



NORTHAM BURROWS COUNTRY PARK

MANAGEMENT PLAN

Version 1

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1. Background

This Management Plan seeks to address the main issues concerning the management of Northam Burrows Country Park over the next five years from the publication of this plan.

2. Aim

The aim of the management plan is ***to conserve, for the future, the integrity of Northam Burrows and make provision for its sustainable use as grazing common and as a wildlife recreation and education resource.***

All the management plan objectives contained within this document reflect the practices required to fulfil this overriding aim.

As Northam Burrows is a naturally occurring area of maritime and estuary deposition, affected over several centuries by grazing activities, by which its future will be strongly influenced. The principle has been adopted that where the needs of nature conservation conflict with other interests, then the former should take priority.

3. Description

3.1 Location

Northam Burrows is located north of the town of Northam (Grid Reference SS445305). The town is best approached from the A39 Barnstaple to Bude road (see *Map 1*).

3.2 Summary Description

Northam Burrows is an expanse of fixed and semi-mobile dunes, protected from the Atlantic, along its western boundary by the prominent local feature of the Pebble Ridge and backed by an area of modified saltmarsh grassland (see *Map 2*). The estuary of the rivers Taw and Torridge flows along the eastern and northern boundaries of Northam Burrows, this being an area of international importance for bird life. Beyond the southern boundary, the land rises through a mixture of grassland and built up areas towards Northam and the popular holiday resort of Westward Ho!

Northam Burrows, which extends to 258 hectares, was acquired by Torridge District Council, from Devon County Council, in 2000. Some of this has been fenced (10 ha) to prevent damage by grazing stock and pedestrian access. A thin unfenced strip of mobile dunes and an area of dune grassland make up Greysand Hill. The area of Greysand saltmarsh has been infilled since 1942 by landfill tipping covering an area of some 11.1 hectares. A more recent tip to the South west of this area covers an additional 4.4 hectares.

The area of maritime grassland, rush beds and scrub make up the

remainder, in the form of a coastal plain

The area once lay within the Ancient Manor of Northam. Residents had conferred on them certain Rights of Common. These exist today as the right of the inhabitants of the Ancient Manor to graze 1200 sheep and 100 horses. It is also an Urban Common, where a right of access exists.

Part of the area is used as a golf course by the Royal North Devon Golf Club, with an associated artisans club, the Northam Golf Club, both of which are the oldest Clubs in England still playing on their original course. The area is a popular location for leisure activities which, in addition to golf, include walking, visiting the beach, bird watching and walking the dog. The Country Park is generally only used by local people for much of the year, but it attracts large numbers of visitors during holiday periods.

The Burrows lies within the North Devon Area of Outstanding Natural Beauty and is designated as a Site of Special Scientific Interest.

3.3 Land Tenure

The Torrington District Council has held the freehold of the site since 2000. The land is subject to certain common Rights as detailed by the Commons Commissioner in his decision of 21st November 1977, Reference No 209/D/91. The number of the Common's Register is CL9. Country Park status was approved by the Countryside Commission in 1975.

3.4 Map Coverage

The area is covered by the Ordnance Survey 1:50,000 Landranger Map, number 180 of the Barnstaple and Ilfracombe area and the 1:25,000 Pathfinder maps numbers SS 43/53 and 42/52 of the Barnstaple and Braunton area and the Bideford and Atherington areas respectively.

Historic maps relate particularly to use of the Burrows by the Royal North Devon Golf Club and provide an interesting record, as do those drawn by Commander Lowry (Reference 2).

3.5 Photographic Coverage

The County Council, Northam Town Council, Torrington District Council and local people have amassed a valuable collection of photographs and copies of some of them are displayed in the Visitor Centre.

The Dartington Amenity Research Trust's report Northam Burrows (Reference 3) contains 36 black and white photographs. The photographic record shows interesting social events and the dramatic effects of flooding.

3.6 Environmental Information

Physical

The soils of Northam Burrows are broadly classified as Sandwich Series

316 and the clayey alluvial soils derive from estuarine origin, outwash from the Culm measure soils of the Northam-Westward Ho! ridge, and possibly from glacial drift. These clayey soils are influenced by windblown or sea-washed sand, especially on the western side of the Burrows. They are poorly drained due to a high water table, being close to or below sea level at high tides. However where sand has accumulated or where raised areas occur, more effective drainage combined with wind, spray and sun drying, cause the vegetation to scorch. The north-western side of the Burrows shows accumulations of sand in the form of semi-fixed and fixed dunes. Like the sand on Baunton Burrows, it contains a significant proportion of shell remains. Many plant and animal species act as clear indicators of calciculous conditions in the soils of Northam Burrows.

Records of climate have been collected at R.A.F. Chivenor over many years and these are processed by the Meteorological Office. The climate records show a low rainfall from February to June inclusive. The sunshine and temperature records show the seasonal norm for this region.

Climate

Rainfall (mm)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
86	58	51	58	54	52	70	73	71	89	110	89

Temperature maxima and minima (Centigrade)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8.2	8.4	10.5	12.6	15.7	18.5	19.6	29.6	18.6	15.5	11.1	8.9
2.9	3.0	3.8	5.7	8.2	10.8	12.4	12.6	11.1	9.1	5.4	3.4

Sunshine (Hours)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
52	76	131	172	209	228	201	177	152	103	66	53

Hydrology

Northam Burrows receives water from a number of sources including rainfall, sea spray, flooding by the sea, ingress of high tides into the Pill (this can be controlled by flaps operating on the outfall drains at Appledore Bridge and south of the reclaimed landfill site) and run-off from the north facing ridge which runs from Northam to Westward Ho! In addition, South West Water Services operate a storm overflow onto Northam Burrows at Grid reference SS439396. Since 1942 the ability of the estuary to flood onto Northam Burrows at high tides has been progressively reduced, with ecological and grazing implications. The pattern of mole and surface drains, leading into the Pill at the southern end of Northam Burrows and from the Holding Pond to an outfall close to the southern side of the reclaimed landfill site, leads all of these sources of water to the estuary. Only heavy flooding by the sea, caused by overtopping of the Pebble Ridge, appears to cause problems of prolonged flooding of the west grassland and even this only lasts for a few days

3.7 Biological Information

An extensive study of the biology of the Burrows was undertaken in July 1991 by Leisure, Environmental and Tourism Services (reference 1) for the County Council. The survey collated existing survey data and undertook additional work where this was required. The survey concluded that the area was being overused and indicated that it was imperative for the long term survival of Northam Burrows that all uses were carefully monitored and controlled as necessary. The biological information from this report is contained in Appendix 1. A summary is given below.

3.7.1 Flora

The coastal grasslands make up nearly half of the area of Northam Burrows and they show variations of plant species according to soil type. Despite the grazing pressure to which the sward is subjected, it appears to be fairly resilient. The variety of plant species and the diversity of this habitat make it a valuable ecological resource. Wetter areas can be identified by Silverweed (*Potentilla anserina*) and drier areas by Daisy (*Bellis perennis*).

The fenced off dunes show most areas have adequate plant cover. The growth of Marram Grass (*Ammophila arenaria*) is not vigorous, due to the lack of fresh sand. The dunes have a fixed appearance and vegetation to match. In areas where 'blow-out' has occurred, a number of annual species have become established. Rabbit grazing helps to maintain the herb-rich sward. Drifts of Bird's-foot Trefoil (*Lotus corniculatus*) are evident in the dunes as large yellow patches. The difference in the appearance of the dune sward inside the fenced area as compared with that on the golf links is dramatic, and the only stands of Viper's Bugloss (*Echium vulgare*) are inside the fenced area. The Dune Pansy (*Viola tricolor* ssp. *Curtissi*) is to be found here.

The fixed dune areas of the golf course show a diversity of plant species in the damper hollows and also outside the desire lines of golfers and walkers. The turf, and its constituent plants, are showing the effects of trampling and vehicle use in certain areas. Grazing does not appear to be the cause of this, but sheep do cause damage where vegetation has broken down and windblown and erosion have created natural 'bunkers'. Sheep lie in these and further the erosion process.

The rush communities around the margins of the golf course are dominated by Sharp Rush (*Juncus acutus*) with Sea Rush (*Juncus maritimus*) and Hard Rush (*Juncus inflexus*). These clumps grow from a sward of wet grassland. The extent to which herbs and grasses are able to flower is influenced by sheep grazing. Many clumps of Sharp Rush are being taken over by Bramble (*Rubus fruticosus*). Other species, showing woody growth are also in evidence. The scrub component of the slacks appears to be increasing. If grazing did not take place, this process would be accelerated. The apparent lowering of the water table is also affecting this change. The area known as the 'Inland Sea' contains the nationally rare Water Germander (*Teucrium scordium*).

Sandymere and the Holding Pond are both man-created or heavily altered and tend to dry in summer. The Holding Pond supports certain saltmarsh grassland species. This interest will be lost if tidal inundation does not take place. Sandymere offers little in the way of botanical interest.

The vegetation in Goosypool is still influenced by residual salt. There still exists an interesting community which warrants appropriate management. The Pill provides a good potential for the conservation of flora by giving a habitat for a range of interesting species.

The verges of the road from Appledore Bridge to the reclaimed landfill site offer ecological conditions alien to Northam Burrows. The original seed mix is however becoming less evident with time. The reclaimed landfill site supports many opportunistic species which favour disturbed areas. The reinstated landfill areas, which cover the site of the Greysand saltmarsh still lie wet in the flatter parts. The grassland here has acquired a good species diversity. Greysand Hill and the beach-dune fringe show zonation from strandline species, giving way to Marram Grass and to grassland. This grassland is very prone to drying out in summer.

The Pebble Ridge supports a limited flora, but several species, including Yellow Horned-poppy (*Glaucium flavum*) are present on the landward side.

The area around the Visitors Centre is part of the fixed dune grassland. There is a higher level of damage due to trampling in this area.

The Skern, which shows signs of erosion near Appledore Bridge and significant sand deposition over many areas, has certain remaining salt-marsh species. These species are being lost, due to sand deposition, which may have resulted from waste disposal activities.

3.7.2 Fauna

The species record is mainly compiled from work completed before the 1991 (Reference 1). The records consist of work undertaken by individuals pursuing their own interests and as a result certain groups may not be represented.

The fauna of Northam Burrows is of great interest and will be subject to change as a result of changes in physical conditions, as is the flora.

The Pill has held Flounder (*Platichthys flesus*) in the past. The fish population now appears to be limited to the Three-spined Stickleback (*Gasterosteus aculeatus*). The appearance of Mole (*Talpa europea*) indicate a change from saltmarsh to terrestrial grassland. Rabbit (*Oryctolagus cuniculus*) is present as is the Short-tailed vole (*Microtus agrrestis*) and the Long-tailed Field Mouse (*Apodemus sylvaticus*). Five species of carnivore have been recorded. Bird species visiting Northam

Burrows are many and varied. The list given in Appendix 1 gives to those which have been recorded on or over Northam Burrows or in the saltmarsh of the Skern.

A Summary is given here.

The extensive areas of grassland provide autumn, spring and winter roosting and feeding grounds for many birds, particularly those using the adjacent estuary. Golden Plover (*Pluvialis apricaria*), Curlew (*Neminius arquata*), Wigeon (*Anas penelope*) and Brent Goose (*Branta bernicla*) occur in overwintering flocks.

The range of habitats present also supports a diverse breeding bird community which includes Shelduck (*Tadorna tadorna*), Wheatear (*Oenanthe oenanthe*), Stonechat (*Saxicola torquata*), Whitethroat (*Sylvia communis*), Grasshopper Warbler (*Locustella naevia*) and Sedge Warbler (*Acrocephalus schoenobaenus*).

3.8 Recreation and Public Interest

Northam Burrows plays a significant role in North Devon as a recreation and tourism area. The beach at Westward Ho! is very popular, with many thousands of visits being paid to it each year. Access to the beach is via the Pebble Ridge, with car-parking taking place from the Westward Ho! gate to Sandymere. A toll charge is made by the District Council during the Easter and Summer seasons for access to car-parking areas.

The District Council has provided a Visitor Centre, to the North of Sandymere, that serves several needs. It gives space for informative and interpretive displays concerning Northam Burrows and its surrounds. The staff responsible for the area are accommodated here. In addition there is a shop selling items of local interest, souvenirs and wildlife information. Part of Northam Burrows is used as a golf course by the Royal North Devon Golf Club and the associated Northam Golf Club.

The whole area is very popular with people who enjoy walking and exercising dogs. The North Devon Coast Path follows the perimeter of Northam Burrows and is maintained as part of the South West Coast Path, National Trail.

The area is popular with bird-watchers, who are attracted by the large numbers of birds that visit the Taw-Torridge estuary, especially the Skern.

Part of Northam Burrows is designated as a horse riding area, available free of charge to the public.

The beach at Westward Ho! and areas of Northam Burrows are used by outdoor holiday centres for organised activities. Educational establishments from primary schools to universities have been able to use Northam Burrows and the Visitor Centre, assisted by Northam Burrows staff, for

various activities.

With the many areas of interest, such as local history and wildlife, the series of activities and guided walks organised by the Northam Burrows staff have proved very popular.

3.9 History

Northam Burrows has played an important role in the local community of Northam and, subsequently, Westward Ho! People have exercised their rights to graze cattle, horses, sheep, geese and other domestic animals for centuries. The recorded history of Northam Burrows is extensive and dates back to the time when the Manor of Northam was granted to the Abbey of St Stephen in Caen by William the Conqueror. This is recorded in a Charter of Richard I which exists as an inspeximus granted to Sir George Cary on 2nd March 1610. In order to qualify for Rights of Common, local people had to show that they had a fire for heating which was independent from one used for cooking. These 'potboilers', or 'potwallopers' as they are referred to, helped the Lord of the Manor to maintain Northam Burrows. One way in which this was done was to carry pebbles thrown by storms onto the grazing areas, back onto the Pebble Ridge. This ancient custom, and the celebrations attached to it, still persists.

The site does not appear to have supported ancient settlements, due to the risk of flooding and the more obvious artefacts are derived from the Second World War. The remains of the military road can be seen to the south-west of Goosypool. The grassland near Appledore Bridge contains large concrete blocks, which were used to tether barrage balloons and support wartime radar aerials.

The Royal North Devon Golf Club plays over the oldest links in England, having been established in 1864. Associated with it is the oldest artisans club in the Country, the Northam Golf Club, which has played over the course since 1888.

More recently, the recreational use of the site has increased. Recognition of the increasing use of Northam Burrows for recreation, education and wildlife study, and the need to reconcile more recent uses with those of grazing and golfing led to the District Council's acquisition of the site in 19XX and its designation as a Country Park. The philosophy that users of an area enjoy the experience more if they have some knowledge and understanding of the resource holds good at Northam Burrows.

Development of the Visitor Centre enables a greater number of visitors and local people to appreciate the interest and value of the area and to see it in its cultural context. The influence of Northam Burrows on Charles Kingsley and Rudyard Kipling, and references to them in these authors' writings, reflect the unique qualities of the landscape of the dunes and marshes.

3.10 Geomorphological Features

The Pebble Ridge is a prominent feature of Northam Burrows and its

continuing stability is critical to its survival. There has been considerable interest in this feature for many years and it is continually the subject of local debate. In a comprehensive survey published in 1954 (Reference 4) a number of conclusions were drawn and recommendations made which included an observation that the Ridge has pivoted around a point north of Sandymere, resulting in it receding south of this point and accreting to the north. The report recommended the transport of material from the area of accretion to the area of recession. In addition the construction of several groynes was proposed. A report prepared for Torridge District Council in 1980 (Reference 5) is one of a number of detailed studies that have been undertaken. The District Council supported the recommendation made in the report, at the time, that the only feasible course of action to safeguard the Pebble Ridge was to continue, on a regular basis, with the pebble recharging scheme that had been undertaken previously. This practice has stopped, and the report of Professor Pethwick (2007) and the Shoreline Management Plan 2, suggest that the Pebble Ridge is under going a realignment, and should be allowed to continue, subject to the reclaimed landfill site being protected.

