fire brigade or ambulance service of the performance of his duty
5. Any person who offends against any of these byelaws shall be liable on summary conviction to a fine not exceeding the sum of fifty pounds

Byelaws - Amenity Areas

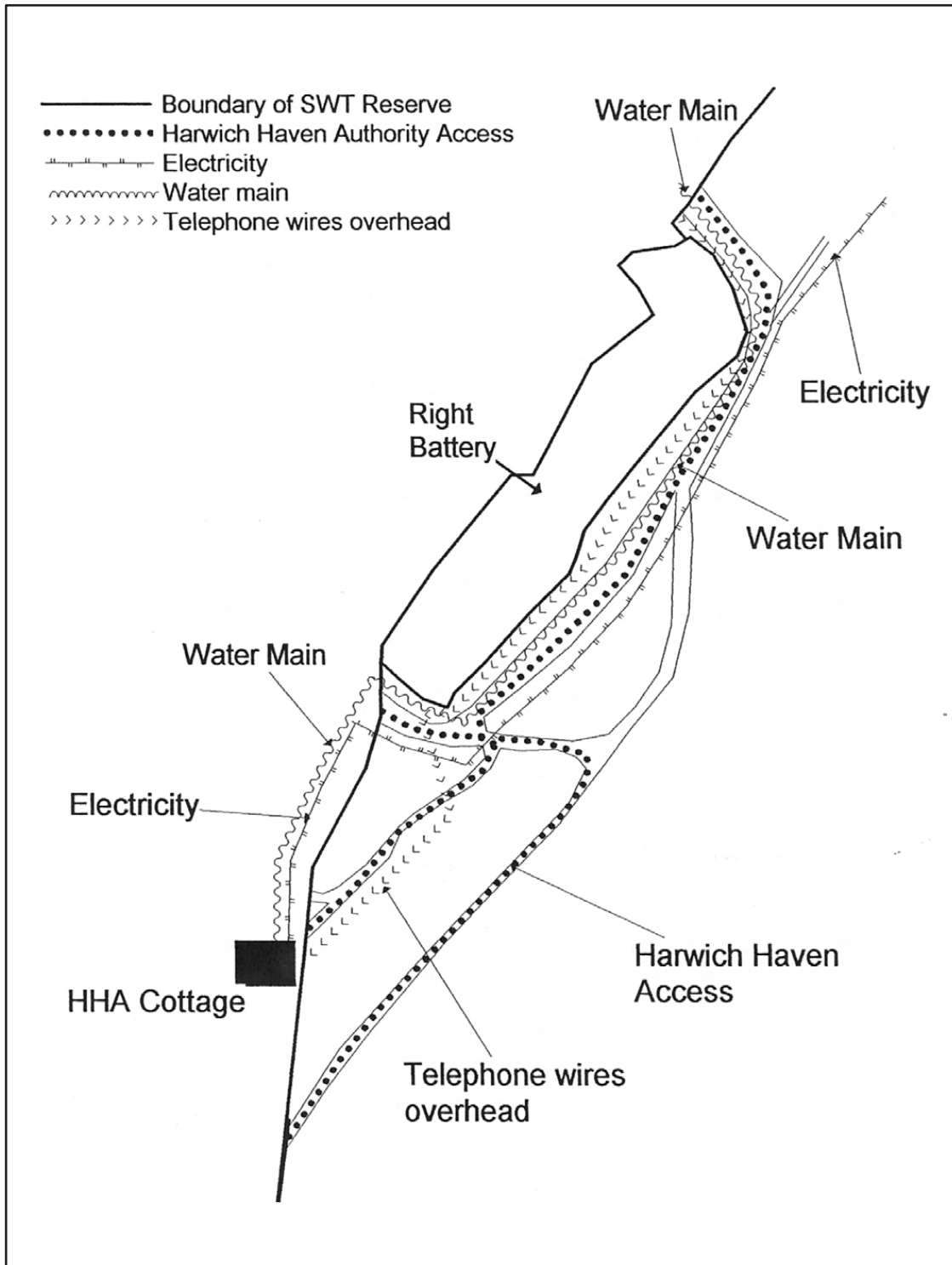
Made under Section 41 of the Countryside Act 1968, by the District Council of Suffolk Coastal with respect to grounds held underSection 41 of the Countryside Act 1986.

1. throughout these byelaws the expression “the Council” means the District Council of Suffolk Coastal and expression “the land” means each of the areas known as Sutton Amenity Area, Bawdsey Amenity Area, Melton Riverside Area and Landguard Amenity Area.
2. No person shall on the land
 - (I) willfully, carelessly or negligently soil or defile any wall or fence on or enclosing the land or any building, barrier, railing, post or seat or any erection or ornament.
 - (II) climb any wall or fence on or enclosing the land or any tree or, railing, post or other erection.
 - (III) willfully, carelessly or negligently remove or displace any barrier, railing, post or seat or any part of any erection or ornament or any implement provided for use in the laying out or maintenance of the land
3. No person shall affix or cause to be affixed any advertisement, bill, placard or notice upon any building, wall, fence, gate, door, pillar, post, tree, rock or stone or enclosing the land.
4.
 - (I) No person shall light a fire on the land or place or throw or let fall a lighted match or any other thing so as to be likely to cause a fire.
 - (II) 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 as indicated by notice conspicuously displayed in such a manner as not to cause danger of or damage by fire
5.
 - (I) No person shall ride or drive a mechanically propelled vehicle on nay part of the land where there is no right of way for vehicles.
 - (II) This byelaw shall not extend to invalid carriages conforming to the provisions of regulations made under the Chronically Sick and Disabled Persons Act 1970
 - (III) 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 the direct route between it and the entrance to the land.
6. Where the Council indicated by a notice conspicuously exhibited on or alongside any gate or on the land that leaving thegate open is prohibited, no person having opened that gate or caused it to be open shall leave it open.
7. No person shall without the consent of the Council erect a tent or use any vehicle, including a caravan or any other structure for the purpose of camping on the land except on any area which may be set apart and indicated by notice as place where camping is permitted

8. No person shall have in his possession, while he is on the land, any firearm unless it is so covered with a securely fastened gun cover that it cannot be fired. In this byelaw the expression "firearm" means any lethal barrelled weapon of any description from which any shot, bullet or other missile can be discharged.
This byelaw shall apply to all parts of the land other than any part which is public right of way.
9. No person shall cause or suffer a dog belonging to him or in his charge to enter or remain on the land unless such dog be and continue to be under proper control and be effectually restrained from causing annoyance to any person and from worrying and disturbing any animal.
10. (I) No person shall without lawful excuse or Authority on the land kill, molest or willfully disturb any animal, bird or fish or engage in hunting, shooting or fishing or the setting of traps or nets or the laying of snares
(II) This byelaw shall not prohibit any fishing which may be authorised by the Council
11. No person shall on the land sell or offer or expose for sale or let to hire or offer or expose for letting to hire any commodity or article except in pursuance of an agreement with the Council
12. No person shall obstruct the flow of any drain or watercourse or open, shut or otherwise interfere with any sluice gate or similar apparatus on the land.
13. No person shall bathe in any waterway comprised in the land except in an area where a notice exhibited by the Council permits bathing.
14. No person shall willfully, carelessly or negligently foul or pollute any waterway comprised in the land.
15. No person shall on the land willfully obstruct, disturb or annoy any other person in the proper use of the land or willfully obstruct or disturb a warden or other officer of the Council in the proper execution of his duty or any other person or servant of any person employed by the Council in the proper execution of any work in connection with the laying out or maintenance of the land.
16. (I) An act necessary to the proper execution of his duty on the land by an officer of the Council or by any person or servant of any person employed by the Council shall not be deemed an offence against these byelaws
(II) Nothing in or done under any of the provisions of these byelaws shall in 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.
17. Every person who shall offend against these byelaws shall be liable on summary conviction to a fine not exceeding fifty pounds

Appendix V

Third Party Wayleaves & Easements



Appendix VI

SBIS Records 2010 -2021

During the period 2010 to 2020 many species from numerous taxon groups including many notable species have been recorded at Landguard by the Landguard Bird Observatory and other recorders as detailed below. For greater detail and historical records prior to this period, please refer to the Suffolk Biological Information Service.

Taxon group	Recommended Common Name	Recommended Taxon Name
amphibian	Smooth Newt	<i>Lissotriton vulgaris</i>
amphibian	Common Frog	<i>Rana temporaria</i>
annelid	Hemiclepsis marginata	<i>Hemiclepsis marginata</i>
bird	Lesser Redpoll	<i>Acanthis cabaret</i>
bird	Common (Mealy) Redpoll	<i>Acanthis flammea</i>
bird	Redpoll (Common\Lesser)	<i>Acanthis flammea/cabaret</i>
bird	Sparrowhawk	<i>Accipiter nisus</i>
bird	Common Myna	<i>Acridotheres tristis</i>
bird	Great Reed Warbler	<i>Acrocephalus arundinaceus</i>
bird	Blyth's Reed Warbler	<i>Acrocephalus dumetorum</i>
bird	Marsh Warbler	<i>Acrocephalus palustris</i>
bird	Sedge Warbler	<i>Acrocephalus schoenobaenus</i>
bird	Reed Warbler	<i>Acrocephalus scirpaceus</i>
bird	Common Sandpiper	<i>Actitis hypoleucos</i>
bird	Long-tailed Tit	<i>Aegithalos caudatus</i>
bird	Eurasian Skylark	<i>Alauda arvensis</i>
bird	Razorbill	<i>Alca torda</i>
bird	Kingfisher	<i>Alcedo atthis</i>
bird	Auks	<i>Alcidae</i>
bird	Red-legged Partridge	<i>Alectoris rufa</i>
bird	Little Auk	<i>Alle alle</i>
bird	Egyptian Goose	<i>Alopochen aegyptiaca</i>
bird	Pintail	<i>Anas acuta</i>
bird	Teal	<i>Anas crecca</i>
bird	Mallard	<i>Anas platyrhynchos</i>
bird	White-fronted Goose	<i>Anser albifrons</i>
bird	European Greater White-fronted Goose	<i>Anser albifrons albifrons</i>
bird	Greylag Goose	<i>Anser anser</i>
bird	Pink-footed Goose	<i>Anser brachyrhynchus</i>
bird	Snow Goose	<i>Anser caerulescens</i>
bird	Taiga Bean Goose	<i>Anser fabalis</i>
bird	Tundra Bean Goose	<i>Anser serrirostris</i>

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bird	Tawny Pipit	<i>Anthus campestris</i>
bird	Red-throated Pipit	<i>Anthus cervinus</i>
bird	Eurasian Rock Pipit	<i>Anthus petrosus</i>
bird	Meadow Pipit	<i>Anthus pratensis</i>
bird	Tree Pipit	<i>Anthus trivialis</i>
bird	Swift	<i>Apus apus</i>
bird	Pallid Swift	<i>Apus pallidus</i>
bird	Great White Egret	<i>Ardea alba</i>
bird	Grey Heron	<i>Ardea cinerea</i>
bird	Great Shearwater	<i>Ardenna gravis</i>
bird	Sooty Shearwater	<i>Ardenna grisea</i>
bird	Turnstone	<i>Arenaria interpres</i>
bird	Long/Short-Eared Owl	<i>Asio</i>
bird	Short-eared Owl	<i>Asio flammeus</i>
bird	Long-eared Owl	<i>Asio otus</i>
bird	Little Owl	<i>Athene noctua</i>
bird	Pochard	<i>Aythya ferina</i>
bird	Tufted Duck	<i>Aythya fuligula</i>
bird	Scaup	<i>Aythya marila</i>
bird	Waxwing	<i>Bombycilla garrulus</i>
bird	Brant Goose	<i>Branta bernicla</i>
bird	Dark-bellied Brent Goose	<i>Branta bernicla bernicla</i>
bird	Light-bellied Brent Goose	<i>Branta bernicla hrota</i>
bird	Black Brant	<i>Branta bernicla nigricans</i>
bird	Canada Goose	<i>Branta canadensis</i>
bird	Barnacle Goose	<i>Branta leucopsis</i>
bird	Red-breasted Goose	<i>Branta ruficollis</i>
bird	Goldeneye	<i>Bucephala clangula</i>
bird	Eurasian Stone-curlew	<i>Burhinus oedinemus</i>
bird	Buzzard	<i>Buteo buteo</i>
bird	Lapland Bunting	<i>Calcarius lapponicus</i>
bird	Sanderling	<i>Calidris alba</i>
bird	Dunlin	<i>Calidris alpina</i>
bird	Knot	<i>Calidris canutus</i>
bird	Curlew Sandpiper	<i>Calidris ferruginea</i>
bird	Purple Sandpiper	<i>Calidris maritima</i>
bird	Little Stint	<i>Calidris minuta</i>
bird	Ruff	<i>Calidris pugnax</i>
bird	Buff-breasted Sandpiper	<i>Calidris subruficollis</i>
bird	Scopoli's Shearwater	<i>Calonectris diomedea</i>

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bird	Goldfinch	<i>Carduelis carduelis</i>
bird	Common Rosefinch	<i>Carpodacus erythrinus</i>
bird	Red-rumped Swallow	<i>Cecropis daurica</i>
bird	Short-toed Treecreeper	<i>Certhia brachydactyla</i>
bird	Treecreeper	<i>Certhia familiaris</i>
bird	Cetti's Warbler	<i>Cettia cetti</i>
bird	Kentish Plover	<i>Charadrius alexandrinus</i>
bird	Little Ringed Plover	<i>Charadrius dubius</i>
bird	Common Ringed Plover	<i>Charadrius hiaticula</i>
bird	Dotterel	<i>Charadrius morinellus</i>
bird	Black Tern	<i>Chlidonias niger</i>
bird	Greenfinch	<i>Chloris chloris</i>
bird	Black-headed Gull	<i>Chroicocephalus ridibundus</i>
bird	Black Stork	<i>Ciconia nigra</i>
bird	Western Marsh Harrier	<i>Circus aeruginosus</i>
bird	Hen Harrier	<i>Circus cyaneus</i>
bird	Montagu's Harrier	<i>Circus pygargus</i>
bird	Long-tailed Duck	<i>Clangula hyemalis</i>
bird	Hawfinch	<i>Coccothraustes coccothraustes</i>
bird	Western Jackdaw	<i>Coloeus monedula</i>
bird	Feral Pigeon	<i>Columba livia</i>
bird	Stock Dove	<i>Columba oenas</i>
bird	Woodpigeon	<i>Columba palumbus</i>
bird	Hooded Crow	<i>Corvus cornix</i>
bird	Carrion Crow	<i>Corvus corone</i>
bird	Rook	<i>Corvus frugilegus</i>
bird	Cuckoo	<i>Cuculus canorus</i>
bird	Subalpine Warbler	<i>Curruca cantillans/iberiae</i>
bird	Whitethroat	<i>Curruca communis</i>
bird	Lesser Whitethroat	<i>Curruca curruca</i>
bird	Barred Warbler	<i>Curruca nisoria</i>
bird	Dartford Warbler	<i>Curruca undata</i>
bird	Eurasian Blue Tit	<i>Cyanistes caeruleus</i>
bird	Black Swan	<i>Cygnus atratus</i>
bird	Bewick's Swan	<i>Cygnus columbianus</i>
bird	Whooper Swan	<i>Cygnus cygnus</i>
bird	Mute Swan	<i>Cygnus olor</i>
bird	Common House Martin	<i>Delichon urbicum</i>
bird	Great Spotted Woodpecker	<i>Dendrocopos major</i>
bird	Little Egret	<i>Egretta garzetta</i>

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bird	Corn Bunting	<i>Emberiza calandra</i>
bird	Yellowhammer	<i>Emberiza citrinella</i>
bird	Ortolan Bunting	<i>Emberiza hortulana</i>
bird	Little Bunting	<i>Emberiza pusilla</i>
bird	Common Reed Bunting	<i>Emberiza schoeniclus</i>
bird	Shore Lark	<i>Eremophila alpestris</i>
bird	Robin	<i>Erithacus rubecula</i>
bird	Saker	<i>Falco cherrug</i>
bird	Merlin	<i>Falco columbarius</i>
bird	Peregrine	<i>Falco peregrinus</i>
bird	American Kestrel	<i>Falco sparverius</i>
bird	Hobby	<i>Falco subbuteo</i>
bird	Kestrel	<i>Falco tinnunculus</i>
bird	Red-footed Falcon	<i>Falco vespertinus</i>
bird	European Pied Flycatcher	<i>Ficedula hypoleuca</i>
bird	Red-breasted Flycatcher	<i>Ficedula parva</i>
bird	Puffin	<i>Fratercula arctica</i>
bird	Common Chaffinch	<i>Fringilla coelebs</i>
bird	Brambling	<i>Fringilla montifringilla</i>
bird	Eurasian Coot	<i>Fulica atra</i>
bird	Fulmar	<i>Fulmarus glacialis</i>
bird	Snipe	<i>Gallinago gallinago</i>
bird	Moorhen	<i>Gallinula chloropus</i>
bird	Jay	<i>Garrulus glandarius</i>
bird	Indet. Diver	<i>Gavia</i>
bird	Black-throated Loon	<i>Gavia arctica</i>
bird	Common Loon	<i>Gavia immer</i>
bird	Red-throated Loon	<i>Gavia stellata</i>
bird	Crane	<i>Grus grus</i>
bird	Oystercatcher	<i>Haematopus ostralegus</i>
bird	Icterine Warbler	<i>Hippolais icterina</i>
bird	Swallow	<i>Hirundo rustica</i>
bird	European Storm Petrel	<i>Hydrobates pelagicus</i>
bird	Little Gull	<i>Hydrocoloeus minutus</i>
bird	Mediterranean Gull	<i>Ichthyaeetus melanocephalus</i>
bird	Booted Warbler	<i>Iduna caligata</i>
bird	Wryneck	<i>Jynx torquilla</i>
bird	Red-backed Shrike	<i>Lanius collurio</i>
bird	Great Grey Shrike	<i>Lanius excubitor</i>
bird	Indet. Gull	<i>Larus</i>

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bird	European Herring Gull	<i>Larus argentatus</i>
bird	Herring Gull X Glaucous Gull	<i>Larus argentatus x hyperboreus</i>
bird	Caspian Gull	<i>Larus cachinnans</i>
bird	Common Gull	<i>Larus canus</i>
bird	Lesser Black-backed Gull	<i>Larus fuscus</i>
bird	Iceland Gull	<i>Larus glaucoides</i>
bird	Glaucous Gull	<i>Larus hyperboreus</i>
bird	Great Black-backed Gull	<i>Larus marinus</i>
bird	Yellow-legged Gull	<i>Larus michahellis</i>
bird	Bar-tailed Godwit	<i>Limosa lapponica</i>
bird	Black-tailed Godwit	<i>Limosa limosa</i>
bird	Linnet	<i>Linaria cannabina</i>
bird	Twite	<i>Linaria flavirostris</i>
bird	Grasshopper Warbler	<i>Locustella naevia</i>
bird	Red Crossbill	<i>Loxia curvirostra</i>
bird	Woodlark	<i>Lullula arborea</i>
bird	Nightingale	<i>Luscinia megarhynchos</i>
bird	Jack Snipe	<i>Lymnocyptes minimus</i>
bird	Wigeon	<i>Mareca penelope</i>
bird	Gadwall	<i>Mareca strepera</i>
bird	Velvet Scoter	<i>Melanitta fusca</i>
bird	Common Scoter	<i>Melanitta nigra</i>
bird	Budgerigar	<i>Melospittacus undulatus</i>
bird	Smew	<i>Mergellus albellus</i>
bird	Common Merganser	<i>Mergus merganser</i>
bird	Red-breasted Merganser	<i>Mergus serrator</i>
bird	Bee-eater	<i>Merops apiaster</i>
bird	Black Kite	<i>Milvus migrans</i>
bird	Red Kite	<i>Milvus milvus</i>
bird	Gannet	<i>Morus bassanus</i>
bird	Pied Wagtail	<i>Motacilla alba</i>
bird	White Wagtail	<i>Motacilla alba alba</i>
bird	Pied Wagtail	<i>Motacilla alba yarrellii</i>
bird	Grey Wagtail	<i>Motacilla cinerea</i>
bird	Western Yellow Wagtail	<i>Motacilla flava</i>
bird	Blue-headed Wagtail	<i>Motacilla flava flava</i>
bird	Yellow Wagtail	<i>Motacilla flava flavissima</i>
bird	Grey-headed Wagtail	<i>Motacilla flava thunbergi</i>
bird	Spotted Flycatcher	<i>Muscicapa striata</i>
bird	Curlew	<i>Numenius arquata</i>

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bird	Eurasian Whimbrel	<i>Numenius phaeopus</i>
bird	Cockatiel	<i>Nymphicus hollandicus</i>
bird	Leach's Storm Petrel	<i>Oceanodroma leucorhoa</i>
bird	Wheatear	<i>Oenanthe oenanthe</i>
bird	Greenland Wheatear	<i>Oenanthe oenanthe leucorhoa</i>
bird	Pied Wheatear	<i>Oenanthe pleschanka</i>
bird	Western Osprey	<i>Pandion haliaetus</i>
bird	Bearded Reedling	<i>Panurus biarmicus</i>
bird	Great Tit	<i>Parus major</i>
bird	House Sparrow	<i>Passer domesticus</i>
bird	Spanish Sparrow	<i>Passer hispaniolensis</i>
bird	Tree Sparrow	<i>Passer montanus</i>
bird	Passeriformes	<i>Passeriformes</i>
bird	Rose-coloured Starling	<i>Pastor roseus</i>
bird	Grey Partridge	<i>Perdix perdix</i>
bird	Coal Tit	<i>Pariparus ater</i>
bird	Continental Coal Tit	<i>Pariparus ater ater</i>
bird	European Honey Buzzard	<i>Pernis apivorus</i>
bird	Shag	<i>Phalacrocorax aristotelis</i>
bird	Cormorant	<i>Phalacrocorax carbo</i>
bird	Red Phalarope	<i>Phalaropus fulicarius</i>
bird	Pheasant	<i>Phasianus colchicus</i>
bird	Chilean Flamingo	<i>Phoenicopterus chilensis</i>
bird	Black Redstart	<i>Phoenicurus ochruros</i>
bird	Redstart	<i>Phoenicurus phoenicurus</i>
bird	Arctic Warbler	<i>Phylloscopus borealis</i>
bird	Chiffchaff	<i>Phylloscopus collybita</i>
bird	Dusky Warbler	<i>Phylloscopus fuscatus</i>
bird	Yellow-browed Warbler	<i>Phylloscopus inornatus</i>
bird	Pallas's Warbler	<i>Phylloscopus proregulus</i>
bird	Radde's Warbler	<i>Phylloscopus schwarzi</i>
bird	Wood Warbler	<i>Phylloscopus sibilatrix</i>
bird	Greenish Warbler	<i>Phylloscopus trochiloides</i>
bird	Willow Warbler	<i>Phylloscopus trochilus</i>
bird	Willow Warbler (acredula)	<i>Phylloscopus trochilus acredula</i>
bird	Eurasian Magpie	<i>Pica pica</i>
bird	European Green Woodpecker	<i>Picus viridis</i>
bird	Spoonbill	<i>Platalea leucorodia</i>
bird	Snow Bunting	<i>Plectrophenax nivalis</i>
bird	Golden Plover	<i>Pluvialis apricaria</i>

