



Sandsend Project Appraisal Report

Extended Phase 1 Habitat Survey

Scarborough Borough Council

October 2011

Final Report

9W5572

Stanley Hall
Edmund Street
Liverpool L3 9NG
United Kingdom
+44 151 236 2944 Telephone
0151 227 2561 Fax
www.royalhaskoning.com Internet

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Drafted by Jamie V. Gardiner
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1 INTRODUCTION

1.1 Scope of work

Royal Haskoning was commissioned by Scarborough Borough Council (SBC) to undertake a Project Appraisal Report (PAR), being undertaken to appraise coastal risk management options at Sandsend, North Yorkshire. The preferred option is to replace the existing concrete apron with a stepped concrete revetment from Sandside Café to Raithwaite Ravine and extending it eastwards across the ravine and part of the golf course to prevent outflanking. This will require the extension of the existing culvert carrying Newholme Beck by approximately 40m, with the new revetment being approximately 2m higher than the existing to take into account sea level rise. The works would also include the stabilisation of the upper coastal slope in front of Raven Hill Farm to reduce the risk of deep rooted slip failures, thus improving safety for road users and to better manage slope drainage and discharge. If suitable, the material removed to stabilise the slope will be used to support the new defence across Raithwaite Ravine.

As part of the environmental appraisal of this option, an Extended Phase 1 Habitat Survey (JNCC, 2007) was required to determine the habitats present within the study area. The survey had the following objectives:

- To conduct an ecological walkover survey to identify Phase 1 Habitat types present within the site, as defined in 'Handbook for Phase 1 Habitat Survey' (JNCC, 2007) and to identify any uncommon habitats or rare and protected plant species; and,
- To undertake a preliminary assessment of the suitability of habitats available to support protected or United Kingdom Biodiversity Action Plan (UKBAP) species, and to record any evidence or sightings of any faunal groups.

1.2 Report structure

Section 2 provides an account of the methodology adopted during the Phase 1 Habitat Survey and describes the baseline environment recorded during the survey. This includes a summary of the habitats and dominant species recorded within the study area. **Sections 3** and **4** discuss the results of the survey, including the potential ecological sensitivities and key areas of the study site in relation to any future development. Recommendations for future action are provided in **Section 5**. **Appendix A** gives a full species list of the flora and fauna identified (signs or observation) during the survey. The Phase 1 Habitat map is presented as **Appendix B**. All target notes are summarised in **Appendix C**.

1.3 Study limitations

This report relates to conditions as they were at the time of the survey. Findings of the report could reasonably be expected to remain valid for one year, before repeat survey work would need to be carried out prior to construction. The survey was undertaken in early September, which is within the optimal time for Phase 1 Habitat Surveys, but care should be taken when interpreting the results since many plant species may not be apparent due to seasonal change (for example spring flowering species).

2 PHASE 1 HABITAT SURVEY

2.1 Methodology

The survey was conducted on 8 September 2011 and followed the basic methodology established within the Handbook for Phase 1 Habitat Survey (JNCC, 2007). To ensure adequate health and safety support, the survey was conducted by a team of two experienced ecological surveyors. All habitats and plant communities within the study area were recorded and mapped using an annotated, colour-coded map indicating broad habitat types and boundary features. Weather during the survey was a mix of sunshine and heavy showers.

The habitats on site were assessed for their suitability to support protected or BAP species (e.g. nesting birds, reptiles, badgers and bats). Any obvious signs of protected species in these adjacent habitats were recorded, although they were not intensively searched.

Also, a search was made for evidence of the presence of any invasive flora including those listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) and subject to strict legal control (e.g. giant hogweed (*Heracleum mantegazzianum*), Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*).

All botanical species recorded during the survey are presented in **Appendix A**. Detailed descriptions of the habitats and flora recorded provide the bulk of the report and are presented in **Section 2.3**.

Target notes have been recorded at key points throughout the study area; the location of each target note is indicated on the Phase 1 Habitat map (**Appendix B**) and a summary of each note is provided in **Appendix C**, along with photographic records. Within the following text, the Phase 1 Habitat codings (e.g. swamp = F1; as listed in JNCC (2007)) are detailed where applicable.

