RARE PLANTS OF THE SEFTON COAST - SUMMARY

The recently published Biodiversity Audit of North West England (1999) lists 474 taxa of vascular plants of "conservation importance", 145 of which occur on the Sefton Coast. Whittling these down to a manageable number for Species Action Plans has been a daunting task. Two, Dune Helleborine and Isle of Man Cabbage are listed as UK Priority or endemic species, so these were obvious choices. Another, Early Sand-grass, occurs here on its only English site and it too was felt to deserve inclusion in the main body of the BAP.

A short-list of another 18 plants that seemed to merit special conservation measures was drawn up and 7 chosen for Species Action Plans. These are all nationally rare or nationally scarce plants for which the Sefton Coast is especially important. In addition, their status is fairly well known and, in most cases, their habitat requirements well understood. They are included in an Appendix rather than the main body of the BAP - not because they are regarded as being of lesser importance but partly because their conservation demands are often very similar and partly in order to avoid appearing to give undue weight to the Sefton Coast within the BAP as a whole.

It is hoped that the species selected give a representative overview of the conservation issues facing plants on the Sefton Coast.

A brief summary of their status and requirements is given below.

1. Dune Helleborine *Epipactis leptochila var. dunensis*
   1.2. Factors causing decline: Physical removal of habitat; expansion of grass-rich swards.
   1.3. Conservation action: Control invading scrub to reduce soil eutrophication; map colonies and make known to site managers.

2. Isle of Man Cabbage *Coincya monensis ssp. monensis*

2.2. Status (local): Three sites, two introduced; Southport Marine Lake, Hall Road, Crosby Marine Park. Populations slowly increasing at all sites.

2.3. Factors causing decline: Two sites lost in early 1990s, one to development, one to maturation of vegetation. Plant seems to depend on open, sandy habitat.

2.4. Conservation action: Resist development proposals affecting Marine Lake site; promote SLBI designation for known sites; amend Site Management Plans; consider further translocations.

3. Early Sand-grass *Mibora minima*
   3.1. Status (national): Nationally rare; native on sand dunes in 7 10km grid squares, introduced in 9 squares.
   3.2. Status (local): Abundant over c. 100m of dunes west of Southport Marine Lake (discovered 1996)
   3.3. Factors causing decline: Open, sandy conditions are essential for the plant's survival as a dune annual. The northern part of its habitat is threatened by a proposed housing development and the southern part by a proposed interpretative centre.
   3.4. Conservation action: Resist proposals to develop the site; promote SLBI designation for the habitat; ensure presence and requirements of the plant are recognised in Site Management Plan; collect seed for storage and propagation.

4. Hedge Bindweed (coastal sub-species) *Calystegia sepium ssp. Roseata*
   4.1. Status (national): Nationally scarce; 25+ 10km grid squares on or near west coast.
   4.2. Status (local): One site - Hightown; transition between saltmarsh and sand dune; a single patch.
   4.3. Factors causing decline: None known
   4.4. Conservation action: Pursue LNR designation for Hightown Dunes & Meadows; include prescriptions for conserving the plant in proposed Site Management Plan; ensure patch is not damaged by footpath maintenance.

5. Grey Hair-grass *Corynephorus canescens*
   5.2. Status (local): Extensive stands on fixed dunes, Southport & Ainsdale Golf Course; two patches eastern edge of Hillside Golf Course; railway line 500m north of Ainsdale Station.
5.3. Factors causing decline: None known, but overmaturity of vegetation or scrub development could be a threat.

5.4. Conservation Action: Seek SSSI status for golf courses; encourage environmental partnerships with golf courses; liaise with golf course and Railtrack staff; ensure prescriptions for conserving the species are included in Site Management Plans.

6. Smooth Rupturewort *Herniaria glabra*


6.2. Status (local): Large population on mown, sandy grass verges of Kenilworth Road, Ainsdale. Smaller population at Westcliffe Road, Birkdale.

6.3. Factors causing decline: None at present but changes in verge management could be deleterious.

6.4. Conservation action: Consider extending LNR boundary to include verges; liaise with appropriate Council departments over verge management.

7. Baltic Rush *Juncus balticus*


7.2. Status (local): Only English locality at Birkdale; about 15 colonies in wet slacks, most in frontal dune strip; gradual increase in status since 1982, especially in southern sites.

7.3. Factors causing decline: Drying out of slacks and maturation of vegetation, including scrub invasion; heavy Rabbit grazing.

7.4. Conservation action: Control invading scrub; promote new dune-slack formation; ensure presence and requirements of plant are recognised in reviews of Site Management Plans.

8. Baltic Rush hybrids *Juncus balticus x J. effusus* (= *J. x obotritorum*). *J. balticus x J. inflexus*

8.1. Status (national): Nationally rare; confined to Lancashire/Merseyside; *inflexus* hybrid is endemic.

8.2. Status (local): *effusus* hybrid no longer found in "wild" state; transplanted material at Hightown, Altcar Rifle Range and Ainsdale NNR. One large, flourishing patch of *inflexus* hybrid in slack 18, Birkdale Sandhills LNR; transplants at Ainsdale NNR and LNR.

