

Site 9 - Ballysadare

Site description

Ballysadare is a large site extending around most of Ballysadare Bay in the south-eastern corner of Sligo Bay, Co. Sligo. The site is part of Ballysadare Bay SAC (SAC 000622) and Ballysadare Bay SPA (SPA 004129).

Field surveys were conducted at two sub-sites: Ballysadare Bay and Strandhill.

Based on the currently available mapping, ten coastal Annex I habitats occur within this SAC, four of which (**2110 Embryonic shifting dunes**, **2120 Marram dunes (white dunes)**, ***2130 Fixed dunes (grey dunes)**, **2190 Humid dune slacks**) are listed as Qualifying Interests ([Table 1](#)).

Table 1. Annex I habitats present at Ballysadare Bay SAC, the area they occupy (based on the most recent mapped available) and status as a Qualifying Interest of the SAC. An asterisk denotes a priority Annex I habitat and habitats that were not the target of this survey are excluded.

Habitat Code	Area (ha)	Qualifying Interest?
1210 Drift line vegetation	0.173	No
1220 Perennial vegetation of stony banks	0.206	No
1310 <i>Salicornia</i> flats	0.451	No
1330 Atlantic salt meadows	38.737	No
1410 Mediterranean saltmarsh	36.225	No
2110 Embryonic shifting dunes	1.216	Yes
2120 Marram dunes (white dunes)	6.791	Yes
*2130 Fixed dunes (grey dunes)	58.456	Yes
2170 Dunes with creeping willow	0.306	No
2190 Humid dune slacks	1.273	Yes

Habitat losses were mainly associated with natural succession. Some little areas have been converted to artificial surfaces (

[Table 2](#)).

Table 2. Habitat loss recorded during the desk and field surveys in hectares.

Habitat	Within SAC?	Loss (ha)	Impact code	New habitat
1330	Yes	0.007	PF15	Buildings and artificial surfaces (BL3) and Dry calcareous and neutral grassland (GS1)
1330	No	0.012	PM07	Reed and large sedge swamps (FS1)
1330	Yes	0.105	PM07	Reed and large sedge swamps (FS1) and Dry calcareous and neutral grassland (GS1)
1410	Yes	0.053	PM07	Reed and large sedge swamps (FS1)
*2130	Yes	0.016	PF01	Buildings and artificial surfaces (BL3)
*2130	Yes	0.017	PF15	Buildings and artificial surfaces (BL3)

Conservation assessments were carried out within two sub-sites occupying a total area of 192 ha (Table 3). Four habitats (**1210 Drift line vegetation**, **1220 Perennial vegetation of stony banks**, **1410 Mediterranean saltmarsh** and **2110 Embryonic shifting dunes**) were in Favourable condition, for one habitat (**1310 *Salicornia* flats**) the assessment was not applicable, while the remainder were in Unfavourable condition, mainly due to overgrazing and trampling by cattle and sheep, encroachment, off road driving and presence of pedestrian tracks among the dunes.

Table 3. Summary of Conservation Status for all habitats assessed at Ballysadare Bay.

Subsite	Habitat	Area	Structure and Functions	Future Prospects	Overall assessment
9.01 Ballysadare Bay	1310	Favourable (stable)	NA (NA)	Favourable	NA (NA)
9.01 Ballysadare Bay	1330	Unfavourable - Inadequate (decreasing)	Favourable (stable)	Unfavourable - Inadequate	Unfavourable - Inadequate (stable)
9.01 Ballysadare Bay	1410	Favourable (stable)	Favourable (stable)	Favourable	Favourable (stable)
9.02 Strandhill	1210	Favourable (stable)	Favourable (stable)	Favourable	Favourable (improving)
9.02 Strandhill	1220	Favourable (stable)	Favourable (stable)	Favourable	Favourable (improving)
9.02 Strandhill	1310	Favourable (stable)	NA (NA)	Favourable	NA (NA)
9.02 Strandhill	1330	Favourable (stable)	Favourable (stable)	Unfavourable - Inadequate	Unfavourable - Inadequate (deteriorating)
9.02 Strandhill	2110	Favourable (stable)	Favourable (stable)	Favourable	Favourable (stable)
9.02 Strandhill	2120	Favourable (increasing)	Unfavourable - Inadequate (stable)	Unfavourable - Bad	Unfavourable - Bad (deteriorating)
9.02 Strandhill	*2130	Unfavourable - Inadequate (increasing)	Unfavourable - Inadequate (increasing)	Unfavourable - Bad	Unfavourable - Bad (stable)
9.02 Strandhill	2170	Favourable (stable)	Unfavourable - Inadequate (stable)	Unfavourable - Inadequate	Unfavourable - Inadequate (stable)
9.02 Strandhill	2190	Favourable (stable)	Favourable (stable)	Unfavourable - Inadequate	Unfavourable - Inadequate (stable)

Sub-site 1. Ballysadare Bay

Ballysadare Bay is a large saltmarsh site covering 118 ha, extending around most of Ballysadare Bay in the south-eastern corner of Sligo Bay, Co. Sligo. The main saltmarsh habitats are **1330 Atlantic salt meadows** and **1410 Mediterranean saltmarsh**, with **1310 *Salicornia* flats** present. Extensive areas of **1410 Mediterranean saltmarsh** continue to be present in the northeast of the site, with linear stretches of **1330 Atlantic salt meadows** extending around much of the site. A swamp forms an important part of the system, particularly in the inner bay.