The original Report (Reference 5) indicated that although recharging would have the effect of slowing the rate of loss of material from the Pebble Ridge, it alone would not prevent it. In the absence of a change that would once again lead to the accretion of material or the installation of an artificial sea defence (all options explored in the report had engineering problems or cost implications that made them unviable) the inevitability is that, at some point in the future, a major breach will occur resulting in extensive flooding of Northam Burrows. A report prepared for the Devon Bird Watching and Preservation Society (Reference 6), suggests that serious environmental problems could occur, with debris from the Waste Disposal Site being spread along the coast.

Further studies are been undertaken to better understand the issues, and when completed will be looked at closely to see what action, if any, is required.

Tide borne debris accumulates along the Pebble Ridge, particularly after spring tides, which is unsightly and causes a danger to wildlife. Regular checks are made of this and appropriate action taken.

3.11 Waste Disposal Facilities

A decision was made in 1942 to create a waste disposal site close to Appledore Bridge. Continued tipping of waste created a bank of waste extending towards the area once known as Greysand Lake. The intention was to afford Northam Burrows a degree of coastal protection and reduce the influence of high tides on the grazing on the Common. By the 1960's the bank had reached Greysand Lake, tipping continued and with the advent of Torridge District Council in 1974, waste was accepted from a wider area than had been the case under the authority of Northam Urban District Council. The continued use of the area for waste disposal has resulted in the filling of Greysand Lake with refuse. There is no longer any

waste disposal service in operation on the Burrows.

3.12 Issues

Over the years that Torridge District Council have been the freeholders of Northam Burrows, several issues have emerged as requiring resolution. These issues form the basis for the analytical part of this Plan.

The issues are:

1. Resourcing of management of Northam Burrows.
2. Wildlife conservation, including the falling water table and grazing and recreation pressures.
3. Rights of Common and grazing.
4. Playing of golf.
5. Recreation.
6. Pest Control.
7. Waste disposal site.
8. Appropriate use and development on the site.
9. Future of Northam Burrows.
10. The movement of and decline in size of the Pebble Ridge.
11. Information and interpretation.
12. Education.
13. Northam Burrows in its setting.
14. Turf and grassland management.
15. The safety of those working at and those visiting Northam Burrows Country Park.

3.13 Higher Level Stewardship Management

A survey carried out by Natural England found that Northam Burrows was in an “unfavourable condition”. Following discussions with Natural England it was decided that in order to move the Burrows back into a favourable condition, that Torridge District Council would apply for Entry Level and Higher Level Stewardship.

In March 2013, it was confirmed that Torridge District Council’s application had been successful. This amounted to some £400,000 over a ten year period. Attached at Appendix 12 is a copy of the Higher Level Stewardship Management Plan.

3.14 References

1. Beale, P. Northam Burrows, A Management Plan to Maintain and Enhance the Ecological Value of the Common (July 1991). Leisure, Environment and Tourism Services.
2. Lowry, C.C. Mapping exercise undertaken for the Royal North Devon Golf Club in 1965. Unpublished.
3. Dartington Amenity Research Trust Northam Burrows – A Study in Conservation and Management (1970). Countryside Commission.

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| 4. | Stuart, A, and Hookway, R.J.S. | Coastal Erosion at Westward Ho! North Devon (1954). Report to Coast Protection Committee (Special) of Devon County Council. |
| 5. | Halcrow and Partners | Pebbleridge, Westward Ho! (January 1980). Sir William Halcrow and Partners. |
| 6. | Leaf Enterprises | Devon Bird Watching and Preservation Society, comments on Devon County Council's draft management plan for Northam Burrows Country Park (February 1992. Leaf Enterprises. |

4. Analysis and Objectives

4.1 Ideal Management Objectives

In the absence of any constraints or obligations the following objectives might be achieved.

1. To secure a suitable level of resources to permit all objectives to be achieved.
2. To conserve the constituent habitats, wildlife communities and species of Northam Burrows.
3. To make provision for a grazing regime that serves the needs of those holding Rights of Common, wildlife conservation and recreation.
4. To provide recreational opportunities, where these are sustainable, for all those who wish to visit Northam Burrows.
5. To prevent inappropriate use and development of Northam Burrows and its environs.
6. To ensure that the Pebble Ridge remains as a significant local and geomorphological feature that provides coastal protection for the hinterland.
7. To promote the use of Northam Burrows for educational purposes and provide information and interpretation as necessary
8. To enhance opportunities for wildlife and landscape conservation and recreation in areas close to Northam Burrows.

4.2 Management Constraints and Obligations

There are certain factors that have an influence over the management of Northam Burrows, these are:-

Resources

The management of Northam Burrows is resource led. There are currently various sources of income which include rentals, letting of catering facilities, revenue from tolls and sales from the shop.

Rights of Common

Northam Burrows is a Common, subject to the provisions of the Commons Act 1899, Law of Property Act 1925 and the Commons Registration Act

1965. As a Section 193 or 'urban' common under the provisions of the Law of Property Act 1925, the public have a right of access to the whole of Northam Burrows. Over four hundred Potwallopers registered grazing rights under the provisions of the Commons Registration Act 1965. following protracted disputes and negotiations a final entry Number 453 was made in the Commons Register on 21st April 1983 giving the Commons Commissioners' ruling: 'The right of the inhabitants of the ancient Parish of Northam to graze 1200 sheep and 100 horses over the whole of the land comprised in the register unit' (Commons Commission's Direction 209/D/91).

The Rights are entrusted to Northam Town Council who allocate and oversee the Grazing.

Coastal Protection

Torrige District Council as the maritime District Council has a responsibility to ensure the integrity of coastal defences.

Area of Outstanding Natural beauty

Northam Burrows lies within the North Devon Area of Outstanding Natural beauty which enables landscape quality to be protected or enhanced, by development control and positive management, and which allows provisions to be made to secure access. Whereas little development has taken place on Northam Burrows, Torrige District Council's policy to permit or promote development has resulted in a considerable amount of housing, roads and other built facilities on the land running down to Northam Burrows from the Northam to Westward Ho! ridge. Not only does this development have a strong influence on the landscape of the area, but the large area of impenetrable surface results in run-off onto the back of Northam Burrows.

Refuse Disposal

The establishment by disposal of waste, of a bank alongside the eastern boundary of Northam Burrows has had the effect of preventing regular tidal inundation of the area, which has changed the biology of the grassland and prevented the deposition of silt. Consolidated waste does not afford coastal protection and is readily eroded by the sea, hence it has proved necessary to protect this by placing large boulders on the Skern side of the refuse bank. Prevention of tidal flooding of parts of the common has changed the character of the turf and its ecological value as a saltmarsh pasture.

Site of Special Scientific Interest

Northam Burrows, with the exception of three areas, (the redundant tip; an area used for links management by the Royal North Devon Golf Club, and the area of and around the District Council's Visitor Centre) was notified under Section 28 of the Wildlife and Countryside Act (1981) as an S.S.S.I. on 29th June 1988. Notification of the site places a particular responsibility on Torrige District Council as the landowner, to protect all those features of floristic, faunistic, geological or physiographical interest. A list of potentially damaging operations has been served on the Council. This list should be

used as a basis for consultation between Torridge District Council and Natural England over any planned activity covered by this list, the aim being to come to an agreement which reconciles the interests of nature conservation with those of the landowner. Natural England is able to offer management agreements under the provisions of the Wildlife and Countryside Act (1981) to facilitate management appropriate to the interest of the site. Any agreement which results in loss of rights or income can be compensated. Tenants or holders of Rights of Common could be compensated, as could the District Council.

Ecological Relationships and Implications Management

The relationship between physical, biological and cultural features of Northam Burrows is summarised here and draws this descriptive section of the plan together.

The soils of Northam Burrows constrain the vegetation which is able to colonise them.

The sands of the dune systems are an unstable and demanding medium for growth. The plant and animal community is specialised to withstand the soil and climatic conditions. Lack of fresh sand recruitment from the sea has led to a fixed dune community. This poses management constraints. The soil of the grassland and marsh areas is still affected by periodic immersion by salt or brackish water and it too supports communities which reflect its transitional status. This requires a system of management which recognises the current and changing state. The site is exposed to the force of south-westerly and easterly winds and the areas of scrub in the large Sharp Rush (*Juncus acutus*) area show effects of wind and frost die-back of new and soft growth. However, scrub appears to be gaining ground at the expense of rushes and grassland.

The climate records show low rainfall from February to June inclusive. This will have a significant effect on vegetation during the early part of the growing season, at a time when grazing pressure and trampling are increasing. Northam Burrows no longer receive a recharge of water and nutrients and silt from the estuary due to the creation of the Appledore road. Sea water, rainfall and storm run-off are however, drained from Northam Burrows by an efficient system of drains to the Pill and tidal-flap outfalls to the Skern. The site shows signs of drying out.

It is on this ecosystem, which is coming to terms biologically with man induced changes affecting its drainage, that an increasing level of recreational and agricultural use is being imposed. The ecosystem is showing clear evidence of degradation in the form of destruction of vegetation cover and loss of breeding birds. There is also evidence in the form of long-term change in the flora and its related fauna of the wetter areas of Northam Burrows.

Protection of the qualities of the site which make it so special, will require compromise by all users.

4.3 Analysis

4.3.1 Resources

The District Council currently makes provision for a revenue budget, which is allocated to staff costs and management and maintenance projects. Additional sources of income include rentals, letting of catering facilities and revenue from tolls. The staff resources are one Senior Ranger, and Seasonal Rangers. All proposals regarding the future of Northam Burrows need to be satisfactorily resourced. To achieve this it is essential that all proposals are prioritised, timetabled and matched against available resources. In order to implement proposals, as desired, efforts should be made to secure the maximum income possible, whilst taking into consideration other management constraints and the overall Aim of the Plan.

4.3.2 Wildlife Conservation

Size

Northam Burrows is not a large conservation area when compared with, for example, Braunton Burrows which lies to the north of the Taw-Torridge Estuary. However, the various habitats, dunes, dune grassland, rushes, open water and wet pasture are sufficiently large in their own right to be able to withstand outside influences, given proper management. The relatively small area of Northam Burrows is made up for by its character of openness, where one habitat type merges into another. The dune systems are small in size and fragmented. They are very susceptible to natural and man-induced change.

Diversity

The wet grassland and area of rushes, combined with managed grazing, make Northam Burrows a valuable site in terms of species diversity. Those animals which have been studied and the list of plants, indicates species richness and a wide range of plant and animal communities. Given appropriate use and management, the diversity of habitats and species diversity within them would be maintained as a stable ecosystem.

The effect of the sea is the greatest destabilising factor and the one most likely to lead to long-term or drastic short-term changes to Northam Burrows.

Naturalness

Most terrestrial ecosystems are modified, but an analysis of Northam Burrows shows an ecosystem which has not been greatly modified in recent times, although the centuries of grazing and the more recent activity of golfing will inevitably have had a significant effect. The Pebble Ridge and dune systems are largely natural and the wet pasture still bears a close resemblance to coastal pasture at the head of the tide in other parts of Britain. Changes in species composition have taken place, due to the loss of periodic inundation at high tides, but the components are still there and

the process could be reversed to a series of grassland systems which are controlled largely by natural forces. These natural forces would include the levels of grazing necessary to maintain herb-rich swards and which would control succession to scrub. The levels of use by man are not natural and effects of these would need to be managed carefully to maintain the ecosystem.

Rarity

The site is noted for the presence of Water Germander (*Teucrium scordium*) which is protected under Schedule 8 of the Wildlife and Countryside Act 1981. It also contains other rare and nationally scarce plants including Sea Stock (*Matthiola sinuata*), Bird's-foot Clover (*Trifolium ornithopodioides*), Rock Sea-lavender (*Limonium binervosium*), Dune Fescue (*Vulpia fasciculata*), Sharp Rush (*Juncus acutus*), and Brackish Water-crowfoot (*Ranunculus bautii*). Scarce animal species include Portland Moth (*Ochropleura praecox*) and the squashbug (*Arenocoris falleni*). Rare migrant birds use the site as an important resting and feeding area. Seen in the context of the whole of the Taw-Torridge estuary, the rarity value of Northam Burrows, coupled with other criteria, is enhanced.

Fragility

This criterion can be considered in two ways, internal fragility e.g. readily damaged habitats such as dune or wetlands, or as external fragility. The latter relates to the ability or inability of a site to withstand external factors or edge effects. Certainly, the dune and dune grassland habitats are fragile and current levels of use are showing just how fragile they are. By the same token, wetland areas, such as the 'inland sea' near the 6th green within the golf course are also demonstrating their fragility. This area appears to be drying out, encouraging grasses to form a greater proportion of the sward. This in its turn leads to greater grazing pressure, because there is more herbage attractive to stock and because the pressure of trampling and vehicle use of the golf course forces stock to seek grazing elsewhere. Fragmentation of communities e.g. rush patches, tends to render them more susceptible to environmental changes, where these are induced by man.

Position in an Ecological Unit

Northam Burrows exists within the ecosystem of the Taw-Torridge estuary, and its value within this area is significant. The Common should be seen as a part of continuum which includes Braunton Burrows and the sea cliffs leading to Hartland Point, together with the remainder of the estuary. Only in the context of the whole can the high significance of this individual part be seen.

Potential Value

The potential for habitat improvement, thereby species diversity, lies mainly in recreation of sea-washed pasture' conditions more favourable to both plants and animals in the Pill and in recreation of a significant sized brackish pool in the Goosypool area. The potential for recreational use of Northam Burrows could be exploited further but this would be at the

expense of its wildlife value, the 'wilderness' quality which the site still enjoys, the existing recreational activities and the grazing of stock.

Educational use of the site offers considerable potential in a formal and informal way.

Intrinsic Appeal

Whilst this is not a scientific criterion on which any quantitative evaluation could be based, the fact that such a large number of people come to Northam Burrows to play golf, walk or use the beach indicates a high intrinsic appeal. If users were to understand more about the area, its history, natural history, land use and the need for its careful use, then the appeal could be broadened and its potential achieved even more effectively.

Conclusion

The value of Northam Burrows as a wildlife resource is sufficient that if it deteriorates significantly a unique and irreplaceable asset to the North Devon area would be lost.

The ecological effect of the apparent drying out of Northam Burrows will result in the present trend for saltmarsh grassland to be replaced by less salt tolerant species and communities. This trend has been observed from examination of plant communities. This process will also affect the dune grasslands, but less directly. If, and when, the sea does flood Northam Burrows, the effect on the ecosystem will be more pronounced than it would, had salt-tolerant species been retained as a major component in the sward of the wet grassland.

Disturbance caused by those using Northam Burrows will have the effect of reducing its wildlife interest. In particular bird life is likely to be affected.

A high priority should be given to measures to conserve the constituent habitats of Northam Burrows and to protect their associated species and communities.

Given the importance of maintaining the integrity of the ecological regime that exists on Northam Burrows, it is considered vital that the means to allow a sufficient quantity of sea water to inundate regularly the area are provided. The Goosypool and Holding Pond areas should be considered as part of this scheme, as should the overall drainage regime of Northam Burrows. The conservation of the maritime grassland habitat will benefit both economic and recreational interests. The right grassland of Northam Burrows and so the very integrity of the area itself is dependent on the continuation of grazing at a level that enhances its floristic diversity. It is essential that a level of grazing is not permitted that will be in any way damaging to the long term health and natural floristic diversity of the turf. To ensure that damage does not take place, at no time must the numbers of stock grazing Northam Burrows be above that which it can naturally sustain. Any loss of the dunes would have the effect of necessitating the introduction of additional coastal defence measures or the acceptance of the inevitable

increase in flooding. Its loss would also destroy a valued and increasingly scarce wildlife resource.

The sand dune areas of Northam Burrows are not only a valuable habitat but also constitute an important coastal defence. It is essential that measures are taken to conserve them and that they are not constrained to artificial limits.

Disturbance should be minimised to conserve the rich and interesting flora and fauna.

4.3.3 Grazing

The existence of Rights of Common on Northam Burrows has allowed generations of local residents access to free grazing and as such has contributed to the economy of the area. It has also produced a valuable wildlife resource.

Loss of the grazing or any degradation in the quality of the vegetation through inappropriate grazing will have the effect of destroying the stability of the ecology of the area and the underlying substrate, with consequent loss of the economic, wildlife and recreation interest of the area.