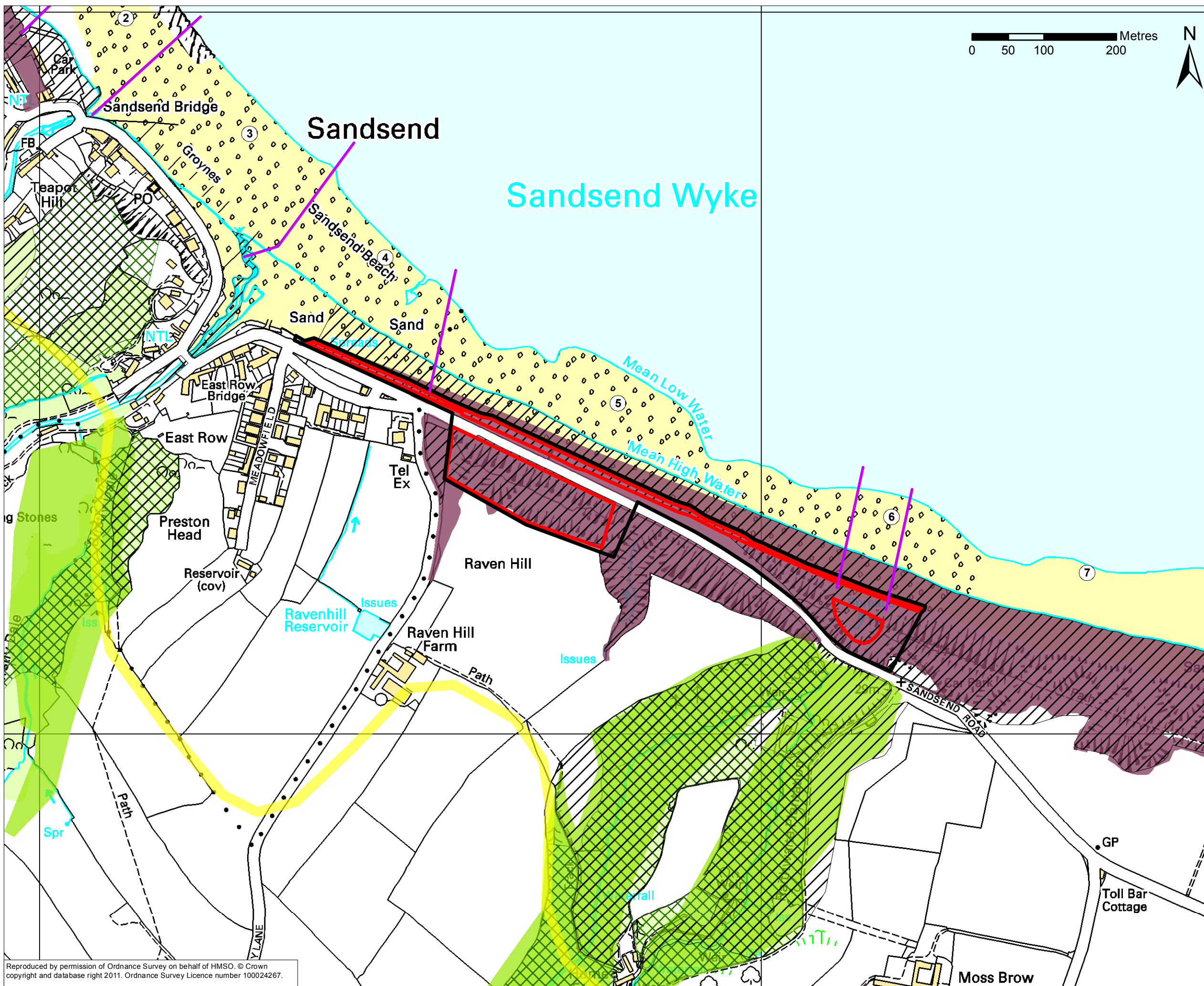
2.2 Study area

The study area encompasses the habitats within the potential scheme footprint and the wider area and comprised two discrete areas (**Figure 2.1**):

1. the coastal slope between the A174 and the existing concrete apron, extending from Sandside Café to Raithwaite Ravine; and,
2. The upper coastal slope, extending for approximately 250m in front of Raven Hill Farm.

The entire study area is included within the Upgang Beck to Sandsend Cliffs Site of Importance for Nature Conservation¹ (SINC), and is classified as Maritime Cliff and Slope UK Biodiversity Action Plan (BAP) habitat. The SINC is designated for its mosaic of coastal cliff habitats, of which the following were recorded within the study area: semi-improved neutral and coastal grasslands (see **Figure 2.1**). The SINC's citation report can be found in **Appendix D**.

¹ SINC's are non-statutory designations, which seeks to protect areas of high wildlife value at a local level.



Environmental Designations

- North York Moors National Park
- SINC
- Ancient Woodland

BAP Habitats

- Maritime Cliffs and Slopes
- Deciduous Woodland

- Management Unit boundary
- Management Unit number

Study Area

Proposed Works

Title:
Study Area

Project:
Sandsend Project Appraisal Report

Client:
Scarborough Borough Council

Date:
October 2011

Scale on A3:
1:5,000

Figure:
2.1

Drawn:
SD

Checked:
JVG



The area of unstable upper coastal slope to be re-graded includes large areas of bare ground. Past works to reduce slope instability by increasing drainage have been unsuccessful, and resulted in sections of pipe being visible where local slips have occurred. The lower coastal slope suffers localised areas of heavy trampling due to uncontrolled access to the beach from the road.

2.3 Survey findings

The following sections provide a summary of the general habitats and associated flora identified within the study area during the survey. The habitat map and associated target notes are presented in **Appendices B** and **C** respectively.

2.3.1 Habitats and flora

Coastal grassland

A narrow linear extent of coastal grassland (H8.4) was present above the existing coastal defence, extending from Sandside Café to Raithwaite Ravine (**Target Note 1**). From the Café to approximately 300m, this habitat covered the entire slope, with the exception of an area of open yellow dune habitat (see below). Further east, this habitat formed a narrow 1 - 2m band above the hard defences which gave way to semi-improved neutral grassland.

Dominant species included red fescue (*Festuca rubra*), sea couch grass (*Agropyron junceiforme*), creeping cinquefoil (*Potentilla reptans*), curled dock (*Rumex crispus*), mosses (*Bryophyta*), red valerian (*Centranthus ruber*) and white stonecrop (*Sedum album*). Other species included creeping thistle (*Cirsium arvense*), yarrow (*Achillea millefolium*), common ragwort (*Senecio jacobaea*), dandelion (*Taraxacum officinale* agg.), ribwort plantain (*Plantago lanceolata*), bramble (*Rubus fruticosus* agg.), smooth sow-thistle (*Sonchus Oleraceus*), spear-leaved orache (*Atriplex prostrata*), spear thistle (*Cirsium vulgare*), nettle (*Urtica* spp.), cleavers (*Gallium aparine*), sea plantain (*Plantago maritima*), hogweed (*Heracleum sphondylium*), glass-leaved orache (*Atriplex littoralis*), marram grass (*Ammophila arenaria*), field horsetail (*Equisetum arvense*) and prickly sow-thistle (*Sonchus asper*). Towards the east of the study area, by Raithwaite Ravine, this habitat also included colt's foot (*Tussilago farfara*), common fleabane (*Pulicaria dysenterica*), lesser knapweed (*Centaurea nigra*), and bird's-foot-trefoil (*Lotus corniculatus*).

The coastal grassland has the potential to be used locally by reptiles; however, the level of habitat fragmentation and disturbance significantly reduces this potential. Invertebrates and ground nesting birds also have the potential to be present; however, regarding the latter, the degree of disturbance is considered to significantly reduce this habitats potential to support these species.

Open yellow dune

Approximately 50m from Sandside Café, the coastal grassland gives way to a small isolated stretch of open yellow dune (H6.8), which extends eastwards for approximately 100m and which was dominated by marram grass (**Target Note 2**). This habitat was influenced by grassland species, with spear-leaved orache, dandelion, sea couch grass, field horsetail, lesser knapweed, creeping cinquefoil, bird's-foot-trefoil, common ragwort,

creeping thistle and white stonecrop also present. A small area, approximately 5m², of oxeye daisy was recorded 100m from the café.