Summary Information

Survey Date: 02-03 July 2023

Water Framework Directive Waterbody: Ballysadare Estuary

Previous survey identifiers: SMP0117

Current survey details:

Table 4: Current survey details for Annex I habitats at Ballysadare Bay

Habitat Code	Area	Monitoring stops
1310 <i>Salicornia</i> flats	0.352	0
1330 Atlantic salt meadows	36.702	12
1410 Mediterranean saltmarsh	36.225	12

1310 *Salicornia* flats

Area

The habitat has increased from 0.002 ha during SMP II to 0.35 ha, due to natural processes. This is consistent with an Area assessment of Favourable and the trend is stable.

Structure and Functions

Structure and Functions were not assessed, so the trend is not applicable.

Future Prospects

No pressures were recorded for this habitat. Future Prospects were therefore assessed as Favourable, and the trend was assessed as stable.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: not applicable
- Future Prospects: Favourable (stable)

Since Structure and Functions were not assessed, the overall conservation assessment for **1310 *Salicornia* flats** at 9.01 Ballysadare Bay was not applicable.

Overall Conservation Status: Favourable (NA)

Condition of the habitat by area

Since Structure and Functions were not assessed, it was impossible to assess the condition of the habitat.

1330 Atlantic salt meadows

Area

The habitat has decreased a little over the most recent reporting cycle, mainly due to natural processes. The loss of area due to natural fluctuations between 1330 Atlantic salt meadows, 1410 Mediterranean

saltmarsh and reed swamps has been very small (0.12 ha). Other losses due to anthropogenic causes, in particular building of coastal defences were present before SMP. Area loss related to livestock-assisted erosion and infilling was recorded during SMP II and since it has not been recovered yet Area was therefore assessed as Unfavourable - Inadequate (decreasing).

Structure and Functions

Five saltmarsh community types were recorded during the surveys: SM2a *Puccinellia maritima*–*Glaux maritima* saltmarsh; SM3a *Plantago maritima*–*Armeria maritima* saltmarsh; SM4a *Festuca rubra*–*Agrostis stolonifera* saltmarsh; SM6b *Agrostis stolonifera*–*Triglochin maritimum* saltmarsh; SM7a *Elytrigia repens* coarse grassland.

No criteria failed in the Structure and Functions assessment that were therefore assessed as Favourable (stable).

Future Prospects

No impacts were having a high negative impact. Overgrazing and trampling by cattle and sheep had a medium-intensity negative impact over more than 18 hectares of the habitat's area. Off-road driving and deposition of waste from agricultural activities were affecting about 1% of the habitat area with a medium-intensity negative impact.

Future Prospects were therefore assessed as Unfavourable - Inadequate, and the trend was assessed as stable.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Unfavourable - Inadequate (decreasing)
- Structure and Functions: Favourable (stable)
- Future Prospects: Unfavourable - Inadequate (stable)

Since two of the three parameters were assessed as Unfavourable - Inadequate, the overall conservation assessment for **1330 Atlantic salt meadows** at 9.01 Ballysadare Bay was Unfavourable - Inadequate. Since the previous assessment was Unfavourable - Inadequate, the trend is stable.

Overall Conservation Status: Unfavourable - Inadequate (stable).

Condition of the habitat by area

Medium-intensity negative impacts were affecting about 18% of **1330 Atlantic salt meadows**, however they didn't lead to the failure of any Structure and Functions criteria, so only 5% of the habitat area was considered to be in poor condition. The remaining 95% of the habitat was considered to be in good condition.

1410 Mediterranean saltmarsh

Area

Since SMP II the habitat has reduced from 36.30 ha to 36.22 ha, due to natural processes. This is consistent with an Area assessment of Favourable and the trend is stable.

Structure and Functions

No criteria failed in the Structure and Functions assessment that were therefore assessed as Favourable (stable).

Future Prospects

No impacts were having a high negative impact. Overgrazing and trampling by cattle and sheep had a low-intensity negative impact over about 1.8 hectares of the habitat area. Future Prospects were therefore assessed as Favourable, and the trend was assessed as stable.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: Favourable (stable)
- Future Prospects: Favourable (stable)

Since all three parameters were assessed as Favourable, the overall conservation assessment for **1410 Mediterranean saltmarsh** at 9.01 Ballysadare Bay was Favourable. Since the previous assessment was Favourable, the trend is stable.

Overall Conservation Status: Favourable (stable)

Condition of the habitat by area

Medium-intensity negative impacts were affecting about 5% of the habitat's area, but they didn't lead to the failure of any Structure and Functions criteria, so only 5% of the habitat area was considered to be in poor condition. The remaining 95% of the habitat was considered to be in good condition.

Site 9 Subsite 1 - Ballysadare Bay Appendices

Appendix 1. Area

Total habitat area recorded during reporting cycles to date.

Habitat	2007	2013	2019	2025
1310	NS	0.012	0.002	0.352
1330	NS	37.114	36.661	36.702
1410	NS	0.012	36.624	36.225

Favourable Reference Area and cumulative changes in area due to human activities (restoration and loss) recorded during reporting cycles to date. Natural fluctuations are not considered.

