

The ‘Even Newer Green Beach’, Ainsdale-on-Sea, Sefton Coast: 2025 update

Philip H. Smith, January 2026

Summary

Green Beach features began to form in 1986 on the foreshore between Birkdale and Ainsdale, a recent example being the ‘Even Newer Green Beach’ which started to develop in 2016 north of the beach car park at Ainsdale-on-Sea. Floristic studies began the following year. By 2025, an embryo dune ridge 150 m long, 35 m wide and up to 1.75 m high was backed by a seasonally-flooded wet slack, the whole feature covering about 1.7 ha. To the west of the ridge, bands of Common Saltmarsh-grass (*Puccinellia maritima*) colonised the foreshore, forming a Green Beach Extension that was recorded separately from 2024. Year totals of vascular plants on the ‘Even Newer Green Beach’ increased from 21 taxa in 2017 to 136 in 2025, 27 (20%) being regionally or nationally notable and 15 (11%) non-native (neophytes and introduced natives). Since recording began in 2017, 196 higher plants have been identified on the ‘Even Newer Green Beach’, 20.4% being notable and 10.7% non-native. Mean Ellenberg salinity values declined during the study period, indicating a shift towards a less salt-tolerant flora. The nationally rare Northern Dune Tiger Beetle (*Cicindela hybrida*) and Sea Bryum moss (*Bryum warneum*) were amongst additional notable biota recorded for the site.

Introduction

Originating in 1986 on the foreshore at Birkdale, north Merseyside, ‘Birkdale Green Beach’ became a mosaic of developing saltmarsh, dune, dune-slack, freshwater swamp and wet woodland habitats (Smith, 2007). It currently extends for more than 4 km from Birkdale southwards to Ainsdale, covering an area of over 66 ha on this rapidly accreting section of sandy coastline. Southern extensions include the 400 m-long ‘New Green Beach’ which began to form in 2004 (Smith & Lockwood, 2021) and the ‘Newest Green Beach’ which is about 350 m in length and originated in 2008 (Smith & Lockwood, 2020) (Fig. 1). The ‘Even Newer Green Beach’ at Ainsdale-on-Sea is a further manifestation of this accretion process, being the subject of floristic studies since 2017 (Smith & Lockwood, 2017, 2018, 2019a, 2020; Smith, 2021a, 2022a, 2023, 2024a).



Figure 1. Aerial photograph of the ‘New’ and ‘Newest Green Beaches’ in 2017 (Google Earth)

‘Even Newer Green Beach’: initiation and development: 2016-24

In 2016, it became apparent that vegetation was colonising the shore southwards from the ‘Newest Green Beach’ towards the beach carpark at Ainsdale-on-Sea to form an ‘Even Newer Green Beach’ (National Grid Reference SD 298 131) (Fig. 2). This process accelerated the following year, when it was decided to start recording the feature (Smith & Lockwood, 2017). As on previous ‘Green Beaches’, a series of low mounds initially accreted around patches of *Puccinellia maritima* (Fig. 3). These were soon colonised by dune-forming grasses, mainly *Elymus junceiformis* (Sand Couch) and *Ammophila arenaria* (Marram), producing a broad belt of embryo dunes about 150 m long, 35 m wide and 1.75 m high by summer 2024, about 40 m west of the original dune frontage (Figs. 4, 5, 6, 7, 8, 9). A narrow zone of scattered *P. maritima* with some sand accretion continued south to the edge of the beach car park. The total length of

the feature was about 234 m, covering an area of about 1.7 ha.

Only 21 vascular plants were identified on the ‘Even Newer Green Beach’ in 2017; this increased rapidly to 67 the following year and to 97 in both 2019 and 2020. The year total increased again to 140 in 2022, before declining to 137 in 2024 (Table 1). Most plants were associated with the developing slack behind the dune ridge, except in 2021 when many new species were found on an exceptionally diverse strandline (Smith, 2022b). Twenty-nine species (21% of the year total) found in 2024 were regionally or nationally notable. Three (4.5%) non-native (neophytes and introduced native) taxa recorded in 2018 increased to 14 (10%) in 2024. The mean Ellenberg salinity value for these plants fell from 2.76 in 2017 to 0.92 in 2024, reflecting a change on the ‘Even Newer Green Beach’ to a less maritime flora (Hill *et al.*, 2004).