8.3. Factors causing decline: Losses have been due to coastal erosion, building development, sand-blow and competition from maturing vegetation in slacks or on the margins of scrapes/ponds.

8.4. Conservation action: Establish current status of transplants; maintain clones in cultivation; pursue LNR status for Hightown Dunes & Meadows; ensure locations and origins of hybrids are recognised in Site Management Plans.

9. Sharp Club-rush *Schoenoplectus pungens*

9.1. Status (national): UK Species of Conservation Concern; nationally rare; 2 localities - Sefton Coast and Jersey, where not seen since 1970s.

9.2. Status (local): Transplanted material at 2 sites Birkdale frontal dunes, recent spread to Birkdale Green-beach.

9.3. Factors causing decline: Original Massams Slack colony lost due to drying out of slack, vegetation maturation and Rabbit grazing. Species seems to require semi-aquatic conditions with little competition from other plants. Susceptible to Rabbit grazing.

9.4. Conservation action: Support ground-water conservation; promote appropriate habitat management through Site Management Plan; maintain stock in cultivation; consider further translocations.

10. Hybrid willows *Salix x angusensis, S. x doniana, S. x friesian*

10.1. Status (national): Nationally rare; *S. x angusensis* is endemic. The first and last named have recently been identified at St. Anne's, Lancashire but, apart from the Sefton Coast, are otherwise only known from single Scottish localities.

10.2. Status (local): *S. x angusensis* found in 1993 in slack 65, Ainsdale NNR. Now thought to be more widespread with bushes at Birkdale Sandhills and Cabin Hill, probably of this hybrid, found in 1999. *S. x doniana* is very scarce in the dunes, being known from about 6 localities, mostly slacks. In contrast, *S. x friesian* is widespread and common throughout the sand dunes, occurring in slacks and on fixed dunes.

10.3. Factors causing decline: Over-assiduous scrub control measures, sheep grazing, high Rabbit populations. Bushes of *S. x doniana* and *S. x friesian* recently destroyed by Rabbits at Ravenmeols.

10.4. Conservation action: Pursue LNR designation for all sites supporting rare hybrids; ensure Site Management Plans take account of these taxa; survey distribution and habitat characteristics of rare willows; take *S. x angusensis* and *S. x doniana* into cultivation.

**HEDGE BINDWEED** (coastal sub-species) *Calystegia sepium roseata*

1. **CURRENT STATUS**

1.1 National
This nationally scarce form of the Hedge Bindweed has striking pink flowers with five white stripes. It
occurs in at least 22 10-km squares in Britain, mostly on the west coast.

1.2 Local
The plant was first recorded on the Sefton Coast in the early - a small patch growing at the inland edge of the small saltmarsh at Hightown (SD 295034) This clump was still present in 1997, covering an area of about 7m by 3m, adjacent to a recently constructed footpath. Another site has been reported just north of the Hightown Sailing Club (SD 296030).

2. CURRENT FACTORS CAUSING LOSS OR DECLINE
2.1 National
2.1.1 None known.

2.2 Local
2.2.1 Potential factors are coastal erosion, coast protection works and footpath maintenance, all of which could impact on the habitat at Hightown.

3. CURRENT ACTION
3.1 National
3.1.1 None known.

3.2 Local
3.2.1 Locations of patches are recorded on GIS.

4. KEY HABITATS
* Marshy (fresh-water) coastal sites where tidal debris accumulate, providing moist, eutrophic conditions.

5. OBJECTIVES AND TARGETS
5.1 At least maintain current local range.

6. PROPOSED ACTIONS
6.1 Policy
6.1.1 Conserve and, where appropriate, enhance the natural and cultural landscape of the dune coast as advocated in the Sefton Coast Management Plan and the Sefton Coast CSAC Draft Conservation Strategy. (Action: SCP; EN) (Priority: High)

6.2 Site safeguard and management
6.2.1 The two known sites are within the Hightown Dunes & Meadows proposed LNR and SLBI. Confirmation of the LNR designation is required. (Action: LA) (Priority: Medium)

6.2.2 Ensure that the plant's presence and locations are recognised in the proposed Hightown Dunes & Meadows Management Plan. (Action: LA) (Priority: High)

6.2.3 Ensure management of Hightown footpath (e.g. mowing of fringes) takes account of the plant. (Action: LA) (Priority: High)

6.3 Species management and protection
6.3.1 Mark positions of patches with pegs to ensure plant is not damaged during routine maintenance. (Action: LA; LWT) (Priority: High)

6.4 Advice to land managers
6.4.1 Ensure site management takes account of the plant. (Action: SCMS) (Priority: High)

6.4.2 Assess impacts of possible coast defence works. (Action: LA) (Priority: High)

6.5 Research and monitoring
6.5.1 Monitor known sites at regular intervals and establish whether Sailing Club colony is still extant. (Action: LWT; LBS) (Priority: Medium)

6.5.2 Set up fixed-point photography. (Action: LA) (Priority: Medium)

6.6 Communications and publicity
6.6.1 Distribute reports of survey to relevant bodies. (Action: LA; LWT) (Priority: Low)