Habitat	Favourable Reference area (ha)	2007 change (ha)	2013 change (ha)	2019 change (ha)	2025 change (ha)
1310	0.012	NS	0	0	0
1330	37.114	NS	0	<1% per year	2019 loss
1410	0.012	NS	0	0	0

Appendix 2. Structure and Functions

Negative indicator species and non-native invasive species

Habitat	Species name	Cover (%)
1410	<i>Senecio jacobaea</i>	1.0
1220	<i>Cirsium vulgare</i>	0.1

Positive indicator species and notable species

Habitat	Species name	Cover (%) (if recorded)
1330	<i>Agrostis stolonifera</i>	
1330	<i>Armeria maritima</i>	
1330	<i>Aster tripolium</i>	
1330	<i>Atriplex prostrata</i>	
1330	<i>Carex extensa</i>	
1330	<i>Cochlearia species</i>	
1330	<i>Festuca rubra</i>	
1330	<i>Glaux maritima</i>	
1330	<i>Juncus gerardii</i>	
1330	<i>Plantago maritima</i>	
1330	<i>Puccinellia maritima</i>	
1330	<i>Salicornia species</i>	
1330	<i>Spergularia marina</i>	
1330	<i>Triglochin maritimum</i>	
1410	<i>Aster tripolium</i>	
1410	<i>Cochlearia species</i>	
1410	<i>Glaux maritima</i>	
1410	<i>Juncus gerardii</i>	
1410	<i>Juncus maritimus</i>	
1410	<i>Leontodon autumnalis</i>	
1410	<i>Oenanthe lachenalii</i>	
1410	<i>Plantago maritima</i>	
1410	<i>Triglochin maritimum</i>	

Structure and Functions Assessment Criteria

Habitat	Indicator	Pass/Fail
1330	Positive indicator species	Pass
1330	Vegetation height – Standard deviation	Pass
1330	Vegetation height – Average height	Pass
1330	Negative indicator species	Pass
1330	Disturbed ground	Pass
1330	Signs of negative activities, e.g. infilling, reclamation, turf-cutting, pollution	Pass
1330	Human disturbance to hydrology	Pass
1330	Natural transitions to semi-natural terrestrial habitats on landward margin	Pass
1330	Presence of <i>Spartina</i> spp. within vicinity of habitat	Pass
1330	Presence of site-specific target species	Pass
1330	Number of zones (SM2, SM3, SM4, SM6BCD, SM7/driftline) covering 1% or more of 1330 area	Pass
1410	Positive indicator species	Pass
1410	Negative indicator species	Pass
1410	Disturbed ground	Pass

1410	Signs of negative activities, e.g. infilling, reclamation, turf-cutting, pollution	Pass
1410	Human disturbance to hydrology	Pass
1410	Natural transitions to semi-natural terrestrial habitats on landward margin	Pass
1410	Presence of site-specific target species (indicators of local distinctiveness)	Pass
1410	Presence of <i>Spartina</i> spp. within vicinity of habitat	Pass

Appendix 3. Impacts and Activities

Impacts recorded

Habitat code	Impact code	Impact description	Relative importance	Influence	Source	Timing	Trend	Area
1310	PX04							
1330	PA07	Overgrazing and trampling (cattle and sheep)	Medium	Negative	Inside	Ongoing	Stable	50.0
1330	PA22	Canal for agriculture	Low	Neutral	Inside	Ongoing	Stable	1.0
1330	PA25	Offroad driving and deposition of waste	Medium	Negative	Inside	Ongoing	Stable	1.0
1330	PF05	Walking and trampling	Low	Neutral	Inside	Ongoing	Stable	0.5
1330	PF15	Coastal defences and rock embankment	Medium	Neutral	Inside	Ongoing	Stable	Unknown
1330	PM07	Ulex europaeus	Low	Neutral	Inside	Ongoing	Stable	0.1
1410	PA07	Overgrazing and trampling (cattle and sheep)	Low	Negative	Inside	Ongoing	Stable	4.0
1410	PA22	Canal for agriculture	Low	Neutral	Inside	Ongoing	Stable	0.2
1410	PA23	Canals and dam	Low	Neutral	Inside	Ongoing	Stable	0.2
1410	PF05	Walking and trampling	Low	Neutral	Inside	Ongoing	Stable	0.5
1410	PF15	Breakwater	Medium	Neutral	Inside	Ongoing	Stable	Unknown

Conservation Measures required

Habitat code	Measure code	Measure description	Area (ha)	Status (in place/partial/ Absent/unidentified)	Response timeframe	Purpose	Location (inside and or Outside SAC)
1220	CE01	Measure required to manage impact of unpaved road	0.4186	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
1220	CF03	Measure required to regulate recreational activities	0.2826	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside

Appendix 4. Condition of the habitat by area

Summary of habitat condition

Habitat code	% remaining habitat in poor condition	% remaining habitat in good condition
1330	5	95
1410	5	95

Sub-site 2. Strandhill

Strandhill is located along a sand spit in the outer part of Ballysadare Bay, approximately 2 km south of Sligo Airport in Co. Sligo.

The dunes at Strandhill are the focus of considerable recreational activities. A golf course has been developed on the dunes. There are car parks and camping facilities, and the location is promoted as a surfing destination. As a result, the dunes are subjected to considerable amenity use and there is a strong motivation to construct coastal protection measures to protect the infrastructure when erosion events take place (RPS, 2012).

The boundaries of this sub-site have changed since SDM. In the past survey Strandhill included the entire dune systems from northern area (north of the Sligo airport) to the southern Mussel Point. During this project the site has been split in two different areas following the boundaries of Ballysadare Bay SAC (SAC 000622) in the south and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC (SAC 000627) in the north.