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bird	American Golden Plover	<i>Pluvialis dominica</i>
bird	Grey Plover	<i>Pluvialis squatarola</i>
bird	Slavonian Grebe	<i>Podiceps auritus</i>
bird	Great Crested Grebe	<i>Podiceps cristatus</i>
bird	Red-necked Grebe	<i>Podiceps grisegena</i>
bird	Black-necked Grebe	<i>Podiceps nigricollis</i>
bird	Marsh Tit	<i>Poecile palustris</i>
bird	Dunnock	<i>Prunella modularis</i>
bird	Balearic Shearwater	<i>Puffinus mauretanicus</i>
bird	Manx Shearwater	<i>Puffinus puffinus</i>
bird	Eurasian Bullfinch	<i>Pyrrhula pyrrhula</i>
bird	Water Rail	<i>Rallus aquaticus</i>
bird	Avocet	<i>Recurvirostra avosetta</i>
bird	Common Firecrest	<i>Regulus ignicapilla</i>
bird	Goldcrest	<i>Regulus regulus</i>
bird	Sand Martin	<i>Riparia riparia</i>
bird	Kittiwake	<i>Rissa tridactyla</i>
bird	Siberian Stonechat	<i>Saxicola maurus</i>
bird	Whinchat	<i>Saxicola rubetra</i>
bird	Stonechat	<i>Saxicola rubicola</i>
bird	Woodcock	<i>Scolopax rusticola</i>
bird	Atlantic Canary	<i>Serinus canaria</i>
bird	Serin	<i>Serinus serinus</i>
bird	Eider	<i>Somateria mollissima</i>
bird	Shoveler	<i>Spatula clypeata</i>
bird	Garganey	<i>Spatula querquedula</i>
bird	Siskin	<i>Spinus spinus</i>
bird	Long-tailed Jaeger	<i>Stercorarius longicaudus</i>
bird	Parasitic Jaeger	<i>Stercorarius parasiticus</i>
bird	Pomarine Jaeger	<i>Stercorarius pomarinus</i>
bird	Great Skua	<i>Stercorarius skua</i>
bird	Roseate Tern	<i>Sterna dougallii</i>
bird	Common Tern	<i>Sterna hirundo</i>
bird	Arctic Tern	<i>Sterna paradisaea</i>
bird	Little Tern	<i>Sternula albifrons</i>
bird	Collared Dove	<i>Streptopelia decaocto</i>
bird	Turtle Dove	<i>Streptopelia turtur</i>
bird	Starling	<i>Sturnus vulgaris</i>
bird	Eurasian Blackcap	<i>Sylvia atricapilla</i>
bird	Garden Warbler	<i>Sylvia borin</i>

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bird	Shelduck	<i>Tadorna tadorna</i>
bird	Red-flanked Bluetail	<i>Tarsiger cyanurus</i>
bird	Sandwich Tern	<i>Thalasseus sandvicensis</i>
bird	Spotted Redshank	<i>Tringa erythropus</i>
bird	Wood Sandpiper	<i>Tringa glareola</i>
bird	Greenshank	<i>Tringa nebularia</i>
bird	Green Sandpiper	<i>Tringa ochropus</i>
bird	Redshank	<i>Tringa totanus</i>
bird	Eurasian Wren	<i>Troglodytes troglodytes</i>
bird	Redwing	<i>Turdus iliacus</i>
bird	Blackbird	<i>Turdus merula</i>
bird	Song Thrush	<i>Turdus philomelos</i>
bird	Fieldfare	<i>Turdus pilaris</i>
bird	Ring Ouzel	<i>Turdus torquatus</i>
bird	Mistle Thrush	<i>Turdus viscivorus</i>
bird	Western Barn Owl	<i>Tyto alba</i>
bird	Common Murre	<i>Uria aalge</i>
bird	Lapwing	<i>Vanellus vanellus</i>
bird	Sabine's Gull	<i>Xema sabini</i>
bird	White-throated Sparrow	<i>Zonotrichia albicollis</i>
bony fish (Actinopterygii)	Greater Pipefish	<i>Syngnathus acus</i>
chromist	Wig Wrack or Sea-loch Egg Wrack	<i>Ascophyllum nodosum</i>
chromist	Sea thong	<i>Himantalia elongata</i>
coelenterate (=cnidarian)	Beadlet anemone	<i>Actinia equina</i>
crustacean	Sea Slater	<i>Ligia oceanica</i>
echinoderm	Common starfish	<i>Asterias rubens</i>
echinoderm	Common Brittlestar	<i>Ophiothrix fragilis</i>
fern	Black Spleenwort	<i>Asplenium adiantum-nigrum</i>
fern	Wall-rue	<i>Asplenium ruta-muraria</i>
fern	Male-fern	<i>Dryopteris filix-mas</i>
fern	Male Fern	<i>Dryopteris filix-mas</i> agg.
fern	Bracken	<i>Pteridium aquilinum</i>
fern	Bracken	<i>Pteridium aquilinum</i> subsp. <i>aquilinum</i>
flowering plant	Sycamore	<i>Acer pseudoplatanus</i>
flowering plant	Yarrow	<i>Achillea millefolium</i>
flowering plant	Agrimony	<i>Agrimonia eupatoria</i>
flowering plant	Creeping Bent	<i>Agrostis stolonifera</i>
flowering plant	Silver Hair-grass	<i>Aira caryophyllea</i>
flowering plant	Early Hair-grass	<i>Aira praecox</i>
flowering plant	Garlic Mustard	<i>Alliaria petiolata</i>

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flowering plant	Onion	<i>Allium</i>
flowering plant	Wild Onion	<i>Allium vineale</i>
flowering plant	Alder	<i>Alnus glutinosa</i>
flowering plant	Marram	<i>Ammophila arenaria</i>
flowering plant	Common Fiddleneck	<i>Amsinckia micrantha</i>
flowering plant	Pyramidal Orchid	<i>Anacamptis pyramidalis</i>
flowering plant	Scarlet Pimpernel	<i>Anagallis arvensis</i>
flowering plant	Scarlet Pimpernel	<i>Anagallis arvensis subsp. arvensis</i>
flowering plant	Bugloss	<i>Anchusa arvensis</i>
flowering plant	Sicilian Chamomile	<i>Anthemis punctata</i>
flowering plant	Anthemis punctata subsp. cupaniana	<i>Anthemis punctata subsp. cupaniana</i>
flowering plant	Bur Chervil	<i>Anthriscus caucalis</i>
flowering plant	Cow Parsley	<i>Anthriscus sylvestris</i>
flowering plant	Parsley-piert	<i>Aphanes arvensis</i>
flowering plant	Parsley Piert	<i>Aphanes arvensis agg.</i>
flowering plant	Slender Parsley-piert	<i>Aphanes australis</i>
flowering plant	Lesser Burdock	<i>Arctium minus</i>
flowering plant	Arctium minus/nemorosum	<i>Arctium minus/nemorosum</i>
flowering plant	Thyme-Leaved Sandwort	<i>Arenaria serpyllifolia</i>
flowering plant	Slender Sandwort	<i>Arenaria serpyllifolia subsp. leptoclados</i>
flowering plant	Thyme-leaved Sandwort	<i>Arenaria serpyllifolia subsp. serpyllifolia</i>
flowering plant	Thrift	<i>Armeria maritima subsp. maritima</i>
flowering plant	False Oat-grass	<i>Arrhenatherum elatius</i>
flowering plant	Mugwort	<i>Artemisia vulgaris</i>
flowering plant	Frosted Orache	<i>Atriplex laciniata</i>
flowering plant	Black Horehound	<i>Ballota nigra</i>
flowering plant	Ballota nigra subsp. meridionalis	<i>Ballota nigra subsp. meridionalis</i>
flowering plant	American Winter-cress	<i>Barbarea verna</i>
flowering plant	Daisy	<i>Bellis perennis</i>
flowering plant	Beet	<i>Beta vulgaris</i>
flowering plant	Sea Beet	<i>Beta vulgaris subsp. maritima</i>
flowering plant	False-brome	<i>Brachypodium sylvaticum</i>
flowering plant	Black Mustard	<i>Brassica nigra</i>
flowering plant	Upright Brome	<i>Bromopsis erecta</i>
flowering plant	Meadow Brome	<i>Bromus commutatus</i>
flowering plant	Great Brome	<i>Bromus diandrus</i>
flowering plant	Lesser Soft-Brome	<i>Bromus hordeaceus</i>
flowering plant	Common Soft-brome	<i>Bromus hordeaceus subsp. hordeaceus</i>
flowering plant	Sand Soft-brome	<i>Bromus hordeaceus subsp. thominei</i>
flowering plant	Lesser Soft-brome	<i>Bromus hordeaceus x lepidus = B. x pseudothominei</i>

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flowering plant	Ripgut Brome	<i>Bromus rigidus</i>
flowering plant	Barren Brome	<i>Bromus sterilis</i>
flowering plant	White Bryony	<i>Bryonia dioica</i>
flowering plant	Butterfly-bush	<i>Buddleja davidii</i>
flowering plant	Sea Rocket	<i>Cakile maritima</i>
flowering plant	Pot Marigold	<i>Calendula officinalis</i>
flowering plant	Hedge Bindweed	<i>Calystegia sepium</i>
flowering plant	Large Bindweed	<i>Calystegia silvatica</i>
flowering plant	Sea Bindweed	<i>Calystegia soldanella</i>
flowering plant	Shepherd's-purse	<i>Capsella bursa-pastoris</i>
flowering plant	Hairy Bitter-cress	<i>Cardamine hirsuta</i>
flowering plant	Slender Thistle	<i>Carduus tenuiflorus</i>
flowering plant	Sedge	<i>Carex</i>
flowering plant	Sand Sedge	<i>Carex arenaria</i>
flowering plant	Divided Sedge	<i>Carex divisa</i>
flowering plant	Small-fruited Prickly-sedge	<i>Carex muricata subsp. pairae</i>
flowering plant	False Fox-sedge	<i>Carex otrubae</i>
flowering plant	Pendulous Sedge	<i>Carex pendula</i>
flowering plant	Greater Pond-sedge	<i>Carex riparia</i>
flowering plant	Fern-Grass	<i>Catapodium</i>
flowering plant	Sea Fern-grass	<i>Catapodium marinum</i>
flowering plant	Fern-grass	<i>Catapodium rigidum</i>
flowering plant	Common Knapweed	<i>Centaurea nigra sens. lat. (=nigra/debauxii)</i>
flowering plant	Common Centaury	<i>Centaurium erythraea</i>
flowering plant	Red Valerian	<i>Centranthus ruber</i>
flowering plant	Sea Mouse-ear	<i>Cerastium diffusum</i>
flowering plant	Common Mouse-ear	<i>Cerastium fontanum</i>
flowering plant	Common Mouse-Ear	<i>Cerastium fontanum subsp. vulgare</i>
flowering plant	Sticky Mouse-ear	<i>Cerastium glomeratum</i>
flowering plant	Little Mouse-ear	<i>Cerastium semidecandrum</i>
flowering plant	Snow-in-summer	<i>Cerastium tomentosum</i>
flowering plant	Rosebay Willowherb	<i>Chamerion angustifolium</i>
flowering plant	Greater Celandine	<i>Chelidonium majus</i>
flowering plant	Fat-hen	<i>Chenopodium album</i>
flowering plant	Red Goosefoot	<i>Chenopodium rubrum</i>
flowering plant	Stinking Goosefoot	<i>Chenopodium vulvaria</i>
flowering plant	Creeping Thistle	<i>Cirsium arvense</i>
flowering plant	Spear Thistle	<i>Cirsium vulgare</i>
flowering plant	Springbeauty	<i>Claytonia perfoliata</i>
flowering plant	Danish Scurvygrass	<i>Cochlearia danica</i>

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flowering plant	Meadow Saffron	<i>Colchicum autumnale</i>
flowering plant	Hemlock	<i>Conium maculatum</i>
flowering plant	Field Bindweed	<i>Convolvulus arvensis</i>
flowering plant	Canadian Fleabane	<i>Conyza canadensis</i>
flowering plant	Dogwood	<i>Cornus sanguinea</i>
flowering plant	Red-osier Dogwood	<i>Cornus sericea</i>
flowering plant	Pampas-grass	<i>Cortaderia selloana</i>
flowering plant	Sea-kale	<i>Crambe maritima</i>
flowering plant	New Zealand Pigmyweed	<i>Crassula helmsii</i>
flowering plant	Mossy Stonecrop	<i>Crassula tillaea</i>
flowering plant	Hawthorn	<i>Crataegus monogyna</i>
flowering plant	Smooth Hawk's-beard	<i>Crepis capillaris</i>
flowering plant	Beaked Hawk's-beard	<i>Crepis vesicaria</i>
flowering plant	Crepis vesicaria subsp. taraxacifolia	<i>Crepis vesicaria subsp. taraxacifolia</i>
flowering plant	Hound's-tongue	<i>Cynoglossum officinale</i>
flowering plant	Rough Dog's-tail	<i>Cynosurus echinatus</i>
flowering plant	Cock's-foot	<i>Dactylis glomerata</i>
flowering plant	Carrot	<i>Daucus carota</i>
flowering plant	Foxglove	<i>Digitalis purpurea</i>
flowering plant	Annual Wall-rocket	<i>Diplotaxis muralis</i>
flowering plant	Wild Teasel	<i>Dipsacus fullonum</i>
flowering plant	Viper's-bugloss	<i>Echium vulgare</i>
flowering plant	Sea Couch	<i>Elytrigia atherica</i>
flowering plant	Elytrigia atherica x juncea = E. x acuta	<i>Elytrigia atherica x juncea = E. x acuta</i>
flowering plant	Sand Couch	<i>Elytrigia juncea</i>
flowering plant	Sand Couch	<i>Elytrigia juncea subsp. boreoatlantica</i>
flowering plant	Common Couch	<i>Elytrigia repens</i>
flowering plant	Couch	<i>Elytrigia x acuta obtusiuscula</i>
flowering plant	American Willowherb	<i>Epilobium ciliatum</i>
flowering plant	Hoary Willowherb	<i>Epilobium parviflorum</i>
flowering plant	Square-stalked Willowherb	<i>Epilobium tetragonum</i>
flowering plant	Blue Fleabane	<i>Erigeron acris</i>
flowering plant	Common Stork's-bill	<i>Erodium cicutarium</i>
flowering plant	Common Stork's-Bill	<i>Erodium cicutarium agg.</i>
flowering plant	Sticky Stork's-bill	<i>Erodium lebelii</i>
flowering plant	Glabrous Whitlowgrass	<i>Erophila glabrescens</i>
flowering plant	Common Whitlowgrass	<i>Erophila verna</i>
flowering plant	Sea-holly	<i>Eryngium maritimum</i>
flowering plant	Wallflower	<i>Erysimum cheiri</i>
flowering plant	Mediterranean Spurge	<i>Euphorbia characias</i>

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flowering plant	Sun Spurge	<i>Euphorbia helioscopia</i>
flowering plant	Sea Spurge	<i>Euphorbia paralias</i>
flowering plant	Petty Spurge	<i>Euphorbia peplus</i>
flowering plant	Rush-leaved Fescue	<i>Festuca arenaria</i>
flowering plant	Sheep's-fescue	<i>Festuca ovina</i>
flowering plant	Sheep's Fescue agg.	<i>Festuca ovina agg.</i>
flowering plant	Sheep's Fescue	<i>Festuca ovina subsp. hirtula</i>
flowering plant	Red Fescue	<i>Festuca rubra</i>
flowering plant	Red Fescue	<i>Festuca rubra agg.</i>
flowering plant	Red Fescue	<i>Festuca rubra subsp. juncea</i>
flowering plant	Red Fescue	<i>Festuca rubra subsp. rubra</i>
flowering plant	Common Cudweed	<i>Filago vulgaris</i>
flowering plant	Fennel	<i>Foeniculum vulgare</i>
flowering plant	White Ramping-fumitory	<i>Fumaria capreolata</i>
flowering plant	Ramping Fumitory	<i>Fumaria capreolata subsp. babingtonii</i>
flowering plant	Common Fumitory	<i>Fumaria officinalis</i>
flowering plant	Cleavers	<i>Galium aparine</i>
flowering plant	Lady's Bedstraw	<i>Galium verum</i>
flowering plant	Cut-leaved Crane's-bill	<i>Geranium dissectum</i>
flowering plant	Dove's-foot Crane's-bill	<i>Geranium molle</i>
flowering plant	Small-flowered Crane's-bill	<i>Geranium pusillum</i>
flowering plant	Herb-Robert	<i>Geranium robertianum</i>
flowering plant	Round-leaved Crane's-bill	<i>Geranium rotundifolium</i>
flowering plant	Yellow Horned-poppy	<i>Glaucium flavum</i>
flowering plant	Ivy	<i>Hedera helix</i>
flowering plant	Common Ivy	<i>Hedera helix subsp. helix</i>
flowering plant	Atlantic Ivy	<i>Hedera hibernica</i>
flowering plant	Hogweed	<i>Heracleum sphondylium</i>
flowering plant	Hogweed	<i>Heracleum sphondylium subsp. sphondylium</i>
flowering plant	Sea-buckthorn	<i>Hippophae rhamnoides</i>
flowering plant	Hoary Mustard	<i>Hirschfeldia incana</i>
flowering plant	Yorkshire-fog	<i>Holcus lanatus</i>
flowering plant	Sea Sandwort	<i>Honckenya peploides</i>
flowering plant	Wall Barley	<i>Hordeum murinum</i>
flowering plant	Bluebell	<i>Hyacinthoides non-scripta x hispanica = H. x massartiana</i>
flowering plant	Henbane	<i>Hyoscyamus niger</i>
flowering plant	Tutsan	<i>Hypericum androsaemum</i>
flowering plant	Imperforate St John's-wort	<i>Hypericum maculatum</i>
flowering plant	Perforate St John's-wort	<i>Hypericum perforatum</i>
flowering plant	Smooth Cat's-ear	<i>Hypochaeris glabra</i>

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flowering plant	Cat's-ear	<i>Hypochaeris radicata</i>
flowering plant	Ploughman's-spikenard	<i>Inula conyzae</i>
flowering plant	Stinking Iris	<i>Iris foetidissima</i>
flowering plant	Bearded Iris	<i>Iris germanica</i>
flowering plant	Yellow Iris	<i>Iris pseudacorus</i>
flowering plant	Hoary Ragwort	<i>Jacobaea erucifolia</i>
flowering plant	Common Ragwort	<i>Jacobaea vulgaris</i>
flowering plant	Frog Rush	<i>Juncus ambiguus</i>
flowering plant	Sea Rush	<i>Juncus maritimus</i>
flowering plant	Great Lettuce	<i>Lactuca virosa</i>
flowering plant	White Dead-nettle	<i>Lamium album</i>
flowering plant	Cut-leaved Dead-nettle	<i>Lamium hybridum</i>
flowering plant	Red Dead-nettle	<i>Lamium purpureum</i>
flowering plant	Sea Pea	<i>Lathyrus japonicus</i>
flowering plant	Sea Pea	<i>Lathyrus japonicus subsp. maritimus</i>
flowering plant	Grass Vetchling	<i>Lathyrus nissolia</i>
flowering plant	Meadow Vetchling	<i>Lathyrus pratensis</i>
flowering plant	Lemna	<i>Lemna</i>
flowering plant	Common Duckweed	<i>Lemna minor</i>
flowering plant	Least Duckweed	<i>Lemna minuta</i>
flowering plant	Lesser Hawkbit	<i>Leontodon saxatilis</i>
flowering plant	Hoary Cress	<i>Lepidium draba</i>
flowering plant	Hoary Cress	<i>Lepidium draba subsp. draba</i>
flowering plant	Dittander	<i>Lepidium latifolium</i>
flowering plant	Summer Snowflake	<i>Leucojum aestivum</i>
flowering plant	Summer Snowflake	<i>Leucojum aestivum subsp. pulchellum</i>
flowering plant	Wild Privet	<i>Ligustrum vulgare</i>
flowering plant	Purple Toadflax	<i>Linaria purpurea</i>
flowering plant	Sweet Alison	<i>Lobularia maritima</i>
flowering plant	Perennial Rye-grass	<i>Lolium perenne</i>
flowering plant	Bird's-Foot-Trefoil	<i>Lotus</i>
flowering plant	Common Bird's-foot-trefoil	<i>Lotus corniculatus</i>
flowering plant	Duke of Argyll's Teaplant	<i>Lycium barbarum</i>
flowering plant	Crab Apple	<i>Malus sylvestris</i>
flowering plant	Dwarf Mallow	<i>Malva neglecta</i>
flowering plant	Common Mallow	<i>Malva sylvestris</i>
flowering plant	Pineappleweed	<i>Matricaria discoidea</i>
flowering plant	Spotted Medick	<i>Medicago arabica</i>
flowering plant	Black Medick	<i>Medicago lupulina</i>
flowering plant	Bur Medick	<i>Medicago minima</i>

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flowering plant	Sand Lucerne	<i>Medicago sativa nothosubsp. varia</i>
flowering plant	Lucerne	<i>Medicago sativa subsp. sativa</i>
flowering plant	White Melilot	<i>Melilotus albus</i>
flowering plant	Ribbed Melilot	<i>Melilotus officinalis</i>
flowering plant	Annual Mercury	<i>Mercurialis annua</i>
flowering plant	Upright Chickweed	<i>Moenchia erecta</i>
flowering plant	Wall Lettuce	<i>Mycelis muralis</i>
flowering plant	Field Forget-me-not	<i>Myosotis arvensis</i>
flowering plant	Early Forget-me-not	<i>Myosotis ramosissima</i>
flowering plant	Wood Forget-me-not	<i>Myosotis sylvatica</i>
flowering plant	Parrot's-feather	<i>Myriophyllum aquaticum</i>
flowering plant	daffodils	<i>Narcissus</i>
flowering plant	Nymphaea	<i>Nymphaea</i>
flowering plant	Red Bartsia	<i>Odontites vernus</i>
flowering plant	Small-flowered Evening-primrose	<i>Oenothera cambrica</i>
flowering plant	Large-flowered Evening-primrose	<i>Oenothera glazioviana</i>
flowering plant	Evening-Primrose	<i>Oenothera glazioviana x biennis = O. x fallax</i>
flowering plant	Common Restharrow	<i>Ononis repens</i>
flowering plant	Common Restharrow	<i>Ononis repens subsp. repens</i>
flowering plant	Spiny Restharrow	<i>Ononis spinosa</i>
flowering plant	Cotton Thistle	<i>Onopordum acanthium</i>
flowering plant	Common Poppy	<i>Papaver rhoeas</i>
flowering plant	Opium Poppy	<i>Papaver somniferum</i>
flowering plant	Opium Poppy	<i>Papaver somniferum subsp. somniferum</i>
flowering plant	Curved Hard-grass	<i>Parapholis incurva</i>
flowering plant	Wild Parsnip	<i>Pastinaca sativa</i>
flowering plant	Green Alkanet	<i>Pentaglottis sempervirens</i>
flowering plant	Sand Cat's-tail	<i>Phleum arenarium</i>
flowering plant	Bristly Oxtongue	<i>Picris echioides</i>
flowering plant	Mouse-ear-hawkweed	<i>Pilosella officinarum</i>
flowering plant	Buck's-horn Plantain	<i>Plantago coronopus</i>
flowering plant	Ribwort Plantain	<i>Plantago lanceolata</i>
flowering plant	Narrow-leaved Meadow-grass	<i>Poa angustifolia</i>
flowering plant	Annual Meadow-grass	<i>Poa annua</i>
flowering plant	Bulbous Meadow-grass	<i>Poa bulbosa</i>
flowering plant	Spreading Meadow-grass	<i>Poa humilis</i>
flowering plant	Early Meadow-grass	<i>Poa infirma</i>
flowering plant	Smooth Meadow-grass	<i>Poa pratensis</i>
flowering plant	Polygonum oxyspermum subsp. raii	<i>Polygonum oxyspermum subsp. raii</i>
flowering plant	Water Bent	<i>Polypogon viridis</i>