The grazing of Northam Burrows has produced the unique grassland habitat that now exists. It is essential that grazing continues if this is to be conserved. Equally important is the need to ensure that the level of, and the practices connected with, grazing do not in themselves contribute to any degradation of the turf. A carefully controlled scheme for grazing Northam Burrows must be adhered to and its effects carefully monitored. Currently the practices which may affect the health and condition of the turf, apart from the level of grazing itself are:

- i. The custom of supplementary feed being brought to stock during winter months;
- ii. The date at which followers are counted as a head of stock and;
- iii. The keeping of rams on Northam Burrows.

4.3.4 Golf

The availability of part of Northam Burrows for the playing of golf provides pleasure for those who pursue this sport. It also provides an additional attraction for visitors, who in turn bring economic benefits to the area. The continued playing of golf maintains a historic tradition in the area.

The use of Northam Burrows in this way brings another pressure to bear on its unique vegetation. The playing of this sport may inadvertently exclude other visitors, or grazing stock from the area of play.

The loss of this sport would result in a break in the tradition of playing golf in the area. It may also have consequences for certain local hotels, who cater for visitors using the course.

In the absence of golf as a sport on Northam Burrows a certain degree of

pressure on the grassland areas would be lifted. Also grazing stock and the visiting public would have an easier access to all areas.

Golf may be played on Northam Burrows to provide pleasure and economic benefit, provided that the level and practices of play do not unduly impinge on other uses and do not have a long-term detrimental effect on the unique vegetation of the area.

As the historic nature of the golf course is closely related to the existence of the Royal North Devon Golf Club, the continuation of the playing of golf should be fully reviewed, if for any reason the Club ceases to use the course.

4.3.5 Recreation

The inappropriate use of the area for recreation will have the effect of destroying the resource over which these uses are made. Activities which significantly degrade the quality of the constituent habitats of Northam Burrows or cause unacceptable disturbance will have to be controlled.

The use of Northam Burrows for recreation has taken place over a number of years. This pressure has increased and is sufficient to have a damaging effect on the area. To ensure that recreation activities in all their forms can continue, it is necessary that they are controlled. A scheme must exist for the regulation of golf, car parking, the use of the area by holiday organisations and the variety of minor recreational uses practices.

4.3.6 Pest Control

The use of Northam Burrows as a grazing common and the value of the unique native vegetation found here has highlighted the occasional increase in the level of certain invasive plant species. The presence of these species reduces the viability of the area for grazing and, where species are not native to Northam Burrows may alter the balance of the plants that grow here.

Certain species, in particular Creeping or Field Thistle (*Cirsium arvense*), are very invasive. They are naturally distributed, but activities such as the importation of topsoil or supplementary feed for grazing stock in the form of hay will increase the chance of occurrence of these species.

The control of invasive species is undertaken but cutting, before seed is set, and the restriction of importation of topsoil and supplementary feed to Northam Burrows. Given the use of Northam Burrows for grazing; its unique ecological value and its function as a coastal defence, the control of any pest species that threaten these should be given due consideration.

4.3.7 Waste Disposal Facilities

The tipping of waste from the Appledore Gate to Greysand Saltmarsh has provided a convenient means of disposal over a number of years to residents in the area. It has also had the effect of destroying the natural process of tidal inundation to Northam Burrows, with its consequential

deposition of alluvial material.

4.3.8 Appropriate Development

From time to time proposals for development may be put forward that effect Northam Burrows directly or indirectly. In order to protect the area for the long term it is essential that due consideration is given to the Aim of the Management Plan when planning proposals are considered.

4.3.9 The Future of Northam Burrows

The area known today as Northam Burrows has existed for a number of centuries and has formed part of local life and the landscape.

Pressures for change have come from natural and man-induced sources. Whilst the forces of nature may not be readily tamed, influence may be brought to bear on man induced change.

The current use of the area brings to it certain pressures. These are from grazing, the use of the golf course and recreation activities. These activities, if practised with due regard to Northam Burrows, provide benefits of economic return, employment, and enjoyment of leisure time and wildlife conservation.

If for any reason one or more of these pressures grows to a level that is not sustainable, in the long term, then Northam Burrows and all those interests associated with it will suffer.

It is essential that a balance is maintained that permits the area to be used in a harmonious and sustainable way in the future.

4.3.10 Pebble Ridge

The changing nature of the Pebble Ridge has resulted in its eastwards movement and a loss in its height. If this trend continues Northam Burrows is likely to see greatly increased flooding. The consequences of this are likely to be the radical alteration in the ecology of the area and the possibility of tipped waste being affected by tidal waters on its western side. This would result in the need for far reaching measures to be taken to prevent the disturbance and distribution of this waste.

The Pebble Ridge is a prominent local feature of considerable geomorphological importance, which contributes to the listing of the area as a site of Special Scientific Interest. Its presence has resulted in the deposition of the material that is today Northam Burrows. All reasonable means should be used to prevent its further decline.

It should also be recognised that the geomorphological interest of the Pebble Ridge is dependent on it being a natural formation, that responds to the natural forces that operate on it. An engineering solution to its changes would destroy this.

4.3.11 Information and Interpretation

The current provision of information and interpretation gives the visitor a good introduction to Northam Burrows.

In order that the visitor who uses the site on more than one occasion is able to view new information and to be able to provide material that is contemporary in nature, information and interpretation must be constantly reviewed.

4.3.12 Education

Given the special nature of the resource at Northam Burrows there is a considerable potential for education and information provision.

Resources should be allocated to permit the wildlife and historic interest to be brought before a wide audience. This includes schools, colleges, universities and the general visiting public.

4.3.13 Northam Burrows in its Setting

Northam Burrows has proved to be an attractive place for visitors and a valuable wildlife conservation area. There is considerable scope to encourage visitors to take advantage of further opportunities for recreation outside the Country Park and to enhance wildlife conservation and the landscape in the surrounding area.

4.3.14 Safety

It is essential that the working environment of those who manage Northam Burrows and the facilities provided for visitors are maintained to the highest safety standards. An analysis of new working practices and new visitor facilities must be undertaken to ensure that they are safe.

4.4 Assessment of the Importance of Site Features

Site Features	Importance		
	National	Regional	Local
Geology and Geomorphology			
➤ Pebble Ridge	High		
➤ Dunes	Average	High	
Vegetation			
➤ Dunes and grassland	Average	High	
➤ West pasture and rushes	Average	High	
Species			
plants			
Sea Stock (<i>Matthiola sinuata</i>)	High		
Bird's-foot Clover (<i>Trifolium ornithopodioides</i>)	Average		
Rock Sea Lavender (<i>Limonium binervosum</i>)	Average		
Dune Fescue	Average		

	(<i>Vulpia fasciculata</i>)			
	Dune Pansy (<i>Viola tricolor ssp.curtissii</i>)		Average	High
	Sharp Rush (<i>Juncus acutus</i>)	Average	High	
	Brackish Water-crowfoot (<i>Ranunculus baudotii</i>)	Average	High	
	Water Germander (<i>Teucrium scordium</i>)	High		
Animals	Armadillidium album	High		
	Ochrolepura praecox	High		
	Arenocoris falleni	High		
	Wheatear (<i>Oenanthe oenanthe</i>)	Average	High	

4.5 Operational Objectives

The Ideal Objectives given earlier are modified below, taking into account the current constraints on management and publications on the County Council.

1. Ensure that income generation is maximised without compromising the Aim of the Plan.
2. Conserve the constituent habitats of Northam Burrows, the wildlife communities and species associated with them and ensure compliance with relevant legislation.
3. Ensure that the Rights of Common may be exercised and sustained.
4. Permit the playing of golf, as provided for in relevant agreement(s).
5. Make provision for sustainable forms of recreation.
6. Control pest species.
7. Ensure the satisfactory closure and reinstatement of the waste disposal and handling facilities at Northam Burrows.
8. Take appropriate action against any development which is likely to be detrimental to the future integrity of Northam Burrows and its sustainable use as a grazing common and a wildlife, recreation and education resource.
9. Ensure that Management and uses made of Northam Burrows do not detract from its intrinsic natural viability and diversity.
10. Prevent those activities, uses and developments that may damage the Pebble Ridge, from the viewpoint of coastal defence, geomorphological interest and wildlife conservation.
11. Make provision for information and interpretation.

12. Encourage and promote the use of Northam Burrows for educational and scientific study purposes.
13. Identify opportunities for promoting the role of the Country Park as a Gateway to the wider countryside.
14. Establish a forum to discuss grassland and turf management issues.
15. Ensure the safety of those visiting and those working at Northam Burrows.

5. Prescriptions

To achieve each Objective, it is necessary to identify the work required. Each Objective is given a number of Prescriptions, as set out below:

1. Resources

- 1.1 Continue to investigate appropriate means by which income may be increased.
- 1.2 Continue to review costs of service provisions.

2. Wildlife

- 2.1 Undertake investigation to determine the hydrological regime required to achieve Objective 2.
- 2.2 Undertake investigation of options available for achieving desired hydrological regime.
- 2.3 Continue with the opening of the tidal flap at Appledore Bridge, if consistent with 2.2 above.
- 2.4 Devise scheme to restore the area of Goosypool to a brackish tide washed pool, in conjunction with investigations into hydrological regime and undertake works as required.
- 2.5 Devise a scheme for the regular tidal inundation of the Holding Pond, in conjunction with investigations into hydrological regime and undertake works as required.
- 2.6 Monitor effects of hydrological scheme.
- 2.7 Ensure that suitable, regular monitoring of the water quality of the Holding Pond and associated ground water is undertaken by the appropriate body.
- 2.8 Ensure that results of monitoring of water quality are made generally available as permitted.
- 2.9 Ensure that any proposed scheme for achieving desired hydrology by inundation addresses need for tidal scour of Pill and prevention of

accumulation of tide-borne debris.

- 2.10 Safeguard the landward side of Tip Road in the event of wave wash damage occurring.
- 2.11 Review the maintenance of the drainage ditch on the Southern boundary.
- 2.12 Ensure that the area to the west of the Westward Ho! entrance drains properly.
- 2.13 Implement scheme to ensure conservation of Sharp Rush (*Juncus acutus*), Water Germander (*Teucrium scordium*) – Appendix 1 and other notable species.
- 2.14 Make provision for an appropriate level of grazing if Common grazing falls below an optimum level for wildlife conservation purposes.
- 2.15 Maintain fence around dunes where it is essential to prevent damage by access or grazing stock.
- 2.16 Ensure legal obligations for fencing of the Common are met.
- 2.17 Ensure legal obligations with regards to wildlife conservation are met.
- 2.18 Fence off new dune area if it is essential, to prevent excessive erosion damage by access or grazing stock.
- 2.19 Undertake conservation measures within dunes, as necessary, to maintain wildlife interest.
- 2.20 Control activities, uses and pest species that may damage the formation and ecology of the dunes.
- 2.21 Undertake monitoring programme of dune system.
- 2.22 Negotiate management agreements, as appropriate, between interested parties in order to achieve the Aim of the Plan.

3. Rights of Common and Grazing

- 3.1 Control those activities that may diminish from the Rights of Common.
- 3.2 Ensure that activities which are detrimental to Northam Burrows and which are outside Commonable Practice are prohibited (Appendix 2).
- 3.3 Monitor adherence to the conditions for the Allocation of Grazing (Appendix 3) and report to the Trustees of Grazing as necessary.
- 3.4 Ensure attendance of appropriate officer at meetings of Northam Town Council Grazing Advisory Committee as necessary.

- 3.5 Monitor the health, condition and natural variety of the plants and animals of Northam Burrows as it relates to grazing.
- 3.6 Ensure appropriate action is taken to prevent deterioration of quality as defined by criteria contained within clause 3.5

4. Playing of Golf

- 4.1 Ensure negotiations are undertaken to establish appropriate practice(s) for the playing of golf (Appendix 4).
- 4.2 Monitor the health, condition and intrinsic natural biological diversity of Northam Burrows as it relates to the playing of golf.
- 4.3 Ensure appropriate action is taken to prevent deterioration of quality as defined by criteria contained within clause 4.2.

5. Recreation

- 5.1 Make provision for sustainable recreation activities.
- 5.2 Ensure code of practice for visiting groups is adhered to (Appendix 5).
- 5.3 Encourage organisations with a tourism interest to consider the implications of this report when preparing tourism strategies.
- 5.4 Ensure implementation of anti dog-fouling scheme(s) in areas affected (Appendix 7).
- 5.5 Monitor anti dog-fouling scheme(s) and undertake further measures as necessary.
- 5.6 Implement improvement scheme for North Devon Coast Path (Appendix 8).
- 5.7 Monitor use of the defined horse riding area and take action as appropriate if level of use becomes unacceptable.
- 5.8 Review byelaws that affect the Burrows.
- 5.9 Monitor the health, condition and intrinsic natural biological diversity of Northam Burrows as it relates to recreation activities.
- 5.10 Ensure appropriate action is taken to prevent deterioration of quality as defined by criteria contained within clause 5.10.

6. Pest Control

- 6.1 Take necessary action to control agricultural weed species (in concordance with statutory obligations).
- 6.2 Take necessary action to control pests (with due regard for public

safety).

7. Waste Disposal Facilities

7.1 Monitor restored Waste Disposal area and ensure action is taken by appropriate body to maintain area in suitable condition.

7.2 Monitor fly tipping take action as necessary.

8. Future Development Proposals

8.1 Assess suitability of any proposed development which affect Northam Burrows, report and take action as appropriate.

8.2 Monitor the effects of military training on Northam Burrows and its uses and take action as appropriate.

9. The Future of Northam Burrows

9.1 Undertake comprehensive monitoring programme of all aspects of use and management of Northam Burrows including surveys of habitats, plant and animal communities and species, recreational use and grazing.

9.2 Identify all those factors that might be contributing to change, detrimental or otherwise and put into effect means to control this change should this be appropriate.

10. Pebble Ridge

10.1 Encourage the appropriate authority(ies) to explore options to safeguard the Pebble Ridge.

10.2 Monitor progress of studies into the Pebble Ridge, report and take action as necessary.

11. Information and Interpretation

11.1 Undertake review of options for the future use of the Visitors Centre. (Appendix 9).

11.2 Implement an information/interpretation scheme.(Appendix 10).

12. Education

12.1 Encourage the use of Northam Burrows for the Study of Wildlife, Geomorphology, History and Land Use.

13. Northam Burrows in its Setting

13.1 Promote opportunities for wildlife conservation and recreation in areas close to Northam Burrows that enhance the concept of it as a Gateway to the wider countryside.

14. Management

14.1 Establish a turf management group to follow terms of reference contained in Appendix 11.

15. Safety

- 15.1 Undertake a safety audit at Northam Burrows in liaison with the Health and Safety Officer.

APPENDICES

APPENDIX 1

Biological Records

This section has been divided into four parts, to deal with the special management of Water Germander, flora, fauna and a species list.

Status and Habitat requirement of Water Germander

Water Germander (*Teucrium scordium*) is a protected plant species under Section 8 of the Wildlife and Countryside Act 1981. It is very local in its distribution, preferring wet calcareous soils.

It occurs at Braunton Burrows and in Upware North Pit in Cambridgeshire, as noted sites. The presence of the population in the 'inland sea' near the 6th hole, on Northam Burrows was reaffirmed and recorded in July 1991. Numerous plants were seen and there is every reason to think that they will flower and set seed.

The reasons for its restricted distribution nationally are attributed to drainage, reclamation and eutrophication. It is site specific, requiring open, disturbed and wet conditions, and calcareous soils with a low nutrient status.

Grazing stock on Northam Burrows helps to provide the disturbed conditions it favours. But the presence of too many grazing animals would be a cause for concern, because of localised eutrophication of the soil due to urine, mainly, but some faeces as well. Admittedly, most sheep will move to drier ground on the golf course at night. Most dunging will take place in the night, in localities away from the 'inland sea' so it could be argued that sheep are helping to maintain the mesotrophic conditions the Water Germander requires. Certainly, controlled grazing is beneficial to the maintenance of this plant.

The disturbed conditions could be provided on an experimental basis, but the cutting, lifting and inversion of turfs. Seed could then be spread on these areas (this would require a licence from English Nature).