6.6.2 Encourage additional survey work and research. (Action: SCMS)

7. CONTACT POINTS
Sefton Coast and Countryside Service
Sefton Coastal Strategy Officer
The Wildlife Trust for Lancashire, Manchester & North Merseyside
Liverpool Botanical

8. REFERENCES
**GREY HAIR-GRASS**
*Corynephorus canescens*

1. CURRENT STATUS
1.1. National
1.1.1 This nationally scarce grass has a mainly eastern distribution in Britain, being found very locally on or near the coasts of east Suffolk and east and west Norfolk. It is rare inland in east Suffolk, probably introduced on the Moray coast and is naturalised in Staffordshire. The plant also occurs in South Lancashire and was formerly present in Glamorgan (Stace 1991). Perring & Walters (1962) show Grey Hair-grass occurring in 25 10km grid squares in the British Isles, 18 of these post-1930. Its habitat is open sand on leached fixed dunes and inland sandy heathland on acid soils.

1.2. Local
Grey Hair-grass was first recorded on the Sefton Coast by W.G. Travis in 1928 “in some plenty at two places at Formby” on the unconsolidated outer series of dunes (Atkinson & Houston 1993). It was also reported near Formby Golf Course and at Freshfield. Extensive stands were recorded on Southport & Ainsdale Golf Course in 1988 some distance from its earlier reported locations and in an area of low dunes, rather than the high dune landscape where the grass was first seen. The plant has also been found growing abundantly on railway track ballast near Ainsdale. More recently, two patches of the grass have been found on Hillside Golf Course and a further colony within the railway fence about 500m north of Ainsdale Station. There has been some debate about the origin of this species on the Sefton Coast. Several authorities, including Hubbard (1954), state that it appears to have been introduced. However, W.G. Travis supported the view that it was probably native here.

2. CURRENT FACTORS CAUSING LOSS OR DECLINE
2.1 Marshall (1965) has shown that the species declines in vigour on stable dunes, indicating that overmaturisation of vegetation and scrub development could be a threat to the plant.

3. CURRENT ACTION
3.1. Local
3.1.1 The plant's 1996-98 distribution on Southport & Ainsdale Golf Course has been mapped on GIS.

3.1.2 Site Management Plans for Southport & Ainsdale and Hillside Golf Courses have been written to include special provisions for Grey Hair-grass.

4. KEY HABITATS
* Decalcified fixed dunes
* Railway track ballast.

5. OBJECTIVES AND TARGETS
5.1 Ensure effective conservation of Grey Hair-grass by at least maintaining local range and distribution.

6. PROPOSED ACTIONS
6.1. Policy
6.1.1 Conserve and, where appropriate, enhance the natural and cultural landscape of the dune coast as advocated in the Sefton Coast Management Plan and the Sefton Coast cSAC Draft Conservation Strategy. (Action: SCP: EN) (Priority: High)

6.2. Site safeguard and management
6.2.1 All known colonies are on Southport & Ainsdale or Hillside Golf Courses or on nearby railway land. The Golf Courses are not protected by national statute but are included in the Sefton Unitary Development Plan as Sites of Local Biological Interest and benefit from Site Management Plans written by the Sefton Coast Life Project.

6.2.2 Encourage the partnership with the Golf Courses on environmental matters established through the Sefton Coast Life Project. (Action: SCP) (Priority: High)

6.3. Species management and protection
6.3.1 Ensure that the presence and requirements of the plant are recognised in reviews of the Southport & Ainsdale and Hillside Golf Courses Management Plans. (Action: SCP: golf courses) (Priority: High)

6.3.2 Work with golf course staff to ensure that day-to-day maintenance of the courses does not adversely affect Grey Hair-grass. Light trampling of the "roughs" and the creation of divots is thought to be beneficial to the species. (Action: SCP: golf courses) (Priority: Medium)

6.3.3 Liaise with Railtrack staff on trackside management to conserve the grass. (Action: SCP; Railtrack) (Priority: Medium)

6.4. Advice to land managers
6.4.1 Advise golf course and railway managers on appropriate management requirements. (Action: SCP) (Priority: Medium)

6.5. Research and monitoring
6.5.1 Survey the golf course colonies at 5-year intervals. Maintain a data-base on GIS. (Action: SCP, LWT, LBS) (Priority: Medium)

6.5.2 Investigate vegetation and soil characteristics associated with Grey Hair-grass and recommend appropriate management options. The University of Lancaster has expressed interest in conducting such studies. (Action: SCP, universities) (Priority: Low)

6.6. Communications and publicity
6.6.1 Distribute reports of survey to relevant bodies (Action: SCP, LBS) (Priority: Medium)
6.6.2 Encourage additional survey work and research. (Action: SCP; universities) (Priority: Low)

6.6.3. Highlight the species in appropriate publications, e.g. Coastlines. (Action: SCP) (Priority: Low)

7. CONTACT POINTS
Sefton Coast and Countryside Service
Sefon Coastal Strategy Officer
The Wildlife Trust for Lancashire, Manchester & North Merseyside
Liverpool Botanical Society/BSBI
Southport & Ainsdale Golf Club (Bob Hutt, Chair of Greens)
Hillside Golf Club (Martin Twist, Head Greenkeeper)
Railtrack Manchester (Heather Fessey)