The immaturity of the vegetation made it difficult to identify particular community types but the western part of the ridge seemed to support a mosaic of the UK National Vegetation Classification’s SD2: *Honckenya peploides*-*Cakile maritima* strandline and SD4: *Elymus farctus* ssp. *boreali-atlanticus* (= *Elymus junceiformis*) foredune, with increasingly dominant patches of SD6: *Ammophila arenaria* mobile dune community to the east. Vegetation with patchy *P. maritima* to the west of the embryo dunes was a variant of SM13: *Puccinellia maritima* saltmarsh (Rodwell, 2000). The slack vegetation was too variable to characterise but areas dominated by *Bolboschoenus maritimus* (Sea Club-rush) had some accordance with S21c *Scirpus maritimus* (= *Bolboschoenus maritimus*) swamp, *Agrostis stolonifera* sub-community (Rodwell, 1995). The slacks became deeply flooded with freshwater from rainfall and seepage during wet winters (Fig. 10) but rapidly dried up during the spring and early summer.



Figure 2. Aerial photograph of the ‘Even Newer Green Beach’ in 2025 (Google Earth)



Figure 3. ‘Even Newer Green Beach’: *Puccinellia* hummocks in August 2016



Figure 4. 'Even Newer Green Beach' embryo dunes, July 2017



Figure 5. Embryo dunes with Marram, 'Even Newer Green Beach', July 2017



Figure 6. 'Even Newer Green Beach' embryo dune ridge, June 2020



Figure 7. 'Even Newer Green Beach' ridge with extensive Marram, September 2021



Figure 8. 'Even Newer Green Beach' frontal ridge with dense Marram, October 2022



Figure 9. 'Even Newer Green Beach' frontal ridge, October 2023



Figure 10. ‘Even Newer Green Beach’ flooded slack, December 2025

Studies in 2025

As in previous years, regular visits from spring to autumn 2025 revealed further accretion of sand, especially at the southern end of the feature. Marram coverage on the frontal dune ridge seemed less dense, probably due to recreational trampling. The height of the ridge was little changed, remaining at about 1.75 m on average, with a peak of 2.5 m at the southern end. The width remained the same at about 35 m. About 150 m long, the ridge was again curtailed to the south by the outflow channel from Sands Lake. Patches of *P. maritima* north of the beach car park were inundated by blown sand during the summer. West of the embryo dune ridge, bands of *P. maritima* established on the beach in earlier years became better defined, being around 40 m wide with hummocks of accreted sand up to 50 cm high in the older areas and about 20-30 cm high in the younger section to the west. These hummocks seemed less likely to be washed away during winter storms, this new feature, entitled ‘Green Beach Extension’, being the subject of separate studies (Smith, 2024b; 2025). Along the foot of the embryo dunes, strandline vegetation was much less well developed than in previous years (e.g. Smith, 2022b). Winter rainfall was

followed by a prolonged spring and summer drought. Flooding of the slacks was less extensive than the previous winter (Fig. 10) and they dried up by late May. Sand-blow continued to affect the slacks, which became more heavily vegetated, with an increase in both distribution and height of *Salix cinerea* (Grey Willow) (Fig. 11). Scattered bushes of *Alnus glutinosa* (Alder) grew larger. As usual, seedlings of *Hippophae rhamnoides* (Sea Buckthorn) were removed when found.



Figure 11. Grey Willow invasion, ‘Even Newer Green Beach’ slacks, May 2025

Species-richness of vascular plants in 2025 reduced slightly from 137 to 136 taxa (Fig. 12). Eight new species were added, six being native and two alien. Twenty-two taxa recorded in 2024 were not found the following year. In total, 27 (19.9%) regionally or nationally notable taxa and 15 (11%) non-native plants were recorded during the year. Populations of the Red-listed *Parnassia palustris* (Grass-of-Parnassus), *Dactylorhiza incarnata* subsp. *coccinea* (Early Marsh-orchid) and *Epipactis palustris* (Marsh Helleborine) increased further. A grand total of 196 vascular plants was identified during the nine years of study, 40 (20.4%) being notable and 21 (10.7%) non-native (Table 1). The mean Ellenberg salinity value (S) of plants found in 2025 was 0.86, compared with 0.96 the previous year (Fig. 13).