Whilst this habitat is not considered to be of national importance, it is one of the only examples of dune habitat in the region². Open dune habitat can have distinctive invertebrate assemblages, which can often be of regional or national significance; however, due to the isolation of this habitat, lack of open bare sand and influence of grassland species, this is considered to be unlikely.

Semi-improved neutral grassland

Semi-improved neutral grassland (B2) covered the majority of the lower coastal slope, seawards of the A174, commencing from approximately 300m east of the café to the eastern extent of the study area, including Raithwaite Ravine. The upper coastal slope within the study area, landwards of the A174, was also covered by this habitat and comprised areas of rank grassland and scattered scrub with localised areas of bare ground due to slope instability, forming areas of poor semi-improved neutral grassland (see below).

Dominant species included false oat grass (*Arrhenatherum elatius*), cock's foot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus*), field horsetail, creeping thistle, red fescue, common fleabane, colt's foot and lesser knapweed. Scattered scrub (A2.2) consisted of ash (*Fraxinus excelsior*), elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), dog rose (*Rosa Canina*), sycamore (*Acer pseudoplatanus*) common gorse (*Ulex europaeus*), eared willow (*Salix aurita*) with honeysuckle (*Lonicera spp.*) and brambles also present. Other species present included yarrow, common ragwort, white clover (*Trifolium repens*), dandelion, ribwort plantain, curled dock, creeping thistle, spear thistle, nettle, cleavers, hogweed, creeping cinquefoil, bird's-foot-trefoil, rough hawkbit, silverweed (*Argentina anserina*), field bindweed (*Convolvulus arvensis*), meadow sweet (*Filipendula ulmaria*) meadow vetchling (*Lathyrus pratensis*), hemp agrimony (*Eupatorium cannabinum*), common orache (*Atriplex patula*), wild angelica (*Angelica sylvestris*), creeping bent (*Agrostis stolonifera*), rough hawkbit, mosses, along with a dense stretch of greater horsetail (*Equisetum telmateia*) present at the base of the upper slope.

This habitat has the potential to be used locally by reptiles, invertebrates and nesting birds.

It should be noted that the SINC citation describes this habitat as unimproved neutral grassland; however, due to the presence of species such as dandelion and nettle, and the relatively low number of species recorded it is considered that it is more accurate to define this habitat as semi-improved. Whilst, the area is not actively managed, it is considered that potential leachates from the road could be affecting the lower coastal slope, whilst the past drainage improvement works and potential leachates from the upper grazed grasslands could be affecting the upper coastal slope. The SINC citation also noted small areas of calcareous grassland on the upper coastal slope that support, in particular, three species of orchid (none of which are protected under the Wildlife and Countryside Act, 1981 as amended). Whilst this habitat was not recorded within the

² Scarborough Biodiversity Action Plan - <http://www.scarborough.gov.uk/pdf/Biodiversity-Action-Plan-Scarborough.pdf>

study area, the presence of these species cannot be ruled out due to the timing of the survey, as orchids are spring flowering plants.

Marginal vegetation

A small area of marginal vegetation (F2.1) was present at the base of Raithwaite Ravine, where the beck exits the culvert (**Target Note 3**). Species included pendulous sedge (*Carex pendula*), great willowherb (*Epilobium hirsutum*), watercress (*Nasturtium officinale*), willow (*Salix spp.*), marsh hawksbeard (*Crepis paludosa*), greater horsetail, creeping bent and brooklime (*Veronica beccabunga*).

Open fore dune

At the base of Raithwaite Ravine, an area of open fore dune (H6.8) was also present, dominated by lyme grass (*Leymus arenarius*) (**Target Note 3**). Other species present included sea mayweed (*Tripleurospermum maritimum*), common orache, creeping bent, early orache (*Atriplex praecox*) and curled dock.

Whilst this habitat is not considered to be of national importance, it is one of the only examples of dune habitat in the region². Open dune habitat can have distinctive invertebrate assemblages, which can often be of regional or national significance; however, due to the isolation of this habitat, lack of open bare sand and influence of coastal species, this is considered to be unlikely.

Poor semi-improved neutral grassland

Areas of unstable slope have reduced the species richness of the grassland and therefore have been classified as poor semi-improved neutral grassland (B6) (**Target Note 4**). Dominate species included colt's foot, creeping bent and red fescue. Other species present included curled dock, gorse, creeping thistle and ribwort plantain.

This habitat has the potential to be used locally by reptiles, invertebrates and nesting birds.

2.3.2 Invasive species

No invasive species were recorded during the survey.

2.3.3 Protected faunal species

Reptiles

Although no reptile species were recorded during the survey, their presence cannot be discounted. The study area offers areas of suitable basking, refuge and foraging / hunting habitat for reptiles, including grassland habitats. The continuous and linked nature of these areas makes them all the more favourable for reptile species. However, a species data search by North and East Yorkshire Ecological Data Centre did not identify any reptile species within 2km of the study area.

Reptile legislation

All four common reptile species (common lizard, adder, grass snake and slow worm) are afforded partial protection under the Wildlife & Countryside Act 1981 (as amended) making it an offence to:

- Intentionally kill or injure any reptiles; and,
- Trade any reptiles (i.e. sell, barter, exchange, transport for sale, and advertise to sell, or to buy).

There are provisions in the legislation to allow actions to take place under licence, which would otherwise contravene the law.

Badger (*Meles meles*)

No signs of badger were recorded within the study area (all areas were actively searched for badger presence). Furthermore, the unstable slope is considered to be unsuitable for sett construction and offers poor foraging.

Amphibians: Great Crested Newt (*Triturus cristatus*)

There are no known ponds either immediately within the surveyed area, or within 500m of the area. In addition, the lack of any known records indicates that great crested newts are not considered at risk from the proposed works.

Amphibians: Natterjack Toad (*Epidalea calamita*)

Natterjack toad populations are largely coastal in distribution, using shallow, freshwater pools in sand dunes, and ponds and ditches in the upper regions of saltmarshes and low lying fields. There are no known records of the species in the study area, and suitable habitat is not present on site to support the species (i.e. the study area contains no ponds or ditches).

Bats

There are no trees or structures within the study area considered suitable to support bats. Foraging habitat is present within the surveyed site provided by the grassland habitats. Habitat outside of the study area, in particular in the woodland associated with Raithwaite Ravine landwards of the A174 is more suitable for roosting.