Summary Information

Survey Date: 01-02 July 2023

Water Framework Directive Waterbody: Ballysadare Estuary

Previous survey identifiers: CMP133, SMP0118

Current survey details:

Table 5: Current survey details for Annex I habitats at Strandhill

Habitat Code	Area	Monitoring stops
1210 Drift line vegetation	0.173	2
1220 Perennial vegetation of stony banks	0.206	2
1310 <i>Salicornia</i> flats	0.099	0
1330 Atlantic salt meadows	1.984	8
2110 Embryonic shifting dunes	1.216	8
2120 Marram dunes (white dunes)	6.791	5
*2130 Fixed dunes (grey dunes)	58.456	12
2170 Dunes with creeping willow	0.306	2
2190 Humid dune slacks	1.273	4

1210 Drift line vegetation

Area

The area of **1210 Drift line vegetation** increased from 0.00 ha to 0.17 ha since SDM. This increase was due to natural processes of deposition. Major losses in Area due to sea defences and recorded during the SDM are located in the northern part of the site, while in the southern part, corresponding to the actual sub-site, the habitat was not present. This is consistent with an Area assessment of Favourable and the trend is stable.

Structure and Functions

No criteria failed in the Structure and Functions assessment, so the Structure and Functions were Favourable. Since in the previous assessment Structure and Functions were Favourable, the trend is therefore stable.

Future Prospects

No negative impacts were recorded within the area of **1210 Drift line vegetation**. Only walking through the habitat was recorded as a low-intensity neutral impact, while the construction of the sea-wall was also assessed as neutral because it was influencing the sediment dynamics, but the area affected is unknown. Future Prospects were therefore assessed as Favourable, and the trend was assessed as increasing.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: Favourable (stable)
- Future Prospects: Favourable (increasing)

All three parameters were assessed as Favourable, and the conservation status of **1210 Drift line vegetation** at 9.02 Strandhill was Favourable. Since the previous assessment was Unfavourable - Bad, the trend is therefore improving.

Overall Conservation Status: Favourable (improving)

Condition of the habitat by area

100% of the habitat was considered to be in good condition.

1220 Perennial vegetation of stony banks

Area

The area of **1220 Perennial vegetation of stony banks** increased from 0.00 ha to 0.21 ha since the SDM survey. This increase was due to natural processes of deposition. During the SDM, in the southern part, corresponding to the actual sub-site, the habitat was not present. This is consistent with an Area assessment of Favourable and the trend is stable.

Structure and Functions

1220 Perennial vegetation of stony banks present at Strandhill was composed by pioneer *Honckenya peploides* dominated communities and, equally, by grassland communities dominated by *Festuca rubra*. No notable species was recorded. No criteria failed in the Structure and Functions assessment, so the Structure and Functions were Favourable. Since during SDM Structure and Functions were Favourable, the trend is therefore stable.

Future Prospects

The construction of the large sea-wall, before the designation of the SAC, has altered the dynamics of erosion and deposition at Strandhill, but the area affected is unknown. Walking through the habitat was recorded as a low-intensity neutral impact. Future Prospects were therefore assessed as Favourable, and the trend was assessed as increasing.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: Favourable (stable)
- Future Prospects: Favourable (increasing)

Since all three parameters were assessed as Favourable, the overall conservation assessment for **1220 Perennial vegetation of stony banks** at 9.02 Strandhill was Favourable and the trend is improving.

Overall Conservation Status: Favourable (improving)

Condition of the habitat by area

100% of the habitat was considered to be in good condition.

1310 *Salicornia* flats

Area

The habitat has increased from 0.03 ha during SMP II to 0.10 ha, due to natural processes. This is consistent with an Area assessment of Favourable and the trend is stable.

Structure and Functions

Structure and Functions were not assessed, so the trend is unknown.

Future Prospects

No pressures were recorded for this habitat. Future Prospects were therefore assessed as Favourable, and the trend was assessed as stable.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: not applicable
- Future Prospects: Favourable (stable)

Since Structure and Functions were not assessed, the overall conservation assessment for **1310 *Salicornia* flats** at 9.02 Strandhill was not applicable.

Overall Conservation Status: not applicable.

Condition of the habitat by area

Since Structure and Functions were not assessed, it was impossible to assess the condition of the habitat.

1330 Atlantic salt meadows

Area

The habitat has increased from 1.52 ha during SMP II to 1.98 ha, due to natural processes. This is consistent with an Area assessment of Favourable and the trend is stable.

Structure and Functions

Four saltmarsh community types were recorded during the surveys: SM2a *Puccinellia maritima*–*Glaux maritima* saltmarsh; SM3a *Plantago maritima*–*Armeria maritima* saltmarsh; SM4a *Festuca rubra*–*Agrostis stolonifera* saltmarsh; SM6b *Agrostis stolonifera*–*Triglochin maritimum* saltmarsh.

One criterion failed in the Structure and Functions assessment. Only 12.50% of stops had an average height greater than 15 cm, while the relevant threshold is 20-30% of stops, but this criterion should not be taken in account for the assessment. The Structure and Functions were therefore Favourable. Since Structure and Functions were assessed as Favourable during the SMP too, the trend is therefore stable.

Future Prospects

No impacts were having a high negative impact. Off-road driving and walking had a medium-intensity negative impact over about 0.04 hectares of the habitat area. Future Prospects were therefore assessed as Unfavourable - Inadequate, and the trend was assessed as decreasing.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (Stable)
- Structure and Functions: Favourable (Stable)
- Future Prospects: Unfavourable - Inadequate (decreasing)

Since one of the three parameters was assessed as Unfavourable - Inadequate, the overall conservation assessment for **1330 Atlantic salt meadows** at 9.02 Strandhill was Unfavourable - Inadequate. Since during SMP the assessment was Favourable, the trend is deteriorating.