Discussion

The extreme dynamism and rapid pace of change associated with this feature closely resembles trends on the adjacent, but older, ‘New’ and ‘Newest Green Beaches’ described by Smith & Lockwood (2018; 2021). The occurrence of 196 vascular taxa (to date) on only about 1.7 ha (115 taxa/ha) represents a high species-richness typical of Sefton calcareous dune habitats (Smith, 2021b), being even higher than values of 83/ha and 99/ha for the ‘Newest’ and ‘New Green Beaches’ respectively (Smith & Lockwood, 2017; 2019b; 2021). So far, about 21% of the plants recorded are regionally or nationally notable, compared with 24% on the ‘Newest Green Beach’ and 17% on the ‘New Green Beach’. The equivalent value for the dune system as a whole is about 17% (Smith, 2015). Bearing in mind its small area and relatively early stage in colonisation, the proportion of notable species on the ‘Even Newer Green Beach’ is remarkable. The latter site has a relatively low proportion of non-native taxa (11%), being similar to the ‘Newest’ (15%) and ‘New Green Beach’ (9%) (Smith & Lockwood, 2019a; 2021). This is much lower than the 40% non-native species for the dune system as a whole (Smith, 2015). Low counts of non-natives are probably due to the harsh maritime conditions and distance from the nearest gardens (c. 0.75 km). The decline in mean Ellenberg salinity values over time on the study site (Fig. 13) indicates a shift towards a flora that is less salt-tolerant as succession proceeds. This trend was also seen on the ‘Newest’ and ‘New Green Beaches’ (Smith & Lockwood, 2019a; 2021).

The ‘Even Newer Green Beach’ vegetation shows similarities to flora that has recently colonised the shore at Hoylake in north Wirral, following significant accretion of sand and silt. Here, on a much larger site, a grand total of about 254 vascular taxa was recorded from 2020 to 2025, many of these plants also being found at Ainsdale. Preliminary analysis shows that that mean Ellenberg S-values for the Hoylake flora declined over time, as on the ‘Even Newer Green Beach’ (J. Styles, personal communication).

During a bryophyte survey in November 2020, Callaghan (2021) found the nationally rare, boreal moss, *Bryum warneum*, in open damp-slack conditions on the ‘Even Newer Green Beach’. These pioneer dune habitats also support a specialist fauna, including the Red-listed Northern Dune Tiger Beetle. The site rarely floods sufficiently to attract Natterjack Toads (*Epidalea calamita*), though in spring 2024, after a particularly wet winter, at least 12 spawn strings were counted (N. Hunt personal communication). The terrestrial habitat is suitable for

this endangered amphibian and the northern end of the slack could accommodate an excavated scrape designed to produce enough water for breeding (Smith & Lockwood, 2019b).