8. REFERENCES


Baltic Rush *Juncus balticus*

1. **CURRENT STATUS**

1.1. National
A nationally scarce plant, Baltic Rush has a northern distribution in Great Britain and is not found in Ireland. It has been recorded in 61 10-km grid squares in Scotland (46 after 1930) (Perring & Walters 1962). Most of these are coastal sites in the north, north-east as far south as Fife and in the Hebrides. In England, there is a pre-1930 record for square SD26 in Furness, but Stace (1972) considers that the record is dubious. A colony at Lytham St. Annes, Lancashire (SD 333276) was destroyed in 1965 by building development (Smith 1984). The only extant English locality is now at Birkdale sand dunes on the Sefton Coast.

1.2. Local
1.2.1 The plant was first discovered in 1913 near Royal Birkdale Golf Course. In 1969-70, C.A. Stace knew of three colonies and in 1981 and 1982 ten colonies were found in the Birkdale dunes in two groups, totalling 133 sq.m. By 1989-90 had spread to three new patches and more than doubled in area and the plant has been at least holding its own during the 1990s, spreading in its south-west sites but declining in the north. Despite extensive searches, it has never been found away from the Birkdale dunes. Attempts to transplant *J. balticus* from Birkdale to Ainsdale NNR seem to have been unsuccessful (Smith 1984).

1.2.2 Baltic Rush appears to be a good coloniser of young, sparsely vegetated wet-slacks and may then persist for many years before declining as the habitat becomes dryer and more heavily vegetated. Pedestrians seem to play an important role in dispersing *J. balticus*, many of the patches being associated with informal footpaths. Vegetation sampling showed that the rush occurred in a wide variety of community types, though most of the localities have been mapped as SD 15d (*Salix repens* - *Holcus lanatus* - *Festuca rubra* sub-community).

2. **CURRENT FACTORS CAUSING LOSS OR DECLINE**

2.1. National
2.1.1 No national studies are known but likely problems are development pressures and over-stabilisation of coastal sand-dunes, leading to a shortage of newly formed slacks.

2.2. Local
2.2.1 F.W. Holder considered the original Birkdale colony was lost due to the drying out of the slack and colonisation by Creeping Willow. By 1965, this site had been built over. Another colony was almost completely destroyed by the construction of the Weld Road roundabout in 1968.

2.2.2 Recent apparent declines in slacks to the east of the coastal road seem to be linked to the age of these slacks (originating in about 1884) and the maturation of their vegetation.

2.2.3 At the northern sites, heavy rabbit grazing of Baltic Rush shoots has been observed recently, this being a likely factor in declines of the plant here.

3. **CURRENT ACTION**

3.1 National
3.1.1 Nothing is known.

3.2 Local
3.2.1 The Birkdale sites were resurveyed in 1998/99 and vegetation samples taken to compare with earlier specimens.

3.2.2 There is a current programme of scrub control in the Birkdale frontal dunes where most of the Baltic Rush sites are located.

4. **KEY HABITATS**

Moderately wet dune slacks, especially those newly or recently formed. Some human disturbance and low or negligible levels of rabbit grazing seem to be beneficial. Competition from dense vegetation and scrub is not tolerated in the long term.

5. **OBJECTIVES AND TARGETS**

5.1 At least maintain current local range and distribution.

6. **PROPOSED ACTIONS**

6.1 Policy
6.1.1 Conserve and, where appropriate, enhance the natural and cultural landscape of the dune coast as advocated in the Sefton Coast Management Plan and the Sefton Coast cSAC Draft Conservation Strategy. (Action: SCP) (Priority: High)

6.2. Site safeguard and management
6.2.1 All known colonies are within the Sefton Coast SSSI and candidate Special Area of Conservation (cSAC) and most are within Ainsdale and Birkdale Sandhills LNR.

6.2.2 One colony, not visited since the early 1980s, is within the boundary of the Royal Birkdale Golf Course, for which a Site Management is due for review. (Action: EN; Royal Birkdale Golf Course) (Priority: Medium)

6.2.3 Control invading scrub in dune slacks throughout the plant's range at Birkdale Sandhills. (Action: LA) (Priority: High)

6.3. Species management and protection
6.3.1 Ensure presence and requirements of the species are recognised in reviews of Site Management Plans. (Action: SCP, EN, land managers)
6.4. Advice to land managers
6.4.1 Promote new dune-slack formation and appropriate management of existing wet-slacks. Ensure Site Management Plans take account of the plant and its requirements. (Action: SCP) (Priority: High)

6.5. Research and monitoring
6.5.1 Monitor known Baltic Rush sites at 3-5 year intervals and maintain a database on GIS. (Action: SCP, LWT, LBS) (Priority: High)

6.5.2 Establish by survey whether the golf course colony is still extant. (Action: SCP) (Priority: Medium)

6.5.3 Survey slacks beyond known range, e.g. Birkdale green-beach, to monitor possible expansion of the population. (Action: SCP, LWT, LBS) (Priority: Medium)