Overall Conservation Status: Unfavourable - Inadequate (deteriorating)

Condition of the habitat by area

Negative impacts were affecting about 2% of **1330 Atlantic salt meadows**, leading to the failure of one Structure and Functions criterion, so this area was considered to be in poor condition. The remaining 98% of the habitat was considered to be in good condition.

2110 Embryonic shifting dunes

Area

The area of **2110 Embryonic shifting dunes** increased from 1.08 ha during the SDM to 1.22 ha. This increase was due to natural processes of erosion. Area was assessed as Favourable and the trend is stable.

Structure and Functions

No criteria failed in the Structure and Functions assessment, so the Structure and Functions were Favourable. Since in the previous assessment Structure and Functions were Favourable, the trend is therefore stable.

Future Prospects

The sea wall was recorded as a neutral impact and its implications in the long-term are not fully understood. Future Prospects were therefore assessed as Favourable, and the trend was assessed as stable.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: Favourable (stable)
- Future Prospects: Favourable (stable)

Since all three parameters were assessed as Favourable, the overall conservation assessment for **2110 Embryonic shifting dunes** at 9.02 Strandhill was Favourable and trend is stable.

Overall Conservation Status: Favourable (stable)

Condition of the habitat by area

100% of the habitat was considered to be in good condition.

2120 Marram dunes (white dunes)

Area

The area of **2120 Marram dunes (white dunes)** increased from 5.47 ha to 6.79 ha since SDM. Vulnerable parts of the habitat have been fenced off since CMP, to prevent natural and anthropogenic erosion due to trampling and to restore the habitat (Project name: Strandhill dune management). This is consistent with an Area assessment of Favourable and the trend is increasing.

Structure and Functions

The habitat failed one of the criteria in the Structure and Functions assessment. The habitat had been undermined by excessive trampling and was structurally damaged, so the Structure and Functions were Unfavourable - Inadequate. Since during SDM Structure and Functions were also Unfavourable - Inadequate, the trend is stable.

Future Prospects

Deposition of waste on the dunes and the spreading of non-native (*Acer pseudoplatanus*) species were recorded as high-intensity negative impacts, fortunately affecting a very small portion of the habitat. Negative indicator species like the native *Arrhenatherum elatius* and trampling were recorded as medium-intensity negative impacts, the latter affecting 50% of the habitat's area.

Future Prospects were therefore assessed as Unfavourable - Bad, and the trend was assessed as decreasing, because the previous assessment was Unfavourable - Inadequate.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: Unfavourable - Inadequate (stable)
- Future Prospects: Unfavourable - Bad (decreasing)

Because one of the three parameters were assessed as Unfavourable-Bad, the overall conservation assessment for **2120** at 9.02 Strandhill is Unfavourable-Bad and trend is deteriorating.

Overall Conservation Status: Unfavourable - Bad (deteriorating)

Condition of the habitat by area

75% of the habitat was considered to be in good condition, the remaining was in poor condition, mainly due to trampling leading to erosion.

*2130 Fixed dunes (grey dunes)

Area

The area of ***2130 Fixed dunes (grey dunes)** increased from 57.02 ha to 58.46 ha between SDM and CHNW21. This increase was due to natural processes of deposition. Small losses (0.03 ha) of habitat due to anthropogenic factors, such as construction of an embankment and a road leading to the beach, led to an Area assessment of Unfavourable - Inadequate. Since no additional loss has been recorded since the previous assessment, the trend is increasing.

Structure and Functions

The ***2130 Fixed dunes (grey dunes)** failed two assessment criteria. No stops with height of vegetation between 2 cm and 10 cm were recorded (the threshold is 30-70% of stops). A sea-wall has been erected adjacent to the fixed dunes. The presence of a hard defence structure that terminates in a soft sand dune could be the cause of further erosion close to the end point of the sea-wall (RPS, 2012).

As these two assessment criteria failed, the Structure and Functions were Unfavourable - Inadequate. Since in the assessment in 2013, Structure and Functions were assessed as Unfavourable – Bad, the trend is therefore increasing.

Future Prospects

Under grazing had a low-intensity, negative effect on 80% of the habitat. Medium-intensity, negative impacts included tracks and cutting of vegetation for leisure activities (golf club) and coastal protection works, which had a high, direct impact on 1% of the habitat. Other negative impacts concerned trampling and spreading of native and non-native problematic species such as *Acer pseudoplatanus*, *Clematis vitalba*, *Solidago canadensis*, *Cirsium arvense*, *Rosa spinosissima*, *Hedera helix*, *Lilium* spp., *Rubus fruticosus*, *Senecio jacobaea*.

Due to the above mentioned negative pressures and threats, particularly trampling and spreading of native and non-native problematic species, Future Prospects were assessed as Unfavourable - Bad, and the trend was assessed as stable.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Unfavourable - Inadequate (Increasing)
- Structure and Functions: Unfavourable - Inadequate (Increasing)
- Future Prospects: Unfavourable - Bad (Stable)

Since one of the three parameters was assessed as Unfavourable - Bad, the overall conservation assessment for ***2130 Fixed dunes (grey dunes)** at 9.02 Strandhill was Unfavourable - Bad. Since the overall assessment was Unfavourable - Bad (deteriorating) during SDM, the trend is therefore stable.