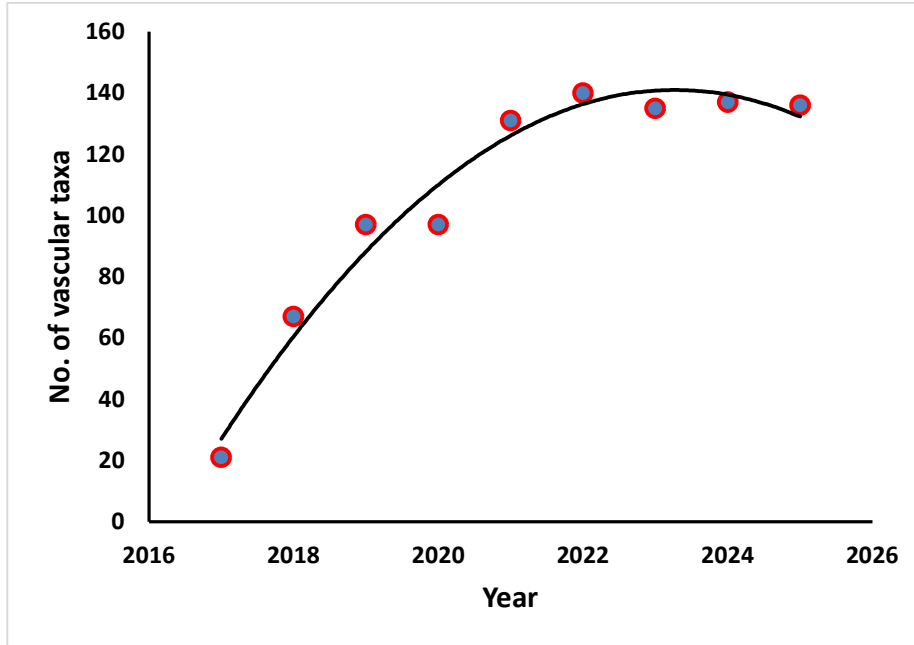


Figure 12. Changes in annual number of vascular taxa on the ‘Even Newer Green Beach’, 2017-25 (fitted line polynomial) ($r = 0.984$, $p \leq 0.00001$)

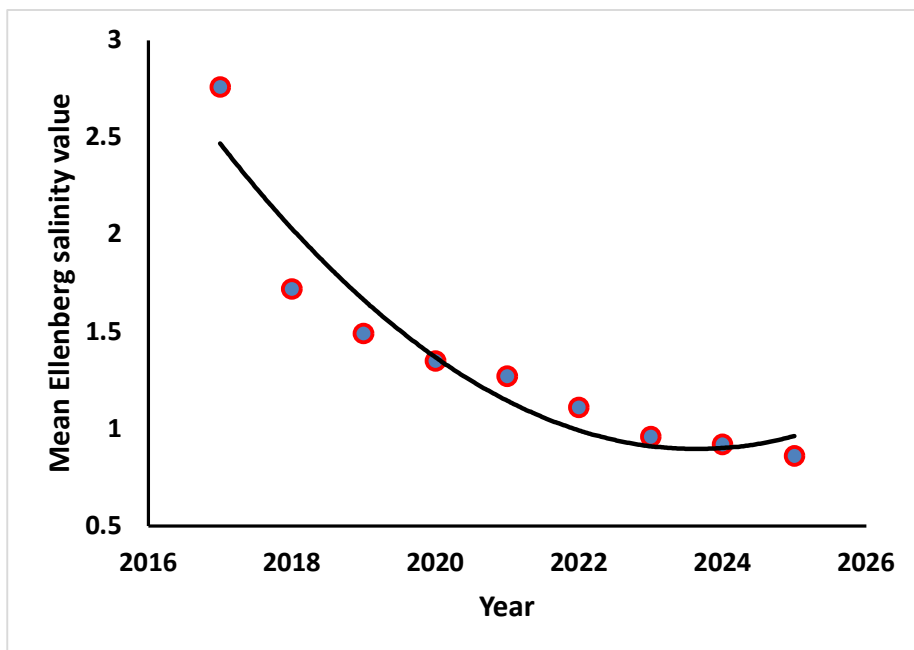


Figure 13. Changes in mean Ellenberg Salinity Values (S) for plants on the ‘Even Newer Green Beach’, 2017-25 (fitted line polynomial) ($r = 0.908$, $p = 0.0007$)

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Table 1. Vascular plants recorded annually on the ‘Even Newer Green Beach’, 2017-2025.

Nomenclature follows C.A. Stace’s *New flora of the British Isles* 4th edition (2019) and subsequent amendments.

r = rare; o = occasional; f = frequent; a = abundant; l = locally; v = very; * = non-native (neophytes & introduced natives); Stat = conservation status; NS = Nationally Scarce; NR = Nationally Rare; NT = Near Threatened; VU = Vulnerable (UK Red-list) (*italics* = England Red List); SCI = Species of Conservation Importance in North West England.