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flowering plant	White Poplar	<i>Populus alba</i>
flowering plant	Grey Poplar	<i>Populus alba x tremula = P. x canescens</i>
flowering plant	Hybrid Black-poplar	<i>Populus nigra x deltoides = P. x canadensis</i>
flowering plant	Poplar	<i>Populus x canadensis 'Serotina'</i>
flowering plant	Broad-leaved Pondweed	<i>Potamogeton natans</i>
flowering plant	Hoary Cinquefoil	<i>Potentilla argentea</i>
flowering plant	Creeping Cinquefoil	<i>Potentilla reptans</i>
flowering plant	Wild Cherry	<i>Prunus avium</i>
flowering plant	Blackthorn	<i>Prunus spinosa</i>
flowering plant	Common Fleabane	<i>Pulicaria dysenterica</i>
flowering plant	Wild Pear	<i>Pyrus pyraster</i>
flowering plant	Evergreen Oak	<i>Quercus ilex</i>
flowering plant	Bulbous Buttercup	<i>Ranunculus bulbosus</i>
flowering plant	Small-flowered Buttercup	<i>Ranunculus parviflorus</i>
flowering plant	Hairy Buttercup	<i>Ranunculus sardous</i>
flowering plant	Celery-leaved Buttercup	<i>Ranunculus sceleratus</i>
flowering plant	Bastard Cabbage	<i>Rapistrum rugosum</i>
flowering plant	Weld	<i>Reseda luteola</i>
flowering plant	Gooseberry	<i>Ribes uva-crispa</i>
flowering plant	Narrow-fruited Water-cress	<i>Rorippa microphylla</i>
flowering plant	Water-cress	<i>Rorippa nasturtium-aquaticum</i>
flowering plant	Dog-rose	<i>Rosa canina</i>
flowering plant	Dog Rose	<i>Rosa canina agg.</i>
flowering plant	Sweet-briar	<i>Rosa rubiginosa</i>
flowering plant	Bramble	<i>Rubus fruticosus agg.</i>
flowering plant	Bramble	<i>Rubus laciniatus</i>
flowering plant	Salmonberry	<i>Rubus spectabilis</i>
flowering plant	Bramble	<i>Rubus ulmifolius</i>
flowering plant	Garden Sorrel	<i>Rumex acetosa subsp. ambiguus</i>
flowering plant	Sheep's Sorrel	<i>Rumex acetosella</i>
flowering plant	Sheep's Sorrel	<i>Rumex acetosella subsp. acetosella</i>
flowering plant	Sheep's Sorrel	<i>Rumex acetosella subsp. pyrenaicus</i>
flowering plant	Curled Dock	<i>Rumex crispus</i>
flowering plant	Curled Dock	<i>Rumex crispus subsp. crispus</i>
flowering plant	Curled Dock	<i>Rumex crispus subsp. littoreus</i>
flowering plant	Fiddle Dock	<i>Rumex pulcher</i>
flowering plant	Hybrid Crack-willow	<i>Salix euxina x alba = S. x fragilis</i>
flowering plant	Saltwort	<i>Salsola kali</i>
flowering plant	Prickly Saltwort	<i>Salsola kali subsp. kali</i>
flowering plant	Clary	<i>Salvia sclarea</i>

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flowering plant	Wild Clary	<i>Salvia verbenaca</i>
flowering plant	Elder	<i>Sambucus nigra</i>
flowering plant	Sedum	<i>Sedum</i>
flowering plant	Biting Stonecrop	<i>Sedum acre</i>
flowering plant	White Stonecrop	<i>Sedum album</i>
flowering plant	English Stonecrop	<i>Sedum anglicum</i>
flowering plant	Ragwort	<i>Senecio</i>
flowering plant	Narrow-leaved Ragwort	<i>Senecio inaequidens</i>
flowering plant	Oxford Ragwort	<i>Senecio squalidus</i>
flowering plant	Sticky Groundsel	<i>Senecio viscosus</i>
flowering plant	Groundsel	<i>Senecio vulgaris</i>
flowering plant	Field Madder	<i>Sherardia arvensis</i>
flowering plant	White Campion	<i>Silene latifolia</i>
flowering plant	White Campion	<i>Silene latifolia subsp. alba</i>
flowering plant	Sea Campion	<i>Silene uniflora</i>
flowering plant	Hedge Mustard	<i>Sisymbrium officinale</i>
flowering plant	Eastern Rocket	<i>Sisymbrium orientale</i>
flowering plant	Pale Yellow-eyed-grass	<i>Sisyrinchium striatum</i>
flowering plant	Alexanders	<i>Smyrnum olusatrum</i>
flowering plant	Bittersweet	<i>Solanum dulcamara</i>
flowering plant	Black Nightshade	<i>Solanum nigrum</i>
flowering plant	Perennial Sow-thistle	<i>Sonchus arvensis</i>
flowering plant	Prickly Sow-thistle	<i>Sonchus asper</i>
flowering plant	Smooth Sow-thistle	<i>Sonchus oleraceus</i>
flowering plant	Swedish Whitebeam	<i>Sorbus intermedia</i>
flowering plant	Spanish Broom	<i>Spartium junceum</i>
flowering plant	Greater Duckweed	<i>Spirodela polyrhiza</i>
flowering plant	Common Chickweed	<i>Stellaria media</i>
flowering plant	Lesser Chickweed	<i>Stellaria pallida</i>
flowering plant	Snowberry	<i>Symphoricarpos albus</i>
flowering plant	White Comfrey	<i>Symphytum orientale</i>
flowering plant	Lilac	<i>Syringa vulgaris</i>
flowering plant	Tamarix	<i>Tamarix</i>
flowering plant	Tamarisk	<i>Tamarix gallica</i>
flowering plant	Dandelion	<i>Taraxacum officinale agg.</i>
flowering plant	Taraxacum sect. Erythrosperma	<i>Taraxacum sect. Erythrosperma</i>
flowering plant	Lesser Meadow-rue	<i>Thalictrum minus</i>
flowering plant	Upright Hedge-parsley	<i>Torilis japonica</i>
flowering plant	Knotted Hedge-parsley	<i>Torilis nodosa</i>
flowering plant	Goat's-beard	<i>Tragopogon pratensis</i>

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flowering plant	Goat's-Beard	<i>Tragopogon pratensis</i> subsp. <i>minor</i>
flowering plant	Hare's-foot Clover	<i>Trifolium arvense</i>
flowering plant	Hop Trefoil	<i>Trifolium campestre</i>
flowering plant	Lesser Trefoil	<i>Trifolium dubium</i>
flowering plant	Clustered Clover	<i>Trifolium glomeratum</i>
flowering plant	Bird's-foot Clover	<i>Trifolium ornithopodioides</i>
flowering plant	Red Clover	<i>Trifolium pratense</i>
flowering plant	Rough Clover	<i>Trifolium scabrum</i>
flowering plant	Knotted Clover	<i>Trifolium striatum</i>
flowering plant	Suffocated Clover	<i>Trifolium suffocatum</i>
flowering plant	Scentless Mayweed	<i>Tripleurospermum inodorum</i>
flowering plant	Sea Mayweed	<i>Tripleurospermum maritimum</i>
flowering plant	Yellow Oat-grass	<i>Trisetum flavescens</i>
flowering plant	Bulrush	<i>Typha latifolia</i>
flowering plant	Gorse	<i>Ulex europaeus</i>
flowering plant	Common Nettle	<i>Urtica dioica</i>
flowering plant	<i>Urtica dioica</i> subsp. <i>dioica</i>	<i>Urtica dioica</i> subsp. <i>dioica</i>
flowering plant	Small Nettle	<i>Urtica urens</i>
flowering plant	Common Cornsalad	<i>Valerianella locusta</i>
flowering plant	Common Cornsalad	<i>Valerianella locusta</i> var. <i>dunensis</i>
flowering plant	Great Mullein	<i>Verbascum thapsus</i>
flowering plant	Wall Speedwell	<i>Veronica arvensis</i>
flowering plant	Ivy-leaved Speedwell	<i>Veronica hederifolia</i>
flowering plant	Ivy-Leaved Speedwell	<i>Veronica hederifolia</i> subsp. <i>hederifolia</i>
flowering plant	Hairy Tare	<i>Vicia hirsuta</i>
flowering plant	Spring Vetch	<i>Vicia lathyroides</i>
flowering plant	Common Vetch	<i>Vicia sativa</i> subsp. <i>segetalis</i>
flowering plant	Sweet Violet	<i>Viola odorata</i>
flowering plant	Squirreltail Fescue	<i>Vulpia bromoides</i>
flowering plant	Purple Fescue	<i>Vulpia ciliata</i> subsp. <i>ambigua</i>
flowering plant	Dune Fescue	<i>Vulpia fasciculata</i>
flowering plant	Rat's-tail Fescue	<i>Vulpia myuros</i>
flowering plant	Spanish-dagger	<i>Yucca gloriosa</i>
fungus	Horse Mushroom	<i>Agaricus arvensis</i>
fungus	Field Mushroom	<i>Agaricus campestris</i>
fungus	Sandy Mushroom	<i>Agaricus devoniensis</i>
fungus	Yellow Stainer	<i>Agaricus xanthodermus</i>
fungus	Spring Fieldcap	<i>Agrocybe praecox</i>
fungus	Grisette	<i>Amanita vaginata</i>
fungus	Small Moss Oysterling	<i>Arrhenia retiruga</i>

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fungus	Jelly Ear	<i>Auricularia auricula-judae</i>
fungus	Bolbitius titubans	<i>Bolbitius titubans</i>
fungus	Red Cracking Bolete	<i>Boletus chrysenteron</i>
fungus	Boletus luridus	<i>Boletus luridus</i>
fungus	Rooting Bolete	<i>Boletus radicans</i>
fungus	Grey Puffball	<i>Bovista plumbea</i>
fungus	Shaggy Parasol	<i>Chlorophyllum rachodes</i>
fungus	Silverleaf Fungus	<i>Chondrostereum purpureum</i>
fungus	Smoky Spindles	<i>Clavaria fumosa</i>
fungus	Golden Spindles	<i>Clavulinopsis fusiformis</i>
fungus	Apricot Club	<i>Clavulinopsis luteoalba</i>
fungus	Fool's Funnel	<i>Clitocybe rivulosa</i>
fungus	The Miller	<i>Clitopilus prunulus</i>
fungus	Wet Rot	<i>Coniophora puteana</i>
fungus	Fairy Inkcap	<i>Coprinellus disseminatus</i>
fungus	Firerug Inkcap	<i>Coprinellus domesticus</i>
fungus	Glistening Inkcap	<i>Coprinellus micaceus</i>
fungus	Hare'sfoot Inkcap	<i>Coprinopsis lagopus</i>
fungus	Haresfoot Inkcap	<i>Coprinopsis lagopus var. lagopus</i>
fungus	Shaggy Inkcap	<i>Coprinus comatus</i>
fungus	Field Bird's Nest	<i>Cyathus olla</i>
fungus	Earthy Powdercap	<i>Cystoderma amianthinum</i>
fungus	Common Jelly Spot	<i>Dacrymyces stillatus</i>
fungus	Cramp Balls	<i>Daldinia concentrica</i>
fungus	Entoloma sericeum var. cinereo-opacum	<i>Entoloma sericeum var. cinereo-opacum</i>
fungus	Entoloma undatum	<i>Entoloma undatum</i>
fungus	Crystal Brain	<i>Exidia nucleata</i>
fungus	Exidia nucleata s. lat.	<i>Exidia nucleata s. lat.</i>
fungus	Velvet Shank	<i>Flammulina velutipes</i>
fungus	Turf Bell	<i>Galerina graminea</i>
fungus	Funeral Bell	<i>Galerina marginata</i>
fungus	Field Earthstar	<i>Gastrum campestre</i>
fungus	Collared Earthstar	<i>Gastrum triplex</i>
fungus	Geoglossum cookeanum	<i>Geoglossum cookeanum</i>
fungus	Horsehair Parachute	<i>Gymnopus androsaceus</i>
fungus	Dune Waxcap	<i>Hygrocybe conicoides</i>
fungus	Hygrocybe virginea	<i>Hygrocybe virginea</i>
fungus	Elder Whitewash	<i>Hyphodontia sambuci</i>
fungus	Hyphodontia sambuci s. lat.	<i>Hyphodontia sambuci s. lat.</i>
fungus	Sulphur Tuft	<i>Hypholoma fasciculare</i>

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fungus	Deadly Dapperling	<i>Lepiota brunneoincarnata</i>
fungus	Chestnut Dapperling	<i>Lepiota castanea</i>
fungus	Dune Dapperling	<i>Lepiota erminea</i>
fungus	Lepiota oreadiformis	<i>Lepiota oreadiformis</i>
fungus	Wood Blewit	<i>Lepista nuda</i>
fungus	Field Blewit	<i>Lepista saeva</i>
fungus	Grassland Puffball	<i>Lycoperdon lividum</i>
fungus	Soft Puffball	<i>Lycoperdon molle</i>
fungus	Meadow Puffball	<i>Lycoperdon pratense</i>
fungus	Mosaic Puffball	<i>Lycoperdon utriforme</i>
fungus	Fairy Ring Champignon	<i>Marasmius oreades</i>
fungus	Common Cavalier	<i>Melanoleuca polioleuca</i>
fungus	Wood Oysterling	<i>Melanotus horizontalis</i>
fungus	Morel	<i>Morchella esculenta</i>
fungus	Drab Bonnet	<i>Mycena aetites</i>
fungus	Yellowleg Bonnet	<i>Mycena epipterygia</i>
fungus	Bonnet Mycena	<i>Mycena galericulata</i>
fungus	Mycena galopus	<i>Mycena galopus</i>
fungus	Coral Spot	<i>Nectria cinnabarina</i>
fungus	Octospora rutilans	<i>Octospora rutilans</i>
fungus	Brown Hay Cap	<i>Panaeolina foenicicii</i>
fungus	Panaeolus papilionaceus	<i>Panaeolus papilionaceus</i>
fungus	Pleated Inkcap	<i>Parasola plicatilis</i>
fungus	Brown Rollrim	<i>Paxillus involutus</i>
fungus	Paxillus obscurisporus	<i>Paxillus obscurisporus</i>
fungus	Shaggy Scalycap	<i>Pholiota squarrosa</i>
fungus	Oyster Mushroom	<i>Pleurotus ostreatus</i>
fungus	Greyling Bracket	<i>Postia tephroleuca</i>
fungus	Dune Brittlestem	<i>Psathyrella ammophila</i>
fungus	Upright Coral	<i>Ramaria stricta</i>
fungus	Sycamore Tarspot	<i>Rhytisma acerinum</i>
fungus	Orange Mossicap	<i>Rickenella fibula</i>
fungus	Collared Mossicap	<i>Rickenella swartzii</i>
fungus	Earth Ball	<i>Scleroderma citrinum</i>
fungus	Hairy Curtain Crust	<i>Stereum hirsutum</i>
fungus	Verdigris Roundhead	<i>Stropharia aeruginosa</i>
fungus	Garland Roundhead	<i>Stropharia coronilla</i>
fungus	Dung Roundhead	<i>Stropharia semiglobata</i>
fungus	Trametes pubescens	<i>Trametes pubescens</i>
fungus	Turkeytail	<i>Trametes versicolor</i>

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fungus	Yellow Brain	<i>Tremella mesenterica</i>
fungus	Soap Tricholoma	<i>Tricholoma saponaceum</i>
fungus	Tubaria furfuracea s. lat.	<i>Tubaria furfuracea s. lat.</i>
fungus	Winter Stalkball	<i>Tulostoma brumale</i>
fungus	Stubble Rosegill	<i>Volvariella gloiocephala</i>
fungus	Candle-Snuff Fungus	<i>Xylaria hypoxylon</i>
insect - beetle (Coleoptera)	2-spot Ladybird	<i>Adalia bipunctata</i>
insect - beetle (Coleoptera)	10-spot Ladybird	<i>Adalia decempunctata</i>
insect - beetle (Coleoptera)	Summer Chafer	<i>Amphimallon solstitiale</i>
insect - beetle (Coleoptera)	Eyed Ladybird	<i>Anatis ocellata</i>
insect - beetle (Coleoptera)	Broscus cephalotes	<i>Broscus cephalotes</i>
insect - beetle (Coleoptera)	Cantharis rustica	<i>Cantharis rustica</i>
insect - beetle (Coleoptera)	Chrysolina hyperici	<i>Chrysolina hyperici</i>
insect - beetle (Coleoptera)	7-spot Ladybird	<i>Coccinella septempunctata</i>
insect - beetle (Coleoptera)	11-spot Ladybird	<i>Coccinella undecimpunctata</i>
insect - beetle (Coleoptera)	Curculio betulae	<i>Curculio betulae</i>
insect - beetle (Coleoptera)	Lesser Stag Beetle	<i>Dorcus parallelipipedus</i>
insect - beetle (Coleoptera)	Great Diving Beetle	<i>Dytiscus marginalis</i>
insect - beetle (Coleoptera)	Orange Ladybird	<i>Halyzia sedecimguttata</i>
insect - beetle (Coleoptera)	Harlequin Ladybird	<i>Harmonia axyridis</i>
insect - beetle (Coleoptera)	Adonis' Ladybird	<i>Hippodamia variegata</i>
insect - beetle (Coleoptera)	Clover Leaf Weevil	<i>Hypera postica</i>
insect - beetle (Coleoptera)	Longitarsus quadriguttatus	<i>Longitarsus quadriguttatus</i>
insect - beetle (Coleoptera)	Stag Beetle	<i>Lucanus cervus</i>
insect - beetle (Coleoptera)	Malachite Beetle	<i>Malachius bipustulatus</i>
insect - beetle (Coleoptera)	Black Oil-beetle	<i>Meloe proscarabaeus</i>
insect - beetle (Coleoptera)	Common Cockchafer	<i>Melolontha melolontha</i>
insect - beetle (Coleoptera)	Shore Sexton Beetle	<i>Necrodes littoralis</i>
insect - beetle (Coleoptera)	Beetle	<i>Nicrophorus</i>
insect - beetle (Coleoptera)	Black Sexton Beetle	<i>Nicrophorus humator</i>
insect - beetle (Coleoptera)	Devil's Coach-horse	<i>Ocytus olens</i>
insect - beetle (Coleoptera)	Swollen-thighed Beetle	<i>Oedemera nobilis</i>
insect - beetle (Coleoptera)	Pseudovadonia livida	<i>Pseudovadonia livida</i>

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insect - butterfly	Peacock	<i>Aglais io</i>
insect - butterfly	Small Tortoiseshell	<i>Aglais urticae</i>
insect - butterfly	Orange-tip	<i>Anthocharis cardamines</i>
insect - butterfly	Orange-tip	<i>Anthocharis cardamines britannica</i>
insect - butterfly	Ringlet	<i>Aphantopus hyperantus</i>
insect - butterfly	Brown Argus	<i>Aricia agestis</i>
insect - butterfly	Green Hairstreak	<i>Callophrys rubi</i>
insect - butterfly	Holly Blue	<i>Celastrina argiolus</i>
insect - butterfly	Holly Blue	<i>Celastrina argiolus britanna</i>
insect - butterfly	Small Heath	<i>Coenonympha pamphilus</i>
insect - butterfly	Small Heath	<i>Coenonympha pamphilus pamphilus</i>
insect - butterfly	Clouded Yellow	<i>Colias croceus</i>
insect - butterfly	Purple Hairstreak	<i>Favonius quercus</i>
insect - butterfly	Brimstone	<i>Gonepteryx rhamni</i>
insect - butterfly	Brimstone	<i>Gonepteryx rhamni rhamni</i>
insect - butterfly	Grayling	<i>Hipparchia semele</i>
insect - butterfly	Grayling	<i>Hipparchia semele semele</i>
insect - butterfly	Long-tailed Blue	<i>Lampides boeticus</i>
insect - butterfly	Wall	<i>Lasiommata megera</i>
insect - butterfly	Small Copper	<i>Lycaena phlaeas</i>
insect - butterfly	Small Copper	<i>Lycaena phlaeas phlaeas</i>
insect - butterfly	Meadow Brown	<i>Maniola jurtina</i>
insect - butterfly	Meadow Brown	<i>Maniola jurtina jurtina</i>
insect - butterfly	Camberwell Beauty	<i>Nymphalis antiopa</i>
insect - butterfly	Large Skipper	<i>Ochlodes sylvanus</i>
insect - butterfly	Speckled Wood	<i>Pararge aegeria</i>
insect - butterfly	Speckled Wood	<i>Pararge aegeria tircis</i>
insect - butterfly	Large White	<i>Pieris brassicae</i>
insect - butterfly	Green-veined White	<i>Pieris napi</i>
insect - butterfly	Green-veined White	<i>Pieris napi sabellicae</i>
insect - butterfly	Small White	<i>Pieris rapae</i>
insect - butterfly	Comma	<i>Polygonia c-album</i>
insect - butterfly	Common Blue	<i>Polyommatus icarus</i>
insect - butterfly	Common Blue	<i>Polyommatus icarus icarus</i>
insect - butterfly	Hedge Brown	<i>Pyronia tithonus</i>
insect - butterfly	Gatekeeper or Hedge Brown	<i>Pyronia tithonus tithonus</i>
insect - butterfly	Essex Skipper	<i>Thymelicus lineola</i>
insect - butterfly	Small Skipper	<i>Thymelicus sylvestris</i>
insect - butterfly	Red Admiral	<i>Vanessa atalanta</i>
insect - butterfly	Painted Lady	<i>Vanessa cardui</i>

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insect - caddis fly (Trichoptera)	Phryganea grandis	<i>Phryganea grandis</i>
insect - cockroach (Dictyoptera)	Lesser Cockroach	<i>Ectobius panzeri</i>
insect - dragonfly (Odonata)	Southern Hawker	<i>Aeshna cyanea</i>
insect - dragonfly (Odonata)	Brown Hawker	<i>Aeshna grandis</i>
insect - dragonfly (Odonata)	Scarce Hawker	<i>Aeshna mixta</i>
insect - dragonfly (Odonata)	Emperor Dragonfly	<i>Anax imperator</i>
insect - dragonfly (Odonata)	Hairy Hawker	<i>Brachytron pratense</i>
insect - dragonfly (Odonata)	Willow Emerald Damselfly	<i>Chalcolestes viridis</i>
insect - dragonfly (Odonata)	Common Coenagrion	<i>Coenagrion puella</i>
insect - dragonfly (Odonata)	Common Blue Damselfly	<i>Enallagma cyathigerum</i>
insect - dragonfly (Odonata)	Small Red-eyed Damselfly	<i>Erythromma viridulum</i>
insect - dragonfly (Odonata)	Common Ischnura	<i>Ischnura elegans</i>
insect - dragonfly (Odonata)	Leucorrhinia	<i>Leucorrhinia</i>
insect - dragonfly (Odonata)	Leucorrhinia pectoralis	<i>Leucorrhinia pectoralis</i>
insect - dragonfly (Odonata)	Broad-bodied Libellula	<i>Libellula depressa</i>
insect - dragonfly (Odonata)	Four-spotted Chaser	<i>Libellula quadrimaculata</i>
insect - dragonfly (Odonata)	Black-tailed Skimmer	<i>Orthetrum cancellatum</i>
insect - dragonfly (Odonata)	Large Red Damselfly	<i>Pyrrhosoma nymphula</i>
insect - dragonfly (Odonata)	Red-veined Sympetrum	<i>Sympetrum fonscolombii</i>
insect - dragonfly (Odonata)	Ruddy Sympetrum	<i>Sympetrum sanguineum</i>
insect - dragonfly (Odonata)	Common Sympetrum	<i>Sympetrum striolatum</i>
insect - earwig (Dermaptera)	Common Earwig	<i>Forficula auricularia</i>
insect - earwig (Dermaptera)	Lesne's Earwig	<i>Forficula lesnei</i>
insect - hymenopteran	Yellow-legged Mining Bee	<i>Andrena flavipes</i>
insect - hymenopteran	Athalia rosae	<i>Athalia rosae</i>
insect - hymenopteran	Large Red Tailed Bumble Bee	<i>Bombus lapidarius</i>
insect - hymenopteran	White-Tailed Bumble Bee	<i>Bombus lucorum</i>
insect - hymenopteran	Buff-Tailed Bumble Bee	<i>Bombus terrestris</i>
insect - hymenopteran	Sand Tailed Digger Wasp	<i>Cerceris arenaria</i>
insect - hymenopteran	Ornate Tailed Digger Wasp	<i>Cerceris rybyensis</i>
insect - hymenopteran	Patchwork Leafcutter Bee	<i>Megachile centuncularis</i>
insect - hymenopteran	Silvery Leafcutter Bee	<i>Megachile leachella</i>
insect - hymenopteran	Bee Wolf	<i>Philanthus triangulum</i>
insect - hymenopteran	Hornet	<i>Vespa crabro</i>