Overall Conservation Status: Unfavourable - Bad (stable)

Condition of the habitat by area

Considering that about 25% of ***2130 Fixed dunes (grey dunes)** were affected by several impacts (mainly spreading of problematic native species and trampling) that have a bad influence on the Structure and Functions, this area was therefore considered to be in poor condition. The remaining 75% of the habitat was considered to be in good condition.

2170 Dunes with creeping willow

Area

The area of **2170 Dunes with creeping willow** increased from 0.16 ha to 0.31 ha between SDM and CHNW21, but this increase was due to a different and more detailed mapping method. This is consistent with an Area assessment of Favourable (stable).

Structure and Functions

Only one criterion failed in the Structure and Functions assessment, the height of *Salix repens* which should be 5 to 30 cm throughout all stops. At each monitoring stops *Salix repens* was tall (50-70 cm) and bushy due to under grazing. As this criterion failed, the Structure and Functions were Unfavourable - Inadequate. The Structure and Functions were assessed Unfavourable - Inadequate during SDM, the trend is therefore stable.

Future Prospects

The most significant impact recorded was undergrazing, which had a low negative impact on 100% of the habitat. Future Prospects were therefore assessed as Unfavourable - Inadequate, and the trend was assessed as stable.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: Unfavourable - Inadequate (stable)
- Future Prospects: Unfavourable - Inadequate (stable)

Although Area was assessed as Favourable, Structure and Functions and Future Prospects were assessed as Unfavourable - Inadequate, so the overall conservation assessment for **2170 Dunes with creeping willow** at 9.02 Strandhill was Unfavourable - Inadequate. Since the overall assessment was Unfavourable - Inadequate during SDM, the trend is stable.

Overall Conservation Status: Unfavourable - Inadequate (stable)

Condition of the habitat by area

Due to undergrazing, about 25% of the habitat's area was considered to be in poor condition. The remaining 75% of the habitat was considered to be in good condition.

2190 Humid dune slacks

Area

The area of **2190 Humid dune slacks** decreased from 1.71 ha to 1.27 ha between SDM and CHNW21, but this decrease was due to natural processes. This is consistent with an Area assessment of Favourable (stable).

Structure and Functions

No criteria failed in the Structure and Functions assessment, so the Structure and Functions were Favourable. Since **2190 Humid dune slacks** was assessed as Favourable during SDM, the trend is therefore stable.

Future Prospects

Walking and trampling, that result in bare sand areas, were recorded. Another reason that provided part of bare sand was the wind moving heaps of sand from the large eroded dune and contributed to the progressive drying out of the habitat.

Future Prospects were therefore assessed as Unfavourable - Inadequate, and the trend was assessed as stable.

Conservation assessment

The conservation status assessments of the three parameters are as follows:

- Area: Favourable (stable)
- Structure and Functions: Favourable (stable)
- Future Prospects: Unfavourable - Inadequate (stable)

Since one of the three parameters was assessed as Unfavourable - Inadequate, the overall conservation assessment for **2190 Humid dune slacks** at 9.02 Strandhill was Unfavourable - Inadequate. Since **2190 Humid dune slacks** was assessed as Unfavourable - Inadequate during SDM, the trend is stable.

Overall Conservation Status: Unfavourable - Inadequate (stable)

Condition of the habitat by area

95% of the habitat was considered to be in good condition.

Site 9 Subsite 2 - Strandhill Appendices

Appendix 1. Area

Total habitat area recorded during reporting cycles to date.

Habitat	2007	2013	2019	2025
1210	0.003	0.000	NS	0.173
1220	0.458	0.027	NS	0.206
1310	NS	0.001	0.034	0.099
1330	NS	1.491	1.525	1.984
2110	0.761	1.081	NS	1.216
2120	4.943	5.470	NS	6.791
2130	56.099	57.025	NS	58.456
2170	0.172	0.158	NS	0.306
2190	1.714	1.710	NS	1.273

Favourable Reference Area and cumulative changes in area due to human activities (restoration and loss) recorded during reporting cycles to date. Natural fluctuations are not considered.

Habitat	Favourable Reference area (ha)	2007 change (ha)	2013 change (ha)	2019 change (ha)	2025 change (ha)
1210	0.984	0	NR	NS	0
1220	0.460	0	0	NS	0
1310	0.001	NS	0	0	0
1330	1.478	NS	0	0	0
2110	0.762	0	0	NS	0
2120	4.944	<1% per year	0	NS	0
*2130	54.427	<1% per year	2007 loss	NS	2007 loss
2170	0.321	<1% per year	0	NS	0
2190	2.050	0	0	NS	0

Appendix 2. Structure and Functions

Negative indicator species and non-native invasive species

Habitat	Species name	Cover (%)
2120	<i>Arrhenatherum elatius</i>	1.0
2120	<i>Senecio jacobaea</i>	1.0
*2130	<i>Acer pseudoplatanus</i>	20.0
*2130	<i>Rubus fruticosus ag.</i>	20.0
*2130	<i>Senecio jacobaea</i>	1.0
2170	<i>Arrhenatherum elatius</i>	5.0
2190	<i>Arrhenatherum elatius</i>	20.0