Taxon	English name	17	18	19	20	21	22	23	24	25	Stat.
<i>Agrostis stolonifera</i>	Creeping Bent	r	o	la	la	la	la	la	la	la	
<i>Aira praecox</i>	Early Hair-grass						vla	vlf	lo	vla	
<i>Alnus cordata</i> *	Italian Alder						r	r	r	r	
<i>Alnus glutinosa</i>	Alder				r	r	o	o	o	o	
<i>Alopecurus geniculatus</i>	Marsh Foxtail									vlo	
<i>Ammophila arenaria</i>	Marram	la	la	la	la	la	la	la	la	la	
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid								r	r	SCI
<i>Angelica archangelica</i> *	Garden Angelica					r	r	r		r	
<i>Angelica sylvestris</i>	Wild Angelica			r	r	r	r	r	r	r	
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass							r		r	
<i>Anthyllis vulneraria</i>	Kidney-vetch						r	la	la	la	
<i>Apium graveolens</i>	Wild Celery							r			SCI
<i>Arenaria serpyllifolia</i>	Thyme-leaved Sandwort					r		vlf			
<i>Arrhenatherum elatius</i>	False Oat-grass			r	r	vla	r	r	r	r	
<i>Artemisia vulgaris</i>	Mugwort		r	r	r	r					
<i>Asparagus officinalis</i> *	Garden Asparagus				r				r		
<i>Atriplex glabriuscula</i>	Babington’s Orache					lo					
<i>Atriplex laciniata</i>	Frosted Orache	r	r	r	r	lo	lo	lo	r		SCI
<i>Atriplex littoralis</i>	Grass-leaved Orache		r				lo	r	r		
<i>Atriplex portulacoides</i>	Sea Purslane		r	r		r					
<i>Atriplex prostrata</i>	Spear-leaved Orache	o	lf	lf	r	lo	lo	lf	lo	lo	
<i>Bellis perennis</i>	Daisy				r	lo	la	lf	lf	lo	
<i>Berula erecta</i>	Lesser Water-parsnip									vlf	
<i>Beta vulgaris</i> subsp. <i>maritima</i>	Sea Beet	o	o	r	r	lo					

<i>Betula pubescens</i>	Downy Birch									r	
<i>Blackstonia perfoliata</i>	Yellow-wort			r	r	r	o	o	o	o	
<i>Bolboschoenus maritimus</i>	Sea Club-rush				lf	lf	la	la	la	la	
<i>Brassica rapa</i>	Wild Turnip			r							
<i>Cakile maritima</i>	Sea Rocket	o	o	o	r	r	lo	lo	r	r	
<i>Calystegia sepium</i>	Hedge Bindweed					r					
<i>Cardamine hirsuta</i>	Hairy Bitter-cress								lf		
<i>Cardamine pratensis</i>	Cuckooflower								r	o	
<i>Carex arenaria</i>	Sand Sedge		lf	lf	lf	lf	lf	lf	o	o	
<i>Carex distans</i>	Distant Sedge						r	r	r	r	
<i>Carex extensa</i>	Long-bracted Sedge			r	r	r	o	o	r	o	
<i>Carex flacca</i>	Glaucous Sedge					r	r	vlf	vlf	vlf	
<i>Carex leporina</i>	Oval Sedge				r						
<i>Carex otrubae</i>	False Fox-sedge		r	r	o	o	o	o	o	o	
<i>Carex viridula</i>	Small-fruited Yellow-sedge		r			r	vlf	vlf	vlf	vlf	SCI
<i>Carlina vulgaris</i>	Carline Thistle								r	r	SCI
<i>Centaureum erythraea</i>	Common Centaury						r	r	lf	o	
<i>Centaureum littorale</i>	Seaside Centaury						r		r	lo	NS SCI
<i>Centaureum pulchellum</i>	Lesser Centaury			r	lo	lf	lo	lo	lf	vlo	SCI
<i>Cerastium diffusum</i>	Sea Mouse-ear				lf	lf		lf	r	vlo	
<i>Cerastium fontanum</i>	Common Mouse-ear						vlf		vlf	lf	
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb							r			
<i>Chenopodium album</i>	Fat-hen					r	r				
<i>Cirsium arvense</i>	Creeping Thistle		r	r	o	o	o	o	o	o	
<i>Cirsium vulgare</i>	Spear Thistle		r	r	r	r	r	r	r		
<i>Convolvulus arvensis</i>	Field Bindweed				r						
<i>Cortaderia selloana</i> *	Pampas-grass					r	r	r	r		
<i>Crepis capillaris</i>	Smooth Hawk's-beard						r	r	vlf	o	
<i>Crepis vesicaria</i> *	Beaked Hawk's-beard						r		o	o	
<i>Crocsmia</i> sp.*	Montbretia			r							
<i>Dactylorhiza incarnata</i> subsp. <i>coccinea</i>	Early Marsh-orchid					o	o	o	o	f	NS NT SCI