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insect - hymenopteran	Violet Carpenter Bee	<i>Xylocopa violacea</i>
insect - moth	Maggie	<i>Abraxas grossulariata</i>
insect - moth	Spectacle	<i>Abrostola tripartita</i>
insect - moth	Dark Spectacle	<i>Abrostola triplasia</i>
insect - moth	Yellow-barred Brindle	<i>Acasis viretata</i>
insect - moth	Water Veneer	<i>Acentria ephemerella</i>
insect - moth	Lesser Wax Moth	<i>Achroia grisella</i>
insect - moth	Yellow Rose Button	<i>Acleris bergmanniana</i>
insect - moth	Tufted Button	<i>Acleris cristana</i>
insect - moth	Maple Button	<i>Acleris forsskaleana</i>
insect - moth	Dark-triangle Button	<i>Acleris laterana</i>
insect - moth	Rhomboid Tortrix	<i>Acleris rhombana</i>
insect - moth	Garden Rose Tortrix	<i>Acleris variegana</i>
insect - moth	Grey Knot-horn	<i>Acrobasis advenella</i>
insect - moth	Broad-barred Knot-horn	<i>Acrobasis consociella</i>
insect - moth	Warted Knot-horn	<i>Acrobasis repandana</i>
insect - moth	Thicket Knot-horn	<i>Acrobasis suavella</i>
insect - moth	Sycamore	<i>Acronicta aceris</i>
insect - moth	Miller	<i>Acronicta leporina</i>
insect - moth	Grey Dagger	<i>Acronicta psi</i>
insect - moth	Knot Grass	<i>Acronicta rumicis</i>
insect - moth	Hemp Agrimony Plume	<i>Adaina microdactyla</i>
insect - moth	Small Barred Long-horn	<i>Adela croesella</i>
insect - moth	Green Long-horn	<i>Adela reaumurella</i>
insect - moth	Hemlock Yellow Conch	<i>Aethes beatricella</i>
insect - moth	Long-barred Yellow Conch	<i>Aethes francillana</i>
insect - moth	Burdock Conch	<i>Aethes rubigana</i>
insect - moth	Yarrow Conch	<i>Aethes smeathmanniana</i>
insect - moth	Common Yellow Conch	<i>Agapeta hamana</i>
insect - moth	Knapweed Conch	<i>Agapeta zoegana</i>
insect - moth	Saltmarsh Plume	<i>Agdistis bennetii</i>
insect - moth	Brown-spot Flat-body	<i>Agonopterix alstromeriana</i>
insect - moth	Brindled Flat-body	<i>Agonopterix arenella</i>
insect - moth	Powdered Flat-body	<i>Agonopterix curvipunctosa</i>
insect - moth	Dark-fringed Flat-body	<i>Agonopterix nervosa</i>
insect - moth	Ruddy Flat-body	<i>Agonopterix subpropinquella</i>
insect - moth	Dotted Border	<i>Agriopis marginaria</i>
insect - moth	Elbow-stripe Grass-veneer	<i>Agriphila geniculata</i>
insect - moth	Barred Grass-veneer	<i>Agriphila inquinatella</i>
insect - moth	White-streak Grass-veneer	<i>Agriphila latistria</i>

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insect - moth	Pale-streak Grass-veneer	<i>Agriphila selasella</i>
insect - moth	Straw Grass-veneer	<i>Agriphila straminella</i>
insect - moth	Common Grass-veneer	<i>Agriphila tristella</i>
insect - moth	Convolvulus Hawk-moth	<i>Agrius convolvuli</i>
insect - moth	Brick	<i>Agrochola circellaris</i>
insect - moth	Brown-spot Pinion	<i>Agrochola litura</i>
insect - moth	Red-line Quaker	<i>Agrochola lota</i>
insect - moth	Beaded Chestnut	<i>Agrochola lychnidis</i>
insect - moth	Yellow-line Quaker	<i>Agrochola macilentata</i>
insect - moth	Heart & Club	<i>Agrotis clavis</i>
insect - moth	Heart & Dart	<i>Agrotis exclamationis</i>
insect - moth	Dark Sword-grass	<i>Agrotis ipsilon</i>
insect - moth	Shuttle-shaped Dart	<i>Agrotis puta</i>
insect - moth	Shuttle-shaped Dart	<i>Agrotis puta puta</i>
insect - moth	Sand Dart	<i>Agrotis ripae</i>
insect - moth	Turnip Moth	<i>Agrotis segetum</i>
insect - moth	Archer's Dart	<i>Agrotis vestigialis</i>
insect - moth	Mottled Beauty	<i>Alcis repandata</i>
insect - moth	Mottled Beauty	<i>Alcis repandata repandata</i>
insect - moth	Yellow Oak Button	<i>Aleimma loeflingiana</i>
insect - moth	Green-brindled Crescent	<i>Allophyes oxyacanthae</i>
insect - moth	March Moth	<i>Alsophila aescularia</i>
insect - moth	Twenty-plume Moth or Many-plumed Moth	<i>Alucita hexadactyla</i>
insect - moth	Beautiful Plume	<i>Amblyptilia acanthadactyla</i>
insect - moth	Brindled Plume	<i>Amblyptilia punctidactyla</i>
insect - moth	Saltern Ear	<i>Amphipoea fucosa</i>
insect - moth	Ear Moth	<i>Amphipoea oculea</i>
insect - moth	Svensson's Copper Underwing	<i>Amphipyra berbera</i>
insect - moth	Copper Underwing	<i>Amphipyra pyramidea</i>
insect - moth	Mouse Moth	<i>Amphipyra tragopoginis</i>
insect - moth	Elder Pearl	<i>Anania coronata</i>
insect - moth	Ochreous Pearl	<i>Anania crocealis</i>
insect - moth	Small Magpie	<i>Anania hortulata</i>
insect - moth	Fenland Pearl	<i>Anania perlucidalis</i>
insect - moth	Nutmeg	<i>Anarta trifolii</i>
insect - moth	Triangle-marked Roller	<i>Ancylis achatana</i>
insect - moth	Saltmarsh Knot-horn	<i>Ancylosis oblitella</i>
insect - moth	Sandhill Knot-horn	<i>Anerastia lotella</i>
insect - moth	Twin-spotted Quaker	<i>Anorthoa munda</i>
insect - moth	Common Nettle-tap	<i>Anthophila fabriciana</i>

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insect - moth	Large Nutmeg	<i>Apamea anceps</i>
insect - moth	Clouded-bordered Brindle	<i>Apamea crenata</i>
insect - moth	Light Arches	<i>Apamea lithoxylaea</i>
insect - moth	Dark Arches	<i>Apamea monoglypha</i>
insect - moth	Dusky Brocade	<i>Apamea remissa</i>
insect - moth	Rustic Shoulder-knot	<i>Apamea sordens</i>
insect - moth	Small Clouded Brindle	<i>Apamea unanimitis</i>
insect - moth	Timothy Tortrix	<i>Aphelia paleana</i>
insect - moth	Bee Moth	<i>Aphomia sociella</i>
insect - moth	Twin-spot Honey	<i>Aphomia zelleri</i>
insect - moth	Treble-bar	<i>Aplocera plagiata</i>
insect - moth	Treble-bar	<i>Aplocera plagiata plagiata</i>
insect - moth	Small Brindled Beauty	<i>Apocheima hispidaria</i>
insect - moth	Dark Fleabane Neb	<i>Apodia bifractella</i>
insect - moth	Feathered Brindle	<i>Aporophyla australis</i>
insect - moth	Deep-brown Dart	<i>Aporophyla lutulenta</i>
insect - moth	Black Rustic	<i>Aporophyla nigra</i>
insect - moth	Brown-veined Wainscot	<i>Archanara dissoluta</i>
insect - moth	Large Fruit-tree Tortrix	<i>Archips podana</i>
insect - moth	Variiegated Golden Tortrix	<i>Archips xylosteana</i>
insect - moth	Garden Tiger	<i>Arctia caja</i>
insect - moth	Cream-spot Tiger	<i>Arctia villica</i>
insect - moth	Cream-spot Tiger	<i>Arctia villica villica</i>
insect - moth	Fen Wainscot	<i>Arenostola phragmitidis</i>
insect - moth	Hawthorn Argent	<i>Argyresthia bonnetella</i>
insect - moth	Gold-ribbon Argent	<i>Argyresthia brockeella</i>
insect - moth	Apple Fruit Moth	<i>Argyresthia conjugella</i>
insect - moth	Golden Argent	<i>Argyresthia goedartella</i>
insect - moth	Heather Twist	<i>Argyrotaenia ljugiana</i>
insect - moth	Dusky Groundling	<i>Aroga velocella</i>
insect - moth	Yellow Belle	<i>Aspitates ochrearia</i>
insect - moth	Centre-barred Sallow	<i>Atethmia centrigo</i>
insect - moth	Dotted Grey Groundling	<i>Athrips mouffetella</i>
insect - moth	Red-necked Footman	<i>Atolmis rubricollis</i>
insect - moth	Silver Y	<i>Autographa gamma</i>
insect - moth	Beautiful Golden Y	<i>Autographa pulchrina</i>
insect - moth	Flame	<i>Axylia putris</i>
insect - moth	Mottled Marble	<i>Bactra furfurana</i>
insect - moth	Rush Marble	<i>Bactra lancealana</i>
insect - moth	Saltern Marble	<i>Bactra robustana</i>

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insect - moth	Lesser Tawny Tubic	<i>Batia lunaris</i>
insect - moth	Poplar Cosmet	<i>Batrachedra praeangusta</i>
insect - moth	Six-belted Clearwing	<i>Bembecia ichneumoniformis</i>
insect - moth	Peppered Moth	<i>Biston betularia</i>
insect - moth	Oak Beauty	<i>Biston strataria</i>
insect - moth	Dingy Dowd	<i>Blastobasis adustella</i>
insect - moth	London Dowd	<i>Blastobasis lacticolella</i>
insect - moth	Hawthorn Cosmet	<i>Blastodacna hellerella</i>
insect - moth	Small Dingy Tubic	<i>Borkhausenia fuscescens</i>
insect - moth	Gorse Crest	<i>Brachmia blandella</i>
insect - moth	Marbled Beauty	<i>Bryophila domestica</i>
insect - moth	Dark Groundling	<i>Bryotropha affinis</i>
insect - moth	Desert Groundling	<i>Bryotropha desertella</i>
insect - moth	House Groundling	<i>Bryotropha domestica</i>
insect - moth	Cinerosus Groundling	<i>Bryotropha terrella</i>
insect - moth	Saltern Bent-wing	<i>Bucculatrix maritima</i>
insect - moth	Bordered White	<i>Bupalus piniaria</i>
insect - moth	Common Wave	<i>Cabera exanthemata</i>
insect - moth	Common White Wave	<i>Cabera pusaria</i>
insect - moth	Carnation Tortrix	<i>Cacoecimorpha pronubana</i>
insect - moth	Bulrush Veneer	<i>Calamotropha paludella</i>
insect - moth	Garden Apple Slender	<i>Callisto denticulella</i>
insect - moth	Pale Tussock	<i>Calliteara pudibunda</i>
insect - moth	Red Birch Slender	<i>Caloptilia betulicola</i>
insect - moth	Small Red Slender	<i>Caloptilia rufipennella</i>
insect - moth	White-triangle Slender	<i>Caloptilia stigmatella</i>
insect - moth	Little Slender	<i>Calybites phasianipennella</i>
insect - moth	Light Emerald	<i>Campaea margaritaria</i>
insect - moth	Yellow Shell	<i>Camptogramma bilineata</i>
insect - moth	Pale Mottled Willow	<i>Caradrina clavipalpis</i>
insect - moth	Clancy's Rustic	<i>Caradrina kadenii</i>
insect - moth	Mottled Rustic	<i>Caradrina morpheus</i>
insect - moth	Long-horned Flat-body	<i>Carcina quercana</i>
insect - moth	Beautiful Groundling	<i>Caryocolum marmorea</i>
insect - moth	Small China-mark	<i>Cataclysta lemnata</i>
insect - moth	Red Underwing	<i>Catocala nupta</i>
insect - moth	Dark Crimson Underwing	<i>Catocala sponsa</i>
insect - moth	Chequered Grass-veneer	<i>Catoptria falsella</i>
insect - moth	Pearl Grass-veneer	<i>Catoptria pinella</i>
insect - moth	Thyme Marble	<i>Celypha cespitana</i>

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insect - moth	Common Marble	<i>Celypha lacunana</i>
insect - moth	Roseate Marble	<i>Celypha rosaceana</i>
insect - moth	Barred Marble	<i>Celypha striana</i>
insect - moth	Antler Moth	<i>Cerapteryx graminis</i>
insect - moth	Red Chestnut	<i>Cerastis rubricosa</i>
insect - moth	Puss Moth	<i>Cerura vinula</i>
insect - moth	Treble Lines	<i>Charanyca trigrammica</i>
insect - moth	Streak	<i>Chesias legatella</i>
insect - moth	Latticed Heath	<i>Chiasmia clathrata</i>
insect - moth	Reed Veneer	<i>Chilo phragmitella</i>
insect - moth	Silky Wainscot	<i>Chilodes maritima</i>
insect - moth	Eastern Groundling	<i>Chionodes distinctella</i>
insect - moth	Downland Groundling	<i>Chionodes fumatella</i>
insect - moth	Red-green Carpet	<i>Chloroclysta siterata</i>
insect - moth	V-Pug	<i>Chloroclystis v-ata</i>
insect - moth	Garden Grass-veneer	<i>Chrysoteuchia culmella</i>
insect - moth	Barred Yellow	<i>Cidaria fulvata</i>
insect - moth	Chinese Character	<i>Cilix glaucata</i>
insect - moth	Dusky-lemon Sallow	<i>Cirrhia gilvago</i>
insect - moth	Sallow	<i>Cirrhia icteritia</i>
insect - moth	Pale-lemon Sallow	<i>Cirrhia ocellaris</i>
insect - moth	Pine Leaf-mining Moth	<i>Clavigesta purdeyi</i>
insect - moth	Privet Twist	<i>Clepsis consimilana</i>
insect - moth	Cyclamen Tortrix	<i>Clepsis spectrana</i>
insect - moth	Chocolate-tip	<i>Clostera curtula</i>
insect - moth	Light Grey Tortrix	<i>Cnephasia incertana</i>
insect - moth	Long-winged Shade	<i>Cnephasia longana</i>
insect - moth	Chamomile Conch	<i>Cochylidia implicitana</i>
insect - moth	Black-headed Conch	<i>Cochylis atricapitana</i>
insect - moth	White-bodied Conch	<i>Cochylis hybridella</i>
insect - moth	Rosy Conch	<i>Cochylis roseana</i>
insect - moth	Small Rufous	<i>Coenobia rufa</i>
insect - moth	Gorse Case-bearer	<i>Coleophora albicosta</i>
insect - moth	Large Green Case-bearer	<i>Coleophora trifolii</i>
insect - moth	Nut-tree Tussock	<i>Colocasia coryli</i>
insect - moth	Green Carpet	<i>Colostygia pectinataria</i>
insect - moth	Feathered Thorn	<i>Colotois pennaria</i>
insect - moth	Blotched Emerald	<i>Comibaena bajularia</i>
insect - moth	Red-headed Chestnut	<i>Conistra erythrocephala</i>
insect - moth	Dark Chestnut	<i>Conistra ligula</i>

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insect - moth	Chestnut	<i>Conistra vaccinii</i>
insect - moth	Bordered Carl	<i>Coptotriche marginea</i>
insect - moth	Lunar-spotted Pinion	<i>Cosmia pyralina</i>
insect - moth	Dun-bar	<i>Cosmia trapezina</i>
insect - moth	Purple Bar	<i>Cosmorhoe ocellata</i>
insect - moth	Hook-streak Grass-veneer	<i>Crambus lathoniellus</i>
insect - moth	Inlaid Grass-veneer	<i>Crambus pascuella</i>
insect - moth	Satin Grass-veneer	<i>Crambus perlella</i>
insect - moth	Coronet	<i>Craniophora ligustri</i>
insect - moth	Golden-brown Tubic	<i>Crassa unitella</i>
insect - moth	Scalloped Oak	<i>Crocallis elinguaris</i>
insect - moth	Southern Bell	<i>Crociosema plebejana</i>
insect - moth	Breckland Plume	<i>Crombruggia distans</i>
insect - moth	Tree-lichen Beauty	<i>Cryphia algae</i>
insect - moth	Star-wort	<i>Cucullia asteris</i>
insect - moth	Chamomile Shark	<i>Cucullia chamomillae</i>
insect - moth	Shark	<i>Cucullia umbratica</i>
insect - moth	Mullein	<i>Cucullia verbasci</i>
insect - moth	Maiden's Blush	<i>Cyclophora punctaria</i>
insect - moth	Rest-harrow Piercer	<i>Cydia microgrammana</i>
insect - moth	Pea Moth	<i>Cydia nigricana</i>
insect - moth	Codling Moth	<i>Cydia pomonella</i>
insect - moth	Marbled Piercer	<i>Cydia splendana</i>
insect - moth	Spruce Seed Moth	<i>Cydia strobilella</i>
insect - moth	Grey Gorse Piercer	<i>Cydia ulicetana</i>
insect - moth	Elephant Hawk-moth	<i>Deilephila elpenor</i>
insect - moth	Small Elephant Hawk-moth	<i>Deilephila porcellus</i>
insect - moth	Silver Barred	<i>Deltote bankiana</i>
insect - moth	Parsnip Moth	<i>Depressaria radiella</i>
insect - moth	Burnished Brass	<i>Diachrysis chrysis</i>
insect - moth	Muslin Moth	<i>Diaphora mendica</i>
insect - moth	Ingrailed Clay	<i>Diarsia mendica</i>
insect - moth	Small Square-spot	<i>Diarsia rubi</i>
insect - moth	Juniper Webber	<i>Dichomeris marginella</i>
insect - moth	Figure of Eight	<i>Diloba caeruleocephala</i>
insect - moth	New Pine Knot-horn	<i>Dioryctria sylvestrella</i>
insect - moth	Red-barred Tortrix	<i>Ditula angustiorana</i>
insect - moth	March Tubic	<i>Diurnea fagella</i>
insect - moth	Pale Water-veneer	<i>Donacaula forcicella</i>
insect - moth	Pebble Hook-tip	<i>Drepana falcataria</i>

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insect - moth	Brindled Green	<i>Dryobotodes eremita</i>
insect - moth	Bird's Wing	<i>Dypterygia scabriuscula</i>
insect - moth	Common Marbled Carpet	<i>Dysstroma truncata</i>
insect - moth	Cream-bordered Green Pea	<i>Earias clorana</i>
insect - moth	Shoulder Stripe	<i>Earophila badiata</i>
insect - moth	Small Phoenix	<i>Ecliptopera silaceata</i>
insect - moth	Ectoedemia heringella	<i>Ectoedemia heringella</i>
insect - moth	Engrailed	<i>Ectropis crepuscularia</i>
insect - moth	Bitter-cress Smudge	<i>Eidophasia messingiella</i>
insect - moth	Scarce Footman	<i>Eilema complana</i>
insect - moth	Buff Footman	<i>Eilema depressa</i>
insect - moth	Dingy Footman	<i>Eilema griseola</i>
insect - moth	Common Footman	<i>Eilema lurideola</i>
insect - moth	Orange Footman	<i>Eilema sororcula</i>
insect - moth	Swan-feather Dwarf	<i>Elachista argentella</i>
insect - moth	Black-headed Dwarf	<i>Elachista atricomella</i>
insect - moth	Two-dotted Dwarf	<i>Elachista biatomella</i>
insect - moth	Common Plume	<i>Emmelina monodactyla</i>
insect - moth	Cherry Bark Tortrix	<i>Enarmonia formosana</i>
insect - moth	Teasel Marble	<i>Endothenia gentianaeanana</i>
insect - moth	Blotched Marble	<i>Endothenia quadrimaculana</i>
insect - moth	Rosy Tabby	<i>Endotricha flammealis</i>
insect - moth	White-shouldered House-moth	<i>Endrosis sarcitrella</i>
insect - moth	Canary-shouldered Thorn	<i>Ennomos alniaria</i>
insect - moth	False Cacao Moth	<i>Ephestia woodiella</i>
insect - moth	Knapweed Bell	<i>Epiblema cirsiaria</i>
insect - moth	White-foot Bell	<i>Epiblema foenella</i>
insect - moth	Thistle Bell	<i>Epiblema scutulana</i>
insect - moth	Brown Elm Bell	<i>Epinotia abbreviana</i>
insect - moth	Crescent Bell	<i>Epinotia bilunana</i>
insect - moth	Large Birch Bell	<i>Epinotia brunnichana</i>
insect - moth	Common Birch Bell	<i>Epinotia immundana</i>
insect - moth	Grey Poplar Bell	<i>Epinotia nisella</i>
insect - moth	Light Brown Apple Moth	<i>Epiphyas postvittana</i>
insect - moth	Common Carpet	<i>Epirrhoe alternata</i>
insect - moth	Common Carpet	<i>Epirrhoe alternata alternata</i>
insect - moth	November Moth	<i>Epirrita dilutata</i>
insect - moth	Mottled Umber	<i>Erannis defoliaria</i>
insect - moth	Dusky Sallow	<i>Eremobia ochroleuca</i>
insect - moth	Sulphur Tubic	<i>Esperia sulphurella</i>

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insect - moth	Bordered Ermel	<i>Ethmia bipunctella</i>
insect - moth	Five-spot Ermel	<i>Ethmia terminella</i>
insect - moth	Beautiful Marbled	<i>Eublemma purpurina</i>
insect - moth	Mother Shipton	<i>Euclidia mi</i>
insect - moth	Marbled Bell	<i>Eucosma campoliliana</i>
insect - moth	Hoary Belle	<i>Eucosma cana</i>
insect - moth	Bright Bell	<i>Eucosma hohenwartiana</i>
insect - moth	Saltmarsh Bell	<i>Eucosma tripoliana</i>
insect - moth	Diamond-back Marble	<i>Eudemis profundana</i>
insect - moth	Narrow-winged Grey	<i>Eudonia angustea</i>
insect - moth	Little Grey	<i>Eudonia lacustrata</i>
insect - moth	Small Grey	<i>Eudonia mercurella</i>
insect - moth	Marsh Grey	<i>Eudonia pallida</i>
insect - moth	Autumnal Rustic	<i>Eugnorisma glareosa</i>
insect - moth	Brindled Pug	<i>Eupithecia abbreviata</i>
insect - moth	Wormwood Pug	<i>Eupithecia absinthiata</i>
insect - moth	Currant Pug	<i>Eupithecia assimilata</i>
insect - moth	Lime-speck Pug	<i>Eupithecia centaureata</i>
insect - moth	Mottled Pug	<i>Eupithecia exiguata</i>
insect - moth	Tawny Speckled Pug	<i>Eupithecia icterata</i>
insect - moth	Ash Pug	<i>Eupithecia innotata</i>
insect - moth	Ash Pug	<i>Eupithecia innotata form fraxinata</i>
insect - moth	Freyer's Pug	<i>Eupithecia intricata</i>
insect - moth	Toadflax Pug	<i>Eupithecia linariata</i>
insect - moth	Narrow-winged Pug	<i>Eupithecia nanata</i>
insect - moth	Cypress Pug	<i>Eupithecia phoeniceata</i>
insect - moth	Foxglove Pug	<i>Eupithecia pulchellata</i>
insect - moth	Plain Pug	<i>Eupithecia simplicata</i>
insect - moth	Grey Pug	<i>Eupithecia subfuscata</i>
insect - moth	Shaded Pug	<i>Eupithecia subumbrata</i>
insect - moth	Bordered Pug	<i>Eupithecia succenturiata</i>
insect - moth	Slender Pug	<i>Eupithecia tenuiata</i>
insect - moth	White-spotted Pug	<i>Eupithecia tripunctaria</i>
insect - moth	Common Pug	<i>Eupithecia vulgata</i>
insect - moth	Small Angle Shades	<i>Euplexia lucipara</i>
insect - moth	Vine Moth	<i>Eupoecilia ambiguella</i>
insect - moth	Brown-tail	<i>Euproctis chrysorrhoea</i>
insect - moth	Yellow-tail	<i>Euproctis similis</i>
insect - moth	Satellite	<i>Eupsilia transversa</i>
insect - moth	Gold-dot Slender	<i>Euspilapteryx auroguttella</i>