Initially these trials should be conducted in areas of Sea Rush (*Juncus maritimus*) which grows in dense clumps among the Sharp Rush (*Juncus acutus*). Trials could also include the spreading of a thin dressing of powdered lime on the upturned turfs, to raise the availability of CaCO₃ to the seedlings. This is suggested, since 'lime-rich drainage into this area from the surrounding golf course will gradually lose its effect, because of the gradual leaching-out of the shell sand over a period of time. This practice would probably not be sustainable in the long term.

Flora

Northam Burrows can be split into distinct habitats as typified by physical conditions and plant species, as follows:

- Coastal grasslands on either side of Pimpley Road.
- Fenced off sand dunes and path systems.
- Fixed due area of the golf course.
- Rush communities near the 6th green, between the 9th, 10th, 11th, and 12th

- greens and near the 14th and 16th greens.
- Holding Pond and Sandymere.
- Goosypool.
- The Pill.
- The road from Appledore Bridge to the tip.
- The tip area.
- Re-instated tip area.
- Greysand Hill and the beach/dune fringe.
- The pebble ridge
- Area around the information centre.
- The Skern.

Coastal Grassland

The coastal grasslands make up nearly half of the area of Northam Burrows and they show variation in plant species according to soil type, mainly clayey alluvium with more sand in the upper layers, and topography. Whereas drier hummocks tend to be dominated by Buck-s-horn Plantain (*Plantago coronopus*), Pearlworts (*Sagina* spp), Red Fescue (*Festuca rubra*), Lesser Trefoil (*Trifolium dubium*), Common Bird's-foot-trefoil (*Lotus corniculatus*), and Annual Meadow-grass (*Poa annua*), areas of intermediate wetness, with less risk of scorch and opening-up of the turf, allow Daisy (*Bellis perennis*), Crested Dog's-tail (*Cynosurus cristatus*), Ribwort Plantain (*Plantago lanceolata*), Smooth Meadow-grass (*Poa pratensis*), and Common Mouse-ear (*Cerastium fontanum*) for form on major parts of the sward. Common Bird's-foot-trefoil (*Lotus corniculatus*) is also abundant and Sea Rush (*Juncus maritimus*) forms dense clumps in places. In the areas of wetter pasture patches of Sea Rush (*Juncus maritimus*) are a significant component of the sward. Saltmarsh Rush (*Juncus gerardii*) dominates in places and in the wetter areas of ditch bottoms or residual pools in the turf, Silverweed (*Potentilla anserina*), Annual Meadow-grass (*Poa annua*), Marsh Pennywort (*Hydrocotyle vulgaris*), Sea Milkwort (*Glaux maritima*) and Lesser Sea-spurrey (*Spergularia marina*) are abundant, especially in areas of wet pasture where the influence of salt is greatest, whereas Bog Pimpernel (*Anagallis tenella*) and Marsh Pennywort (*Hydrocotyle vulgaris*) are abundant in areas with less saline influence. Despite the grazing pressure to which this sward is subjected, it appears to be standing up to it very well. The variety of plant species and the diversity of this habitat makes it a valuable and interesting ecological resource. Zonation in the vegetation according to soil moisture and saline influence is particularly evident' wetter areas can be identified at some distance by the flowers of Silverweed (*Potentilla anserina*) and drier areas by Daisy (*Bellis perennis*). These grasslands are identifiable as MG11 under the National Vegetation Classification.

Fenced-off dunes and paths

The dune systems were surveyed, very thoroughly, by the Coastal Ecological Unit of English Nature in September 1990. Since the current status of the dunes is evident, it would be useful to record more general observations which relate to the dynamics of the fenced dunes and their management needs. The photographic record by the Dartington Amenity Research Trust in 1969 shows evidence of large areas of damaged, unstable and windblown dunes. Even in the fenced areas, stiles led the public into the dunes for shelter and other purposes. The situation in 1991 is very much more satisfactory and this reflects in an adequate plant cover over most of the dunes' the paths alongside and across the dunes are another matter. The growth of

Marram Grass (*Ammophila arenaria*) is not vigorous, however, due to a lack of fresh sand. This appears to be 'intercepted' by the Pebble Ridge which fronts the dunes. The dunes have a fixed appearance and vegetation to match. In areas where blown has occurred a number of annual species are able to establish, notably Hound's-tongue (*Cynoglossum officinale*), Viper's bugloss (*Echium vulgare*), Sea Bindweed (*Caylsteugia soldanella*), Common Evening-primrose (*Oenothera biennis*), Sea Stock (*Matthiola sinuata*) and Sea Spurge (*Euphorbia paralias*).

Rabbit burrowing also provides opportunities for annual plants to establish and in places heavy, but selective, rabbit grazing helps maintain herb-rich sward. Drifts of Common Bird's-foot-trefoil (*Lotus corniculatus*) are evident in the dunes as large yellow patches. However, outside the fenced area the evidence of this species, in flower, is much more difficult to discern. The difference in the appearance of the dune sward inside the fenced area, as compared with that on the golf links, is dramatic, and the only stands of Viper's bugloss (*Echium vulgare*) were noted inside the fenced area. Also the Dune Pansy (*Viola tricolor* spp. *Curtisii*) is more prevalent inside the fence. The paths across and following the outer side of the fenced due area show the effects of excessive trampling on a fragile dune turf. Where the turf has been destroyed, except for more persistent species such as Sand Sedge (*Carex arenaria*) and Buck's-horn Plantain (*Plantago coronopus*), windblown and rainfall erosion has left areas of unvegetated and totally unstable sand.

Fixed Dune Areas

The fixed dune areas of the golf course show a diversity of plant species in the damper hollows and in areas which lie outside the desire lines of golfers and walkers. Most of the grassland is classified under the National Vegetation classification as SD8 (fixed dune community) with some MG7 (Mesotrophic Grassland). Red Fescue (*Festuca rubra*) with Lady's Bedstraw (*Galium verum*) and *Tortula ruralis* forms dominate, with Dune Storksbill (*Erodium disnense*), Wild Thyme (*Thymus praecox*), Lesser Trefoil (*Trifolium dubium*) and Common Bird's-foot-trefoil (*Lotus corniculatus*). This turf, and its constituent plants, is showing the effects of excessive trampling and vehicle use and is breaking down in many places. Sheep grazing does not appear to be a cause of damage to the turf, since there is so little to graze. Sheep do, however, cause damage in areas where vegetation has broken down and windblow and erosion have created natural 'bunkers'. Sheep lie in these for shelter and use the eroding faces for scratching their fleeces.

Rush Communities

The rush communities within and around the margins of the golf course are dominated by Sharp Rush (*Juncus acutus*) with Sea Rush (*Juncus maritimus*) and Hard Rush (*Juncus inflexus*). These rush clumps grow from a sward of wet grassland, of varying degrees of summer soil moisture. Crested Dog's-tail (*Cynosurus cristatus*), Perennial Rye-grass (*Lolium perenne*) mesotrophic grasslands merge in with dune slack communities normally influenced by Creeping Willow (*Salix repens*). However, despite its abundance on Braunton Burrows, *Salix repens* does not occur on Northam Burrows. The fact that it is a low growing plant may result in its being grazed off and unable to establish, if it were ever species native to Northam Burrows. The dune slacks are also notable for Variegated Horsetail (*Equisetum variegatum*) Cuckooflower (*Cardamine pratensis*) Changing Forget-me-not (*Myosotis discolor*), False-broome (*Brachypodium sylvaticum*), Yorkshire-fog (*Holcus lanatus*), Creeping

Bent (*Agrostis stolonifera*), and the moss *Calliergon cuspidatum*). The extent to which herbs and grasses are able to flower is influenced by sheep-grazing. Sheep are forced into the dune undergrowth by lack of grazing on the golf course and they not only check the growth of herbaceous plants they can reach, but also woody species as well.

Many clumps of Sharp Rush (*Juncus acutus*), over a wide area, are being taken over by Bramble (*Rubus fruticosus*) and the signs of scrub succession are becoming very evident. Large stands of Hawthorn (*Craetagus monogyna*) Blackthorn (*Prunus spinosa*) and some Elder (*Sambucus nigra*) act as cover the Bramble (*Rubus fruticosus*). Honeysuckle (*Lonicera periclymenum*), Privet (*Ligustrum vulgare*), Bittersweet (*Solanum dulcamara*) and some plants of Soft Shield-fern (*Polystichum setiferum*). Despite sheep grazing and scorch caused by frost and wind, the scrub component of the Sharp Rush (*Juncus acutus*) slacks appears to be increasing. Were grazing to be removed, the process of natural succession would speed up dramatically. The other factor which appears to be affecting the species composition of the slack areas is soil moisture. Part of the change referred to is likely to be caused by a gradual lowering in the water table of Northam Burrows. This is now affecting one of the wettest slacks by green 6 on the golf course. The 'inland sea', as it is referred to, is dominated by *Juncus* spp., but also contains the nationally rare Water Germander (*Teucrium scordium*), large amounts of Water Mint (*Mentha aquatica*), and some Corn Mint (*Mentha avensis*). Bog Pimpernel (*Anagallis tenella*) is abundant and Adder's-tongue 'fern' (*Ophioglossum vulgatum*) is present. Few flowered Spike-rush (*Elocharis quinqueflora*) is present and Silverweed (*Potentilla anserina*) is abundant.

Holding Pond and Sandymere

The Holding Pond and Sandymere are both man-created or heavily altered and both tend to dry up in the summer. The Holding Pond supports some plant species typical of saltmarsh grassland, notably Sea Milkwort (*Glaux maritima*) and Saltmarsh Rush (*Juncus gerardi*), but Silverweed (*Potentilla anserina*) is becoming abundant. Without tidal inflow this area will not reach any wetland potential, since it is prone to freshwater flooding in winter and drying out during the summer months. The grassland to the west of the Holding Pond shows vigorous new clumps of Sharp Rush (*Juncus acutus*), whereas the same species is only holding its ground or is in decline in all other areas. Sandymere appears to offer little in the way of botanical interest except for some saltmarsh of Sea Milkwort (*Juncus gerardi*) and Red Fescue (*Festuca rubra*) on the south-western side.

Goosypool

Goosypool shows on O.S. maps as a permanent pasture of between 1.5 and 2 hectares in size. Infilling of the pool, using dredging from the deepened Pill, combined with an apparent lowering in the water table of Northam Burrows, have resulted in the pool being reduced to an area of less than 5 metres wide. The vegetation in the area of the pool is still influenced by residual salt and Sea Milkwort (*Glaux maritima*), Saltmarsh Rush (*Juncus gerardi*), Lesser Sea-spurrey (*Spergularia marina*), Saltmarsh Grass (*Puccinellia* sp.), Common-spike Rush (*Elocharis palustris*), Creeping Bent (*Agrostis stolonifera*), Celery-leaved Buttercup (*Ranunculus sceleratus*), Sea Pearlwort (*Sagina maritima*) and Blue Water-Speedwell (*Veronica anagallis-acquatica*) are abundant or present. Despite the adverse conditions under

which the vegetation grows it is a very interesting community and warrants management appropriate to its potential value.

The Pill

The Pill, like Goosypool offers far more in terms of potential for its vegetation than the current status of plants within it might show. Despite dredging-out to improve drainage flow towards Appledore Bridge, and heavy grazing pressure by sheep and horses, the Pill provides a habitat for a range of interesting species. Sweet-grasses (*Glyceria* spp.), Creeping Bent (*Agrostis stolonifera*), Watercress (*Nasturtium officinale*) Water-starwort (*Callitriche* sp.) grow along the margins of the Pill with Parsley Water-dropwort (*Oenanthe lachenalii*), Sea-arrow Grass (*Triglochin maritima*), Common-spike Rush (*Elocharis palustris*), Sea Club-rush (*Scirpus maritimus*) and Water-plantain (*Alisma plantago*). Where the Pill is wide, and animals are unable to reach it, Grey Club-rush (*Schoenoplectus tabernaemontanii*) forms vigorous clumps. Parrot's-feather (*Myriophyllum aquaticum*) is present in parts of the Pill near the Golf Club as an introduced species. Like Goosypool, the Pill offers potential for its plant community, given appropriate management and protection from the constant pressure of grazing.

Verges

The verges of the road from Appledore Bridge to the landfill site offer ecological conditions alien to Northam Burrows. The original seed mixtures are becoming less evident with time and species more typical to Northam Burrows have moved into the sward. Thistles (*Cirsium* spp.) are common and these have spread into disturbed areas of the wet pasture and fixed dunes along with Nettles (*Urtica* spp.) and other plants which favour a higher nutrient status in the soil. Knotted Hedge-parsley (*Torilis nodosa*) grows on the banks of the road and it appears to be spreading into drier areas of the pasture to the west of the road.

Old Waste Disposal/Recycling Site

The waste disposal site hosts an impressive collection of Thistles (*Cirsium* spp.), Nettles (*Urtica* spp.), Docks (*Rumex* spp.), Goose-foots (*Chenopodium* spp.), Persicarias (*Polygonum* spp.) and other opportunistic species which favour disturbed conditions and high levels of soil fertility.

Reinstated Waste Disposal Site

The reinstated waste disposal site which covers the site of Grey Sand saltmarsh still lie wet in the flatter parts or in depressions between the 'dunes' imaginatively created at the north-western end of the area. The grassland here has acquired a surprising species diversity with strong stands of Bird's-foot Clover (*Trifolium ornithopodoides*) and Black Medick (*Medicago lupulina*), with wet areas where annual species Annual Meadow Grass (*Poa annua*) and Cudweeds (*Filago* spp.) establish strongly. The reclaimed grassland merges into fixed dune grassland (SD7 and SD8) where the presence of Sea Mouse-ear (*Cerastium diffusum*) and Red Fescue (*Festuca rubra*) mark the change in soil conditions.

Grey Sand Hill

Grey Sand Hill and the beach/dune fringe show an almost textbook zonation from strandline species Prickly Saltwort (*Salsola kali*), Sea Sandwort (*Honkenya peploides*) and Sand Couch (*Elytrigia juncea* ssp. *Boreoatlantica*) giving way to Marram Grass

(*Ammophila arenaria*), Sea Bindweed (*Calystegia soldanella*), Sea Holly (*Eryngium maritimum*) and some Hound's-tongue (*Cynoglossum officinale*) where it is able to establish in the face of grazing, where it is able to establish in the face of grazing pressure. The grassland which backs onto the mobile dunes has most of the characteristics of grassland described under the section on the fixed dune area of the golf course. The grassland of Grey Sand Hill is very prone to drying out and scorch in the summer, but it is not subject to treading to the same extent as the golf links.

Pebble Ridge

The Pebble Ridge supports a limited flora on its crest but on the landward site, where the pebbles merge into sand, Yellow Horned-poppy (*Glaucium flavum*), Curled Dock (*Rumex crispus*) and Sea Spurge (*Euphorbia paralias*) are present. The *Euphorbia paralias* is abundant at the northernmost tip of Northam Burrows, and Henbane (*Hyoscyamus niger*) forms strong stands in some years.

Visitor Centre

The area around the Visitor's Centre is part of the fixed dune grassland which makes up most of the golf links. Many of the visitors to the Centre, especially children, run and play over the area which results in heavy damage to the vegetation. Like other areas of fixed dune it is very subject to drying out and scorch by the sun. The plant community is therefore restricted to species able to withstand the pressure, notably Buck's-horn Plantain (*Plantago coronopus*), Red Fescue (*Festuca rubra*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Lesser Trefoil (*Trifolium dubium*), Dune Stork's-bill (*Erodium cicutarium* ssp. *Dunense*) and Sand Sedge (*Carex arenaria*).

The Skern

The Skern is subject to erosion of the banks at the Appledore Bridge end, and the estuary is depositing significant amounts of sand on the remaining areas of saltmarsh. Stands of Common cord-grass (*Spartina anglica*) which were planted in the Skern in November 1932 have not flourished.

Common cord-grass has not established in the Skern and shows clear evidence of dieback at the Grey Sand end of the saltmarsh. The saltmarsh was a very good example of this type of plant community, but freshly accumulating sand and lack of silt deposition are causing it to break down rapidly. Saltmarsh-grasses (*Puccinellia* spp.) Annual Sea-blite (*Suaeda maritima*), Lesser Sea-spurrey (*Spergularia marina*) and Sea Plantain (*Plantago maritima*) face an uncertain future; the prognosis for the valuable plant community is poor.