6.5.4 Determine impact of rabbits on Baltic Rush. (Action: SCP, universities) (Priority: Low)

6.6. Communications & publicity
6.6.1 Distribute reports of survey to relevant bodies. (Action: SCP) (Priority: Low)

6.6.2 Encourage additional survey work and research. (Action: SCP, universities) (Priority: Low)

6.6.3. Highlight the plant in appropriate publications, e.g. Coastlines. (Action: SCP) (Priority: Low)

7. CONTACT POINTS
Sefton Coast and Countryside Service
Sefton Coastal Strategy Officer
The Wildlife Trust for Lancashire, Manchester & North Merseyside
Liverpool Botanical Society/BSBI
Liverpool Hope University College

8. REFERENCES


**Baltic Rush hybrids:**

*Juncus balticus* x *J. effusus* (= *J. x obotritorum*); *J. balticus* x *J. inflexus*

### 1. CURRENT STATUS

#### 1.1. National/Local

1.1.1 In Britain, these two hybrids are unique to Lancashire/Merseyside, *J. balticus* x *J. inflexus* being endemic. The fact that they have not arisen anywhere else in the country is particularly remarkable.

1.1.2 The *effusus* hybrid, *Juncus x obotritorum*, has been recorded three times in the wild. Firstly, in 1933 at Ainsdale in a large dune wet-slab that was destroyed in 1968 by the construction of Pontin's Holiday Village. A second clone was discovered in 1966 in a Hightown slack but this disappeared in 1974 under sand bulldozed by contractors working on a new housing estate. A third patch, at Hightown, was recorded in 1973 growing in a brackish marsh community on the upper shore. This clump was washed away by high tides during the 1980/81 winter.

1.1.3 The Ainsdale clone was translocated to Ainsdale Sand Dunes NNR in 1968 and still survived at 3 sites in 1982. However, by 1991 all these transplants seem to have died out. Fortunately, material had been taken into cultivation and some of this was returned to two sites in the NNR in 1992, the remainder being sent to Ness Botanic Gardens to be grown on.

1.1.4 Material from the second Hightown clone was transplanted to a newly dug scrape on Altcar Rifle Ranges in January 1977, some rhizomes being sent to the University of Leicester and Ness Botanic Gardens for cultivation. The Rifle Range colony did well for several years but seemed to go into decline in the late 1980s as vegetation around the scrape matured. The hybrid's present status here is unclear. Some material from the second Hightown clone was transplanted to a Natterjack Toad scrape at Hightown in 1992 and was still thriving in 1999.

1.1.5 The *inflexus* hybrid has also been found on three occasions, firstly in 1951 in a Birkdale Sandhills wet-slab. By 1982, this was a large, spreading patch occupying about 450 square metres and it is still dominant and vigorous. The second patch was found in 1950/52 in what is now Ainsdale Sand Dunes NNR. Its habitat was overwhelmed by blown sand from the erosion of Massams Slack in the late 1980s and the plant became extinct. The other locality is a wet-slab on Lytham St. Annes Local Nature Reserve, Lancashire, where the plant was still thriving in 1995.

1.1.6 Material from the Birkdale clone was transplanted to three sites in Ainsdale NNR between 1967 and 1976 and the pant was still present in 1991. Further translocations from both Sefton Coast clones took place in 1992 to Ainsdale NNR and Birkdale Sandhills LNR. The present condition of these transplants is unclear.

### 2. CURRENT FACTORS CAUSING LOSS OR DECLINE

#### 2.1 National/Local

2.1.1 Losses on the Sefton Coast have been attributed to coastal erosion, building development, sand-blow and competition from maturing vegetation in slacks or on the margins of scrapes and ponds.

2.1.2 The *effusus* hybrid, being less vigorous, seems to be more susceptible to competition than *J. balticus* x *inflexus*. The *inflexus* clone at Birkdale was damaged in 1976 when a Natterjack Toad scrape was dug by mistake in the slack containing the rush.

### 3. CURRENT ACTION

3.1.1 Translocations are detailed above.

### 4. KEY HABITATS

Semi-aquatic and wet slacks and pond margins with sparse vegetation. Brackish marsh on the upper shore.

### 5. OBJECTIVES AND TARGETS

5.1 Ensure effective conservation of all the local clones by maintaining them in cultivation and in appropriate semi-natural habitats on the Sefton Coast.

### 6. PROPOSED ACTIONS

#### 6.1. Policy

6.1.1 Conserve and, where appropriate, enhance the natural and cultural landscape of the dune coast as advocated in the Sefton Coast Management Plan and the Sefton Coast cSAC Draft Conservation Strategy. (Action: SCP) (Priority: High)

#### 6.2. Site safeguard and management

6.2.1 Most known sites are within the Sefton Coast SSSI and cSAC. Other sites are at Hightown Dunes & Meadows proposed LNR and Altcar Rifle Range. The latter are not protected by national statute but enjoy Site of Local Biological Interest status and sympathetic management regimes. Confirmation of LNR designation is required at Hightown. (Action: LA, EN) (Priority: Medium)

6.2.2 Ensure locations and origins of hybrids are recognised in appropriate Site Management Plans. (Action: SCP, EN, Altcar Liaison Committee) (Priority: High)