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insect - moth	Drinker	<i>Euthrix potatoria</i>
insect - moth	Coast Dart	<i>Euxoa cursoria</i>
insect - moth	Garden Dart	<i>Euxoa nigricans</i>
insect - moth	White-line Dart	<i>Euxoa tritici</i>
insect - moth	Ash-bark Knot-horn	<i>Euzophera pinguis</i>
insect - moth	Marbled Yellow Pearl	<i>Evergestis extimalis</i>
insect - moth	Garden Pebble	<i>Evergestis forficalis</i>
insect - moth	Dark Bordered Pearl	<i>Evergestis limbata</i>
insect - moth	Poplar Kitten	<i>Furcula bifida</i>
insect - moth	Sallow Kitten	<i>Furcula furcula</i>
insect - moth	Wax Moth	<i>Galleria mellonella</i>
insect - moth	Barred Straw	<i>Gandaritis pyraliata</i>
insect - moth	Large Emerald	<i>Geometra papilionaria</i>
insect - moth	Yarrow Plume	<i>Gillmeria pallidactyla</i>
insect - moth	Webb's Wainscot	<i>Globia sparganii</i>
insect - moth	Cocksfoot Moth	<i>Glyphipterix simplicella</i>
insect - moth	Frosted Orange	<i>Gortyna flavago</i>
insect - moth	Common Slender	<i>Gracillaria syringella</i>
insect - moth	Pale-bordered Piercer	<i>Grapholita janthinana</i>
insect - moth	Merveille du Jour	<i>Griposia aprilina</i>
insect - moth	Hoary Knot-horn	<i>Gymnancyla canella</i>
insect - moth	Double-striped Pug	<i>Gymnoscelis rufifasciata</i>
insect - moth	Rosy Cloaked Shoot	<i>Gypsonoma aceriana</i>
insect - moth	Common Cloaked Shoot	<i>Gypsonoma dealbana</i>
insect - moth	Brindled Shoot	<i>Gypsonoma minutana</i>
insect - moth	Buff Arches	<i>Habrosyne pyritoides</i>
insect - moth	Shears	<i>Hada plebeja</i>
insect - moth	Lychnis	<i>Hadena bicurris</i>
insect - moth	Varied Coronet	<i>Hadena compta</i>
insect - moth	Tawny Shears	<i>Hadena perplexa</i>
insect - moth	Broad-barred White	<i>Hecatera bicolorata</i>
insect - moth	Small Ranunculus	<i>Hecatera dysodea</i>
insect - moth	Marbled Orchard Tortrix	<i>Hedya nubiferana</i>
insect - moth	Plum Tortrix	<i>Hedya pruniana</i>
insect - moth	White-backed Marble	<i>Hedya salicella</i>
insect - moth	Orange Crest	<i>Helcystogramma rufescens</i>
insect - moth	Scarce Bordered Straw or Old World Bollworm	<i>Helicoverpa armigera</i>
insect - moth	Bordered Straw	<i>Heliothis peltigera</i>
insect - moth	Citron Plume	<i>Hellinsia carphodactyla</i>
insect - moth	Crescent	<i>Helotropha leucostigma</i>

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insect - moth	Small Emerald	<i>Hemistola chrysoprasaria</i>
insect - moth	Common Emerald	<i>Hemithea aestivaria</i>
insect - moth	Ghost Moth	<i>Hepialus humuli</i>
insect - moth	Small Fan-foot	<i>Herminia grisealis</i>
insect - moth	Fan-foot	<i>Herminia tarsipennalis</i>
insect - moth	Brown House-moth	<i>Hofmannophila pseudospretella</i>
insect - moth	Twin-barred Knot-horn	<i>Homoeosoma sinuella</i>
insect - moth	Vine's Rustic	<i>Hoplodrina ambigua</i>
insect - moth	Rustic	<i>Hoplodrina blanda</i>
insect - moth	Uncertain	<i>Hoplodrina octogenaria</i>
insect - moth	Small Waved Umber	<i>Horisme vitalbata</i>
insect - moth	Rosy Rustic	<i>Hydraecia micacea</i>
insect - moth	Small Yellow Wave	<i>Hydrelia flammeolaria</i>
insect - moth	July Highflyer	<i>Hydriomena furcata</i>
insect - moth	May Highflyer	<i>Hydriomena impluviata</i>
insect - moth	Barred Red	<i>Hylaea fasciaria</i>
insect - moth	Spurge Hawk-moth	<i>Hyles euphorbiae</i>
insect - moth	Bedstraw Hawk-moth	<i>Hyles gallii</i>
insect - moth	Snout	<i>Hypena proboscidalis</i>
insect - moth	Gold Triangle	<i>Hypsopygia costalis</i>
insect - moth	Double-striped Tabby	<i>Hypsopygia glaucinalis</i>
insect - moth	Riband Wave	<i>Idaea aversata</i>
insect - moth	Small Fan-footed Wave	<i>Idaea biselata</i>
insect - moth	Single-dotted Wave	<i>Idaea dimidiata</i>
insect - moth	Small Scallop	<i>Idaea emarginata</i>
insect - moth	Dwarf Cream Wave	<i>Idaea fuscovenosa</i>
insect - moth	Least Carpet	<i>Idaea rusticata</i>
insect - moth	Small Dusty Wave	<i>Idaea seriata</i>
insect - moth	Plain Wave	<i>Idaea straminata</i>
insect - moth	Satin Wave	<i>Idaea subsericeata</i>
insect - moth	Treble Brown Spot	<i>Idaea trigeminata</i>
insect - moth	Olive	<i>Ipimorpha subtusa</i>
insect - moth	Common Swift	<i>Korscheltellus lupulina</i>
insect - moth	Bright-line Brown-eye	<i>Lacanobia oleracea</i>
insect - moth	Dog's Tooth	<i>Lacanobia suasa</i>
insect - moth	Light Brocade	<i>Lacanobia w-latinum</i>
insect - moth	Poplar Hawk-moth	<i>Laothoe populi</i>
insect - moth	Mallow	<i>Larentia clavararia</i>
insect - moth	Oak Eggar	<i>Lasiocampa quercus</i>
insect - moth	Double Lobed	<i>Lateroligia ophiogramma</i>

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insect - moth	Red Piercer	<i>Lathronympha strigana</i>
insect - moth	Twin-spotted Wainscot	<i>Lenisa geminipuncta</i>
insect - moth	Shoulder-striped Wainscot	<i>Leucania comma</i>
insect - moth	White Satin Moth	<i>Leucoma salicis</i>
insect - moth	Bulrush Cosmet	<i>Limnaecia phragmitella</i>
insect - moth	Blair's Shoulder-knot	<i>Lithophane leautieri</i>
insect - moth	Lithophane leautieri leautieri	<i>Lithophane leautieri leautieri</i>
insect - moth	Grey Shoulder-knot	<i>Lithophane ornitopus</i>
insect - moth	Rosy Minor	<i>Litoligia literosa</i>
insect - moth	Smoky-barred Marble	<i>Lobesia abscisana</i>
insect - moth	Clouded Border	<i>Lomaspilis marginata</i>
insect - moth	Clouded Silver	<i>Lomographa temerata</i>
insect - moth	Lyme Grass	<i>Longalatedes elymi</i>
insect - moth	Orange Pine Twist	<i>Lozotaeniodes formosana</i>
insect - moth	Sandhill Rustic	<i>Luperina nickerlii</i>
insect - moth	Flounced Rustic	<i>Luperina testacea</i>
insect - moth	True Lover's Knot	<i>Lycophotia porphyrea</i>
insect - moth	Black Arches	<i>Lymantria monacha</i>
insect - moth	Apple Leaf Miner	<i>Lyonetia clerkella</i>
insect - moth	Sharp-angled Peacock	<i>Macaria alternata</i>
insect - moth	Rannoch Looper	<i>Macaria brunneata</i>
insect - moth	Tawny-barred Angle	<i>Macaria liturata</i>
insect - moth	Peacock Moth	<i>Macaria notata</i>
insect - moth	Dotted Fan-foot	<i>Macrochilo cribrumalis</i>
insect - moth	Humming-bird Hawk-moth	<i>Macroglossum stellatarum</i>
insect - moth	Ground Lackey	<i>Malacosoma castrensis</i>
insect - moth	Lackey	<i>Malacosoma neustria</i>
insect - moth	Cabbage Moth	<i>Mamestra brassicae</i>
insect - moth	Crescent Plume	<i>Marasmarcha lunaedactyla</i>
insect - moth	Brown Knot-horn	<i>Matilella fusca</i>
insect - moth	Kent Black Arches	<i>Meganola albula</i>
insect - moth	Dot Moth	<i>Melanchna persicariae</i>
insect - moth	Waved Umber	<i>Menophra abruptaria</i>
insect - moth	Mesapamea	<i>Mesapamea</i>
insect - moth	Lesser Common Rustic	<i>Mesapamea didyma</i>
insect - moth	Common Rustic	<i>Mesapamea secalis</i>
insect - moth	Cloaked Minor	<i>Mesoligia furuncula</i>
insect - moth	Burdock Neb	<i>Metzneria lappella</i>
insect - moth	Meadow Neb	<i>Metzneria metzneriella</i>
insect - moth	Lime Hawk-moth	<i>Mimas tiliae</i>

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insect - moth	Common Cosmet	<i>Mompha epilobiella</i>
insect - moth	Bracken Neb	<i>Monochroa cytisella</i>
insect - moth	Wainscot Neb	<i>Monochroa palustrellus</i>
insect - moth	Pale-backed Clothes	<i>Monopis crocicapitella</i>
insect - moth	Skin Moth	<i>Monopis laevigella</i>
insect - moth	White-blotched Clothes	<i>Monopis monachella</i>
insect - moth	Yellow-backed Clothes	<i>Monopis obviella</i>
insect - moth	Carrion Moth	<i>Monopis weaverella</i>
insect - moth	Old Lady	<i>Mormo maura</i>
insect - moth	Thistle Ermine	<i>Myelois circumvoluta</i>
insect - moth	White-point	<i>Mythimna albipuncta</i>
insect - moth	Brown-line Bright-eye	<i>Mythimna conigera</i>
insect - moth	Mathew's Wainscot	<i>Mythimna favicolor</i>
insect - moth	Clay	<i>Mythimna ferrago</i>
insect - moth	Smoky Wainscot	<i>Mythimna impura</i>
insect - moth	L-album Wainscot	<i>Mythimna l-album</i>
insect - moth	Common Wainscot	<i>Mythimna pallens</i>
insect - moth	Southern Wainscot	<i>Mythimna straminea</i>
insect - moth	American Wainscot or White-speck	<i>Mythimna unipuncta</i>
insect - moth	Delicate	<i>Mythimna vitellina</i>
insect - moth	Gothic	<i>Naenia typica</i>
insect - moth	Yellow-barred Long-horn	<i>Nemophora degeerella</i>
insect - moth	Heather Groundling	<i>Neofaculta ericetella</i>
insect - moth	Spindle Knot-horn	<i>Nephoterix angustella</i>
insect - moth	Lesser Yellow Underwing	<i>Noctua comes</i>
insect - moth	Broad-bordered Yellow Underwing	<i>Noctua fimbriata</i>
insect - moth	Least Yellow Underwing	<i>Noctua interjecta</i>
insect - moth	Lesser Broad-bordered Yellow Underwing	<i>Noctua janthe</i>
insect - moth	Langmaid's Yellow Underwing	<i>Noctua janthina</i>
insect - moth	Lunar Yellow Underwing	<i>Noctua orbona</i>
insect - moth	Large Yellow Underwing	<i>Noctua pronuba</i>
insect - moth	Least Black Arches	<i>Nola confusalis</i>
insect - moth	Short-cloaked Moth	<i>Nola cucullatella</i>
insect - moth	Rush Veneer	<i>Nomophila noctuella</i>
insect - moth	Bulrush Wainscot	<i>Nonagria typhae</i>
insect - moth	Yellow-faced Bell	<i>Notocelia cynosbatella</i>
insect - moth	Summer Rose Bell	<i>Notocelia roborana</i>
insect - moth	Bramble Shoot Moth	<i>Notocelia uddmanniana</i>
insect - moth	Iron Prominent	<i>Notodonta dromedarius</i>
insect - moth	Pebble Prominent	<i>Notodonta ziczac</i>

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insect - moth	Oak Nycteoline	<i>Nycteola revayana</i>
insect - moth	Gem	<i>Nycterosea obstipata</i>
insect - moth	Marbled Green	<i>Nyctobrya muralis</i>
insect - moth	Flame Shoulder	<i>Ochropleura plecta</i>
insect - moth	Scalloped Hazel	<i>Odontopera bidentata</i>
insect - moth	Straw Obscure	<i>Oegoconia caradjai</i>
insect - moth	Scarce Obscure	<i>Oegoconia deauratella</i>
insect - moth	Middle-barr'd Minor	<i>Oligia fasciuncula</i>
insect - moth	Tawny Marbled Minor	<i>Oligia latruncula</i>
insect - moth	Marbled Minor	<i>Oligia strigilis</i>
insect - moth	Lunar Underwing	<i>Omphaloscelis lunosa</i>
insect - moth	Rosy-striped Knot-horn	<i>Oncocera semirubella</i>
insect - moth	Winter Moth	<i>Operophtera brumata</i>
insect - moth	Brimstone Moth	<i>Opisthograptis luteolata</i>
insect - moth	Vapourer	<i>Orgyia antiqua</i>
insect - moth	Oblique Carpet	<i>Orthonama vittata</i>
insect - moth	Common Quaker	<i>Orthosia cerasi</i>
insect - moth	Small Quaker	<i>Orthosia cruda</i>
insect - moth	Hebrew Character	<i>Orthosia gothica</i>
insect - moth	Powdered Quaker	<i>Orthosia gracilis</i>
insect - moth	Clouded Drab	<i>Orthosia incerta</i>
insect - moth	Northern Drab	<i>Orthosia opima</i>
insect - moth	Lead-coloured Drab	<i>Orthosia populeti</i>
insect - moth	European Corn-borer	<i>Ostrinia nubilalis</i>
insect - moth	Swallow-tailed Moth	<i>Ourapteryx sambucaria</i>
insect - moth	Painted Neb	<i>Oxypteryx wilkella</i>
insect - moth	Olive-tree Pearl	<i>Palpita vitrealis</i>
insect - moth	Sycamore Piercer	<i>Pammene aurita</i>
insect - moth	Acorn Piercer	<i>Pammene fasciana</i>
insect - moth	Regal Piercer	<i>Pammene regiana</i>
insect - moth	Barred Fruit-tree Tortrix	<i>Pandemis cerasana</i>
insect - moth	Chequered Fruit-tree Tortrix	<i>Pandemis corylana</i>
insect - moth	Dark Fruit-tree Tortrix	<i>Pandemis heparana</i>
insect - moth	Pine Beauty	<i>Panolis flammea</i>
insect - moth	Ringed China-mark	<i>Parapoynx stratiotata</i>
insect - moth	Hawthorn Ermel	<i>Paraswammerdamia nebulella</i>
insect - moth	Green Pug	<i>Pasiphila rectangulata</i>
insect - moth	Salt-marsh Grass-veneer	<i>Pediasia aridella</i>
insect - moth	Waste Grass-veneer	<i>Pediasia contaminella</i>
insect - moth	Dark Spinach	<i>Pelurga comitata</i>

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insect - moth	Gorse Knot-horn	<i>Pempelia genistella</i>
insect - moth	Willow Beauty	<i>Peribatodes rhomboidaria</i>
insect - moth	Pearly Underwing	<i>Peridroma saucia</i>
insect - moth	Small Rivulet	<i>Perizoma alchemillata</i>
insect - moth	Sandy Carpet	<i>Perizoma flavofasciata</i>
insect - moth	Buff-tip	<i>Phalera bucephala</i>
insect - moth	Large Saltmarsh Conch	<i>Phalonidia affinitana</i>
insect - moth	Lesser Swallow Prominent	<i>Pheosia gnoma</i>
insect - moth	Swallow Prominent	<i>Pheosia tremula</i>
insect - moth	Pale Brindled Beauty	<i>Phigalia pilosaria</i>
insect - moth	Angle Shades	<i>Phlogophora meticulosa</i>
insect - moth	Ruby Tiger	<i>Phragmatobia fuliginosa</i>
insect - moth	Ruby Tiger	<i>Phragmatobia fuliginosa fuliginosa</i>
insect - moth	Plain Conch	<i>Phtheochroa inopiana</i>
insect - moth	Rough-winged Conch	<i>Phtheochroa rugosana</i>
insect - moth	Dotted Oak Knot-horn	<i>Phycita roborella</i>
insect - moth	Ermine Knot-horn	<i>Phycitodes binaevella</i>
insect - moth	Chalk Knot-horn	<i>Phycitodes maritima</i>
insect - moth	Kent Bent-wing	<i>Phyllocnistis xenia</i>
insect - moth	Garden Midget	<i>Phyllonorycter messaniella</i>
insect - moth	Silver-edged Knot-horn	<i>Pima boisduvaliella</i>
insect - moth	Pine Marble	<i>Piniphila bifasciana</i>
insect - moth	Scorched Wing	<i>Plagadis dolabraria</i>
insect - moth	Hook-tipped Grass-veneer	<i>Platytes alpinella</i>
insect - moth	Little Grass-veneer	<i>Platytes cerussella</i>
insect - moth	Mother of Pearl	<i>Pleuroptya ruralis</i>
insect - moth	Gold Spot	<i>Plusia festucae</i>
insect - moth	Grey-streaked Smudge	<i>Plutella porrectella</i>
insect - moth	Diamond-back Moth	<i>Plutella xylostella</i>
insect - moth	December Moth	<i>Poecilocampa populi</i>
insect - moth	Large Ranunculus	<i>Polymixis flavicincta</i>
insect - moth	Feathered Ranunculus	<i>Polymixis lichenea</i>
insect - moth	Feathered Ranunculus	<i>Polymixis lichenea lichenea</i>
insect - moth	Yellow-spot Twist	<i>Pseudargyrotoza conwagana</i>
insect - moth	Green Silver-lines	<i>Pseudoips prasinana</i>
insect - moth	Common Sweep	<i>Psyche casta</i>
insect - moth	White Plume	<i>Pterophorus pentadactyla</i>
insect - moth	Pale Prominent	<i>Pterostoma palpina</i>
insect - moth	Coxcomb Prominent	<i>Ptilodon capucina</i>
insect - moth	Maple Prominent	<i>Ptilodon cucullina</i>

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insect - moth	Meal Moth	<i>Pyralis farinalis</i>
insect - moth	Small Purple & Gold	<i>Pyrausta aurata</i>
insect - moth	Straw-barred Pearl	<i>Pyrausta despicata</i>
insect - moth	Common Purple & Gold	<i>Pyrausta purpuralis</i>
insect - moth	Bordered Sallow	<i>Pyrrhia umbra</i>
insect - moth	Large Wainscot	<i>Rhizedra lutosa</i>
insect - moth	Beautiful Knot-horn	<i>Rhodophaea formosa</i>
insect - moth	Holly Tortrix	<i>Rhopobota naevana</i>
insect - moth	Dotted Rustic	<i>Rhyacia simulans</i>
insect - moth	Orange-spotted Shoot	<i>Rhyacionia pinicolana</i>
insect - moth	Spotted Shoot Moth	<i>Rhyacionia pinivorana</i>
insect - moth	Straw Dot	<i>Rivula sericealis</i>
insect - moth	Brown Rustic	<i>Rusina ferruginea</i>
insect - moth	Emperor Moth	<i>Saturnia pavonia</i>
insect - moth	Giant Water-veneer	<i>Schoenobius gigantella</i>
insect - moth	Bramble False-feather	<i>Schreckensteinia festaliella</i>
insect - moth	Willow Knot-horn	<i>Sciota adelphella</i>
insect - moth	Herald	<i>Scoliopteryx libatrix</i>
insect - moth	Common Grey	<i>Scoparia ambigualis</i>
insect - moth	Base-lined Grey	<i>Scoparia basistrigalis</i>
insect - moth	Meadow Grey	<i>Scoparia pyralella</i>
insect - moth	Large Grey	<i>Scoparia subfusca</i>
insect - moth	Rosy Wave	<i>Scopula emutaria</i>
insect - moth	Cream Wave	<i>Scopula floslactata</i>
insect - moth	Cream Wave	<i>Scopula floslactata floslactata</i>
insect - moth	Small Blood-vein	<i>Scopula imitaria</i>
insect - moth	Mullein Wave	<i>Scopula marginepunctata</i>
insect - moth	Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>
insect - moth	Winter Groundling	<i>Scrobipalpa costella</i>
insect - moth	Hawthorn Moth	<i>Scythropia crataegella</i>
insect - moth	Early Thorn	<i>Selenia dentaria</i>
insect - moth	Hornet Moth	<i>Sesia apiformis</i>
insect - moth	Bordered Gothic	<i>Sideridis reticulata</i>
insect - moth	Campion	<i>Sideridis rivularis</i>
insect - moth	White Colon	<i>Sideridis turbida</i>
insect - moth	Reed Dagger or Powdered Wainscot	<i>Simyra albovenosa</i>
insect - moth	Sulphur Pearl	<i>Sitochroa palealis</i>
insect - moth	Eyed Hawk-moth	<i>Smerinthus ocellata</i>
insect - moth	Small Purple Button	<i>Spatalistis bifasciana</i>
insect - moth	Privet Hawk-moth	<i>Sphinx ligustri</i>

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insect - moth	Pine Hawk-moth	<i>Sphinx pinastri</i>
insect - moth	White Ermine	<i>Spilosoma lubricipeda</i>
insect - moth	Buff Ermine	<i>Spilosoma lutea</i>
insect - moth	Small Mottled Willow	<i>Spodoptera exigua</i>
insect - moth	Maize Moth	<i>Spoladea recurvalis</i>
insect - moth	Brown Plume	<i>Stenoptilia pterodactyla</i>
insect - moth	Dowdy Plume	<i>Stenoptilia zophodactylus</i>
insect - moth	Golden Pigmy	<i>Stigmella aurella</i>
insect - moth	Scrubland Pigmy	<i>Stigmella plagicolella</i>
insect - moth	Holm-oak Pigmy	<i>Stigmella suberivora</i>
insect - moth	Poplar Grey	<i>Subacronicta megacephala</i>
insect - moth	Long-legged Tabby	<i>Synaphe punctalis</i>
insect - moth	Ruddy Streak	<i>Tachystola acroxantha</i>
insect - moth	Common Groundling	<i>Teleiodes vulgella</i>
insect - moth	Large Groundling	<i>Teleiopsis diffinis</i>
insect - moth	Figure of Eighty	<i>Tethea ocularis</i>
insect - moth	Tethea ocularis ocularis	<i>Tethea ocularis ocularis</i>
insect - moth	Straw Underwing	<i>Thalpophila matura</i>
insect - moth	Spruce Carpet	<i>Thera britannica</i>
insect - moth	Cypress Carpet	<i>Thera cupressata</i>
insect - moth	Grey Pine Carpet	<i>Thera obeliscata</i>
insect - moth	Lemon Bell	<i>Thiodia citrana</i>
insect - moth	Hedge Rustic	<i>Tholera cespitis</i>
insect - moth	Feathered Gothic	<i>Tholera decimalis</i>
insect - moth	Round-winged Muslin	<i>Thumatha senex</i>
insect - moth	Peach Blossom	<i>Thyatira batis</i>
insect - moth	Barred Sallow	<i>Tiliacea aurago</i>
insect - moth	Orange Sallow	<i>Tiliacea citrigo</i>
insect - moth	Blood-vein	<i>Timandra comae</i>
insect - moth	Bugloss Spear-wing	<i>Tinagma ocnerostomella</i>
insect - moth	Case-bearing Clothes Moth	<i>Tinea pellionella</i>
insect - moth	Fulvous Clothes	<i>Tinea semifulvella</i>
insect - moth	Bird's-nest Moth	<i>Tinea trinotella</i>
insect - moth	Winter Shade	<i>Tortricodes alternella</i>
insect - moth	Green Oak Tortrix	<i>Tortrix viridana</i>
insect - moth	Ni Moth	<i>Trichoplusia ni</i>
insect - moth	Orange Swift	<i>Triodia sylvina</i>
insect - moth	Cinnabar	<i>Tyria jacobaeae</i>
insect - moth	Rusty-dot Pearl	<i>Udea ferrugalis</i>
insect - moth	Olive Pearl	<i>Udea olivalis</i>