"Extending the tip to Grey Sand Hill may have far reaching consequences for Saltmarsh ecology".

This prediction made by Dartington Amenity Research Trust (Reference 3) has proved valid.

Infilling of the inner saltmarsh appears to have drastically affected the pattern of the incoming and outgoing tides. When the tide was able to flood onto the marsh, and no doubt across part of Northam Burrows as well, the force of the incoming and outgoing water would have been checked. This would have resulted in silt deposition which would have benefited the saltmarsh community. Without the dissipation of part of the

energy of the tide, deposition now appears to be of sand. This does not favour the plant communities of the Skern.

Fauna

At the time at which the survey for this plan was carried out, mid-June, the weather was cold and very windy. Conditions were not ideal for insects and therefore the species record is largely dependent on those made in previous years. Whereas new records were added to the fauna list, these were not as extensive as the surveyor would have liked. The Fauna lists are therefore far from complete, whole orders of insects being barely represented or not represented at all. Fauna lists are idiosyncratic and depend very much on the collector's interests and expertise.

It is evident, from field observations, that the fauna of Northam Burrows is of great interest and, just as the increase or decrease in the vigour of some plants indicates changes in physical conditions, so do changes in the species and numbers of animals. The numbers of aquatic insects and molluscs would increase greatly if the Pill and Goosypool were to be managed for their benefit. Whereas the Pill held Flounder (*Platichthys flesus*) in the past the fish population now appears to be restricted to Three-spined Stickleback (*Gasterosteus aculeatus*). Tadpoles and newt larvae now appear in large numbers, especially the former, whereas they were not seen on Northam Burrows until recently, according to local people. The appearance of Mole (*Talpa europa*) indicates a change from saltmarsh to terrestrial grassland conditions and a sufficient number of Earthworms (*Lumbricus* spp.) to support the level of mole activity noted. The presence of large numbers of Rabbit (*Oryctolagus cuniculus*) was observed and the presence of Field Vole (*Microtus agrestis*) and Wood Mouse (*Apodemus sylvaticus*) has been recorded, Fox (*Vulpes vulpes*), Badger (*Meles meles*), Stoat (*Mustela erminea*), Weasle (*Mustela nivalis*) and Mink (*Mustela vison*). Foxes are known to live in the large areas of Sharp Rush (*Juncus acutus*) and Bramble (*Rubus fruticosus*), and whereas stoats and weasels may live on Northam Burrows throughout the year, mink and badgers only hunt over Northam Burrows. The status of the animal population would change and the number of species would increase if the process of natural succession were to continue in the large area of Sharp Rush (*Juncus acutus*) and if the wetland habitats, especially open water, were to be managed in a way more sympathetic to their needs.

The list of bird species visiting or which can be seen from Northam Burrows is long and impressive, but the list has been limited to those species which have been recorded on or over Northam Burrows or in the saltmarsh areas of the Skern for the purposes of this plan. The list of breeding species, including summer migrants, is also wide. Protected Species Birds which are protected under Schedule 1 of the Wildlife and Countryside Act (1981) and which visit Northam Burrows occasionally are Cetti's Warbler (*Cettia cetti*) and Bittern (*Botaurus stellaris*). Common Frog (*Rana temporaria*), Common Toad (*Bufo bufo*), Newts (*Triturus* spp.) and Common Lizard (*Lacerta vivipara*) are afforded partial protection under Schedule 5 of the 1981. Act.

Records of Flora

These records are a composite of those collected over a number of years. Most of the list is reasonably up-to-date although some species, such as those associated with the waste areas created by tipping tend to be ephemeral.

Lichens

On mature dunes, occasionally on golf links:

- ❖ *Cladonia rangiformis*
- ❖ *C. pocillum*
- ❖ *C. furcata*
- ❖ *Toninia coeruleonigricans*
- ❖ *Bacidia muscorum*
- ❖ *Peltigera rufescens*
- ❖ *P. membranacea*
- ❖ *Solenopsora holophaea*
- ❖ *Evernia prunastri*
- ❖ *Physcia tenella*

On fence posts (lignum), often dust-impregnated:

- ❖ *Lecanora expallens*
- ❖ *L. conizaeoides*
- ❖ *L. dispersa*
- ❖ *L. albescens*
- ❖ *Caloplaca holocarpa* *Catillaria chalybeia*
- ❖ *Xanthoria parietina*

On *Crataegus monogyna* (Hawthorn):

- ❖ *Lecanora chlorotera*
- ❖ *L. conizaeoides*
- ❖ *Opegrapha atra*
- ❖ *Arthonia radiata*
- ❖ *Lecidella elaeochroma*
- ❖ *Parmelia sulcata*
- ❖ *Physcia adscendens*
- ❖ *P. aipolia*
- ❖ *P. tenella*

On pebbles:

- ❖ *Rinodina gennarii*
- ❖ *Lecanora dispersa*
- ❖ *Rhizocarpon obscuratum*
- ❖ *Xanthoria parietina*

Bryophyta

- ❖ *Brachythecium albicans*
- ❖ *Brachythecium rutabulum*
- ❖ *Ceratodon purpureus*
- ❖ *Tortula ruraliforme*
- ❖ *Fissidens taxifolius*
- ❖ *Calliergon cuspidatum*
- ❖ *Homalothecium lutescens*

Pteridophyta (Ferns and Horsetails)

- ❖ *Equisetaceae*

- ❖ Equisetum palustre Marsh Horsetail
- ❖ Equisetum variegatum Variegated Horsetail
- ❖ Equisetum arvens Field Horsetail
- ❖ Ophiglossaceae
- ❖ Ophiglossum vulgatum Adder's-tongue

Aspidiaceae

- ❖ Dryopteris filix-mas Male fern
- ❖ Polystichum setiferum Soft Shield-fern

Dicotyledons (Flowering Plants)

Ranunculaceae

- ❖ Clematis vitalba Travellers-joy
- ❖ Ranunculus acris Meadow Buttercup
- ❖ Ranunculus repens Creeping Buttercup
- ❖ Ranunculus bulbosus Bulbous Buttercup
- ❖ Ranunculus flammula Lesser Spearwort
- ❖ Ranunculus scleratus Celery-leaved Buttercup
- ❖ Ranunculus hederaceus Ivy-leaved Crowfoot
- ❖ Ranunculus baudotii Brackish Water-crowfoot
- ❖ Ranunculus ficaria Lesser Celandine

Ceratophyllaceae:

- ❖ Ceratophyllum demersum Rigid Hornwort

Papaveraceae:

- ❖ Papaver rhoeas Common Poppy
- ❖ Glaucium flavum Yellow Horned-poppy

Fumariaceae:

- ❖ Fumaria muralis ssp.boraei Few-flowered Fumitory

Cruciferae

- ❖ Brassica nigra Black Mustard
- ❖ Sinapis arvensis Charlock
- ❖ Diplotaxis muralis Annual Wall-rocket
- ❖ Cakile maritima Sea Rocket
- ❖ Coronopus squamatus Swine-cress
- ❖ Coronopus didymus Lesser Swine-cress
- ❖ Capsella bursa-pastoris Shepherd's-purse
- ❖ Cochlearia officinalis Common Scurvygrass
- ❖ Cochlearia danica Danish Scurvygrass
- ❖ Lobularia maritima Sweet Alison
- ❖ Erophila verna Common Whitlowgrass
- ❖ Erophila verna var. praecox Round-podded Whitlowgrass
- ❖ Cardamine praetensis Cuckooflower
- ❖ Rorippa nasturtium-aquaticum Water-cress
- ❖ Rorippa microphylla x nasturtium-aucatum

- ❖ *Rorippa sylvestris* Creeping Yellow-cress
- ❖ *Matthiola sinuata* Sea Stock
- ❖ *Sisymbrium officinale* Hedge Mustard
- ❖ *Sisymbrium orientale* Eastern Rocket

Violaceae:

- ❖ *Viola canina* Heath Dog-violet
- ❖ *Viola riviniana* Common Dog-violet
- ❖ *Viola tricolor ssp. Curtisii* Dune Pansy

Polygalaceae:

- ❖ *Polygala vulgaris* Common Milkwort
- ❖ *Polygala calcarea* Chalk Milkwort

Hypericaceae:

- ❖ *Hypericum tetrapterum* Square-stalked St John's-wort

Carophyllaceae:

- ❖ *Silene diorica* Red Campion
- ❖ *Cerastium fontanum* Common Mouse-ear
- ❖ *Cerastium diffusum* Sea Mouse-ear
- ❖ *Cerastium semidecandrum* Little Mouse-ear
- ❖ *Cerastium glomeratum* Sticky Mouse-ear
- ❖ *Stellaria media* Common Chickweed
- ❖ *Stellaria pallida* Letter Chickweed
- ❖ *Sagina maritima* Sea Pearlwort
- ❖ *Sagina procumbens* Procumbent Pearlwort
- ❖ *Sagina nodosa* Knotted Pearlwort
- ❖ *Arenaria serpyllifolia* Thyme-leaved Sandwort
- ❖ *Spergularia arvensis* Corn spurrey
- ❖ *Spergularia media* Greater Sea-spurrey
- ❖ *Spergularia marina* Lesser Sea-spurrey
- ❖ *Lychnis flos-cuculi* Ragged-robin

Chenopodiaceae:

- ❖ *Chenopodium album* Fat-hen
- ❖ *Beta vulgaris* Sea Beet
- ❖ *Atriplex prostrata* Spur-leaved Orache
- ❖ *Atriplex glabriuscula* Babington's Orache
- ❖ *Atriplex patula* Common Orache
- ❖ *Halimione portulacoides* Sea Purslane
- ❖ *Suaeda maritima* Annual Seablite
- ❖ *Salsola kali* Prickly Saltwort
- ❖ *Salicornia europaea* Glasswort
- ❖ *Salicornia pusilla* One-flowered Glasswort

Malvaceae:

- ❖ *Malva neglecta* Dwarf Mallow
- ❖ *Malva sylvestris* Common Mallow
- ❖ *Lavatera arborea* Tree Mallow

Linaceae:

- ❖ *Linum bienne* Pale Flax
- ❖ *Linum catharticum* Fairy Flax

Geraniaceae:

- ❖ *Geranium molle* Dove's-foot Crane's-bill
- ❖ *Geranium robertianum* Herb-Robert
- ❖ *Erodium cicutarium* Common Stork's-bill
- ❖ *Erodium cicutarium* ssp. *Dunense* Dun Stork's-bill

Papilionaceae:

- ❖ *Ulex europaeus* Common Gorse
- ❖ *Ononis repens* Common Restharrow
- ❖ *Ononis repens* var *Horrida* Horrida
- ❖ *Medicago lupulina* Black Medick
- ❖ *Medicago arabica* Spotted Medick
- ❖ *Trifolium ornithopodioides* Bird's-foot Clover
- ❖ *Trifolium micranthum* Slender Trefoil
- ❖ *Trifolium dubium* Lesser Trefoil
- ❖ *Trifolium campestre* Hop Trefoil
- ❖ *Trifolium repens* White Clover
- ❖ *Trifolium fragiferum* Strawberry Clover
- ❖ *Trifolium arvense* Hare's-foot Clover
- ❖ *Trifolium scabrum* Rough Clover
- ❖ *Trifolium striatum* Knotted Clover
- ❖ *Trifolium pratense* Red Clover
- ❖ *Trifolium glomeratum* Clustered Clover
- ❖ *Trifolium subterraneum* Subterranean Clover
- ❖ *Lotus corniculatus* Common Bird's-foot-trefoil
- ❖ *Lotus uliginosus* Marsh Bird's-foot Trefoil

Rosaceae:

- ❖ *Rubus fruticosus* agg. Bramble
- ❖ *Potentilla anserina* Silverweed
- ❖ *Potentilla erecta* Tormentil
- ❖ *Potentilla reptans* Creeping Cinquefoil
- ❖ *Fillipendula ulmaria* Meadowsweet
- ❖ *Agrimonia eupatoria* Agrimony
- ❖ *Aphanes arvensis* Parsley-piert
- ❖ *Rosa canina* Dog-rose
- ❖ *Prunus spinosa* Blackthorn
- ❖ *Crataegus monogyna* Hawthorn
- ❖ *Fragaria vesca* Wild Strawberry

Crassulaceae:

- ❖ *Sedum acre* Biting Stonecrop
- ❖ *Sedum album* White Stonecrop

Saxifragaceae:

- ❖ *Saxifraga* Rue-leaved Saxifrage

Lythraceae:

- ❖ *Lythrium salicaria* Purple-loosestrife

Onagraceae:

- ❖ *Epilobium hisutum* Great Willowherb
- ❖ *Epilobium parviflorum* Hoary Willowherb
- ❖ *Epilobium montanum* Broad-leaved Willowherb
- ❖ *Oenothera stricta* (recorded 1947) Fragrant Evening-primrose
- ❖ *Oenothera erythrosepala* Large-flowered Evening-primrose

Haloragaceae:

- ❖ *Myriophyllum aquaticum* Parrot's-feather (introduced 1984, probably in discarded aquarium water)

Callitrichaceae:

- ❖ *Callitriche stagnalis* Common Water-starwort

Araliaceae:

- ❖ *Hedera helix* Ivy

Umbelliferae:

- ❖ *Hydrocotyle vulgaris* Marsh Pennywort
- ❖ *Eryngium maritimum* Sea Holly
- ❖ *Torilis japonica* Upright Hedge-parsley
- ❖ *Torilis nodosa* Knotted Hedge-parsley
- ❖ *Apium graveolens* Wild Celery
- ❖ *Apium nodiflorum* Fool's Water-cress
- ❖ *Crithmum maritimum* Rock Samphire
- ❖ *Oenanthe lachenalii* Parsley Water-dropwort
- ❖ *Oenanthe crocata* Hemlock Water-dropwort
- ❖ *Aethusa cynapium* Fool's Parsley
- ❖ *Angelica sylvestris* Wild Angelica
- ❖ *Heracleum sphondylium* Hogweed
- ❖ *Daucus carota* Wild Carrot

Elaeagnaceae:

- ❖ *Hippophae rhamnoides* Sea Buckthorn (recorded 1973)

Euphorbiaceae:

- ❖ *Euphorbia helioscopia* Sun Spurge
- ❖ *Euphorbia populus* Petty Spurge
- ❖ *Euphorbia paralias* Sea Spurge

Polygonaceae:

- ❖ *Polygonum aviculare* Knotgrass
- ❖ *Polygonum amphibium* Amphibious Bistort
- ❖ *Polygonum persicaria* Redshank
- ❖ *Polygonum hydropiper* Water-pepper
- ❖ *Polygonum convolvulus* Black-bindweed

❖ Rumex crispus	Curled Dock
❖ Rumex obtusifolius	Broad-leaved Dock
❖ Rumex conglomeratus	Sharp Dock
❖ Rumex acetosella	Sheep's Sorrel
Urticaceae:	
❖ Urtica urens	Small Nettle
❖ Urtica dioica	Common Nettle
Betulaceae:	
❖ Alnus glutinosa	Alder
Coryllaceae:	
❖ Corylus avellana	Hazel
Fagaceae:	
❖ Quercus cerris	Turkey Oak
❖ Quercus ilex	Holm Oak
❖ Quercus robur	Pedunculate Oak
Plumbaginaceae:	
❖ Limonium vulgare	Common Sea-lavender
❖ Limonium binervosum	Rock Sea Lavender
❖ Armeria maritima	Thrift
Primulaceae:	
❖ Anagallis tenella	Bog Pimpernel
❖ Anagallis arvensis	Scarlet Pimpernel
❖ Glaux maritima	Sea Milkwort
❖ Samolus valerandi	Brookweed
Oleaceae:	
❖ Ligustrum vulgare	Privet
Gentianaceae:	
❖ Centaurium pulchellum	Slender Centaury
❖ Centaurium erythraea	Common Centaury
❖ Gentianella amerella	Autumn Felwort
Boraginaceae:	
❖ Cynoglossum officinale	Hound's-tongue
❖ Borago officinalis	Borage
❖ Anchusa arvensis	Bugloss
❖ Myosotis laxa	Tufted Water Forget-me-not
❖ Myosotis discolor	Changing Forget-me-not
❖ Echium vulgare	Viper's Bugloss
Convolvulaceae:	
❖ Convolvulus arvensis	Field Bindweed
❖ Calystegia soldanella	Sea Bindweed