#### 6.3. Species management and protection

6.3.1 Investigate which clones are still in cultivation and where. Ensure these are maintained. (Action: SCP, Ness Botanic Gardens) (Priority: Medium)

6.3.2 Organise a survey of all clones and transplant sites on the Sefton Coast. Map these on GIS. (Action: SCP, LWT, EN, LBS) (Priority: High)
6.3.3 Seek to extend the range of the clones on the Sefton Coast by further translocations of material of known origin to suitable sites following survey. (Action: land managers, LWT, EN, LBS)

6.3.4 Ensure that positions of clones are known to site managers so that plants are not lost by accident. (Action: SCP, EN, Altcar Range Liaison Committee) (Priority: High)

6.4 Advice to land managers
6.4.1 Ensure that site management takes account of the hybrids. (Action: SCP, EN, TAVR)

6.5 Research and monitoring
6.5.1 Determine current status of all known clones and translocations and monitor these at 3-5 year intervals. Maintain a data base on GIS. (Action: SCP) (Priority: Medium)

6.5.2 Investigate preferred habitat of the transplants. (Action: land managers, universities) (Priority: Medium)

6.6 Communications and publicity
6.6.1 Distribute reports of survey to relevant bodies. (Action: land managers; LBS) (Priority: Low)

6.6.2 Encourage additional survey work and research. (Action: SCP, universities) (Priority: Low)

6.6.3. Highlight the hybrids in appropriate publications, e.g. Coastlines. (Action: SCP) (Priority: Low)

7. CONTACT POINTS
Sefton Coast and Countryside Service
Sefton Coastal Strategy Officer
The Wildlife Trust for Lancashire, Manchester & North Merseyside
Liverpool Botanical Society/BSBI
Ness Botanic Gardens

8. REFERENCES


SMOOTH RUPTUREWORT  
*Herniaria glabra*

1. CURRENT STATUS  
1.1. National  
1.1.1 This nationally rare annual or biennial plant is known from 12 localities in East Anglia, principally in the Breckland of Norfolk and Suffolk. (Garrard & Streeter 1983). Perring & Walters (1962) show it as occurring in 16 10-km grid squares in eastern England. Elsewhere, it is considered to be a rare casual (Stace 1991).

1.1.2 Smooth Rupturewort is associated with bare open ground on sandy to gravelly, weakly acid to alkaline soils that have become compacted by fluctuations in water content. It occurs on road verges, in compacted wheel ruts, on footpaths, on ditch and pond excavations and on chalk. It is a poor competitor and can be eliminated within a few years of becoming established by grasses.

1.2. Local  
Smooth Rupturewort was first discovered on the Sefton Coast in 1988, growing on sandy, mown grass verges of Kenilworth Road, Ainsdale. How the plant got there is unknown; the area was formerly fixed sand-dunes and slacks but was developed as a housing estate from about 1969 to 1973. It occurs particularly in bare patches close to the road edge or the footpath. A second, smaller, population of Smooth Rupturewort was discovered in 1998 at Westcliffe Road, Birkdale, growing on a similar, sandy, grass verge. This may have been introduced on mowing machinery.

2. CURRENT FACTORS CAUSING LOSS OR DECLINE  
2.1. National  
2.1.1 It may be inferred that afforestation, intensive agriculture and the hardening of informal trackways are deleterious to the plant in its Breckland headquarters.

2.2. Local  
2.2.1 Under the current management regime of occasional mowing and light trampling of the grass verges, the plant is doing well. Changes in this regime, such as top-soiling, reseeding or the use of selective herbicides could be disastrous.

3. CURRENT ACTION  
3.1 Local  
3.1.1 Surveys are being undertaken to determine the distribution of Smooth Rupturewort and the nature of its habitat on the Sefton Coast.

3.1.2 Localities are being mapped on GIS.

4. KEY HABITATS  
- Lightly mown, sandy, grass verges supporting open, fixed-dune vegetation. Bare patches arising from mowing or trampling seem to be important and the soils appear to be at least partly decalcified and somewhat compacted.

5. OBJECTIVES AND TARGETS  
5.1 Protect and suitably manage existing sites and maintain the range of the plant on the Sefton Coast.

6. PROPOSED ACTION  
6.1. Policy  
6.1.1 Promote recognition of the biological importance of the grass verges. (Action: SCP; LWT; LBS) (Priority: High)

6.2. Site safeguard and management  
6.2.1 The southern localities are adjacent to the Kenilworth Road dunes, which are in process of being designated as a Local Nature Reserve. Consider extending the boundaries of the LNR to include the verges. (Action: LA; EAS) (Priority: Medium)

6.2.2 Ensure the presence of the plant and the nature of desired management are made known to the relevant Council Departments. (Action: SCP) (Priority: High)

6.3. Species management and protection  
6.3.1 Include prescriptions for Smooth Rupturewort in Kenilworth Road Dunes Management Plan. (Action: SCP) (Priority: High)