Bat legislation

All bats in the UK are listed on Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (SI 2010/490), making it illegal to:

- Intentionally or deliberately kill, injure or capture (take) bats;
- Deliberately disturb bats (whether at roost or not);
- Recklessly disturb roosting bats or obstruct access to their roosts;
- Damage or destroy bat roosts;
- Possess or transport a bat or any part unless acquired legally; or,
- Sell (or offer for sale) or exchange bats, or any parts of bats.

As there is no potential to disturb bats or their roosts, they are not considered at risk from the proposed works.

Breeding Birds

Areas of grassland and scrub were recorded during the survey. These offer potential habitat for breeding birds.

Bird legislation

All wild bird species in the UK are protected under the Wildlife and Countryside Act (1981) and it is an offence to:

- damage or destroy wild bird eggs/nests; or
- kill/injure/take any wild birds.

Schedule 1 of the Act contains a list of bird species for which all offences carry harsher penalties and for which extra protection makes it an offence to:

- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Invertebrates

The open fore dune and open yellow dune habitats have the potential to support rich and distinctive invertebrate assemblages; however, due to the isolation of these habitats, lack of open bare sand and influence of grassland / coastal species, this is considered to be unlikely. There are 12 invertebrate species listed as UK BAP priority species; however, none of these species are identified within Scarborough's BAP. The grassland habitats also have the potential to support invertebrates, some of which could be protected under the Wildlife and Countryside Act 1981, as amended, and classified as BAP priority species.

3 KEY ISSUES

Depending on the working footprint and timing of the works (which has not yet been confirmed) the following key issues need to be considered:

- Short term disturbance and possible permanent loss of habitats which potentially support protected species, namely reptiles, breeding birds, and invertebrates. Any disturbance or damage to these faunal species would represent offences, to varying degrees, under the Wildlife & Countryside Act 1981 (as amended).
- The regrading of the slope has the potential to affect, in particular, orchids should they be present. Which these are not legally protected, they are considered to be of local interest.
- The new defence works across Raithwaite Gill will result in the loss of the small extent of open fore dune habitat.

4 RECOMMENDATIONS

- If possible, the works should be undertaken outside the breeding bird season (typically beginning of March to end of August). Where this is unavoidable the areas of vegetation likely to be directly disturbed or damaged should be cleared outside of the breeding bird season to deter birds from nesting. A suitably qualified ecologist should survey the works areas for the presence of nesting birds immediately prior to work commencing.
- The works areas, including vehicle access routes, should be delimited with tape or temporary fencing to avoid any accidental damage to adjacent habitats.
- Although the extent of the proposed works has not been confirmed, the coastal slopes offer suitable reptile habitat; however, as noted, no reptiles have been identified within 2km of the study area. As such consultation with North Yorkshire County Council's Ecologist is recommended to inform any further work that may be required to mitigate for the presence of reptiles. Should it be required, it is suggested that a supervised vegetation clearance exercise be undertaken during the active season (April to September, inclusive).
- The re-graded slope and defence works to Raithwaite Ravine should be appropriately re-seeded, with the species mix used discussed and agreed with North Yorkshire County Council and Natural England.

5 REFERENCES AND BIBLIOGRAPHY

Blamey, M., Fitter, R. and Fitter, A. (2003) "Wild Flowers of Britain and Ireland". A & C Black Publishers Ltd.

Rose, F. (2006) "The Wild Flower Key (Revised Edition) - How to identify wild plants, trees and shrubs in Britain and Ireland." Frederick Warne.

JNCC (2007) "Handbook for Phase 1 Habitat Survey – a technique for environmental audit". JNCC, Peterborough, England.