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insect - moth	Dusky Pearl	<i>Udea prunalis</i>
insect - moth	Oak Hook-tip	<i>Watsonalla binaria</i>
insect - moth	Pink-barred Sallow	<i>Xanthia togata</i>
insect - moth	Dark-barred Twin-spot Carpet	<i>Xanthorhoe ferrugata</i>
insect - moth	Garden Carpet	<i>Xanthorhoe fluctuata</i>
insect - moth	Silver-ground Carpet	<i>Xanthorhoe montanata</i>
insect - moth	Silver-ground Carpet	<i>Xanthorhoe montanata montanata</i>
insect - moth	Red Twin-spot Carpet	<i>Xanthorhoe spadicearia</i>
insect - moth	Setaceous Hebrew Character	<i>Xestia c-nigrum</i>
insect - moth	Six-striped Rustic	<i>Xestia sexstrigata</i>
insect - moth	Double Square-spot	<i>Xestia triangulum</i>
insect - moth	Square-spot Rustic	<i>Xestia xanthographa</i>
insect - moth	Early Grey	<i>Xylocampa areola</i>
insect - moth	Spindle Ermine	<i>Yponomeuta cagnagella</i>
insect - moth	Bird-cherry Ermine	<i>Yponomeuta evonymella</i>
insect - moth	Willow Ermine	<i>Yponomeuta rorrella</i>
insect - moth	Wainscot Smudge	<i>Ypsolopha scabrella</i>
insect - moth	Variable Smudge	<i>Ypsolopha ustella</i>
insect - moth	Cock's-head Bell	<i>Zeiraphera isertana</i>
insect - moth	Six-spot Burnet	<i>Zygaena filipendulae</i>
insect - moth	Zygaena filipendulae filipendulae	<i>Zygaena filipendulae filipendulae</i>
insect - orthopteran	Lesser Marsh Grasshopper	<i>Chorthippus albomarginatus</i>
insect - orthopteran	Field Grasshopper	<i>Chorthippus brunneus</i>
insect - orthopteran	Short-winged Cone-head	<i>Conocephalus dorsalis</i>
insect - orthopteran	Long-winged Cone-head	<i>Conocephalus fuscus</i>
insect - orthopteran	Speckled Bush-cricket	<i>Leptophyes punctatissima</i>
insect - orthopteran	Oak Bush-cricket	<i>Mecanema thalassinum</i>
insect - orthopteran	Roesel's Bush-cricket	<i>Metrioptera roeselii</i>
insect - orthopteran	Mottled Grasshopper	<i>Myrmeleotettix maculatus</i>
insect - orthopteran	Woodland Grasshopper	<i>Omocestus rufipes</i>
insect - orthopteran	Desert Locust	<i>Schistocerca gregaria</i>
insect - orthopteran	Great Green Bush Cricket	<i>Tettigonia viridissima</i>
insect - silverfish (Thysanura)	Silverfish	<i>Lepisma saccharina</i>
insect - true bug (Hemiptera)	Hawthorn Shieldbug	<i>Acanthosoma haemorrhoidale</i>
insect - true bug (Hemiptera)	Dock Bug	<i>Coreus marginatus</i>
insect - true bug (Hemiptera)	Corizus hyoscyami	<i>Corizus hyoscyami</i>
insect - true bug (Hemiptera)	Hairy Shieldbug	<i>Dolycoris baccarum</i>
insect - true bug (Hemiptera)	Birch Shieldbug	<i>Elasmotethus interstinctus</i>
insect - true bug	Common Pondskater	<i>Gerris (Gerris) lacustris</i>

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(Hemiptera)		
insect - true bug (Hemiptera)	Box Bug	<i>Gonocerus acuteangulatus</i>
insect - true bug (Hemiptera)	Heterotoma planicornis	<i>Heterotoma planicornis</i>
insect - true bug (Hemiptera)	Water Measurer	<i>Hydrometra stagnorum</i>
insect - true bug (Hemiptera)	Western Conifer Seed Bug	<i>Leptoglossus occidentalis</i>
insect - true bug (Hemiptera)	Loricula elegantula	<i>Loricula elegantula</i>
insect - true bug (Hemiptera)	Common Backswimmer	<i>Notonecta (Notonecta) glauca</i>
insect - true bug (Hemiptera)	Green Shieldbug	<i>Palomena prasina</i>
insect - true bug (Hemiptera)	Red-legged Shieldbug	<i>Pentatoma rufipes</i>
insect - true bug (Hemiptera)	Gorse Shieldbug	<i>Piezodorus lituratus</i>
insect - true bug (Hemiptera)	Prostemma (Prostemma) guttula	<i>Prostemma (Prostemma) guttula</i>
insect - true bug (Hemiptera)	Rhombic Leatherbug	<i>Syromastus rhombeus</i>
insect - true fly (Diptera)	Chrysotoxum bicinctum	<i>Chrysotoxum bicinctum</i>
insect - true fly (Diptera)	Marmalade Hoverfly	<i>Episyrphus balteatus</i>
insect - true fly (Diptera)	Eristalis tenax	<i>Eristalis tenax</i>
insect - true fly (Diptera)	Helophilus pendulus	<i>Helophilus pendulus</i>
insect - true fly (Diptera)	Mesembrina meridiana	<i>Mesembrina meridiana</i>
insect - true fly (Diptera)	Nephrotoma appendiculata	<i>Nephrotoma appendiculata</i>
insect - true fly (Diptera)	Phytomyza conyzae	<i>Phytomyza conyzae</i>
insect - true fly (Diptera)	Scaptomyza flava	<i>Scaptomyza flava</i>
insect - true fly (Diptera)	Dune Villa	<i>Villa modesta</i>
insect - true fly (Diptera)	Hornet Mimic Hoverfly	<i>Volucella zonaria</i>
lichen	Aspicilia contorta	<i>Aspicilia contorta</i>
lichen	Aspicilia contorta subsp. hoffmanniana	<i>Aspicilia contorta subsp. hoffmanniana</i>
lichen	Caloplaca arcis	<i>Caloplaca arcis</i>
lichen	Caloplaca flavocitrina	<i>Caloplaca flavocitrina</i>
lichen	Caloplaca saxicola	<i>Caloplaca saxicola</i>
lichen	Candelariella aurella	<i>Candelariella aurella</i>
lichen	Candelariella vitellina f. vitellina	<i>Candelariella vitellina f. vitellina</i>
lichen	Cladonia foliacea	<i>Cladonia foliacea</i>
lichen	Cladonia furcata	<i>Cladonia furcata</i>
lichen	Cladonia rangiformis	<i>Cladonia rangiformis</i>
lichen	Collema crispum var. crispum	<i>Collema crispum var. crispum</i>
lichen	Oak Moss	<i>Evernia prunastri</i>
lichen	Myriolecis albescens	<i>Myriolecis albescens</i>
lichen	Myriolecis dispersa	<i>Myriolecis dispersa</i>
lichen	Myriolecis hagenii	<i>Myriolecis hagenii</i>

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lichen	<i>Peltigera canina</i>	<i>Peltigera canina</i>
lichen	<i>Phaeophyscia orbicularis</i>	<i>Phaeophyscia orbicularis</i>
lichen	<i>Physcia caesia</i>	<i>Physcia caesia</i>
lichen	<i>Rhizocarpon reductum</i>	<i>Rhizocarpon reductum</i>
lichen	<i>Rinodina oleae</i>	<i>Rinodina oleae</i>
lichen	<i>Verrucaria muralis</i>	<i>Verrucaria muralis</i>
lichen	<i>Verrucaria nigrescens f. nigrescens</i>	<i>Verrucaria nigrescens f. nigrescens</i>
lichen	Common Orange Lichen	<i>Xanthoria parietina</i>
lichen	<i>Xanthoria polycarpa</i>	<i>Xanthoria polycarpa</i>
marine mammal	Whales & Dolphins	<i>Cetacea</i>
marine mammal	Grey Seal	<i>Halichoerus grypus</i>
marine mammal	Common Seal	<i>Phoca vitulina</i>
marine mammal	Common Porpoise	<i>Phocoena phocoena</i>
mollusc	White-lipped Snail	<i>Cepaea (Cepaea) hortensis</i>
mollusc	Common Garden Snail	<i>Cornu aspersum</i>
mollusc	Yellow Cellar Slug	<i>Limacus flavus</i>
mollusc	Green Cellar Slug	<i>Limacus maculatus</i>
mollusc	Lesser Bulin	<i>Merdigera obscura</i>
mollusc	Common mussel	<i>Mytilus edulis</i>
reptile	Slow-worm	<i>Anguis fragilis</i>
reptile	Grass Snake	<i>Natrix helvetica</i>
reptile	Common Lizard	<i>Zootoca vivipara</i>
slime mould	<i>Fuligo septica</i>	<i>Fuligo septica</i>
slime mould	False Puffball	<i>Reticularia lycoperdon</i>
spider (Araneae)	Garden Orb-Web Spider	<i>Araneus diadematus</i>
spider (Araneae)	Wasp Spider	<i>Argiope bruennichi</i>
spider (Araneae)	<i>Drassodes lapidosus</i>	<i>Drassodes lapidosus</i>
spider (Araneae)	Woodlouse Spider	<i>Dysdera crocata</i>
spider (Araneae)	<i>Eratigena duellica</i>	<i>Eratigena duellica</i>
spider (Araneae)	Cobweb Spider	<i>Pholcus phalangioides</i>
spider (Araneae)	Nursery-Web Spider	<i>Pisaura mirabilis</i>
spider (Araneae)	<i>Steatoda nobilis</i>	<i>Steatoda nobilis</i>
spider (Araneae)	<i>Tibellus oblongus</i>	<i>Tibellus oblongus</i>
spider (Araneae)	<i>Zygiella x-notata</i>	<i>Zygiella x-notata</i>
terrestrial mammal	Yellow-necked Mouse	<i>Apodemus flavicollis</i>
terrestrial mammal	Wood Mouse	<i>Apodemus sylvaticus</i>
terrestrial mammal	West European Hedgehog	<i>Erinaceus europaeus</i>
terrestrial mammal	Field Vole	<i>Microtus agrestis</i>
terrestrial mammal	Chinese Muntjac	<i>Muntiacus reevesi</i>
terrestrial mammal	Stoat	<i>Mustela erminea</i>

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terrestrial mammal	Weasel	<i>Mustela nivalis</i>
terrestrial mammal	European Rabbit	<i>Oryctolagus cuniculus</i>
terrestrial mammal	Daubenton's Bat	<i>Myotis daubentonii</i>
terrestrial mammal	Noctule Bat	<i>Nyctalus noctula</i>
terrestrial mammal	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>
terrestrial mammal	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>
terrestrial mammal	Natterer's Bat	<i>Myotis nattereri</i>
terrestrial mammal	Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>
terrestrial mammal	Brown Rat	<i>Rattus norvegicus</i>
terrestrial mammal	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>
terrestrial mammal	Eurasian Common Shrew	<i>Sorex araneus</i>
terrestrial mammal	Red Fox	<i>Vulpes vulpes</i>

APPENDIX VII

Archaeological/Historical Interest

"Landguard Fort and Associated Fieldworks" <https://historicengland.org.uk/listing/the-list/list-entry/1018969>

The first artillery sconce at "Langer Point" dated from c.1547 being built at the express command of Henry VIII to meet the threat of invasion by the powerful Catholic countries of France and Spain. Earth and wood fortifications were repaired in 1587-8 at the time of the Armada, however subsequently the blockhouses were allowed to fall into a state of disrepair. The first Landguard Fort built in 1625-6 was destined to play a significant part in the wars against the Dutch who on 2nd July 1667 landed on the Felixstowe beach at Cobbolds Point with the intention of attacking the deepwater port and naval dockyard at Harwich. To do that they needed to take Landguard Fort that guarded the entrance to the Harwich Haven. The Dutch attempts to storm the fort were repulsed by Captain Darell and his men of the Lord High Admirals Regiment. This event is of great historical importance as it is the last time an enemy force invaded English soil. A second Fort was begun in 1717 and encompassed into the larger Fort built in 1744-51 which exists today. Extensive fieldworks were constructed on Landguard Common (c.1778-83) but levelled after 1803. The existing building has changed little since the "great remodelling" of 1871-75 when the order went out to strengthen and modernize coastal fortifications against the threat of invasion.

Interestingly, during the 1870's reconstruction, the lord of the manor of Walton-cum-Trimley successfully charged the War Office a series of high tolls for all building materials passing over the foreshore - and claimed residual rights over Landguard Common, which the Government held on a 999-year lease allowing military use. The dispute caused a halt to the works as Colonel George Tomline cut off the garrison's water supply. The Government invoked the provision of the Defence Act to acquire absolute ownership of all common land and foreshore. An enquiry at Shire Hall, Ipswich led to Tomline receiving under £2,000 compensation for his loss of manorial rights - he had claimed £40,000!

The Victorian Fort was referred to in Fortifications in East Anglia by P Kent as a "massive and extremely expensive reconstruction" producing a "monumental" casement battery of formidable appearance, housing large Rifled Muzzle-Loaders. However, it was indefensible against offshore naval bombardment within 10 years. The Ravelin Block stored mines (operated by electric cable) to protect the harbour (1879-1909). In 1888-91 the Left Flank Battery was constructed outside the antiquated Fort to house new breech-loading 10 and 6-inch guns - the first to fire directly out to sea. The Right Flank Battery (now Landguard Bird Observatory) was built in 1898-1901, and Darrell's Battery (1901) was built in front of the granite casements of the Old Fort to house two 4.7-inch Quick Firers to protect the minefield. Part of the Right Flank Battery was converted to a command post in 1912, and 4 searchlights were added by 1914 to illuminate the harbour entrance. The guns were not fired in anger during the 1914-18 War, but the Fort gained "a sinister reputation" as a temporary prison holding several dozen conscientious objectors before they were shipped over to France. The main entrance to the Fort interior was a wooden drawbridge up until the 1939 when it was replaced with the present-day stone causeway.

After 1918 the Fort was garrisoned by regular and Territorial Army units; there were no changes to the armaments in the inter-war years and in 1939 the armament was as it had been in 1918. Between January and July 1940 Darrell's Battery was modernised, with 6-pounders installed and towers built to house directors for the guns and lights. Six fixed-beam searchlights were installed in the concrete shelters at this time. In July-August 1940 the 40-year-old 6-inch guns were given overhead protection against air attack. The Fort became barrack accommodation and communications centre. After 1945 the Fort became the HQ of the local artillery command, until the abolition of coast artillery in 1956. The last soldiers left in 1957. The Fort was handed over to the Department of the Environment in 1965 and since 1984 it has been in the guardianship of English Heritage.

The Nature Reserve itself is covered in the remains of military installations including Anti-Aircraft gun positions, Victorian practice battery, searchlight buildings and barrack accommodation. There also exists a great deal of hidden archaeology, hence its designation as a Scheduled Ancient Monument.

GAZETTEER

OF THE LANDGUARD PENINSULAR

A list of Military buildings and structures on the Landguard Peninsular.

Compiled By:-

D.A. Wood.

I. Scrivener.

A. Lockwood.

V. 1: August 1999

V. 2: December 1999.



Ref. No:	Building:	Location:	Date:	Comments:
ROYAL AIR FORCE STATION:				
<i>Locations taken from A.M. plan first drawn 1944 with amendments through to 1962. The numbers alongside are as they are on the plan (this plan is included in the gazetteer).</i>				
RAF1	1. Picket Post.		WW1	Destroyed 1953 flood. Wood Construction.
RAF2	2.			
RAF3	3.			
RAF4	4. Armoury.			Demolished 1953. CGI.
RAF5	5. Lecture Room-also Church.		WW1	Demolished 1954. CGI.
RAF6	6. Officers Mess.		1933.	Brick Construction.
RAF7	6A. Officers Quarters (single).		1937.	Extension. Brick.
RAF8	6B. Officers Quarters.		1939.	Extension. Brick.
RAF9	7. Flagstaff.		1926-38.	50 foot. Wood.
RAF10	8. Sergeants Mess.		1925-36-39.	Extensions in 36 & 39. Built over the site of four RNAS WW1 Huts.
RAF11	9. EWS Fire Tank.		WW2	SHQ. Steel.
RAF12	10. EWS Fire Tank.		WW2	MQ area. Steel.
RAF13	11. Hut Old RN Mess.		WW1	Rough Cast Hut.
RAF14	12. Gas Decontamination Bldg			Early Location not traced.
RAF15	13. Latrine. (Brick).			
RAF16	14. Hut Old RN Mess.		WW1.	74'x30' CGI
RAF17	15. Hut RN.		WW1.	48'x21' CGI
RAF18	15A. Boiler House.		WW1.	
RAF19	16. C I Hut RN. Mess.		WW1.	75'x20' CGI
RAF20	17. C I Hut RN. Mess.		WW1.	64'x20' CGI
RAF21	18. C I Hut RN. Mess.		WW1.	59'x20' CGI
RAF22	18A. Boiler House.		WW1.	
RAF23	19. PBX & Butchers Shop.			Brick Construction.
RAF24	20. Hut Old RN Mess.		WW1.	Believed to be old bldg No 10. Rough Cast.
RAF25	21. C I Hut.			
RAF26	21A. RN Mess, also Church.		WW1.	60'x20' CGI
RAF27	21B. RN Mess.		WW1.	60'x20' CGI
RAF28	21C. RN Mess.		WW1.	60'x20' CGI
RAF29	21D. RN Mess.		WW1.	Last of block of 4 huts. 60'x20' CGI
RAF30	22. Nissen Hut. RN Mess.		WW2	60'x24' or later Nissen replaced WW1 Hut.
RAF31	23. EFI Store & Preparation Room.		1937.	Brick.
RAF32	24. AM dining Room & Institute (NAFFI).		1937.	Brick.
RAF33	25. By Products.		1937.	Swill Shed. Brick.
RAF34	26. Hut (was Cinema).			CGI & Brick Construction.
RAF35	27. EWS Fire Tank.			Near Bldg 149. Brick.
RAF36	28. EWS Fire Tank.			Near Bldg 148.

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RAF37	29. Hut, Brick. Bath House.		WW1.	
RAF38	30 (1). U/G Reservoir-Fire.		1939	Concrete.
RAF39	30 (2). Brick Bath House.		WW1.	Swapped No with 35. 36'x20'
RAF40	31. Anemometer 75' Mast.			In Married Quarter Area. Steel.
RAF41	32. S.A.A Store No 1.		On 1967 survey.	In Married Quarter Area. Brick.
RAF42	33. S.A.A Store No 2.		On 1967 survey.	In Married Quarter Area. Brick.
RAF43	34. Latrine.			South of Bldg 107. Brick.
RAF44	35 (1). Hut, Brick (Bath House).		WW1.	To be demolished by AMWD.
RAF45	35 (2). U/G Fire Tank.		1939.	30 (1).
RAF46	36. Battery Charging Room, Officers Bath House!			To be demolished by AMWD. Brick.
RAF47	37. Power House.		WW1.	Station Engineer.
RAF48	38. Cooling Tower for Power House.			Steel.
RAF49	38A. Cooling Tank-G/Level.			
RAF50	39. Latrine-Technical Officers.			Brick.
RAF51	40. Store. (CGI).			Petrol & Paint.
RAF52	41. Pumphouse-Water Booster.			Brick. Fire Main Booster.
RAF53	42. Reservoir-Fire. (Conc).			150,000 galls.
RAF54	43. Fuel Store.		1931.	Coal & Coke enlargement of WW1 store.
RAF55	44. Bulk Petrol Store.		1931-32.	
RAF56	45. Aviation Fuel Store.		1933.	WW1 then rebuilt.
RAF57	46. Hut, Brick.			
RAF58	46A. R.W.R. Office. (Brick).			Signal Workshop & Instrument store.
RAF59	47. R.W.E. Office.			W/T Store part of No 46.
RAF60	48. A.M.W.D. Mess Hut (Brick).			Clerk of Works.
RAF61	49. Store-Works Services (Wood). AMWD.		WW1.	
RAF62	50. Store-Works Services. AMWD (Brick).			Built sometime after 1919.
RAF63	51. Store & Office. (Wood).		WW1.	
RAF64	52. Workshops-Contractors.		WW1.	CGI construction.
RAF65	53. Mess Hall-Contractors.		WW1.	Wood construction.
RAF66	54. Store-Contractors.			
RAF67	55. Store-Contractors (Plumbers).		WW1.	Wood construction.
RAF68	56. Store-Contractors (Electricians).		WW1.	Wood construction.
RAF69	57. Store-Contractors (Carpenters & Drivers).		WW1.	Wood construction.
RAF70	58. Shed Aircraft No 1.		WW1-	RNAS.

			1928.	
RAF71	59. Oil and Paint Store (Brick).		1928.	Also Radar Workshop.
RAF72	60. Hut, brick?. Office .			Experimental Staff.
RAF73	61. Drg. Office & Radar Workshop (Wood).			Destroyed 1953 flood.
RAF74	62. Main Stores.			Shed to rear of Hanger No 2.
RAF75	63. Shed Aircraft No 2		WW1.	RNAS.
RAF76	64. Workshop-Carpenters.			CGI Construction.
RAF77	65. Shops-Shoemaker, Taylor & Wardens Store.			Brick Construction.
RAF78	66. Annex to Shed No 3.			
RAF79	67. Shed Aircraft No 3.		WW1-1928.	RNAS.
RAF80	68. Engine Test House Store.			CGI Construction.
RAF81	69. Engine Repair Shop Building.			CGI Construction.
RAF82	70. Latrine-Technical.			Brick Construction.
RAF83	71. Store-Oil.			By rear of Bldg 64.
RAF84	72. Engine Test House, Shed-Open Ended.			RNAS. Steel Framed Construction.
RAF85	73. Wind Indicator Sock.			Wood Pole near Gantry No 2.
RAF86	74. Compass Swing Plate.			Front of No 1 Shed.
RAF87	75. Squash Court.		1930.	Replaced Gym.
RAF88	76. Photographic Office.			Wood Construction.
RAF89	77.Compressor House Sewage.			Concrete Construction.
RAF90	78. Pier Masters Hut. Dock Co.		1934.	Brick Construction. Under Crane.
RAF91	79. Pyrotechnic Store.			Brick Construction.
RAF92	80. Barrack Hut.			Wood Construction.
RAF93	81. Barrack Hut.			Wood Construction.
RAF94	82. Barrack Hut.			Wood Construction.
RAF95	83. Barrack Hut.			Wood Construction.
RAF96	84. Gymnasium & Parachute Store (Shed C).			CGI Construction. RNAS.
RAF97	85. Boiler House-Old.			Brick Construction.
RAF98	86. Shed-Aircraft 'D'.			CGI Construction. RNAS.
RAF99	87. Boiler House.			Wood Construction.
RAF100	88. Shed E-Aircraft, Old Dock Shop & Dope Shop.			Prop. Shop. RNAS. CGI Construction.
RAF101	89. Dope Store.			CGI Construction.
RAF102	90. Barracks? Station Church.			CGI Construction.
RAF103	91. Shed-Flight F.			CGI Construction. RNAS.
RAF104	92. Shed-Flight G became MT shed later.			CGI Construction. RNAS. Demolished 1953.
RAF105	93. Winch House.			CGI Construction. South side of top slipway No 6.
RAF106	94. MT Office, Rest Room & Store.			CGI Construction. 928 Balloon Sqdn. Ops.