Solanaceae:

- ❖ *Hyoscyamus niger* Henbane
- ❖ *Solanum nigrum* Black Nightshade
- ❖ *Solanum dulcamara* Bittersweet

Scrophulariaceae:

- ❖ *Scrophularia auriculata* Water Figwort
- ❖ *Odontites verna* Red Bartsia
- ❖ *Veronica beccabunga* Brooklime
- ❖ *Veronica catenata* Pink Water-speedwell
- ❖ *Veronica chamaedrys* Germander Speedwell
- ❖ *Veronica persica* Common Field-speedwell
- ❖ *Veronica polita* Grey Field-speedwell
- ❖ *Veronica filiformis* Slender Speedwell
- ❖ *Veronica serpyllifolia* Thyme-leaved Speedwell
- ❖ *Euphrasia officinalis* Eyebright
- ❖ *Digitalis purpurea* Foxglove
- ❖ *Verbascum thapsus* Common Mullein

Labiatae:

- ❖ *Mentha arvensis* Corn Mint
- ❖ *Mentha aquatica* Water Mint
- ❖ *Mentha x rotundifolia* False Apple-mint
- ❖ *Thymus praecox* Wild Thyme
- ❖ *Prunella vulgaris* Self-heal
- ❖ *Stachys arvensis* Field Woundwort
- ❖ *Ballota nigra* Black Horehound
- ❖ *Lamium purpureum* Red Deadnettle
- ❖ *Teucrium scordonia* Wood Sage
- ❖ *Teucrium scordium* Water Germander
- ❖ Plantaginaceae
- ❖ *Plantago major* Greater Plantain
- ❖ *Plantago lanceolata* Ribwort Plantain
- ❖ *Plantago maritima* Sea Plantain
- ❖ *Plantago coronopus* Buck's-horn Plantain

Rubiaceae:

- ❖ *Sherardia arvensis* Field Madder
- ❖ *Galium verum* Lady's Bedstraw
- ❖ *Galium palustre* ssp. *palustre* Common Marsh-bedstraw
- ❖ *Galium palustre* ssp. *Elongatum* Common March-bedstraw
- ❖ *Galium aparine* Goosegrass

Caprifoliaceae:

- ❖ *Sambucus nigra* Elder
- ❖ *Lonicera periclymenum* Honeysuckle

Valerianaceae:

- ❖ *Valerianella locusta* Common cornsalad

Dipsacaceae:

- ❖ *Succisa pratensis*

Devil's-bit Scabious

Compositae:

- ❖ *Bidens cernua*
- ❖ *Bidens tripartita*
- ❖ *Senecio erucifolius*
- ❖ *Senecio jacobaea*
- ❖ *Senecio vulgaris*
- ❖ *Pulicaria dysenterica*
- ❖ *Gnaphalium uliginosum*
- ❖ *Aster tripolium*
- ❖ *Bellis perennis*
- ❖ *Anthemis cotula*
- ❖ *Chamaemelum nobile*
- ❖ *Achillea millefolium*
- ❖ *Tripleurospermum maritimum*
- ❖ *Matricaria matricarioides*
- ❖ *Artemisia vulgaris*
- ❖ *Artemisia maritima*
- ❖ *Arctium* sp.
- ❖ *Carduus tenuiflorus*
- ❖ *Carduus nutans*
- ❖ *Cirsium arvense*
- ❖ *Cirsium dissectum*
- ❖ *Cirsium palustre*
- ❖ *Cirsium acaule*
- ❖ *Cirsium vulgare*
- ❖ *Eupatorium cannabinum*
- ❖ *Lapsana communis*
- ❖ *Hypochoris radicata*
- ❖ *Leontodon autumnalis*
- ❖ *Leontodon taraxacoides*
- ❖ *Picris echioides*
- ❖ *Sonchus arvensis*
- ❖ *Sonchus oleraceus*
- ❖ *Hiercium pilosella*
- ❖ *Crepis capillaris*
- ❖ *Taraxacum officinalis*

Nodding Bur-marigold
Trifid Bur-marigold
Hoary Ragwort
Ragwort
Groundsel
Common Fleabane
Marsh Cudweed
Sea Aster
Daisy
Stinking Mayweed
Chamomile
Yarrow
Sea Mayweed
Pineappleweed
Mugwort
Sea Wormwood
Burdock
Slender Thistle
Nodding Thistle
Creeping Thistle
Meadow Thistle
Marsh Thistle
Dwarf Thistle
Spear Thistle
Hemp Agrimony
Nipplewort
Common Cat's-ear
Autumn Hawkbit
Lesser Hawkbit
Bristly Ox-tongue
Perennial Sow-thistle
Smooth Sow-thistle
Mouse-ear Hawkweed
Smooth Hawk's-beard
Common Dandelion

Alismataceae:

- ❖ *Alisma plantago-aquatica*

Water Plantain

Juncaginaceae:

- ❖ *Triglochin palustris*
- ❖ *Triglochin maritima*

March Arrow-grass
Sea Arrow-grass

Potamogetonaceae:

- ❖ *Potamogeton natans*

Broad-leaved Pondweed

Ruppiaceae:	
❖ <i>Ruppia maritima</i>	Beaked Tasselweed
Zanichelliaceae:	
❖ <i>Zannichellia palustris</i>	Horned Pondweed
Juncaceae:	
❖ <i>Juncus gerardii</i>	Saltmarsh Rush
❖ <i>Juncus bufonius</i>	Toad Rush
❖ <i>Juncus inflexus</i>	Hard Rush
❖ <i>Juncus effusus</i>	Soft Rush
❖ <i>Juncus maritimus</i>	Sea Rush
❖ <i>Juncus acutus</i>	Sharp Rush
❖ <i>Juncus articulatus</i>	Jointed Rush
❖ <i>Juncus bulbosus</i>	Bulbous Rush
❖ <i>Luzula</i> sp. Prob. <i>Campestris</i>	Field Wood-rush
Iridaceae:	
❖ <i>Iris pseudacorus</i>	Yellow Iris
Dioscoreaceae:	
❖ <i>Tamus communis</i>	Black Bryony
Orchidaceae:	
❖ <i>Epipactis palustris</i>	Marsh Helleborine
❖ <i>Dactylorhiza praetermissa</i>	Southern Marsh-orchid
❖ <i>Spiranthes spiralis</i>	Autumn Lady's tresses
Araceae:	
❖ <i>Arum maculatum</i>	Lords-and-ladies
Lemnaceae:	
❖ <i>Lemna minor</i>	Common Duckweed
Sparganiaceae:	
❖ <i>Sparganium erectum</i>	Branched Bur-reed
Cyperaceae:	
❖ <i>Eleocharis quinqueflora</i>	Few-flowered Spike-rush
❖ <i>Eleocharis alustris</i>	Common Spike-rush
❖ <i>Scirpus maritimus</i>	Sea Club-rush
❖ <i>Schoenoplectus tabernaemontani</i>	Grey Club-rush
❖ <i>Isolepis cernua</i>	Slender Club-rush
❖ <i>Carex distans</i>	Distant Sedge
❖ <i>Carex serotina</i>	Small-fruited Yellow-sedge
❖ <i>Carex flacca</i>	Glaucous Sedge
❖ <i>Carex nigra</i>	Common Sedge
❖ <i>Carex otrubae</i>	False Fox-sedge

- | | |
|----------------------------|--------------|
| ❖ <i>Carex arenaria</i> | Sand Sedge |
| ❖ <i>Carex divulsa</i> | Grey Sedge |
| ❖ <i>Carex caryophylla</i> | Spring Sedge |

Gramineae:

- | | |
|--|--------------------------|
| ❖ <i>Phragmites australis</i> | Common Reed |
| ❖ <i>Glyceria fluitans</i> | Floating Sweet-grass |
| ❖ <i>Glyceria declinata</i> | Small Sweet-grass |
| ❖ <i>Catabrosa aquatica</i> | Water Whorl-grass |
| ❖ <i>Festuca rubra</i> | Red-Fescue |
| ❖ <i>Lolium perenne</i> | Perennial Rye-grass |
| ❖ <i>Vulpia fasciculata</i> | Dune Fescue |
| ❖ <i>Vulpia bromoides</i> | Squirreltail Fescue |
| ❖ <i>Puccinellia maritima</i> | Common Saltmarsh-grass |
| ❖ <i>Puccinellia distans</i> | Reflexed Saltmarsh-grass |
| ❖ <i>Catapodium rigidum</i> | Fern-grass |
| ❖ <i>Catapodium marinum</i> | Sea Fern-grass |
| ❖ <i>Poa Pratensis</i> | Smooth Meadow-grass |
| ❖ <i>Poa subcaerulea</i> | Spreading Meadow-grass |
| ❖ <i>Poa annua</i> | Annual Meadow-grass |
| ❖ <i>Dactylis glomerata</i> | Cock's-foot |
| ❖ <i>Cynosurus cristatus</i> | Crested Dog's-tail |
| ❖ <i>Bromus mollis</i> | Soft Brome |
| ❖ <i>Brachypodium sylvaticum</i> | False Brome |
| ❖ <i>Elytrigia atherica</i> | Sea Couch |
| ❖ <i>Elytrigia juncea</i> ssp. <i>Boreoatlantica</i> | Sand Couch |
| ❖ <i>Aira praecox</i> | Early Hair-grass |
| ❖ <i>Hordium murinum</i> | Wall barley |
| ❖ <i>Arrhenatherum elatius</i> | False Oat-grass |
| ❖ <i>Holcus lanatus</i> | Yorkshire-fog |
| ❖ <i>Ammophila arenaria</i> | Marram Grass |
| ❖ <i>Agrostis stolonifera</i> | Creeping Bent |
| ❖ <i>Phleum arenarium</i> | Sand Cat's-tail |
| ❖ <i>Phleum pratense</i> ssp. <i>Pratense</i> | Timothy Grass |
| ❖ <i>Alopecurus geniculatus</i> | Marsh Foxtail |
| ❖ <i>Phalaris canariensis</i> | Canary-grass |
| ❖ <i>Parapholis strigosa</i> | Hard-grass |
| ❖ <i>Spartina townsendii</i> | Cord-grass |
| ❖ <i>Panicum miliaceum</i> | Common Millet |
| ❖ <i>Cynodon dactylon</i> | Bermuda-grass |

Records of Fauna

The lists are far from complete since survey work was carried out in early June 1991. The weather was cold and windy and had been for some weeks. For this reason, insects and other invertebrates were poorly represented. Records must therefore rely on observations and identifications made in previous years.

Some Phyla, Classes and Orders are hardly represented, due to lack of interest or expertise, but, not surprisingly Lepidoptera, Coleoptera, and Arachnida have been listed in a comprehensive way, due to the interests of local naturalists. Odonata,

Hemiptera, Diptera, Hymenoptera, Chilopoda and Diplopoda have only been recorded very sketchily, or not at all. Likewise, records for Trematodes, Nematodes, Cestodes and Annelids do not exist. Records for Amphipods and Decapods are very basic, but Isopods have been studied in some detail.

More Mollusc species live on Northam Burrows than have been recorded. The species of fish found in the Pill and pools within Northam Burrows show a change over the years from marine to brackish/freshwater species. Several Amphibia have been recorded, but apparently only one Reptile species, and this is confirmed by the recent survey. Toads and their tadpoles are now common in the Pill and ditches, whereas they would have been unlikely to have been found when the high tides were able to flood the wet pasture of the inner Burrows. Records of birds are very comprehensive, but, for the purposes of this plan, only those species likely to be recorded on Northam Burrows or in the Skern have been listed. Mammal records are rather rudimentary and it is certain that a greater number of mammals live on, or hunt over Northam Burrows than have been listed.

Trematoda, Nematoda, Cestoda

A number of parasites as well as free living flukes, round worms and tapeworms will be present. Sheep, horses and dogs act as hosts.

Annelida (Worms)

The presence of moles indicates an earthworm population and Tubifex spp. Were noted in parts of the Pill. Leeches have been recorded.

Crusacea (Isopoda) Woodlice

Ligiidae:

- ❖ *Ligia oceanca* Sea Slater

Halophilosciidae:

- ❖ *Halophiloscia couchi*

Philosciidae:

- ❖ *Philoscia muscorum*

Platyarthridae:

- ❖ *Platyarthrus hoffmannseggi*

Armadilidiidae:

- ❖ *Armadillidium vulgare*
- ❖ *Armadillidium album*

Porcellionidae:

- ❖ *Porcellio scaber*

Crustacea (Amphipoda):

- ❖ *Orchestia gammarella* Sandhoppers
- ❖ *Talitrus saltator* Sandhoppers

Crustacea (Decapoda):

- ❖ *Carcinus maenas* Shore Crab

Insecta (Odonata) (Dragonflies):

- ❖ *Ischnura elegans* Blue tailed Damselfly

Insecta (Hemiptera) (Bugs):

- ❖ *Arenocoris falleni* Squash Bug
- ❖ *Notonecta glauca* Common Backswimmer
- ❖ *Gerris lacustris* Pond Skater

Lepidoptera (Butterflies and Moths):

Hesperiidae:

- ❖ *Pyrgus lalvae* Grizzled Skipper
- ❖ *Erynnis tages* Dingy Skipper

Pieridae:

- ❖ *Pieris brassicae* Large White
- ❖ *Artogeia rapae* Small White
- ❖ *Artogeia napi* Green-veined White`
- ❖ *Colias hyale* Pale Clouded Yellow

Nymphalidae:

- ❖ *Aglais urticae* Small Tortoiseshell
- ❖ *Polygonia c-album* Comma
- ❖ *Cynthia cardui* Painted Lady
- ❖ *Vanessa atalanta* Red Admiral
- ❖ *Inachis io* Peacock
- ❖ *Mesoacidalia aglaja* Dark Green Fritillary

Satyridae:

- ❖ *Hipparchia semele* Grayling
- ❖ *Maniola jurtina* Meadow Brown
- ❖ *Aphantopus hyperanthus* Ringlet
- ❖ *Coenonympha pamphilus* Small Heath
- ❖ *Pararge aegeria* Speckled Wood
- ❖ *Lastiommatra megera* Wall Brown

Lycaenidae:

- ❖ *Lycaena phlaeas* Small Copper
- ❖ *Celastrina argiolus* Holly Blue
- ❖ *Aricia agestis* Brown Argus
- ❖ *Polyommatus icarus* Common Blue

Lymantriidae:

- ❖ *Euproctis similis* Yellow Tail

Lasiocampidae:

- ❖ *Malacosoma neustria* Lackey

❖ <i>Lasiocampa quercus</i>	Oak Eggar
❖ <i>Philudoria potatoria</i>	Drinker
Saturnidae:	
❖ <i>Saturnia pavonia</i>	Emperor
Sphingidae:	
❖ <i>Macroglossum stellatarum</i>	Humming-bird Hawk moth
❖ <i>Deilephia elpenor</i>	Elephant Hawk moth
❖ <i>Deilephila porcellus</i>	Small Elephant Hawk moth
Zgaenidae:	
❖ <i>Zygaena filipendula stephensi</i>	Six-spot Burnet
Geometridae:	
❖ <i>Hemithea aestivaria</i>	Common Emerald
❖ <i>Epirrhoe galita</i>	Galium Carpet
❖ <i>Camptogramma bilineata</i>	Yellow Shell
❖ <i>Eulithis pyraliata</i>	Barred Straw
❖ <i>Eupithecia centaureata</i>	Lim-speck Pug
❖ <i>Crocallis eliguaria</i>	Scalloped Oak
Arctiidae:	
❖ <i>Eilema complana</i>	Scarce Footman
❖ <i>Eilema lurideola</i>	Common Footman
❖ <i>Artica caja</i>	Garden Tiger
❖ <i>Artica villica britannica</i>	Cream-spot Tiger
❖ <i>Tyria jacobaeae</i>	Cinnabar
Noctuidae:	
❖ <i>Euxoa nigricans</i>	Garden Dart
❖ <i>Agrotis vestigialis</i>	Archer's Dart
❖ <i>Agrotis clavis</i>	Heart and Club
❖ <i>Agrotis exclamationis</i>	Heart and Dart
❖ <i>Agrotis puta</i>	Shuttle-shaped Dart
❖ <i>Achropleura praecox</i>	Portland Moth
❖ <i>Noctua pronuba</i>	Large Yellow Underwing
❖ <i>Xestia xanthographa</i>	Square-spot Rustic
❖ <i>Lacanobia oleracea</i>	Bright Line brown-eye
❖ <i>Mythimna impura impura</i>	Smokey Wainscot
❖ <i>Apamea monoglypha</i>	Dark Arches
❖ <i>Euxoa obelisca grisea</i>	Square-spot Dart
❖ <i>Autographa gamma</i>	Silver Y
Pyralidae:	
❖ <i>Pyralis farinalis</i>	Meal Moth
Pterophoridae:	
❖ <i>Pterophorus pentadactyle</i>	White Plume Moth