APPENDIX A

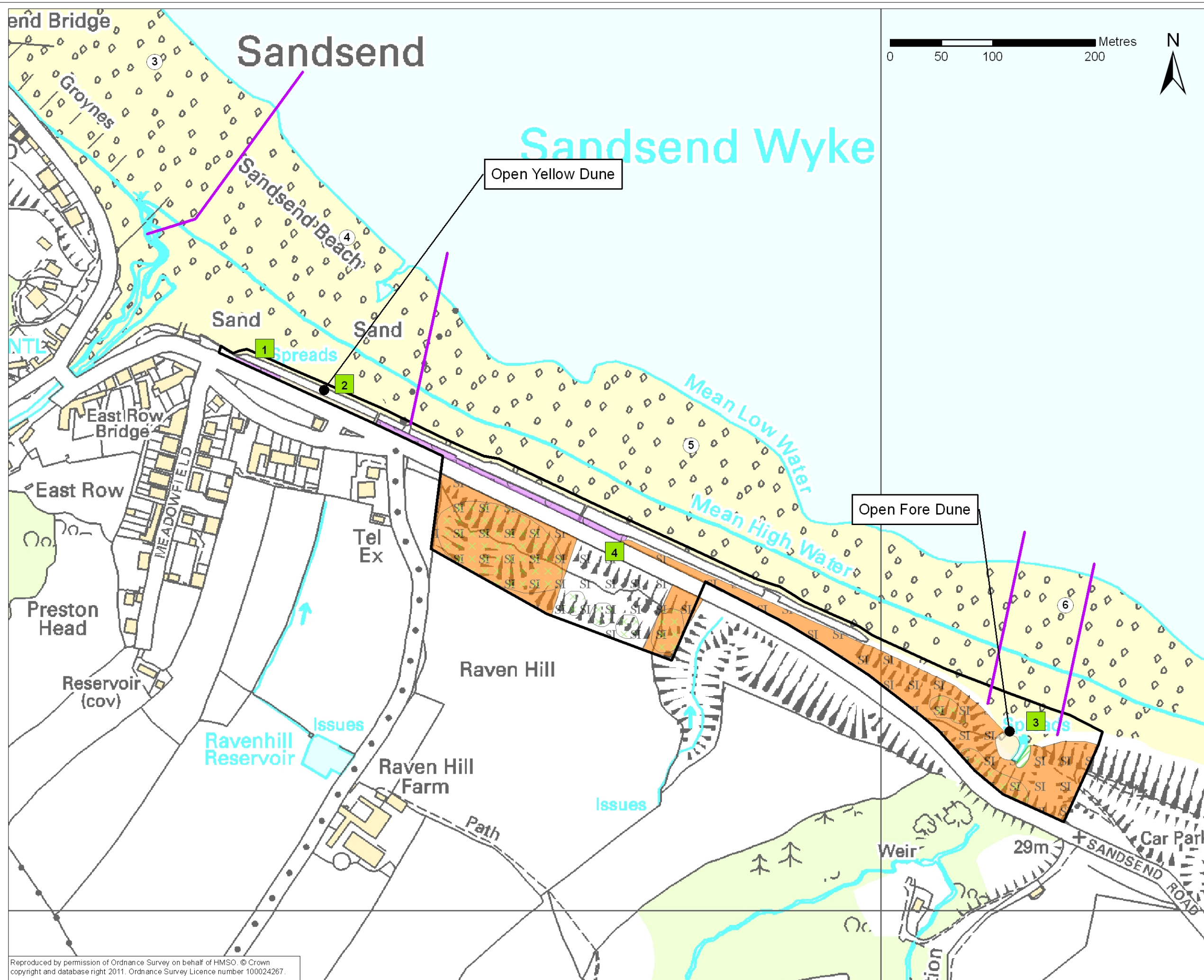
Species list

Scientific name	Common name
<i>Acer pseudoplatanus</i>	Sycamore
<i>Achillea millefolium</i>	Yarrow
<i>Agropyron junceiforme</i>	Sea couch grass
<i>Agrostis stolonifera</i>	Creeping bent
<i>Ammophila arenaria</i>	Marram grass
<i>Argentina anserina</i>	Silverweed
<i>Arrhenatherum elatius</i>	False oat grass
<i>Atriplex littoralis</i>	Glass leaved orache
<i>Atriplex patula</i>	Common orache
<i>Atriplex praecox</i>	Early orache
<i>Atriplex prostrata</i>	Spear-leaved orache
<i>Bryophyta</i>	Mosses
<i>Carex pendula</i>	Pendulous sedge
<i>Centaurea nigra</i>	Lesser knapweed
<i>Centranthus ruber</i>	Red valerian
<i>Centranthus ruber alba</i>	White valerian
<i>Cirsium arvense</i>	Creeping thistle
<i>Cirsium vulgare</i>	Spear thistle
<i>Convolvulus arvensis</i>	Field bindweed
<i>Crataegus monogyna</i>	Hawthorn
<i>Crepis paludosa</i>	Marsh hawksbeard
<i>Dactylis glomerata</i>	Cock's foot
<i>Epilobium hirsutum</i>	Great willowherb
<i>Equisetum arvense</i>	Field horsetail
<i>Equisetum telmateia</i>	Greater horsetail
<i>Festuca rubra</i>	Red fescue
<i>Filipendula ulmaria</i>	Meadow sweet
<i>Fraxinus excelsior</i>	Ash
<i>Gallium aparine</i>	Cleavers
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire fog
<i>Lathyrus pratensis</i>	Meadow vetchling
<i>Leontodon hispidus</i>	Rough hawkbit
<i>Leucanthemum vulgare</i>	Oxeye daisy
<i>Leymus arenarius</i>	Lyme grass
<i>Lotus corniculatus</i>	Bird's-foot-trefoil
<i>Nasturtium officinale</i>	Watercress
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Plantago maritima</i>	Sea plantain
<i>Potentilla reptans</i>	Creeping cinquefoil
<i>Pulicaria dysenterica</i>	Common fleabane
<i>Rosa Canina</i>	Dog rose
<i>Rubus fruticosus agg</i>	Bramble
<i>Rumex crispus</i>	Curled dock
<i>Salix spp.</i>	Willow
<i>Sambucus nigra</i>	Elder
<i>Sedum album</i>	White stonecrop
<i>Senecio jacobaea</i>	Common ragwort

Scientific name	Common name
<i>Sonchus asper</i>	Prickly sow-thistle
<i>Sonchus Oleraceus</i>	Smooth sow-thistle
<i>Taraxacum officinale agg.</i>	Dandelion
<i>Trifolium repens</i>	white clover
<i>Tripleurospermum maritimum</i>	Sea mayweed
<i>Tussilago farfara</i>	Colt's foot
<i>Ulex europaeus</i>	Common gorse
<i>Urtica spp.</i>	Nettle
<i>Veronica beccabunga</i>	Brooklime

APPENDIX B

Phase 1 Habitat Map



Phase 1 Habitat Survey

- Scrub - scattered
- Neutral grassland - semi-improved
- Poor semi-improved grassland
- Marginal and inundation - inundation vegetation
- Open dune
- Coastal grassland

Management Unit boundary

Management Unit number

Study Area

Title:
Phase 1 Habitat Map

Project:
Sandsend Project Appraisal Report

Client:
Scarborough Borough Council

Date: October 2011	Scale on A3: 1:3,500
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Figure: B.1	Drawn: SD	Checked: JVG
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ROYAL HASKONING

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APPENDIX C

Target Notes

Target Note	Description
1	 <p>Coastal grassland (H8.4) dominated by red fescue, sea couch grass, creeping cinquefoil, curled dock, mosses, red valerian and white stonecrop. Also present were creeping thistle, yarrow, common ragwort, dandelion, ribwort plantain, bramble, smooth sow-thistle, spear-leaved orache, spear thistle, nettle, cleavers, sea plantain, hogweed, glass leaved orache, common horsetail and prickly sow-thistle.</p>

2




Open yellow dune (H6.8). A small linear strip of open yellow dune exists on top of the sea wall, dominated by marram grass. Other species present include spear-leaved orache, dandelion, sea couch grass, common horsetail, lesser knapweed, creeping cinquefoil, bird's-foot-trefoil, common ragwort, creeping thistle and white stonecrop.

3



A small area of **marginal vegetation** (F2.1) was located at the base of Raithwaite Gill, adjacent to where Newholme Beck exits the culvert. Marginal species included pendulous sedge, great willowherb and watercress. Other species present included creeping bent, curled dock, marsh hawksbeard and greater horsetail. An area of **open fore dune** (H6.8) was also present in this location. Dominant species included lyme grass, with sea mayweed, common orache and early orache also present.