RAF107	95. High Speed Flight Shed.			CGI Construction. Replaced by MG Range.
RAF108	96. Bulk Fuel for Power House.			To be sold by AMWD. Steel Construction.
RAF109	97. U/G Water Tank.			Concrete. South of Old Station.
RAF110	98.			
RAF111	99.			
RAF112	100. Latrine-Technical.			Brick Construction.
RAF113	101. Store-Petrol.		1914.	CGI Construction.
RAF114	102. Store-Oil.			CGI Construction.
RAF115	103. Store-Fuel.			South of 104.
RAF116	104. Incinerator.			CGI Construction.
RAF117	105. Disinfecter.			Brick Construction.
RAF118	106. Sub Station for Landguard Fort. W.D.		1940.	CGI Construction.
RAF119	107. Central Heating Station 'A'		1937-8.	Brick Construction.
RAF120	108. Dome Teacher.		1942.	Concrete Construction.
RAF121	109. Hut, Brick. In married qtrs area. RN Guard Room.			Brick Construction No 115 on some plans.
RAF122	110.			Bldg. In Dock Area.
RAF123	111. Latrine.			For 21/A-B
RAF124	112. Latrine.			For 21/C-D
RAF125	113.			
RAF126	114. Squadron Offices.			
RAF127	115 (1). Squadron Offices.			
RAF128	115 (2). Naval Guard Room.			See 109.
RAF129	116 (2). MG Range-25 Yard.			Also No 95.
RAF130	116A. Battery Room & Store.		1936.	Off Station Location.
RAF131	116 (1). Rest Room.		1936.	Off Station Location.
RAF132	117.			
RAF133	118. Tank-Storm Water U/G.			Concrete Construction. Between Range & River Wall.
RAF134	119.			
RAF 135	120. Aviation-Store-Oil & Dope.			Brick Construction.
RAF136	121. HSF Hut on Landguard Point.			Brick Construction.
RAF137	122. Sick Quarters & Decontamination Centre.		1927-37.	FX85 & FX345 built over two early R.N.A.S. Huts,
RAF138	123. Guard Room & Fire Party.		1930s?	Brick Construction. Standard Pattern.
RAF139	124. Station HQ Offices.		1928-9.	Brick Construction.
RAF140	125. Airmen's Quarters.			P Tower Cottages, Coastguard Encroachment, WD Land.
RAF141	126. Martello Tower P. ROC Post. Had also been a W/T	TM 293.331	1812-19?	Also ROC underground post. HQ RNXS &

	Station.			Coastguard.
RAF142	127. Airmen's Tennis Court.			Encroachments on WD Land.
RAF143	128. Football Pitch.			Encroachments on WD Land between A & B land.
RAF144	129. Cricket Pitch.			Encroachments on WD Land.
RAF145	130. Tennis Courts (two of).			Officers Courts near Officers Mess.
RAF146	131. RN Motor Boats Crew Hut.			Near Officers Mess.
RAF147	132. Telephone Kiosk.		1935.	Encroachment Married Quarters's.
RAF148	133. Trolley Track Turntable.		WW1.	
RAF149	134. Trolley Track Turntable.		WW1.	
RAF150	135. Hut-Link Trainer.		1937-38.	Wood Construction.
RAF151	136. Married Quarters-Airmen.		1935.	Brick Construction.
RAF152	137. Married Quarters-Airmen.		1935.	Brick Construction.
RAF153	138. Married Quarters-Airmen.		1935.	Brick Construction.
RAF154	139. Married Quarters-Airmen.		1935.	Brick Construction.
RAF155	140. Married Quarters-Airmen.		1935.	Brick Construction.
RAF156	141. Married Quarters-WOs.		1935.	Brick Construction.
RAF157	142. Married Quarters-Airmen.		1935.	Brick Construction.
RAF158	143. Married Quarters-Airmen.		1935.	Brick Construction.
RAF159	144. Married Quarters-Airmen.		1935.	Brick Construction.
RAF160	145. Married Quarters-WOs.		1935.	Brick Construction.
RAF161	146. Shop/Store Grocery.		1936.	Brick Construction. MQ NAFFI.
RAF162	147. Barrack Block No 1.		1937.	Brick Construction.
RAF163	148. Barrack Block No 2.		1937.	Brick Construction.
RAF164	149. Barrack Block No 3.		1937.	Brick Construction.
RAF165	150. Barrack Block.		1937.	Brick Construction.
RAF166	151. Meteorological Office.		1938.	Brick Construction.
RAF167	152. Ablutions. WRNS & WAAF.		1937.	Brick Construction. Rear of SHQ, two locations also shown next to bldg 26.
RAF168	153. Decontamination Centre. Concrete Construction.	East of married quarters housing.	1937.	This building survives but is due for demolition! 1999.
RAF169	154. Hut, Brick. Old Broadcasting Building.		1937-41.	Brick Construction.
RAF170	155. Watch Office (Tower).		1934-60.	Brick Construction.

RAF171	156. Pigeon House.		WW2.	Wood Construction. MQ's area.
RAF172	157. Pigeon House.		WW2.	Wood Construction. MQ's area.
RAF173	158. Balloon Site Hut.		WW2.	Wood Construction. MQ's area. 928 Sqdn.
RAF174	159. Pigeon Staff, Hut.			Wood Construction. MQ's area.
RAF175	160. Pigeon Staff, Hut.			Wood Construction. MQ's area.
RAF176	161. Lecture Room.			Nissen. MQ's area.
RAF177	162. HSL Crew Accommodation.			Brick Construction. Dock Area.
RAF178	163. HSL Store.			Nissen. Dock Area.
RAF179	164 (1). HSL Armoury.		1944.	Nissen. Dock Area.
RAF180	164 (2). Fire Tender Shed.			
RAF181	164 (3). Store-Oil.			Built onto building No 60.
RAF182	165 (1). Rest Room, WAAF.			Wood Construction, rear of Guard Room.
RAF183	165 (2). Transformer Distribution Centre 'A'.			Nissen.
RAF184	166. Sub-Station.			NQ of SHO.
RAF185	167.			
RAF186	168.			
RAF187	169. Air Sea Rescue Pier.		WW2.	Dock Basin.
RAF188	170. Gantry No 1 later became No 2.			RNAS. Wood & Concrete Construction.
RAF189	171. Gantry No 2 later became No 4.			RNAS. Wood & Concrete Construction.
RAF190	172. Slipway No 2 later became No 3.			RNAS. Concrete Construction.
RAF191	173. Crane Pier No 5 (Dock Company).		1932.	Crane added 1934 taken over by Dock Co 1962.
RAF192	174. Slipway No 6.			Old Station by G Shed.
RAF 193	175. Hydrogen Peroxide Store.			
RAF194	176. Nissen Hut-Store.			
RAF195	177. MT Office.			Destroyed by 1953 flood.
RAF196	178. Hull Launching Tank.			Behind Sheds D, E & F.
RAF197	179. M.T. Detail & Rest Room.			ATC South Area. Old Station.
RAF198	180. Married Quarters-Airmen Total of 66 House. (1 to 66). WOs Quarters 1A-4A.			
RAF199	194. Sewage Ejectors Pump House.			Married Qtrs. Area.
RAF200	195. Sub Station-Intake.			Near Guard Room.
RAF201	196. Transformer Distribution Centre 'B'.			Married Qtrs. Area.
RAF202	197. Transformer Distribution Centre 'C'.			No 3 Hanger.

RAF203	198. Hut-Timekeepers.			M.O.S.
RAF204	199.			
RAF205	200.			
RAF206				
RIGHT BATTERY:				
RB1	Right Battery (original 6" Emp No 1)		1901.	
RB2	Right Battery (original 6" Emp No 2)		1901.	
RB3	Right Battery (original 1x10" Emp No 3)		1901.	Converted to Fire Control Building.
RB4	B.C. Post to rear of original Battery.		1901.	
RB5	War Shelter No 2 original Battery.		1901.	
RB6	War Shelter No 4 original Battery.		1901.	
RB7	Hold Fast near No 3 Emp original Battery.		.	
RB8	RF Pillar.			Fallen over bank original position unclear. Possibly part of EB24.
RB9	Intake Room between Emplacements No 3 and 2.			
RB10	Lift Motor Room.			Near Emplacement No 3 (RB3).
RB11	Holdfast near Lift Motor Room RB10.			
RB12	Intake room.			Between staircase and emplacement No 3.
RB13	Unidentified Structure/object.			Near RB12.
RB14	Artillery Store.			For Emplacement No 1.
RB15	War Shelter No 1.			For Emplacement No 1.
RB16	War Shelter No 3.			For Emplacement No 2.
RB17	Room No 4.			For Emplacement No 3?
EMERGENCY BATTERIES (Within the Right Battery Complex):				
EB1	Practice Battery 6" BL Emplacement No 1.		1903.	Naval Mounting.
EB2	Practice Battery 6" BL Emplacement No 2.		1903.	Naval Mounting.
EB19	Site of tramway.		1904	
EB3	Within Right Battery area. 1 x 6" WW2 Emergency Battery. Emplacement No 1		1942.	Concrete Construction. (On a 1942 plan this emplacement is No 2)
EB4	Unidentified Base?			
EB5	Men's Shelter for Emp No 2.		1942.	
EB6	Gun Store for Emp No 2.		1942.	
EB7	Within Right Battery area. 1 x 6" WW2 Emergency Battery.		1942.	Concrete Construction.

	Emp No 2			
EB8	Cartridge Store.		1942.	
EB9	Shell Store.		1942.	
EB10	Men's Shelter for Emp. No 1.		1942.	
EB11	Gun Store for Emp. No 1.		1942.	
EB12	Spigot Mortar Position.		1940?	Between emplacement No 2 and Cartridge Store EB8.
EB13	There was another Spigot Mortar position within the Emergency/Right Battery area-not located.		1940?	
EB14	PF Cell.		WW2.	Close to No 1 Emplacement (EB3).
EB15	Shell store.		WW2?	Rear of practice battery. Unclear if this was for the practice battery or the emergency battery.
EB16	Cartridge store.		WW2?	Rear of practice battery.
EB17	Staircase. SW of Emplacement No 1 (EB10).		WW2?	Concrete Construction. Unclear if this was for the practice battery or the emergency battery.
EB18	Remains of at least one slit trench in the Right Battery area.		WW2.	Between Spigot Mortar emplacement and EB7.
EB19	<i>See above.</i>			
DARELLS BATTERY formerly MINEFIELD BATTERY:				
<i>Minefield Battery originally constructed to protect the Minefield but later after changing its name its main roll was as an AMTB Battery.</i>				
DB1	Beauclerks Battery eleven guns.		1750s.	Within the same area.
DB2	Saluting Battery six guns.		1881?	Within the same area.
DB3	DEL Emplacement No 8.		1893.	There are listed by EH two other DELs related to Minefield Battery.
DB4	Minefield Battery 2 x 4.7" BLs.		1901.	Parts of this battery survive within the structure of the Twin Six Battery.
DB5	6 pdr position.			Temporary position whilst the Twin Six positions were constructed.
DB6	6 pdr position.			Temporary position whilst the Twin Six positions were constructed.
DB7	DEL fixed light emplacement No 1.			Existing emplacement.

DB8	DEL fixed light emplacement No 2.			Existing emplacement.
DB9	DEL fixed light emplacement No 3.			Existing emplacement.
DB10	Darells Battery 1 x Twin Six Pdrs. Emp No 1.		1940.	Built on top and around the old Battery.
DB11	Darells Battery 1 x Twin Six Pdrs. Emp No 2.		1940.	Built on top and around the old Battery.
MANOR HOUSE BATTERY:				
MH1	6" BL Emp. No 1.		1942?	
MH2	6" BL Emp. No 2.		1942?	
MH3	Battery Observation Post.		1942?	
MH4	Engine Room.		1942?	
MH5	3" AA Gun.		1942?	
MH6	Radar Section.		1942?	
	<i>There were other structures associated with this battery, there was a concrete building till quite recently in the caravan site.</i>	<i>There is some confusion as to the exact location of the Battery, the drawing enclosed shows two gun houses, which were believed to be the 6" positions, but other sources believe they were to the North between Landguard Lodge and Manor House.</i>		
LEFT BATTERY formerly WING BATTERY:				
LB1	10" BL on Disappearing Carriage, to rear of Wing Battery.		18??.	Built before Wing Battery.
LB6	Artillery Store to rear of Emplacements Nos 1 & 2.		1886.	
LB9	No 1 Look Out Position.		1888.	Between No 1 and No 2 Emplacement.
LB10	No 2 Look Out Position.			Left of No 3 gun.
LB2	10" BL No 1 Emplacement.		1888.	Later became AAOR.
LB3	6" BL No 2 Emplacement.		1888.	
LB5	B.C. Post near No 3 Emp.		1888.	
LB8	Troop Shelter, between guns Nos. 2 & 3.		1891.	
LB7	Tresidders Cartridge Store.		1893.	
LB4	6" BL No 3 Emplacement.		1899.	
LB11	Maxim MG Position.		1904.	Left, rear of No 2 Look Out. Exact position not located.
LB12	Unidentified structure.			
LB13	Unidentified structure.			
LB14	Unidentified structure.			
LB15	BC Post.			Near 10" Emplacement.
LB16	Conversion of No 1 Emplacement into HAA Operations Room.		WW2.	

SUBMARINE MINING BUILDINGS:				
SUB1	Within the area of the Submarine Mining Section was a considerable area of garden.		c1867.	
SUB2	Storekeepers Quarters.		1800s.	Demolished 1978. Base remains. Opposite Main Block.
SUB3	Ravelin Block (Main Building)	TM 2835 3196	1881/2.	
SUB4	No 1 Priming Pit.			Submarine Mining Compound.
SUB5	No 2 Priming Pit.			Submarine Mining Compound.
SUB6	No 5 Priming Pit.			Submarine Mining Compound. Was Numbered No 3 till 1905.
SUB7	Dry Gun Cotton Store			Submarine Mining Compound.
SUB8	Wet Gun Cotton Store..			Submarine Mining Compound.
SUB9	Tonite Store.			Property of Trinity Board Encroachment No 352. Sub. Mining Compound.
SUB10	DEL Sea Saw Mirror Type.		1890.	Sub. Mining Compound
SUB11	Loaded Mine Store.			Sub. Mining Compound
SUB12	Case Loaded Store Shed.			Sub. Mining Compound
SUB13	App. Store.			Sub. Mining Compound
SUB14	Submarine Mining O.P.			Sub. Mining Compound
SUB15	Narrow Gauge Rail System.			Sub. Mining Compound
SUB16	R.E. Latrine.			Sub. Mining Compound
SUB17	Cable Pond.			Side of Main Building. To Admiralty in 1905.
SUB18	Cable Pond.			Side of Main Building. To Admiralty in 1905.
SUB19	No 7 EL Emplacement (Temporary).		1904.	
SUB20	Iron Pier.		1890s/1905	Now gone.
SUB21	Base for Crane.			Steel. By side of SUB 17.
SUB22	Wooden Pier.			Piles only remain.
SUB23	Curved passageway to pier.			Railway lines (in part).
SUB24	SM Blockhouse.		1940s.	Concrete construction.
SUB25	Undefined building.		?	Possible engine room, followed by case store.
SUB26	Carpenters building.			
SUB27	Electricians building.			
SUB28	Calor Gas tank compound.			
SUB29	Reservoir.			
ANTI AIRCRAFT BATTERY:				
<i>Was adjacent to Darells Road.</i>				

AA1	AA hexagonal gun pit. 3.7"		1939.	Concrete Construction. Now under Dock.
AA2	AA hexagonal gun pit. 3.7"		1939.	Concrete Construction. Now under Dock.
AA3	AA hexagonal gun pit. 3.7"		1939.	Concrete Construction. Now under Dock.
AA4	AA hexagonal gun pit. 3.7"		1939.	Concrete Construction. Now under Dock.
AA5	AA Square gun pit.		1940s	Now under Dock.
AA6	AA Square gun pit.		1940s	Now under Dock.
AA7	Store Building.		1940s	Now under Dock.
AA8	R.E. Store Building.		1940s	Now under Dock.
AA9	Misc. Building.		1940s	Now under Dock.
AA10	Store. Nissen Hut.		1940s	Now under Dock.
AA11	Misc. Building.		1940s	Now under Dock.
AA12	Misc. Building.		1940s	Now under Dock.
AA13	Cook House.		1940s	Now under Dock.
AA14	Seven small buildings.		1940s	Now under Dock.
AA15	Pump House.		1940s	Now under Dock.
AA16	Battery Control Room.		1939.	Now under Dock.
AA17	Misc. Building near BCR.		1940s	Now under Dock.
AA18	Small Misc. Building near BCR.		1940s	Now under Dock.
AA19	Building between Hex gun pits.		1940s	Now under Dock.
AA20	Building between Hex gun pits.		1940s	Now under Dock.
AA21	Building between Hex gun pits.		1940s	Now under Dock.
AA22	Building Beside Square Gun Pit.		1940s	Now under Dock.
AA23	Misc. Building.		1940s	Now under Dock.
AA24	Misc. Building.		1940s	Now under Dock.
AA25	Misc. Building.		1940s	Now under Dock.
AA26	Misc. Building.		1940s	Now under Dock.
AA27	Misc. Building.		1940s	Now under Dock.
AA28	Bath House.		1940s	Now under Dock.
AA29	1. Company office. Brick Construction.			74' x 20'10"
AA30	2. MI room. Brick.			50' x 20'10"
AA31	3.Sgt's living block. Brick.			86' x 20'10"
AA32	4. Sgt's Mess. Brick.			50' x 30'
AA33	5.Officers mess. Brick.			86' x 20'
AA34	6. ATS officers. Hipperson type hut (H).			22' x 16'
AA35	7. ATS rest room (H).			22' x 16'
AA36	8. Ration store (H).			22' x 16'
AA37	9. Sanitary & Ablutions. Brick.			38' x 20'
AA38	10. ATS San & Ablt Brick.			62' x 20'
AA39	11. ATS NCO's. Nissen Hut.			36' x 16'
AA40	12. ATS living. Brick.			62' x 20'

AA41	13. ATS living. Brick.			62' x 20'
AA42	14. ATS living. Brick.			62' x 20'
AA43	15. ATS living. Brick.			62' x 20'
AA44	16. Male OR's living. Brick.			62' x 20'
AA45	17. Male OR's living. Brick.			62' x 20'
AA46	18. Male OR's living. Brick.			62' x 20'
AA47	19. ATS San & Ablt. Nissen.			36' x 16'
AA48	20. ATS living. Brick.			62' x 20'
AA49	21. Lecture Room. Nissen.			36' x 16'
AA50	22. Store. Nissen.			36' x 16'
AA51	23. Store. Nissen.			36' x 16'
AA52	Nissen. Demolished			36 x 16 base
AA53	Nissen. Demolished.			36 x 16 base
AA54	24. Store. Nissen.			36' x 16'
AA55	Nissen.			36 x 16 base. Demolished.
AA56	25. Accumulator Room Concrete Construction.			22' x 31'
AA57	26.ATS Radar Room. Hipperson.			22' x 16' Centre rear of gun site.
AA58	27. MT transport office. Nissen.			36' x16' Rear of gun site.
AA59	28. Engine room. Nissen.			36' x 16' South of gun site.
AA60	29. Regimental Institute. Brick Construction.			95' x 20'10" Unit NAAFI.
AA61	30. ATS quiet room. Hipperson.			22' x 16'
AA62	31a/b. Dining. Brick Construction.			50' x 38' (x2)
AA63	32. Cookhouse. Brick Construction.			74' x 20'10" Joined to 31 above.

See also 3 inch AA position (MH5) Manor House Battery.

LANDGUARD FORT:

LF1	Landguard Bulwark (Blockhouse)	Langer Rood	1547	See Martello Tower N.
LF2	Landguard Bulwark (Blockhouse)	Langer Pointe.	1547	
	Landguard Fort.		1626	
LF4	Landguard Fort.		1717	
LF5	Landguard Fort.		1740/1870 s	<i>As exists now.</i>

LANDGUARD BARRACKS & OTHER AREAS:

This includes all miscellaneous buildings, taken from various plans. Where known the W.D. building number has been added.

WD1	Hut			Near Boathouse.
WD2	Boathouse		1867.	Air Raid Shelter-North Side.
WD3	Married Quarters Block A			Brick Construction, two

				storey.
WD4	Married Quarters Block B		1872.	Single Storey.
WD5	Married Quarters Block C			Single Storey.
WD6	Wash house & C			
WD7	Hospital block			CGI Construction. Two Storey with Single Storey Wings.
WD8	EWS Rainwater Collection Tank.			Concrete Construction.
WD9	Single Soldiers Block.		From 1907 photograph	CGI Construction, with Basement.
WD10	Quartermasters Quarters.		1872.	Hut.
WD11	Hutment (above). Kitchen, cookhouse, School Accommodation & Company Office.		1872.	Half size of original. Changed at a later date.
WD12	Water Tower (two).		1880.	
WD13	Septic Tank.			
WD14	Barrack Ablution.			Behind Hutment.
WD15	Barrack Cookhouse.			Behind Hutment.
WD16	Adult School.			South end of Hutment.
WD17	Canteen.		1880.	
WD18	RASC.			Nissen. Ex-AGB.
WD19	Stable.			
WD20	Tent Camp Latrine.			
WD21	Not allocated.			
WD22	Camp Ground Ablution.			
WD23	Camping Ground Cookhouse.			
WD24	Base.			
WD25	Incinerator.			
WD26				
WD27	Passive Air Defence.			Concrete. Practise AA Camp Office.
WD28	NAAFI (Main).			Double Hut.
WD29	NAAFI Office.			Brick Construction.
WD30	NAAFI Store.			CGI Construction.
WD31	Boiler House & Shed.			Brick Construction.
WD32				Brick Construction.
WD33	72. S.M. QM's Bungalow			
WD34				Brick Construction.
WD35	74. Sergeants Mess.			Joined with Bldg. 117.
WD36				
WD37	MT Shed.			Three Truss Roof.
WD38	Oil Store.			At Rear of above.
WD39	POL Point.			Hut & Pumps.
WD40	AA School Bldg A			Workshop & Stores.
WD41	Bldg B. Transformer & Generator No 4.			
WD42	Bldg C. Recreation Room &			

	Ors Living.			
WD43	Bldg D. Lecture Rooms.			
WD44	Bldg E. Lecture Rooms.			
WD45	Bldg F. QMS, OC, Ord. Sgt & BSM.			
WD46	Bldg G. Instructors.			
WD47	OR living A. Nissen.			Opposite Bldg. F.
WD48	OR living B. Nissen.			By road, opposite MT Shed.
WD49	Hut. Latrine/Ablution.			Behind B.
WD50				
WD51	OR living H. Nissen.			North East of AA School Bldg. A.
WD52				
WD53	Latrine.			Left rear (north end) of Left Battery.
WD54	OR Living.			Inside old rifle fence.
WD55	OR Living			Inside old rifle fence.
WD56				
WD57	81. Rest Room.			
WD58	82. Accommodation.			Brick Construction. Ex Ammunition Store for Left Battery.
WD59	83. Latrine.			
WD60	84. Rest Room.			
WD61	Not allocated.			
WD62	Not allocated.			
WD63	Not allocated.			
WD64	Not allocated.			
WD65	EL Emplacement.			(Disused or First No 7).
WD66	Observation Station.			
WD67	Admiralty Power House.			Near PAD Block.
WD68	RN Fuel Oil Tank/s.			Shown as two bases on some plans.
WD69	Static Water Tank.			Round.
WD70	RN Fuel Oil Tank.			Near Boat House.
WD71	Not allocated.			
WD72	Not allocated.			
WD73	Not allocated.			Nissen.
WD74	Not allocated.			
WD75	REME Workshop.			Admin. Mechanical Engineer Sub. Mining.
WD76	Store.			
WD77	Store .			
WD78	ASM Office.			AMS (RN).
WD79	EL Generator No. 1.			
WD80	Store. MOSY.			
WD81	Not allocated.			
WD82	Not allocated.			
WD83	Not allocated.			