Positive indicator species and notable species

Habitat	Species name	Cover (%) (if recorded)
1210	<i>Atriplex species</i>	
1210	<i>Cakile maritima</i>	
1220	<i>Cochlearia officinalis</i>	1.0
1220	<i>Honckenya peploides</i>	30.0
1220	<i>Rumex crispus</i>	2.0
1220	<i>Silene uniflora</i>	15.0
1330	<i>Agrostis stolonifera</i>	
1330	<i>Armeria maritima</i>	
1330	<i>Aster tripolium</i>	
1330	<i>Atriplex prostrata</i>	
1330	<i>Elytrigia repens</i>	
1330	<i>Festuca rubra</i>	
1330	<i>Glaux maritima</i>	
1330	<i>Juncus gerardii</i>	
1330	<i>Plantago maritima</i>	
1330	<i>Puccinellia maritima</i>	
1330	<i>Salicornia species</i>	
1330	<i>Spergularia marina</i>	
1330	<i>Spergularia media</i>	
1330	<i>Suaeda maritima</i>	
1330	<i>Triglochin maritimum</i>	
2110	<i>Elytrigia juncea</i>	
2110	<i>Leymus arenarius</i>	
2120	<i>Ammophila arenaria</i>	
2120	<i>Elytrigia juncea</i>	
*2130	<i>Anthyllis vulneraria</i>	
*2130	<i>Carex arenaria</i>	
*2130	<i>Carex flacca</i>	
*2130	<i>Crepis capillaris</i>	
*2130	<i>Daucus carota</i>	
*2130	<i>Euphrasia officinalis ag.</i>	
*2130	<i>Festuca rubra</i>	
*2130	<i>Galium verum</i>	
*2130	<i>Homalothecium lutescens</i>	
*2130	<i>Hylocomium splendens</i>	

*2130	<i>Hypochaeris radicata</i>	
*2130	<i>Lotus corniculatus</i>	
*2130	<i>Luzula campestris</i>	
*2130	<i>Peltigera species</i>	
*2130	<i>Pilosella officinarum</i>	
*2130	<i>Plantago lanceolata</i>	
*2130	<i>Poa pratensis</i>	
*2130	<i>Rhytidiadelphus squarrosus</i>	
*2130	<i>Rhytidiadelphus triquetrus</i>	
*2130	<i>Scleropodium purum</i>	
*2130	<i>Thymus polytrichus</i>	
*2130	<i>Trifolium repens</i>	
*2130	<i>Veronica chamaedrys</i>	
*2130	<i>Viola canina</i>	
2170	<i>Festuca rubra</i>	
2170	<i>Holcus lanatus</i>	
2170	<i>Rhytidiadelphus squarrosus</i>	
2170	<i>Salix repens</i> v. <i>argentea</i>	
2170	<i>Scleropodium purum</i>	
2190	<i>Agrostis stolonifera</i>	
2190	<i>Calliergon cuspidatum</i>	
2190	<i>Campylium stellatum</i>	
2190	<i>Carex arenaria</i>	
2190	<i>Carex flacca</i>	
2190	<i>Dactylorhiza species</i>	
2190	<i>Epipactis palustris</i>	
2190	<i>Festuca rubra</i>	
2190	<i>Lotus corniculatus</i>	
2190	<i>Sagina nodosa</i>	
2190	<i>Salix repens</i> v. <i>argentea</i>	

Structure and Functions Assessment Criteria

Habitat	Indicator	Pass/Fail
1210	Positive indicator species	Pass
1210	Negative indicator species	Pass
1210	Non-native species	Pass
1210	Notable/rare species	Pass
1210	Interference with the sediment dynamics	Pass
1210	Damage due to disturbance	Pass
1220	Shingle habitat	Pass
1220	Native species	Pass
1220	Notable/rare species	Pass
1220	Negative indicator species	Pass
1220	Non-native species	Pass
1220	Interference with the sediment dynamics	Pass
1220	Damage due to disturbance	Pass
1330	Positive indicator species	Pass
1330	Vegetation height – Standard deviation	Pass
1330	Vegetation height – Average height	Fail
1330	Negative indicator species	Pass
1330	Disturbed ground	Pass

1330	Signs of negative activities, e.g. infilling, reclamation, turf-cutting, pollution	Pass
1330	Human disturbance to hydrology	Pass
1330	Natural transitions to semi-natural terrestrial habitats on landward margin	Pass
1330	Presence of <i>Spartina</i> spp. within vicinity of habitat	Pass
1330	Presence of site-specific target species	Pass
1330	Number of zones (SM2, SM3, SM4, SM6BCD, SM7/driftline) covering 1% or more of 1330 area	Pass
2110	Positive indicator species	Pass
2110	Negative indicator species	Pass
2110	Non-native species	Pass
2110	Flowering or fruiting of positive indicator species	Pass
2110	Notable/rare species	Pass
2110	Interference with the sediment dynamics	Pass
2110	Damage due to disturbance	Pass
2120	Positive indicator species	Pass
2120	Negative indicator species	Pass
2120	Non-native species	Pass
2120	Flowering or fruiting of positive indicator species	Pass
2120	Notable/rare species	Pass
2120	Interference with the sediment dynamics	Pass
2120	Damage due to disturbance	Fail
*2130	Positive indicator species	Pass
*2130	Negative indicator species	Pass
*2130	Non-native species	Pass
*2130	Cover of trees and scrub other than <i>Juniperus communis</i>	Pass
*2130	Trees or saplings from adjacent plantations	Pass
*2130	Height of vegetation	Fail
*2130	Flowering or fruiting of positive indicator species	Pass
*2130	Bare sand	Pass
*2130	Notable/rare species	Pass
*2130	Interference with the sediment dynamics	Fail
*2130	Damage due to disturbance	Pass
2170	Positive indicator species	Pass
2170	Negative indicator species	Pass
2170	Non-native species	Pass
2170	Rank grasses	Pass
2170	Cover of trees and scrub other than <i>S. repens</i>	Pass
2170	Height of <i>Salix repens</i>	Fail
2170	Bare sand	Pass
2170	Notable/rare species	Pass
2170	Interference with the sediment dynamics	Pass
2170	Damage due to disturbance	Pass
2190	Positive indicator species	Pass
2190	Bryophytes	Pass
2190	Cover of <i>Salix repens</i>	Pass
2190	Negative indicator species	Pass
2190	Non-native species	Pass
2190	Cover of scrub	Pass
2190	Forb:grass ratio (mean)	Pass
2190	Bare ground	Pass
2190	Notable/rare species	Pass
2190	Interference with the sediment dynamics	Pass
2190	Damage due to disturbance	Pass