4	 <p>Unstable supper coastal slope supporting poor semi-improved neutral grassland (B6). Dominate species included colt's foot, creeping bent and red fescue. Other species present included curled dock, gorse, creeping thistle and ribwort plantain.</p>
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APPENDIX D

Upgang Beck to Sandsend Cliffs SINC citation



North & East Yorkshire Ecological Data Centre

Local Wildlife Site Report

Site Code: NZ81-01
Site Name: UPGANG BECK TO SANDSEND CLIFFS

Site Information

SITE AREA: 13.68 Hectares
SURVEY DATE: 07/07/1998
DESIGNATION: **SINC (07/07/1998 onwards)**

Location Information

GRIDREF: NZ870121
DISTRICT / BOROUGH: Scarborough
PARISH: Newholm-cum-Dunsley
OWNER/CONTACT: Withheld
NATURAL AREA: North York Moors and Hills

Topography

GEOLOGY
SOIL TYPE Brown Earths, Drift
ADJACENT LAND USE Amenity/Recreation
ASPECT North

Description/evaluation

HABITATS: (AREA IN HA) B21 Neutral grassland: unimproved (9.26), B31 Calcareous grassland: unimproved (2.28), H84 Maritime cliff and slope: coastal grassland (0.9), A22 Scrub: scattered (0.14), A21 Scrub: dense/continuous (0.26), C31 Other tall herb and fern: tall ruderal (0.06), E22 Flush and spring: basic (0.06), G2 Running water (0), B22 Neutral grassland: semi-improved (0.24)

NVC: CG2 Festuca ovina - Avenula pratensis grassland, MG1 Arrhenatherum elatius grassland, MG5 Cynosurus cristatus-Centaurea nigra grassland, MC9 Festuca rubra - Holcus lanatus maritime grassland, W23 Ulex europaeus-Rubus fruticosus scrub, W24 Rubus fruticosus-Holcus lanatus underscrub, OV26 Epilobium hirsutum community

SITE DESCRIPTION:

Coastal slope of mainly rank grassland, with scattered scrub of brambles (*Rubus fruticosus* agg), gorse (*Ulex europaeus*) and, more locally, eared willow (*Salix aurita*), some hybridised. The dominant species is false oat grass (*Arrhenatherum elatius*) with frequent cock's foot (*Dactylis glomerata*), red fescue (*Festuca rubra*), Yorkshire fog (*Holcus lanatus*), lesser knapweed (*Centaurea nigra*), white clover (*Trifolium repens*), creeping thistle (*Cirsium arvense*), fleabane (*Pulicaria dysenterica*), colt's foot (*Tussilago farfara*) and field horsetail (*Equisetum arvense*), with patches of hemp agrimony (*Eupatorium cannabinum*) and meadowsweet (*Filipendula ulmaria*). At the central point patches of wood vetch (*Vicia sylvatica*) are notable, and nearby are several plants of the rare bithynian vetch (*V. bithynica*). In the west the upper slope is grazed and typical species are crested dog's tail (*Cynosurus cristatus*), lesser knapweed, bird's foot trefoil (*Lotus corniculatus*), ribwort (*Plantago lanceolata*) and clovers (*Trifolium* spp.). The mown edge to the golf course is similar. Coastal grassland is most extensive to the east where the eroded cliffs are unsafe to survey closely and have much bare earth. Typical species here are kidney vetch (*Anthyllis vulneraria*), red fescue, bird's foot trefoil and sea plantain (*Plantago maritima*) and, more locally, yellow rattle (*Rhinanthus minor*), restharrow (*Ononis repens*) and carline thistle (*Carlina vulgaris*). Unstable slopes also support calcareous grassland. The largest block of this habitat results from mechanical levelling of a landslip. Here there are bird's foot trefoil, red and white clovers (*Trifolium pratense* and *T. repens*), lesser trefoil (*T. dubium*), rough hawkbit (*Leontodon hispidus*), colt's foot, lesser knapweed, field horsetail, common spotted orchid (*Dactylorhiza fuchsii*), early purple orchid (*Orchis mascula*), bee orchid (*Ophrys apifera*), eyebright (*Euphrasia* agg.) and fairy flax (*Linum catharticum*).

Upgang Beck to Sandsend Cliffs - 07/07/1998**EVALUATION:**

Qualifies - Gr4 score 19/8 (calc), 18/8 (neut) Co1 Mh2 score 9/6

Date Printed: 11 Nov 2011 Version: 1

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Species Report

Site Code: NZ81-01**Site Name:** UPGANG BECK TO SANDSEND CLIFFS

LATIN NAME	ENGLISH NAME	TAXONOMIC GROUP	DATES	RECORDERS	DESIGNATIONS
<i>Pteridium aquilinum</i>	Bracken	Fern	07/07/1998	(Mr) Andrew Weston	
<i>Achillea millefolium</i>	Yarrow	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Aegopodium podagraria</i>	Ground-Elder	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Agrimonia eupatoria</i>	Agrimony	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c)
<i>Agrostis capillaris</i>	Common Bent	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar2
<i>Ammophila arenaria</i>	Marram	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Angelica sylvestris</i>	Wild Angelica	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 14 Wd(wet) ×1.0 NYCC Table 17 Fe(rich)
<i>Anthyllis vulneraria</i>	Kidney Vetch	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3 ×1.0 NYCC Table 7 Gr(c)
<i>Arrhenatherum elatius</i>	False Oat-Grass	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Bellis perennis</i>	Daisy	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Brachypodium sylvaticum</i>	False-Brome	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Calystegia sepium</i> subsp. <i>sepium</i>	Great Bindweed	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Carex flacca</i>	Glaucous Sedge	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 17 Fe(rich) ×1.0 NYCC Table 18 Fe(poor) ×1.0 NYCC Table 20 Sw(nutrient rich) ×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c) ×1.0 NYCC Table 8 Gr(a)