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WD84	EL Engine Room U/G.		1899.	New RN Bldg. Behind?
WD85	Not allocated			
WD86	Not allocated			
WD87	Not allocated			
WD87a	Ball Alley (site of in moat).		1882.	Later presumed location for Submarine Mining Junction Box.
WD88				
WD89	EL Emplacement No. 3.		1904.	
WD90	EL Emplacement No. 4.		1904.	
WD91	EL Emplacement No. 5.		1904.	Mirror Type. Near Boathouse.
WD92	EL Emplacement No. 6.		1904.	Mirror Type. Near Boathouse.
WD93	Not allocated.			
WD94	Not allocated .			
WD95	EL Emplacement No. 9.		1904.	Landguard Point.
WD96	EL Emplacement No. 10.		1904.	Landguard Point.
WD97	Tonite Store.		Not located.	Landguard Point.
WD98	Not allocated.			
WD99	Calor Gas Tank.			Side of Bldg. No 112.
WD100	12-pdr Gun Pad.		1939.	Top of River Bank, front of 108.
WD100a	12-pdr Gun Pad.		1939.	Position not visable.
WD101	108. Troop Shelter (Wood).			Behind 12 Pdr. Pad, a second pad believed between 109A/B.
WD102	108A. Signals Test Box.			Hut to North of 108.
WD103	109. Chamber.			Brick Construction. In Bank behind 109A
WD104	Nothing allocated to this number.			
WD105	Nothing allocated to this number.			
WD106	Nothing allocated to this number.			
WD107	110. Hut		WW2.	
WD108	111. Paint & cement store		WW2.	Brick Construction.
WD109	Not allocated.			
WD110	112. Ravelin Block. (S.M. Main building).		1878.	Brick Construction. See Sub 1.
WD111	113. EL Engine Room			Nissen.
WD112	114. Generator house		WW2.	Concrete Construction. Replaced earlier construction (1904).
WD113	115. Reserve Fuel Oil Store.			
WD114	116. Machine Shop.			Wood Construction. BV Hut Fitters & Turners.
WD115	117. Sergeant's Mess.			Including No 74.

WD116	118. Transformer.			
WD117	119. Art Store/Old Smithy.			
WD118	120. Lifting Tackle Store/Side Arms..			Near Fort Entrance. Base left only.
WD119	121. Shell Store			For Practice Battery?
WD120	122. Shell Store			For Practice Battery? Possibly Cartridge?
WD121	123. Living Accommodation.			Nissen.
WD122	124. Living Accommodation.			Nissen.
WD123	125. Living Accommodation.			Hipperson Hut.
WD124	126. Latrine Officers			
WD125	127. Living Accommodation Officers.			
WD126	128. Living Accommodation.			Hipperson Hut.
WD127	129. No. 1 Empl. Left Bty			
WD128	Not allocated.			
WD129	131. Hut (Nissen).			Angle of No 1 Casemate & Harwich Bastion.
WD130	132. Hut (Nissen).			Under No 2 Casemate.
WD131	Not allocated.			
WD132	134. Hut (Nissen).			In moat below No 5 Casemate.
WD133	135. Drill shed			CGI Construction. In moat below No 7 Casemate.
WD134	136. Latrine.			Corner under King's Bastion in moat.
WD135	137. Machine Gun Shed.		1901.	Brick Construction.
WD136	138. Gun store.			Between Darell Battery & Romney.
WD137	139. AA Shed			Romney.
WD138	140. Miniature Range.			Maycrete.
WD139	141. Latrine.			Concrete Construction.
WD139a	Latrine.		1901.	In Moat along side Kings Bastion.
WD140	142. ATMB Range.			Brick?
WD141	143. Trg Hut.			Nissen.
WD142	144. Living Accommodation.			Nissen.
WD143	145. Living Accommodation.			Nissen.
WD144	146. Officers Accommodation.			Nissen. Boiler House Attached.
WD145	146A. Living Accommodation.			Nissen.
WD146	147. Right Battery.	See Dedicated Section.		
WD147	148. 928 Squadron Hut Barrage Balloon Crew.			Foot of bank below Battery Command Post. Nissen.
WD148				
WD149				
WD150	151. CASL No. 9			Concrete Construction (see 254).

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WD151	152. CASL No. 9A			Concrete Construction (see 253).
WD152				
WD153	OR Living Accommodation.			Mosy. 21 x 16.
WD154	OR Living Accommodation.			Mosy. 21 x 16.
WD155	OR Living Accommodation.			Hipperson, with extension. 21 x 16.
WD156	NAAFI.			Hut. 40 x 16.
WD157	OR Living Accommodation.			Hut. 40 x 16.
WD158	OR Living Accommodation.			Hut. 55 x 16.
WD159	Store.			Mosy.
WD160	Store.			Hut.
WD161	Mess.			Hut. 65 x 16.
WD162	Cookhouse.			
WD163	Latrine.			
WD164	OR Living.			Hut. 65 x 16.
WD165	Officers Mess.			Hut. 40 x 12.
WD166	Cookhouse.			Hut. 36 x 6.
WD167	OR Living Accommodation.			Hut. 60 x 16.
WD168	Decontamination Block.			26 x 16.
WD169	Officers Sanitation.			
WD170	OR Sanitation.			40 x 12.
WD171	Ablutions.			
WD172				
WD173	A Range (North).			Bank FP. Built as 800 yds reduced to 300yds when closed.
WD174	Shelter A Range 300 yds.			Telephone Point?
WD175	A Butts Gallery.			Gallery.
WD176	A Butts Target Shed.			
WD177	A Butts Hut.			
WD178	Hut.			Ablutions/Toilets? Railway gap.
WD179	C Range (centre).			Mantlets. Built as 600 yds.
WD180	Ablution/Latrine.			Near PF Mound.
WD181	PF Mound.		1892.	
WD182	Gatling Gun Position.			By PF Mound.
WD183	B Range (South).			Built as 1000 yds reduced by the building of RNAS & RAF Station.
WD184	Shelter B Range 400 yds.			Telephone Point?
WD185	B Butts.			Gallery. Rebuilt as 30m (post 1967).
WD186	B Butts Hut.			Telephone Point?
WD187	Shed.			Replaced (post 1967).
WD188	Hut.			Removed by 1973.
WD189	30m Firing Point.			Shelter & Hut combined.
WD190				
WD191	Isolation Hospital.		Existing 1904.	Moved later (239), between present Custom

				House & MQs.
WD192	Hutment's.		WW1.	Wood Construction. Group of 13 Huts, same position as above, approx. line NE.
WD193	CA Radar.		End of WW2.	Behind MT Shed.
WD194	Ammunition Laboratory.			By roadway, extreme end of Left Battery.
WD195				
WD196				
WD197				
WD198				
WD199	236. Pillbox?			Front of No 3 Aircraft Shed.
WD200				
WD201	UDC Isolation Hospital.			Opposite RAF main gate.
WD202				
WD203	246. ?			Kings Bastion.
WD204				
WD205	249. CASL No. 8.			By Tide Gauge Jetty.
WD206	250. Bungalow? Site of two bungalows?			Brick Construction. Harwich Harbour Conservancy Board.
WD207	251. Pillbox.			
WD208				
WD209	253. CASL No. 9A.			Concrete Construction. In River-ex 152.
WD210	254. CASL No. 9.			Concrete Construction. In ex 151.
WD211	Pillbox.			Approx. location.
WD212	D.E.L.			Emplacement No 11.
WD213	257.			
WD214	258. MG Pillbox.			
WD215	259. Sewage Outfall Tank.			Behind end of present sea defence.
WD216	Range Store.			CGI Construction. Old Musketry Office.
WD217	Pillbox.			Concrete Construction. Half way along bank to the North. FW 3/23.
WD218	South House.			Brick Construction. RE Stores/target store.
WD219	Pillbox			Concrete. South House Fence/Sea Wall junction. FW 3/23.
WD220	Pillbox or S/L emplacement.			Concrete FW 3/23. 30m North of last Pbox.
WD221	Hut.			Between Pillbox & Stop Butts.

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WD222	Hut.			As above.
WD223	S/L emplacement.			
WD224	260. Pillbox?			Concrete. WD Boundary, for protection of the Beach Battery (Manor House).
WD225	261. Landguard Lodge			Brick Construction. Old Officers Mess, Stables & Stores.
WD226	262. CASL?			Concrete Construction, South Light Beach Battery.
WD227	263.			
WD228	264.			
WD229	265.			
WD229a	Gun House.			Manor house Battery?
WD231b	Gun House.			Manor house Battery?
WD 230	Living Accommodation.	Just North of Left Battery.		Porta Cabin. Twenty of with 20' spacing, opposite old NAFFI.
WD231	D.E.L.			No 12 Emplacement.
WD232	BOP			
WD233	Engine room			
WD234	CASL			WD
WD235	Pillbox			North Beach Battery Protection.
WD236	3 inch AA (two guns).			Behind Landguard Lodge on present car park.
WD237	Radar Position.			GL Set, South of AA Guns.
WD238	Princes Lines.		1782.	
WD239	Artillery Stores.		1782.	Princes Lines.
WD240	Store.		1782.	Princes Lines.
WD241	Guard House.		1782.	Princes Lines.
WD242	Magazine.		1782.	Princes Lines.
WD243	Officers Quarters.		1782.	Princes Lines.
WD244	Kings Lines.		1782.	
WD245	Magazine.		1782.	Kings Lines.
WD246	Guard House.		1782.	Kings Lines.
WD247	Magazines.		1782.	Kings Lines.
WD248	Rainham Redoubt.		1782.	Redoubt.
WD249	Magazine.		1782.	South Battery.
WD250	Magazine.		1782.	North Battery.
WD251	Governors House, later became Canteen.		1782.	
WD252	Tank traps.		WW2	Coastal stretch.
WD253	Pillbox.			Near site of South Battery Approx. location.
WD254	Pillbox (now gone).			Near Rainham Redoubt.
WD255	Pillbox (now gone).			Near Rainham Redoubt.
WD256	Pillbox.		WW1.	
WD257	Shingle Washing Plant.			

WD258	North Battery.		1782.	
WD259	South Battery.		1782.	
WD260	Martello Tower N.	TM 277341	Demolished 1922.	Local name the 'Dooly Fort' Now under Dock. This site was thought to be where the Blockhouse of 1545 was sited (LF1).
WD261	Martello Tower N Battery.	TM 277341	Demolished 1982.	Now under the Dock.
WD262	Martello Tower O.	TM288319 Estimated.	Built 1812 Abandoned in 1822?	Now approx. 200 yards off the shore. Lost to sea.
WD263	Practice Battery.		Unknown.	4 x 64 pdrs. There were two buildings associated with this battery, no further information available at this moment.
WD264	Approx. location of balloon base.			

APPENDIX 1 R.A.F. STATION & NAVAL SECTION:

Occupation

Royal Naval Air Station – Station commissioned 5th August 1913

Royal Naval Air Service formed 1st July 1914

RAF formed 1st April 1918

The Marine Craft Experimental Unit RAF formed 1923 at RAF Felixstowe from ex-RNAS launches

Marine Aircraft Experimental Establishment formed 1st April 1924

High Speed Flight formed 1st October 1926

M.A.E.E. evacuated 3rd September 1939

1st MTB Flotilla arrive Felixstowe Dock January 1940

HMS Beehive (MTB Base) commissioned July 1940 encroached on RAF Felixstowe

No. 26 Marine Craft Unit RAF Felixstowe

M.A.E.E. return May 1945

No. 1103 Marine Craft Unit arrives

Marine Training School formed July 1945

Link Trainer Instrument Blind Flying School formed July 1945

Marine Training School moved to Pembroke Dock April 1948

RAF Station Felixstowe title first used in operations logbook, replacing M.A.E.E.

First W.A.A.F. arrive November 1949
Tidal surge and flood 31st January 1953
Station transferred to No. 26 Group RAF April 1954
B Flight, No. 22 Air Sea Rescue Squadron arrives May 1956
Station transferred to No. 22 Group RAF June 1958
No. 1103 Marine Craft Unit RAF moved to Bridlington 20th May 1959
No. 22 Squadron 'B' Flight moved to RAF Tangmere
No. 33 Wing RAF Regiment leaves 21st June 1962
1st Battalion, The East Anglian Regiment takes over RAF Station and Landguard Camp as Normandy Barracks until December 1969.

Outline

The Old Station – the Royal Naval Air Service station composed of Flight sheds A to G at the north of the Landguard Fort Barracks formed around the entrance to the Creek due to its sheltered nature.

The New Station – The area of Aircraft Sheds No.1, 2 & 3 and the Naval Barracks behind them, that removed the first part of A, B and C rifle ranges, south of Ireton's ditch which followed the line of the south side of Carr Road. The War Office land boundary from 1874 across the top of the peninsular.

APPENDIX 2. LANDGUARD FORT & W.D. PROPERTY:

The Bulwark – the area of the Tudor Sconce of 1544, the First Forts cemetery, Rainham Redoubt of 1782 and Martello Tower O of 1809. This area of buildings is totally lost due to erosion that took place between 1825 and 1834, commented on by Captain John Washington RN (Hydrographer) in 1842. It necessitated a new burial ground, consecrated on 2nd November 1828, the greater part of which was lost to further erosion by 1867.

The First Fort (1628) – Also the one that kept the Dutch out in 1667. The area between the present forts south-east curtain and the shingle beach/common boundary in part built over by the north part of right battery. The line of King's Bastion and the southern ditch can still be traced; other remains may lie buried.

The present Fort, in its current state the third version on the same site, a complex mix. The majority of buildings on the common relate to it, from 1717 to date. The greater numbers being Victorian, First and Second World War products. Left/Wing and Right Batteries, which made the fort itself redundant, must be considered as part of its out buildings.

The WD area spits into several easy parts -
Camping ground HAA site.

Barracks and Married Quarters area, north boundary remains of Prince's Lines
Submarine mining depot – main submarine mining block, quartermasters, and Main depot area within the fence.

Fort proper and ditch – three major changes.

Anti-Aircraft School, MT shed and POL.

Left Battery, inside the rifle fence and towards the practice positions

Darell's Battery – culmination of 1731 battery, later Beauclerk's battery, later Saluting battery, minefield battery 4.7 inch, renamed, finally re-armed 1940 twin Six pounder battery.

Rear of Right Battery, between the Fort and Darell's
Harwich Harbour Conservancy land.

WD area of the point forward of Left and Right batteries to the South
East Coast and banks from position finding mound north.

The Rifle ranges, in order B (south) C (centre) A (north).

Artillery Test Ranges (along coastal edge and out to sea).

Historical order

Landguard Bulwark – lost to the sea 1830's

Described as Blockhouses – Langer Rood and Langer Pointe in 1547 with a porter employed at each, which seems to indicate that some form of building existed on each, probably a wooden hut for the indicated permanent staff of nine.

Langer Rood, "Old Harry" of 1809, site of Martello tower N, later 'Doolie's Fort' correctly Walton Ferry Battery.

Old Fort of 1628 - footings may remain

The Fort contained:

A brick and timber house, 51 ft x 21 ft of 12 rooms, intended Magazine.

A brick house, 115 ft x 24 ft, 10 ft high, 40 rooms and 20 Chimnies, for soldiers.

Powder house, 12 ft high, 18 ft x 14 ft vaulted.

Two Centry (sentry) houses built and three more to be added.

A second barrack for soldiers being built.

A house for the Captain of the Fort.

A Chappell (Chapel)

A Court of Guard (guardroom)

A second powder house

A posterne (sally port)

A Percullis (portcullis)

Area dug over for entrenchment's, both wars and after. By 1667 the buildings had been altered, and the best list is the 1715 plan for its replacement by the closed Lunette which was built in 1717.

The fort of 1717 to date

1717 Close lunette – Governor's house and canteen outside it well to north

1745 Pentagon Fort – Governor's house moved inside the fort.

1751 Barracks reported complete.
Old house converted into Suttling house about 1775.

A landscape of 1753 shows the Governor's house and two smaller buildings on the common. Plans of 1785 show three ready use powder houses, Rainham Redoubt, North and South Batteries. It is unlikely that the one in Rainham Redoubt was built.

A set of three buildings in the area of King's Lines – Guardhouse and two magazines.

A set of five buildings in Prince's Lines – Officers, Magazine, Guardhouse, Storehouse and Artillery store. The old governor's house now the canteen.

1803 All lines and buildings out side the fort reported raised, the remains of the lines plot as banks on the 1881 survey, and still mark the boundary between the Army and RNAS site, later RAF Felixstowe on the 1967 OS survey.

1809 Martello O sited on the end of the old Rainham redoubt foundations. It was lost to erosion in the 1830's.

1867 Two coast guard cottages with sheds on the extreme point of Landguard, referred to as Lightkeepers, q.v. A lighthouse or more likely a pole light.
A pagoda and fish pond with fountain, in the garden formed from remains of North battery, urinal behind
Boathouse
Cottage
Canteen (wood – 1866) and store house
Boatman's house and wash house, Stable for two horses, paddock, with a soldier's garden attached
Ball court in fort ditch (bldg 131site)
Shell house in fort ditch
A number of latrines about the ranges on the common.
Lifeboat house in front of P tower still marked as crown land.

1871 Reconstruction of the fort started authority Harwich 15/8 of 9th September 1870.
Plan dated 7th March 1870, contract completed 29th October 87 under Colchester 5/908.

- 1872 Landguard Hut Barracks built authority Col 5/1188 of 23.9.72.
 1875 fort reconstruction completed.
 1878 Submarine mining building completed.
 1880 Canteen and water tower built authority 2/1134.
 1882 Sub Mining outbuildings added.
 1886 Sub Mining Test Rm. & Obs. Stn. W.O. Gen. 5/1850 of 21.10.86
 1888 Wing Bty, No. 1 and 2 guns authority Col 5/3259 of 12.11.88
- 1892 Position Finding Cells on Landguard mound, Landguard common
 Q tower PF cells authority Col 5/44149 of 20.2.92
 R tower PF cells authority Col 5/4190 of 30.4.92 (new financial year)
- 1895 Depression PF Cell, Fort. Authority Col 5/4591 3.5.95.
 1896 Artillery Stores No. 1 and 2, authority Col 5/4756 of 19.8.96.
 1898 Wing Bty, No. 3 gun, authority Col 5/17 of 29.1.98.
 Construction of Right Battery started.
 EL position (same 109C), authority Col 5/129 of 8.11.98.
- 1899 EL engine room and oil store for two oil engines - Col 5/250 completed 21.6.1901
 1901 Machine Gun Shed authority Col 5/460 of 13.4.01.
 1902 Fire Command Post, Fort authority Col 5/582 of 12.7.02.
 Construction of Minefield Battery authority Col 5/351 of 1.4.00 (1900)
- 1904 EL Fixed beam No. 3, 4 & 5 and No. 1 SM Obs. Station 2.2.04.
 Engine room & Res. Oil store No. 7, 8, 9 & 10 EL- Col 5/669 10.5.04.
 1905 Cable Ponds to Admiralty – Authority Eastern 5/48
 1909 PF cells at Q and R towers dismantled
 1910 Re-appropriation, Landguard EL Estb. W.O. (K 1318) 8.11.10 – for 21 Coy. RE and
 District Officers RE offices authority Eastern 5/469.
 1911 Landguard Submarine Mining Establishment. Main building – Eastern 16/679 of
 22.5.11.
- WW2 The whole of the coastal strip had defence's erected. Minefields were laid, scaffolding was erected on the beach and in some cases off the beach, tank traps (blocks) and wire were also constructed and laid.

APPENDIX 3. H1 A.A. SITE:

H1 HAA site is standard 3.7 inch four gun site between B and C rifle ranges about the 400 yard point of each range. The Area was extended and built on as a camping ground for practise camps. Two cookhouse 500 men built next to Nissen huts 22 & 23 and the empty base & 24. Ablution blocks and urinals were built in the form of a hollow square to surround the tented campsite.

Four ablution blocks and eight urinals around the square, four 7 bay latrines built in H1 gun site area.

A.A. Training School added.

APPENDIX 4. BUILDINGS OFF THE PENNINSULAR, NOT COVERED:

Officers Quarters

Garfield House, Garfield Road, [FX260]. Gp III later OMQ type II
Tregenna, Queens Road. Gp IV later OMQ type II
The Mount, Garfield Road. [FX272] Gp IV later disposed of
Karachi, Garfield Road [FX266] Gp V later OMQ type III
Cotswold, Garrison Lane. Gp V later OMQ type III

Additional quarters

51,53, 55 Rosemary Avenue.
40,42,44,46 Colneis Road.
26, 28, 30 Lansdown Road.

Requisitions

Herman De Sterne Convalescent Home, became WAAF quarters.

APPENDIX 5. WIRELESS STATION:

The Wireless Telegraphy Station – The area today is the western end of the Astral Close Housing Estate now in private ownership. It was to the east of the road from Carr Road (A45) to Landguard Fort barracks, that formed the boundary between the War Office and Admiralty internal sites.

East of 600 yard firing point of ‘A’ Range, classified as meteorological station later 1935 when new Married Quarter’s built.

W/T hut Wireless site
W/T hut Wireless site

Line of four Huts	Living accommodation other side of road, starting opposite SE corner of Bldg 66, approx. 197, north to opposite Bathhouse Bldg 35. Huts end to end.
Two huts	Living accommodation between Bath house Bldg 35 and Bldg 107. Huts in line with 107 east west.
Hut	Living accommodation north of Bldg 29 running back to U/G water tank.
Hut	living accommodation in line with Bldgs 21A-D & 22, site now occupied by Bldg 152, Q? 152 location.
Two huts	wood/CGI, site of Bldg 155 (pre- 1934)

- Hutment's Site occupied by area Bldgs 148 to 150. Standard living accommodation in two rows laid out in same direction as later buildings.
- Hutment's Married Quarters site south of Gym towards Bldg 147 prior to 1935 MQ's being built. W.O.'s quarters Bldgs 114, 115 may be part.

APPENDIX 5. RAF/RN STATION NOTES:

- Shed aircraft A. RN. Old station built 1913.
- Shed aircraft B. RN. Old station built 1913.
- Bldg 8. Built over site of four RNAS WW 1 huts
- Bldg 20. (10) Had another hut to its north, No. 9(?) right by the road gate and railway entrance.
- Bldg 46 Hut on site of north arm of Bldg 46 1919, Hut (Q? boiler house) to rear toward No. 1 shed. Small store north of it, L shaped hut west (Q? lean-to) toward shed No. 1
- Bldg 76 believed to replace – Gym, North of 600-yard firing point 'A' Range to west and rear of it.
- Slipway No. 1 Front of No. 1 Shed, each shed had its own Slipway and gantry directly in front when first built. Demolished post WW II.
- Slipway No. 3 River side front of No. 3 shed, removed for construction of Crane Pier 1932.
- Gantry No. 3 Riverside, south of No. 3 Slipway, removed for construction of Crane Pier 1932.
- Pillbox Riverside wall north of entrance to Gantry No. 4 (171)

APPENDIX VIII
 Compartment Maps