6.4. Advice to land managers  
6.4.1 Promote appropriate management of grass verges. (Action: SCP) (Priority: High)

6.5. Research and monitoring  
6.5.1 Monitor Smooth Rupturewort populations at two-year intervals and maintain a database on GIS. (Action: SCP; LWT; LBS) (Priority: Medium)

6.5.2 Determine the ecological characteristics of the plant's habitat, including soil conditions, and the impact of management regimes. (Action: SCP; universities) (Priority: Medium)

6.6. Communications and publicity  
6.6.1 Distribute reports of survey to relevant bodies. (Action: SCP; LWT; LBS) (Priority: Low)

6.6.2 Report presence of plant in appropriate publications; e.g. Coastlines. (Action: SCP) (Priority: Low)

6.6.3 Encourage further survey work and research. (Action: SCP; universities) (Priority: Low)

7. CONTACT POINTS  
Sefton Coast Management Officer
The Wildlife Trust for Lancashire, Manchester & North Merseyside
Liverpool Botanical Society/BSBI

8. REFERENCES


SHARP CLUB-RUSH
Schoenoplectus pungens

1. CURRENT STATUS

1.1. National
1.1.1 This rare native plant has only been recorded from two localities in Britain, a pond margin in Jersey, where it has not been seen since the early 1970s and wet dune-slacks in South Lancashire (VC 59) (Stace 1991).

1.2. Local
1.2.1 Sharp Club-rush was first found on the Sefton Coast by W.G. Travis in 1909, though he did not identify it correctly until 1928. It was "found in a hollow among the dunes near the sea-coast in the vicinity of Formby" as a patch of about 25 square yards. He concluded that the colony was native though Clapham, Tutin & Moore (1987) record it as "introduced in Lancashire". The colony in Massams Slack, close to the Fisherman's Path, became extinct by 1978 but the plant was translocated to another pond near Pinfold Lane, Ainsdale in 1972, where it survived to the early 1990s. In 1990 further translocations were made to four sites in the Birkdale Sandhills, at two of which the plant has thrived and spread.

2. CURRENT FACTORS CAUSING LOSS OR DECLINE

2.1. National
2.1.1 Nothing specific is known

2.2. Local
2.2.1 The original Massams Slack colony seems to have declined due to progressive drying out of the wet-slack, competition from maturing vegetation and rabbit grazing. Sand-blow from pedestrian damaged dunes at Fisherman's Path may also have contributed to the problems.

2.2.2 The demise of the Pinfold Lane population has been attributed to dramatic fluctuations in the wate-table.

3. CURRENT ACTION

3.1. Local
3.1.1 Cultivation of the plant is thought to be continuing at the Ness Botanic Gardens of the University of Liverpool.

3.1.2 Translocated populations at Birkdale have been mapped on GIS.

4. KEY HABITATS

The species seems to do best in recently formed semi-aquatic habitats where there is little competition from existing vegetation. Simpson's (1990) literature search revealed optimum conditions for Sharp Club-rush were "on the edge of ponds in salt-marshes where freshwater is running out of the dunes" and "at the margins of ponds near the sea".

5. OBJECTIVES AND TARGETS

5.1 Protect and suitably manage existing sites and extend the range of the plant on the Sefton Coast.

6. PROPOSED ACTION

6.1. Policy
6.1.1 Conserve and, where appropriate, enhance the natural and cultural landscape of the dune coast as advocated in the Sefton Coast Management Plan and the cSAC Draft Conservation Strategy. (Action: SCP; EN) (Priority: High)

6.2. Site safeguard and management
6.2.1 The Birkdale translocation sites are within the Sefton Coast SSSI and cSAC and the Ainsdale & Birkdale Sandhills LNR.

6.2.2. Promote appropriate habitat management through the Ainsdale & Birkdale Sandhills LNR Management Plan. (Action: LA) (Priority: High)

6.2.3. Support ground-water conservation through a coastal Water Conservation Plan. (Action: SCP; EA) (Priority: High)

6.3. Species management and protection
6.3.1 Ensure stocks of the plant continue to be cultivated. (Action: SCP; Ness Botanic Gardens) (Priority: High)

6.3.2 Consider and plan further translocations to broaden the distribution of Sharp Club-rush on the Sefton Coast. (Action: SCP; LBS) (Priority: Medium)

6.4. Advice to land managers
6.4.1 Promote site protection and natural dune processes through the Sefton Coast Management Scheme. (Action: SCP) (Priority: High)

6.5. Research and monitoring
6.5.1 Monitor the success of the translocations annually and maintain a data-base and maps on GIS. (Action: LA; LWT, LBS). (Priority: High)

6.5.2 Determine the ecological characteristics of the plant's habitat. (Action: SCP; universities) (Priority: Low)

6.5.3 Set up fixed-point photography of the translocated populations. (Action: LA) (Priority: Medium)

6.5.4 Investigate possible impact of rabbit grazing. (Action: LA; universities) (Priority: Medium)

6.6. Communications and publicity
6.6.1. Distribute reports of survey to relevant bodies. (Action: SCP; LBS) (Priority: Medium)
6.6.2. Encourage additional survey work and research. (Action: SCP; universities) (Priority: Low)

6.6.3 Report presence of plant in appropriate publications, e.g. Coastlines. (Action: SCP) (Priority: Low)

7. CONTACT POINTS
Sefton Coast Management Officer
Sefton Coast and Countryside Service
The Wildlife Trust for Lancashire, Manchester & North Merseyside
Liverpool Botanical Society/BSBI
Ness Botanic Gardens

8. REFERENCES


Simpson, D. 1990. The conservation of Scirpus americanus on the Sefton Coast: the introduction of this species to Tag's Island. Unpub. project plan, Ainsdale Sand Dunes NNR.