Hymenoptera (Wasps and Ants)

Formicidae (Ants):

- ❖ *Myrmica ruginodis*
- ❖ *Myrmica scabrinodis*
- ❖ *Lasius flavus*
- ❖ *Lasius alienus*
- ❖ *Lasius niger*

Coleoptera (Beetles);

Staphylinidae:

- ❖ *Tachyporus nitidulus*
- ❖ *Tachyporus hypnorum*
- ❖ *Tachyporus pusillus*
- ❖ *Tachyporus chrysomelinus*

Curculionidae:

- ❖ *Apion onopordi*
- ❖ *Philopodon plagiatus*
- ❖ *Sitona griseus*
- ❖ *Sitona flavescens*
- ❖ *Sitona hispidulus*
- ❖ *Brachysomas echinatus*
- ❖ *Otiorhynchus ligneus*
- ❖ *Ceuthorrhynchidius troglodytes*

Scarabaeidae:

- ❖ *Onthophagus fracticornis*

Anthicidae:

- ❖ *Anthicus flralis*

Tenebrionidae:

- ❖ *Melanimon tibialis*
- ❖ *Phylan gibbus*
- ❖ *Phaleria cadaverina*

Carabidae:

Pterostichus vernalis

- ❖ *Amara plegeja*
- ❖ *Amara tibialis*
- ❖ *Amara aulica*
- ❖ *Amara aena*
- ❖ *Harpalus rufipes*
- ❖ *Harpalus aeneus*
- ❖ *Notiophilus substriatus*
- ❖ *Clivina fossor*
- ❖ *Broscus cephalotes*
- ❖ *Trechus quadristriatus*

Coccinellidae:

- ❖ *Coccinella septempunctata*
- ❖ *Coccinella undecimpunctata*

Nitidulidae:

- ❖ *Omosita discoidea*

Anisotomidae:

- ❖ *Liodes calcarata* *Liodes furva*
Araena (Spiders)

Aranea (Spiders)

Dictynidae:

- ❖ *Argenna subnigra*

Arachnida (Spiders and Harvestmen)

Gnaphosidae:

- ❖ *Zelotes pusillus*
- ❖ *Zelotes electus*

Clubionidae:

- ❖ *Clubiona stagnatalis*
- ❖ *Clubiona compta*

Zoridae:

- ❖ *Aora spinimana*

Thomisidae:

- ❖ *Xysticus cristatus*
- ❖ *Xysticus kochi*
- ❖ *Oxyptila simplex*

- ❖ Trechus obtusus
- ❖ Calathus fuscipes
- ❖ Calathus melanocephalus
- ❖ Calathus mollis
- ❖ Bembidion properans
- ❖ Bembidion articulatum
- ❖ Bembidion lunatum
- ❖ Platyderus ruficollis
- ❖ Agonum dorsale
- ❖ Agonum marginatus
- ❖ Agonum muelleri
- ❖ Metabletus truncatellus
- ❖ Metabletus foveatus

Chrysomelidae:

- ❖ Oulema melanopa
- ❖ Chaetocnema connicina

Elatridae

- ❖ Adrastus nitidulus
- ❖ Lathridiidae
- ❖ Corticaria pubscens

Theridiidae:

- ❖ Episinus angulatus
- ❖ Theridion bimaculatum

Tetragnathidae:

- ❖ Pachygnatha clercki
- ❖ Pachygnatha degeeri

Araneidae:

- ❖ Araneus diadematus
- ❖ Araneus adiantus

Linyphiidae:

- ❖ Ceratinella brevipes
- ❖ Ceratinella brevis
- ❖ Ceratinella scabrosa
- ❖ Walckenaera antica
- ❖ Walckenaera unicornis
- ❖ Dicymbiumnigrum
- ❖ Pocadicnemis pumilla
- ❖ Oedothorax fuscus
- ❖ Oedothorax retusus
- ❖ Ceratinopsis romana
- ❖ Tiso vagans
- ❖ Monocephalus fuscipes
- ❖ Gongylidiellumvivum
- ❖ Savignya frontata

- ❖ Tibellus maritimus

Salticidae:

- ❖ Heliophanus flavipes
- ❖ Euophrys aequipes
- ❖ Attulus saltator

Lycosidae:

- ❖ Paradosa agricola var. arenicola
- ❖ Paradosa pullata
- ❖ Paradosa prativaga
- ❖ Paradosa nigriceps
- ❖ Paradosa proxima
- ❖ Xerolycosa miniata
- ❖ Alopecosa pulverulenta
- ❖ Trochosa ruricola
- ❖ Trochosa terricola
- ❖ Arctosa perita
- ❖ Arctosa leopardus
- ❖ Pirata latitans

Pisauridae:

- ❖ Pisaura mirabilis

- ❖ *Erigone dentipalpis*
- ❖ *Erigone atra*
- ❖ *Oreonetides abnormis*
- ❖ *Bathyphantes gracilis*
- ❖ *Lepthyphantes tenuis*
- ❖ *Lepthyphantes cristatus*

Opilionidae (Harvestmen):

- ❖ *Nemastoma bimaculatum*
- ❖ *Rilaena triangularis*

Mollusca:

Gastropoda (Snails):

- ❖ *Helix aspersa* Garden Snail
- ❖ *Cepaea nemoralis* Banded Snail

Pisces (Fishes):

- ❖ *Pleuronectidae*
- ❖ *Platichthys flesus* Flounder
- ❖ *Mugillidae Mugil sp.* Grey Mullet

Gasteroteidae:

- ❖ *Gasterosteus aculeatus* Three-spined Stickleback

Amphibia (Amphibians):

Bufonidae:

- ❖ *Bufo bufo* Common Toad

Salamandridae:

- ❖ *Triturus sp.* Newt larvae

Ranidae:

- ❖ *Rana temporaria* Common Frog

Reptillia (Reptiles):

Lacertidae:

- ❖ *Lacerta vivipara* Common Lizard

Aves (Birds)

(Those found on Northam Burrows and the Skern are listed)

Podicipitidae:

- ❖ *Tachybaptus ruficollis* Little Grebe

Ardeidae:

- ❖ *Ardea cinerea* Heron
- ❖ *Botaurus stellaris* Bittern

Anatidae:

- ❖ *Cygnus olor* Mute Swan
- ❖ *Cygnus cygnus* Whooper Swan
- ❖ *Anser albifrons* White-Fronted Goose
- ❖ *Branta bernicla* Brent Goose
- ❖ *Branta leucopsis* Barnicle Goose
- ❖ *Branta canadensis* Canada Goose
- ❖ *Tadorna tadorna* Shelduck
- ❖ *Anas platyrhynchos* Mallard
- ❖ *Anas penelope* Wigeon
- ❖ *Anas crecca* Teal
- ❖ *Anas querquedula* Garganey
- ❖ *Anas acuta* Pintail
- ❖ *Anas clypeata* Shoveler
- ❖ *Aythya fuligula* Tufted Duck
- ❖ *Aythya marila* Scaup
- ❖ *Aythya ferina* Pochard
- ❖ *Melanitta nigra* Common Scoter
- ❖ *Bucephala clangula* Goldeneye
- ❖ *Mergus merganser* Goosander
- ❖ *Mergus serrator* Red-breasted Merganser
- ❖ *Mergus albellus* Smew

Accipitridae:

- ❖ *Pandion haliaetus* Osprey
- ❖ *Accipiter nisus* Sparrowhawk
- ❖ *Buteo buteo* Buzzard
- ❖ *Circus aeruginosus* Marsh Harrier
- ❖ *Falco peregrinus* Peregrine
- ❖ *Falco columbarus* Merlin
- ❖ *Falco tinnunculus* Kestrel

Phasianidae:

- ❖ *Phasianus colchicus* Pheasant

Rallidae:

- ❖ *Rallus aquaticus* Water Rail
- ❖ *Gallinula chloropus* Moorhen
- ❖ *Fulica atra* Coot

Haematopodidae:

- ❖ *Haematopus ostralegus* Oystercatcher

Recurvirostridae:

- ❖ *Recurvirostra avosetta* Avocet

Charadriidae:

- ❖ *Charadrius hiaticula* Ringed Plover
- ❖ *Charadrius dubius* Little Ringed Plover

- ❖ *Pluvialis apricaria* Golden Plover
- ❖ *Pluvialis squatarola* Grey Plover
- ❖ *Eudromias morinellus* Dotterel
- ❖ *Arenaria interpres* Turnstone
- ❖ *Vanellus vanellus* Lapwing

Scolopacidae:

- ❖ *Actitis hypoleucos* Common Sandpiper
- ❖ *Calidris ferruginea* Curlew Sandpiper
- ❖ *Calidris alpina* Dunlin
- ❖ *Calidris minuta* Little Stint
- ❖ *Calidris canutus* Knot
- ❖ *Calidris alba* Sanderling
- ❖ *Calidris matitima* Purple Sandpiper
- ❖ *Tringa totanus* Redshank
- ❖ *Tringa erythropus* Spotted Redshank
- ❖ *Tringa nebular* Greenshank
- ❖ *Tringa glareola* Wood Sandpiper
- ❖ *Tringa ochropus* Green Sandpiper
- ❖ *Philomachus pugnax* Ruff
- ❖ *Numenius arquata* Curlew
- ❖ *Numenius phaeopus* Whimbrel
- ❖ *Limosa limosa* Black-tailed Godwit
- ❖ *Limosa lapponica* Bar-tailed Godwit
- ❖ *Lymnocyptes mimimus* Jack snipe
- ❖ *Gallinago gallinago* Snipe

Phalaropidae:

- ❖ *Phalaropus fulicarius* Grey Phalarope
- ❖ *Phalaropus lobatus* Red-necked Phalarope

Laridae:

- ❖ *Larus ribidundus* Black-headed Gull
- ❖ *Larus minutus* Little Gull
- ❖ *Larus argentatus* Herring Gull
- ❖ *Larus fuscus* Lesser Black-backed gull
- ❖ *Larus marinus* Greater Black-backed gull
- ❖ *Larus hyperboreus* Laccus Gull
- ❖ *Larus glaucooides* Iceland Gull
- ❖ *Larus canus* Common Gull

Sterninae:

- ❖ *Sterna sandvicensis* Sandwich Tern
- ❖ *Sterna hiundo* Common tern
- ❖ *Sterna paradisaea* Arctic Tern
- ❖ *Sterna albifrons* Little Tern
- ❖ *Childonias niger* Black Tern

Columbidae:

- ❖ *Columba oenas* Stock Dove

❖ <i>Columba palumbus</i>	Wood Pigeon
❖ <i>Streptopelia decaocto</i>	Collared Dove
❖ <i>Streptopelia turtur</i>	Turtle Dove
Cuculidae:	
❖ <i>Cuculus canorus</i>	Cuckoo
Tytonidae:	
❖ <i>Tyto alba</i>	Barn Owl
Strigidae:	
❖ <i>Asio flammeus</i>	Short-eared Owl
❖ <i>Strix aluco</i>	Tawny Owl
Apogidae:	
❖ <i>Apus apus</i>	Swift
Alcedinidae:	
❖ <i>Alcedo atthis</i>	Kingfisher
❖ <i>Upupa epops</i>	Hoopoe
Picidae:	
❖ <i>Picus viridis</i>	Green Woodpecker
❖ <i>Dendrocopos major</i>	Great Spotted Woodpecker
❖ <i>Jynx torquilla</i>	Wryneck
Aludidae	
❖ <i>Eremophila alpestris</i>	Shorelark
❖ <i>Alauda arvensis</i>	Skylark
Hirundinae:	
❖ <i>Hirundo rustica</i>	Swallow
❖ <i>Riparia riparia</i>	Sand Martin
❖ <i>Delichon urbica</i>	House Martin
Motacillidae:	
❖ <i>Anthus pratensis</i>	Meadow Pipit
❖ <i>Anthus spinoletta</i>	Water Pipit/Rock Pipit
❖ <i>Motacilla alba</i>	Pied Wagtail/White Wagtail
❖ <i>Motacilla cinerea</i>	Grey Wagtail
❖ <i>Motacilla flava</i>	Yellow Wagtail/Blue-headed Wagtail
❖ <i>Prunellidae</i>	
❖ <i>Prunella modularis</i>	Dunnock
Sylviidae:	
❖ <i>Locustella naevia</i>	Grasshopper Warbler
❖ <i>Acrocephalus scirpaceus</i>	Reed Warbler
❖ <i>Acrocephalus schoenobaenus</i>	Sedge Warbler
❖ <i>Cetti cetti</i>	Cetti's Warbler
❖ <i>Sylvia communis</i>	Whitethroat

❖ <i>Phylloscopus trochilus</i>	Willow Warbler
❖ <i>Phylloscopus collybita</i>	Chiffchaff
Turdidae:	
❖ <i>Saxicola torquata</i>	Stonechat
❖ <i>Saxicola rubetra</i>	Whinchat
❖ <i>Oenanthe oenanthe</i>	Wheatear
❖ <i>Phoenicurus ochruros</i>	Black Redstart
❖ <i>Erithacus rubecula</i>	Robin
❖ <i>Turdus merula</i>	Blackbird
❖ <i>Turdus pilaris</i>	Fieldfare
❖ <i>Turdus iliacus</i>	Redwing
❖ <i>Turdus philomelos</i>	Song Thrush
Paridae:	
❖ <i>Parus major</i>	Great Tit
❖ <i>Parus caeruleus</i>	Blue Tit
Sitidae:	
❖ <i>Troglodytes troglodytes</i>	Wren
Emberixidae:	
❖ <i>Emberiza schoeniclus</i>	Reed Bunting
❖ <i>Plectophenax nivalis</i>	Snow Bunting
❖ <i>Calcarius lapponicus</i>	Lapland Bunting
❖ <i>Emberiza cirrus</i>	Girl Bunting
Fringillidae:	
❖ <i>Fringilla coelebs</i>	Chaffinch
❖ <i>Carduelis carduelis</i>	Goldfinch
❖ <i>Carduelis chloris</i>	Greenfinch
❖ <i>Acanthis cannabina</i>	Linnet
Ploceidae:	
❖ <i>Passer domesticus</i>	House Sparrow
❖ <i>Passer montanus</i>	Tree Sparrow
Sturnidae:	
❖ <i>Sturnus vulgaris</i>	Starling
Corvidae:	
❖ <i>Pica pica</i>	Magpie
❖ <i>Corvus corax</i>	Raven
❖ <i>Corvus frugilegus</i>	Rook
❖ <i>Corvus corone</i>	Carrion Crow
❖ <i>Corvus monedula</i>	Jackdaw

Mammalia (Mammals)

Erinaceidae:

- ❖ *Erinaceus eurpaeus* Hedgehog

Talpidae:

- ❖ *Talpa europaea* Mole

Soricidae:

- ❖ *Sorex araneus* Common Shrew
- ❖ *Sorex minutus* Pygmy Shrew
- ❖ *Neomys fodiens* Water Shrew

Vespertilionidae:

- ❖ *Pipistrellus pipistrellus* Pipistrelle bat
- ❖ *Myotis daubentoni* Daubenton's Bat

Leporidae:

- ❖ *Oryctolagus cuniculus* Rabbit
- ❖ *Lepus capensis* Hare

Microtinae:

- ❖ *Clethrionomys glareolus* Bank Vole
- ❖ *Microtus agrestis* Field Vole

Muridae:

- ❖ *Apodemus sylvaticus* Wood Mouse
- ❖ *Rattus norvegicus* Common Rat

Canidae:

- ❖ *Vulpes vulpes* Fox

Mustelidae:

- ❖ *Mustela erminea* Stoat
- ❖ *Mustela nivalis* Weasel
- ❖ *Mustela furo* Ferret
- ❖ *Mustela vison* Mink
- ❖ *Meles meles* Badger

Phocidae:

- ❖ *Halichoerus grypus* Grey Seal

Cervidae:

- ❖ *Capreolus capreolus* Roe Deer

Appendix 2

Rights of Common and Grazing

The Northam Town Council, as Trustees of the Common Grazing Rights, are charged with ensuring that these Rights are exercised in a reasonable and responsible manner and for allocating individual headage quotas. The Town Council impose a series of conditions to regulate grazing on all those successful in their application to keep stock on Northam Burrows.