Carlina vulgaris	Carlina Thistle	Flowering Plant	07/07/1998	(Mr) Andrew Weston	✖1.0 NYCC Table 7 Gr(c)
Centaurea nigra	Common Knapweed	Flowering Plant	07/07/1998	(Mr) Andrew Weston	✖1.0 NYCC Table 30 Ar3 ✖1.0 NYCC Table 6 Gr(n)
Centaureum erythraea	Common Centaury	Flowering Plant	07/07/1998	(Mr) Andrew Weston	✖1.0 NYCC Table 30 Ar3
Cerastium fontanum	Common Mouse-Ear	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Cirsium arvense	Creeping Thistle	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Cirsium palustre	Marsh Thistle	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Conium maculatum	Hemlock	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Cynosurus cristatus	Crested Dog's-Tail	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Dactylis glomerata	Cock's-Foot	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Dactylorhiza fuchsii	Common Spotted-Orchid	Flowering Plant	07/07/1998	(Mr) Andrew Weston	✖0.0 NYCC Table 17 Fe(rich) ✖0.0 NYCC Table 18 Fe(poor) ✖2.0 NYCC Table 30 Ar1 ✖2.0 NYCC Table 30 Ar3 ✖1.0 NYCC Table 6 Gr(n) ✖1.0 NYCC Table 7 Gr(c) ✖1.0 NYCC Table 8 Gr(a)
Elytrigia repens	Common Couch	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Epilobium ciliatum	American Willowherb	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Epilobium hirsutum	Great Willowherb	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Eupatorium cannabinum	Hemp-Agrimony	Flowering Plant	07/07/1998	(Mr) Andrew Weston	✖1.0 NYCC Table 14 Wd(wet) ✖1.0 NYCC Table 17 Fe(rich) ✖1.0 NYCC Table 25 Fw1
Euphrasia officinalis agg.	Eyebright	Flowering Plant	07/07/1998	(Mr) Andrew Weston	✖1.0 NYCC Table 6 Gr(n) ✖1.0 NYCC Table 7 Gr(c)
Festuca arundinacea	Tall Fescue	Flowering Plant	07/07/1998	(Mr) Andrew Weston	

<i>Festuca ovina</i>	Sheep's Fescue	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 7 Gr(c) ×1.0 NYCC Table 8 Gr(a)
<i>Festuca rubra</i>	Red Fescue	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3
<i>Filipendula ulmaria</i>	Meadowsweet	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 6 Gr(n)
<i>Galium aparine</i>	Cleavers	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Galium verum</i>	Lady's Bedstraw	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c) ×1.0 NYCC Table 8 Gr(a)
<i>Geranium molle</i>	Dove's-Foot Crane's-Bill	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Glechoma hederacea</i>	Ground-Ivy	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Hedera helix</i>	Ivy	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Heracleum sphondylium</i>	Hogweed	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Holcus lanatus</i>	Yorkshire-Fog	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Hordeum murinum</i>	Wall Barley	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Hypericum hirsutum</i>	Hairy St. John's-Wort	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 7 Gr(c)
<i>Hypericum pulchrum</i>	Slender St. John's-Wort	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 8 Gr(a)
<i>Hypericum tetrapterum</i>	Square-Stalked St. John's-Wort	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 17 Fe(rich) ×1.0 NYCC Table 6 Gr(n)
<i>Hypochaeris radicata</i>	Cat's-Ear	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3
<i>Juncus articulatus</i>	Jointed Rush	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Juncus inflexus</i>	Hard Rush	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Lathyrus pratensis</i>	Meadow Vetchling	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3 ×1.0 NYCC Table 6 Gr(n)
<i>Leontodon hispidus</i>	Rough Hawkbit	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3 ×1.0 NYCC Table 6 Gr(n)

					×1.0 NYCC Table 7 Gr(c)
<i>Linum catharticum</i>	Fairy Flax	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3 ×1.0 NYCC Table 7 Gr(c)
<i>Lolium perenne</i>	Perennial Rye-Grass	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Lotus corniculatus</i>	Common Bird's-Foot-Trefoil	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3 ×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c) ×1.0 NYCC Table 8 Gr(a)
<i>Malva sylvestris</i>	Common Mallow	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Medicago lupulina</i>	Black Medick	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Mercurialis perennis</i>	Dog's Mercury	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 12 Wd(n-c) ×1.0 NYCC Table 14 Wd(wet)
<i>Ononis repens</i>	Common Restharrow	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c)
<i>Ophrys apifera</i>	Bee Orchid	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3 ×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c) ×2.0 NYCC Table 8 Gr(a)
<i>Orchis mascula</i>	Early-Purple Orchid	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 12 Wd(n-c) ×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c) ×2.0 NYCC Table 8 Gr(a)
<i>Plantago lanceolata</i>	Ribwort Plantain	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Plantago maritima</i>	Sea Plantain	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
<i>Plantago media</i>	Hoary Plantain	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c)
<i>Potentilla anserina</i>	Silverweed	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 22 Sw(Draw down-inundation veg)

Potentilla reptans	Creeping Cinquefoil	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Primula vulgaris	Primrose	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 12 Wd(n-c) ×1.0 NYCC Table 14 Wd(wet) ×1.0 NYCC Table 6 Gr(n)
Prunella vulgaris	Selfheal	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Pulicaria dysenterica	Common Fleabane	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 17 Fe(rich)
Ranunculus acris	Meadow Buttercup	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 20 Sw(nutrient rich) ×1.0 NYCC Table 21 Sw(nutrient poor)
Ranunculus repens	Creeping Buttercup	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 20 Sw(nutrient rich) ×1.0 NYCC Table 21 Sw(nutrient poor) ×1.0 NYCC Table 22 Sw(Draw down-inundation veg)
Rhinanthus minor	Yellow-Rattle	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3 ×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c)
Rosa rugosa	Japanese Rose	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Rubus fruticosus agg.	Bramble	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Rumex acetosa	Common Sorrel	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Rumex acetosella	Sheep's Sorrel agg.	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar2 ×1.0 NYCC Table 8 Gr(a)
Rumex obtusifolius	Broad-Leaved Dock	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Salix aurita	Eared Willow	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 13 Wd(a) ×1.0 NYCC Table 18 Fe(poor)
Sambucus nigra	Elder	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Sanguisorba minor	Salad Burnet	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 7 Gr(c)