HYBRID WILLOWS
Salix x angusensis, S. x doniana, S. x friesiana

1. CURRENT STATUS
1.1. National/Local
1.1.1 These three willow hybrids are nationally rare, being known only from single Scottish localities in addition to the Sefton Coast, and West Lancashire in the case of S. angusensis and S. x friesiana.

1.1.2 The triple hybrid, Salix x angusensis (S. repens x S. cinerea x S. viminalis) is a British endemic discovered in the 1950s on sand dunes in Angus. On the Sefton Coast, it was first collected in 1993 from Ainsdale NNR slack 65. A second sample was gathered from a group of six bushes in a seasonally flooded dune slack in 1998 and further specimens were found in 1999 at Birkdale.

1.1.3 S. x doniana (S. purpurea x S. repens) was first discovered on the Sefton at Formby in 1947. Since then, it has been found sporadically in a few sites in Formby, Ainsdale and Birkdale.

1.1.4 S. x friesiana (S. repens x S. viminalis) was first collected in Sutherland in 1897. It was found at Formby in 1943 and has subsequently proved to be widespread and common throughout most of the dune system, including outliers such as the Queen's Jubilee Trail, Southport, where there is a large population (Smith 1998), and the northern section of the Birkdale frontal dunes. This plant seems to have a much wider habitat range than the other two hybrids, occurring in both wet and dry slacks as well as fixed dunes.

2. CURRENT FACTORS CAUSING LOSS OR DECLINE
2.1. National
2.1.1 Not known

2.2 Local
2.1.1 Potentially adverse factors are over-assiduous scrub control measures, the introduction of sheep grazing to the dunes and the impact of recent population increases of Rabbits Oryctolagus cuniculus in some areas.

3. CURRENT ACTION
3.1 National
3.1.1 None

3.2. Local
3.2.1 Positions of patches of the hybrids are being surveyed and recorded on GIS.

4. KEY HABITATS
* Wet and dry slacks and fixed dunes for S. x friesiana.

5. OBJECTIVES AND TARGETS
5.1 Ensure effective conservation of the hybrid willows by maintaining them in cultivation and in appropriate semi-natural habitats on the Sefton Coast.

6. PROPOSED ACTIONS
6.1. Policy
6.1.1 Conserve and, where appropriate, enhance the natural and cultural landscape of the dune coast as advocated in the Sefton Coast Management Plan and the Sefton Coast cSAC Draft Conservation Strategy. (Action: EN; SCP) (Priority: High)

6.2. Site safeguard and management
6.2.1 Most known sites are statutorily protected by NNR, LNR, SSSI or cSAC designations. Others, mainly for S. x friesiana, enjoy Site of Local Biological Interest status and most have sympathetic management regimes. Confirmation of LNR designation is required at Hightown Dunes & Meadows. (Action: LA, EN) (Priority: Low)

6.2.3 Ensure existence and requirements of the hybrid willows are recognised in appropriate site Management Plans. (Action: land managers; SCP) (Priority: High)

6.3. Species management and protection
6.3.1 Ensure that at least S. x angusensis and S. x doniana are taken into cultivation. (Action: SCP, Ness Botanic Gardens) (Priority: Medium)

6.3.2 Seek to extend the range of Salix x angusensis by propagation and translocation. (Action: EN) (Priority: Medium)

6.3.4 Ensure that locations of important hybrid swarms are known to site managers so that plants are not lost by accident. (Action: SCP; LWT) (Priority: Medium)

6.4. Advice to land managers
6.4.1 Ensure that site management takes account of the hybrid willows. (Action: SCP; LWT) (Priority: Medium)

6.5. Research and monitoring
6.5.1 Determine locations and status of the three hybrids and monitor these at regular intervals. Maintain a database on GIS. (Action: SCP LWT, LBS) (Priority: Medium)

6.5.2 Investigate preferred habitats of the hybrids. (Action: universities) (Priority: Low)

6.5.3 Determine impact of rabbits on the willows. (Action: SCP; universities) (Priority: Low)

6.5.4 Clarify identification characteristics of S. x angusensis. (Action: LWT; LBS) (priority: Low)
6.6. Communications and publicity
6.6.1 Distribute reports of survey to relevant bodies. (Action: SCP; LWT) (Priority: Medium)

6.6.2 Highlight the plants in appropriate publications, e.g. Coastlines. (Action: SCP) (Priority: Low)

7. CONTACT POINTS
Sefton Coast Management Officer
Sefton Coast & Countryside Service
The Wildlife Trust for Lancashire, Manchester & North Merseyside
Liverpool Botanical Society/BSBI

8. REFERENCES