As a means of safeguarding the long-term interests of those holding Common grazing rights, it is essential that the regulations are enforced and that the levels of grazing do not exceed those set by the Commons Commissioner in his decision of 21st November 1977. That is 'The right of the inhabitants of the ancient parish of Northam to graze 1200 sheep and 100 horses over the whole of the land comprised in the register unit.'

Activities that may be to the detriment of Northam Burrows and are considered to be outside Commonable Practice will not be permitted. These activities are to include the following:

1. The grazing of any of stock that are in excess of the numbers set by the Commons Commissioner in his decision of 21st November 1977.
2. The keeping of followers on Northam Burrows at times outside that period determined by the Trustees of the Grazing as being conducive to good agricultural practice.
3. The keeping of numbers of stock at such a level or in such a manner that may result in a deterioration of the condition and health and nature conservation value of the turf.
4. The supplementary feeding of stock other than that permitted by the Trustees of the Grazing as a matter of custom.

In addition, the following are relevant to the keeping of stock on Northam Burrows:

5. Provision is made within the Enclosure Act (1773), for the keeping of rams on commons. This legislation is available, should circumstances warrant it.
6. Should any animal constitute a menace to the public, the District Council's staff will take any reasonable action to restrain or remove it.
7. Should it be shown that the level of grazing is lower than that which is necessary to maintain a healthy and botanically diverse grassland, then the means will be sought to establish an appropriate level, in co-operation with the Trustees.
8. Supplementary feeding of animals requires the consent of English Nature under the provisions of the legislation for Sites of Special Scientific Interest.

Appendix 3

Conditions for the Allocation of Grazing (as determined by Northam Town Council).

1. QUALIFICATION: Qualification is restricted to one member of the household resident in the Ancient Manor of Northam whose name appears on the current Register of electors. For the avoidance of doubt, persons sharing the same address but with differing surname shall be construed as members of the same household.
2. Applicants shall register their mark with the Town Council and shall maintain clear and legible marks on their stock AT ALL TIMES. In the case of horses where animals are freeze branded the mark must be described on the application together with the description. In all other cases, unless previously registered, the application must be accompanied by two photographs of the animal(s) sufficiently detailed to allow for ease of identification, in addition to the written description.
3. Applicants shall provide proof of ownership of stock to the Town Council on demand, the acceptance or otherwise of such proofing being at the sole discretion of the Town Council.
4. New applicants shall, if necessary, be put on a waiting list, and when an allocation can be made shall be subject to a probationary period of one year or longer if deemed necessary, during which time adherence to these rules, stockmanship, and general conduct on Northam Burrows will be considered by the Town Council.
5. Applicants shall be subject to permitted numbers of stock as shall be decided annually by the Town Council.
6. All rams shall be removed from Northam Burrows on or before 1st August and shall not be returned before 7th October. No followers shall be placed on the Common on or before 10th April and shall be removed by 31st July. For the purposes of this clause followers shall be construed as lambs. No entire horses shall be put onto Northam Burrows at any time.
7. No weaned foals shall be put on Northam Burrows at any time without supplementary feeding. Supplementary feeding of stock is permissible subject to the following:

All feeds are to be fed directly to stock. All feeds, receptacles and baler cord are not to remain on Northam Burrows at such times as the owner of the stock is not in attendance. Particular care is to be made in the removal of all hay, so as to avoid the introduction of undesirable weed species. The feeding of silage is not permitted due to the risk of seepage of silage liquor. Graziers are asked not to place feed in close proximity to the access gate.
8. All stock are subject to immediate removal from Northam Burrows by the owners on the giving of formal notice in writing by the Town Council whenever at their sole discretion it is considered that any stock
 - a) Constitutes any danger whatsoever

- b) Could be injurious to public health
 - c) Could be detrimental to the well being of other livestock
 - d) Any other reason deemed to be in the best interest of Northam Burrows or its stock. Such notice shall be sent by first-class post and receipt therefore shall be deemed to have taken place twenty-four hours thereafter .Non-compliance therewith shall make it lawful for the Town Council to remove and otherwise deal with such stock as deemed necessary or expedient at their sole discretion and at the sole cost to the owner of such stock.
9. The vehicle pass issued to graziers is given to enable a vehicle to be taken onto Northam Burrows for the purpose of attending animals only. It may not be used in substitution for a Manor Pass or vice versa. It is an offence for graziers to drive a vehicle off the established roads and onto the Common for any purpose other than to remove sick or injured animals and the carting of supplementary feed. The Town Council reserves the right to prosecute and/or withdraw the grazing allocations from persons in breach of this requirement.
10. Applicants hereby agree to comply at all times with regulations, instructions or other requirements by the Town Council, MAFF or other relevant Authority.

Issued on the Authority of the Town Council as Trustees of the Grazing.

Appendix 4

The Royal North Devon Golf Club

The District Council recognises that the Club is an important economic asset for the area and has strong historic ties with Northam Burrows. As golf is to continue to be played on Northam Burrows (and in harmony with other interests) an agreement that determines the obligations and responsibilities of all concerned will have been put in place. This will ensure that the traditional links character of the course is not lost.

The District Council also recognises that Northam Golf Club play golf on Northam Burrows over the course established and maintained by the Royal North Devon Golf Club. This is governed by an agreement between the two Clubs and it is envisaged by them that this will continue.

Given its historic ties with Northam Burrows through the Royal North Devon Golf Club, the playing of golf should continue, but if for any reason, in the future the Club ceases to play golf on the course it is proposed that this practice should be reviewed.

The District Council recommends that a sustainable level of use is determined, by agreement, to ensure the long term well being of the area. To ascertain the number of rounds that are played on the course, an enumeration scheme should be introduced, through negotiation with the Club, and to be supplemented by further survey of the condition and floral diversity of the turf.

Adjustment can then be made to the scheme of play, should this prove necessary.

In addition to the enumeration system a schedule of management practices and responsibilities for the Golf Course has been agreed between both parties.

The schedule of management practices and responsibilities, which will include a detailed analysis of certain of them, will be contained, where appropriate, in any negotiated agreement.

The parameters of management are:

1. The daily management of the golf course is to be the responsibility of the Royal North Devon Golf Club. This is to fall within the bounds of the practices set out below.
2. Where matters of turf management require discussion between the Club, representatives of those holding Rights of Common, those with a statutory duty towards the Site of Special Scientific Interest and the District Council, this will be undertaken within the Turf Management Group (See Appendix 12).
3. Should occasion arise, where circumstances are such that there has been or is likely to be significant deterioration in the condition of the turf including its natural floral diversity, then the District Council will retain the power, under any tenancy agreement that may exist between the District Council and the Club, to take any necessary action to rectify or prevent that deterioration, this may include the closure of the course on a temporary basis.

4. Agreed maintenance tracks only are to be used. Use of these will be restricted to agreed vehicles and machines. Any other use must be authorised, in advance by an officer of the District Council. All other tracks will be closed and damage to the original turf, agreed as being caused by the Clubs activities (or those authorised by them), repaired by themselves. The method of reinstatement is to be agreed with Torridge District Council.
5. The taking of sand, turf and any other material from any part of the site is prohibited, except by prior agreement with the District Council.
6. The repair of damage caused by golf and related activities, to dunes and other areas of turf will be undertaken by the Club and to the satisfaction of the District Council's staff.
7. A list of pesticides/herbicides and fertilisers, which are only to be used on greens and tees, is to be submitted for prior approval by the District Council and consultation with Natural England. Maintenance of the apron is to be restricted to cutting only. The management of fairways is to be subject to agreement with both Torridge District Council and Northam Town Council and will then be submitted for approval by Natural England.

All agreed management is then to be included in the annual work programme. This will be with the exception of those activities deemed to be of a more frequent nature (eg the use of the chain harrow) where they will be referred, in the first instance, to the Turf Management Group when required.

8. The Club is to have due regard to the playing of golf during adverse conditions, which will include heavy rain, frost or very dry periods.
9. The Royal North Devon Golf Club will be invited to send a representative to the Turf Management Group and the Northam Burrows Advisory committee.
10. The area licensed, the maximum size of greens with their associated aprons and the practice area to be agreed, and accurately defined. This will be achieved with the use of ground markers (of an unobtrusive, stud design, at ground level) from which accurate measurements can be made. The fencing of areas, to prevent damage by horses, is to be restricted to the greens and aprons and is to be of a type agreed by both Torridge District Council and Northam Town Council.
11. With the reinstatement of Goosypool, the use of the practice area would be disruptive to wildlife if ever used intensively. The use of the area is to be monitored and maintained at an appropriate level as determined by Torridge District Council following discussion with the Royal North Devon Golf Club.
12. It is considered appropriate to display information explaining the Rights of Common in the Club House in a form that is readily noticeable to visitors, and include them on the score card. Information as to the extent of the golf course is to be made readily available to those visiting Northam Burrows.
13. Material changes to the existing course are only to be made by prior agreement with

both the District Council and Northam Town Council.

14. Means for the humane control of rabbits are to be introduced (with due regard to public safety).
15. The condition of the North Devon Coast Path alongside greens is to be maintained to a suitable standard. These works are to be included in any programme agreed between both parties.
16. Any possible interference with the playing of golf by the irresponsible use of the are by large organised groups is to be alleviated by the introduction of a Code of Practice for such groups.
17. An annual work programme is to be submitted to Torridge District Council, for approval in advance of any work.
18. A five year plan of works is to be agreed between Torridge District Council and the Golf Club on matters concerning the licensed area. This is to include damage caused to the licensed area by either party.
19. The Rules of Golf will apply to balls inadvertently struck outside the licensed area.
20. The numbers of rounds of golf played is to be at a level that can be sustained in the long term. The use of the course must reflect the multiple use to which Northam Burrows is put. Following the establishment of the number of rounds played, the condition of the course and the floristic diversity of the turf will be assessed and the number of rounds adjusted accordingly. In the first instance this is not to exceed 35,000 rounds per annum.
21. The number of individual rounds of golf played are to be assessed by the introduction of an enumeration scheme, such that:
 - a) All those playing the course will be required, by the Club, to enter their name on a starting sheet. This information will then be available to Torridge District Council;
 - b) These figures may be verified, if required, by independent studies undertaken by Torridge District Council;
22. The definition of a round, for the purposes of this exercise, is to be: the playing of a single ball, around the recognised course or part thereof, by a member of or a visitor to the Club.

Appendix 5

Code of Practice for Organised Groups

1. All visiting groups will be required to adhere to this code of practice.
2. The use of Northam Burrows for educational study will be encouraged.
3. Other than bona-fide wildlife study games, activities such as 'adventure games' will not be allowed.
4. Due regard is to be given to Bye-laws and other statutory provisions.
5. No fires, camping, bivouacing or overnight stays will be allowed.
6. Activities organised on Northam Burrows must give due regard to the wildlife conservation status, Rights of Common and other users.
7. All group activities should be properly supervised at all times.
8. All organised group activities must be approved, in advance by Torridge District Council's Northam Burrows Service staff.
9. All apparatus, equipment and vehicles must be removed from the site on completion of the activity and in all cases before dusk, except by prior approval of Torridge District Council.
10. Use of Northam Burrows, by visitors is to give due regard to those involved with the playing of golf and to avoid impeding play where possible.
11. Visitors are not to feed livestock or cause them to be disturbed.
12. The following activities are prohibited:
 - Lighting of fires
 - Camping and bivouacing
 - Overnight stays or parking
 - Adventure games
 - Orienteering
 - Vehicles (including bicycles) except on metalled roads
 - Cycling except on metalled roads
 - Parachute ascents and descents
 - Model aircraft
 - Radio controlled cars

Appendix 6

Car Parking and Access

Car parking on Northam Burrows is an important visitor facility and provides valuable income. This provision is the prerogative of the District Council who levy a toll charge for access, by vehicle, to Northam Burrows as they see fit. As compensation for any loss of grazing as a result of excluding grazing from the dune area, the provision of metalled roads and the erection of the Visitors Centre, the District Council provide the Trustees of the grazing with 1,500 free passes to the Burrows (the 'Manor Pass'). If the area of land available for grazing changes, then the number of Manor Passes will be adjusted pro-rata. Only limited control of parking areas is possible given current staff resources and this has led to damage being caused to some of the turfed areas.

1. Parking is allowed on an area between the Pebble Ridge and the road from the Westward Ho! gate.
2. Should movement of the Pebble Ridge block the road from the Westward Ho! gate the cost implications of its replacement or clearance would be carefully assessed.
3. Access will also be allowed by car along the Tip Road, access being retained for emergency and maintenance access.

Appendix 7

Dog Fouling

To overcome the problems of dog fouling, a 'poop-a-Scoop' scheme has been introduced in the vicinity of the Visitor Centre and other affected areas as appropriate. Should this prove unsuccessful other means of control of this problem will be investigated.

Appendix 8

The North Devon Coast Path

1. The route of the North Devon Coast Path through the Northam Burrows will be reviewed given the changing nature of the land form in the area and the sensitivity of some of the habitats.
2. Any new route will take due account of conservation aims and objectives and all works will be carried out in a sensitive and sympathetic manner.
3. An alternative route will be signposted which would allow the visitor to walk between the Appledore gate and the Westward Ho! gate.
4. A scheme will be undertaken to improve the high dune area, behind the Visitors Centre.

Appendix 9

Visitor Centre

Although existing facilities in the present Visitor Centre are under constant review detailed visitor surveys have shown that there is a need to increase the provision of facilities made available to the visitor. This could be achieved by planning a Visitor Centre, located off Northam Burrows, that would eventually replace the current Visitor Centre which might include:

1. A refreshment area
2. Accommodation for visiting groups including volunteers
3. Improved accommodation for the site staff

Appendix 10

Information and Interpretation

The information and interpretation provided at Northam Burrows will reflect its position in the wider countryside of North Devon. Among the facilities provided will be:

1. Roadside directional signs to the Country Park.
2. On site direction signs to complement the 'welcome' signs already in place.
3. Detailed, information signs near the site entrances which will give the visitor an insight into the special nature of Northam Burrows.
4. Advisory information on bye-laws, regulations and public safety.
5. Specific interpretive signs on features of special interest.
6. Interactive displays for education purposes at the Visitor Centre, including audio and visual media.

Appendix 11

Turf Management Group

The group would have the following functions:

1. To ensure, by inspection, that the condition and intrinsic natural floral diversity of the turf of Northam Burrows is not damaged by use of it for grazing, the playing of golf or other activities/ The right of access by pedestrians on the Common or along public rights of way would not be affected by decisions made by this group.
2. To recommend suitable action to prevent or rectify damage to the turf.
3. The structure of the group would be as follows:
 - 2 representatives of Torridge District Council, one to be a Councillor and the other to be the Senior Ranger or an officer of the Authority.
 - 1 representative of Northam Town Council, as the Trustees of the grazing.
 - 1 representative of the 'active' graziers, who is not to be a member of any of the other organisations represented within the group.
 - 1 representative of the Royal North Devon Golf Club who is to be the Secretary, the General Manager or the Chairman.
 - 1 Representative from Natural England. Members of the group would be drawn from the Northam Burrows Advisory Committee and be able to nominate a substitute.
4. The Turf Management Group would have the power to report to the District Council; Northam Town Council and the Royal North Devon Golf Club. It is essential that this group is able to be convened at short notice to prevent damage occurring.