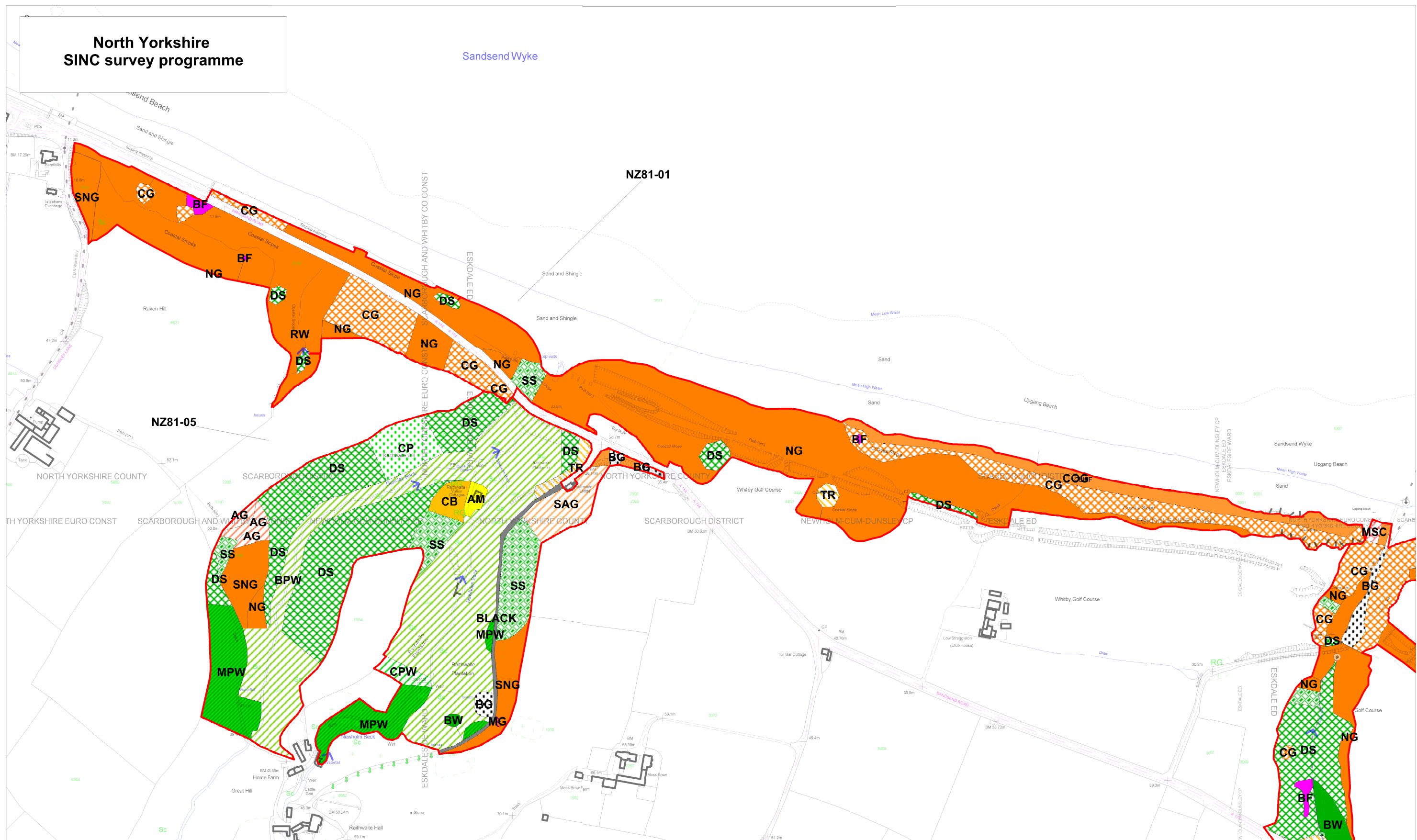
Senecio erucifolius	Hoary Ragwort	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Senecio jacobaea	Common Ragwort	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Silene dioica	Red Campion	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Silene vulgaris	Bladder Campion	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Sonchus arvensis	Perennial Sow-Thistle	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Stachys officinalis	Betony	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 6 Gr(n) ×1.0 NYCC Table 8 Gr(a)
Stachys sylvatica	Hedge Woundwort	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Stellaria holostea	Greater Stitchwort	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Symphoricarpos albus	Snowberry	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Teucrium scorodonia	Wood Sage	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 13 Wd(a)
Trifolium dubium	Lesser Trefoil	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Trifolium pratense	Red Clover	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Trifolium repens	White Clover	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Tussilago farfara	Colt's-Foot	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Urtica urens	Small Nettle	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Vicia bithynica	Bithynian Vetch	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Vicia cracca	Tufted Vetch	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3
Vicia hirsuta	Hairy Tare	Flowering Plant	07/07/1998	(Mr) Andrew Weston	
Vicia sepium	Bush Vetch	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 30 Ar3
Vicia sylvatica	Wood Vetch	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×2.0 NYCC Table 12 Wd(n-c)
Viola hirta	Hairy Violet	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 7 Gr(c)

Viola riviniana	Common Dog-Violet	Flowering Plant	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 8 Gr(a)
Equisetum arvense	Field Horsetail	Horsetail	07/07/1998	(Mr) Andrew Weston	
Equisetum palustre	Marsh Horsetail	Horsetail	07/07/1998	(Mr) Andrew Weston	
Equisetum telmateia	Great Horsetail	Horsetail	07/07/1998	(Mr) Andrew Weston	×1.0 NYCC Table 14 Wd(wet) ×1.0 NYCC Table 17 Fe(rich) ×1.0 NYCC Table 20 Sw(nutrient rich) ×1.0 NYCC Table 21 Sw(nutrient poor)

INDICATOR LIST	SCORE
NYCC Table 6 Gr(n)	19
NYCC Table 7 Gr(c)	19
NYCC Table 8 Gr(a)	13
NYCC Table 12 Wd(n-c)	5
NYCC Table 13 Wd(a)	2
NYCC Table 14 Wd(wet)	5
NYCC Table 17 Fe(rich)	6
NYCC Table 18 Fe(poor)	2
NYCC Table 20 Sw(nutrient rich)	4
NYCC Table 21 Sw(nutrient poor)	3
NYCC Table 22 Sw(Draw down-inundation veg)	2
NYCC Table 25 Fw1	1
NYCC Table 30 Ar3	15

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Site Code: NZ81-01

Site Name: Upgang Beck to
Sandsend Cliff

Site Centroid: NZ870122

Scale 1:4,500 (when printed at A3)

Date Printed: 11/11/2011

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