Appendix 3. Impacts and Activities

Impacts recorded

Habitat code	Impact code	Impact description	Relative importance	Influence	Source	Timing	Trend	Area
1210	PF05	Walking	Low	Neutral	Inside	Ongoing	Decreasing	80.0
1210	PF15	Sea defences	Low	Neutral	Outside	Ongoing	Decreasing	Unknown
1220	PF05	Walking	Low	Neutral	Inside	Ongoing	Decreasing	80.0
1220	PF15	Coastal defence	Low	Neutral	Outside	Ongoing	Decreasing	Unknown
1310	PX04							
1330	PF05	Offroad driving and walking	Medium	Negative	Inside	Ongoing	Decreasing	2.0
1330	PF15	Coastal defence	Medium	Neutral	Inside	Ongoing	Stable	Unknown
2110	PF05	Walking	Low	Neutral	Inside	Ongoing	Decreasing	80.0
2110	PF15	Sea defences	Medium	Neutral	Outside	Ongoing	Decreasing	Unknown
2120	PF05	Walking, footpaths and trampling	Medium	Negative	Inside	Ongoing	Increasing	50.0
2120	PF06	Deposition of waste	High	Negative	Inside	Ongoing	Decreasing	0.1
2120	PF15	Sea defences	High	Negative	Outside	Ongoing	Stable	Unknown
2120	PI02	Acer pseudoplatanus	High	Negative	Inside	Ongoing	Decreasing	0.1
2120	PI03	Arrhenatherum elatius	Medium	Negative	Inside	Ongoing	Decreasing	0.1
2120	PM07	Natural erosion	High	Neutral	Inside	Ongoing	Decreasing	50.0
*2130	PA05	No grazing	Low	Negative	Inside	Ongoing	Stable	80.0
*2130	PA07	Senecio jacobaea due to overgrazing	Medium	Negative	Inside	Ongoing	Decreasing	1.0
*2130	PF05	Golf club	Medium	Negative	Inside	Ongoing	Stable	10.0
*2130	PF15	Sea defences	High	Negative	Outside	Ongoing	Stable	Unknown
*2130	PI02	Acer pseudoplatanus, Clematis vitalba, Solidago canadensis and Lilium spp	High	Negative	Inside	Ongoing	Decreasing	0.6
*2130	PI03	Encroachment (Hedera helix and Rubus fruticosus)	Medium	Negative	Inside	Ongoing	Decreasing	2.0
*2130	PM07	Encroachment (Crataegus monogyna and Salix cinerea) and natural erosion	Medium	Neutral	Inside	Ongoing	Stable	10.0
2170	PA05	No grazing	Low	Negative	Inside	Ongoing	Decreasing	100.0
2170	PF05	Walking	Low	Negative	Inside	Ongoing	Decreasing	1.0
2170	PM07	Arrhenatherum elatius	Low	Negative	Inside	Ongoing	Decreasing	1.0
2190	PF05	Walking and trampling	Medium	Negative	Inside	Ongoing	Decreasing	1.0
2190	PM07	Drying	High	Neutral	Inside	Ongoing	Decreasing	20.0

Conservation Measures required

Habitat code	Measure code	Measure description	Area (ha)	Status (in place/partial/ Absent/unidentified)	Response timeframe	Purpose	Location (inside and or Outside SAC)
2120	CF02	Measure required to reduce impact of coastal defences	U	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
2120	CF03	Measure required to	3.4020	Absent	Medium-	Restore the struc-	Inside

		regulate recreational activities			term results	ture & functions, including the status of typical species	
2120	CL01	Measure required to reduce impact of natural erosion	4.3177	Partial	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
*2130	CA04	Measure required to reintroduce grazing	47.0500	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
*2130	CA05	Measure required to regulate grazing	0.6430	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
*2130	CF02	Measure required to reduce impact of coastal defences	U	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
*2130	CF03	Measure required to regulate recreational activities	7.7000	Partial	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
*2130	CI03	Measure required to control or eradicate other invasive alien species	0.3500	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
*2130	CI05	Measure required to control or eradicate native species	1.1700	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
*2130	CL01	Measure required to reduce impact of natural erosion and encroachment	7.4600	Partial	Medium-term results	Restore the structure & functions, including the status of typical species	Inside
2170	CA04	Measure required to reintroduce grazing	0.3056	Absent	Medium-term results	Restore the structure & functions, including the status of typical species	Inside

Appendix 4. Condition of the habitat by area

Summary of habitat condition

Habitat code	% remaining habitat in poor condition	% remaining habitat in good condition
1210	0	100
1220	0	100
1330	2	98
2110	0	100
2120	25	75
*2130	25	75
2170	25	75
2190	5	95