<i>Dactylorhiza incarnata</i> subsp. <i>incarnata</i>	Early Marsh-orchid							r	r		SCI
<i>Dactylorhiza praetermissa</i>	Southern Marsh-orchid							r	o	o	
<i>Dactylorhiza purpurella</i>	Northern Marsh-orchid									r	SCI
<i>Daucus carota</i>	Wild Carrot								r	lo	
<i>Eleocharis quinqueflora</i>	Few-flowered Spike-rush					vla		vla	vla	vla	SCI
<i>Elymus junceiformis</i>	Sand Couch	la	la	la	la	la	la	la	la	la	
<i>Elymus repens</i>	Common Couch	r	r	lf		r	r	o	lf		
<i>Epilobium ciliatum</i> *	American Willowherb		r	r		r	r	o	r	r	
<i>Epilobium hirsutum</i>	Great Willowherb		o	o	o	lf	lf	lo	lo	vlf	
<i>Epilobium obscurum</i>	Short-fruited Willowherb			r		r		r			
<i>Epilobium palustre</i>	Marsh Willowherb			r	r	r	lo	r	r	o	
<i>Epilobium parviflorum</i>	Hoary Willowherb			r	o	o	o	o	o	o	
<i>Epipactis palustris</i>	Marsh Helleborine				r	r	o	o	o	o	NT SCI
<i>Erigeron acris</i>	Blue Fleabane			r	r	r	r	r	r	vlo	
<i>Erigeron canadensis</i> *	Canadian Fleabane			r	r	o	o	o	o	o	
<i>Erigeron sumatrensis</i> *	Guernsey Fleabane		r	r	r	r	o	o	o	lo	
<i>Erophila verna</i>	Common Whitlowgrass								la		
<i>Eryngium maritimum</i>	Sea-holly	r		r	o	r	r	r	r	r	NT SCI
<i>Euphorbia paralias</i>	Sea Spurge	r	o	o	o	r	r	r	r	r	SCI
<i>Euphorbia portlandica</i>	Portland Spurge						r				SCI
<i>Euphrasia confusa</i>	Confused Eyebright						r		vlf	vlf	VU VU
<i>Euphrasia nemorosa</i>	Common Eyebright							lf	vlf	la	NT NT
<i>Euphrasia tetraquetra</i>	Western Eyebright							r	vlf	vlf	NT NT SCI
<i>Festuca rubra</i>	Red Fescue			r	o	o	o	o	o	o	
<i>Filipendula ulmaria</i>	Meadowsweet					r			r		
<i>Galium palustre</i>	Marsh Bedstraw			r		r	vlf	vlf	o	o	
<i>Hippophae rhamnoides</i> *	Sea Buckthorn			r	r		r	r	r	r	
<i>Holcus lanatus</i>	Yorkshire-fog		o	o	o	o	o	o	o	o	
<i>Honckenya peploides</i>	Sea Sandwort	r	r	r		r	lo				
<i>Hydrocotyle vulgaris</i>	Marsh Pennywort							la	la	la	

<i>Hypochaeris radicata</i>	Cat's-ear				o	o	lf	lf	lf	f	
<i>Iris pseudacorus</i>	Yellow Iris		r	r	r	r	r	r	o	o	
<i>Isolepis setacea</i>	Bristle Club-rush			r		r			r		
<i>Jacobaea vulgaris</i>	Common Ragwort		r	r	o	o	o	lf	lf	lf	
<i>Juncus articulatus</i>	Jointed Rush		o	lf	la	la	la	la	la	la	
<i>Juncus bufonius</i>	Toad Rush		o	o	lf	lf	vlf	r	r		
<i>Juncus effusus</i>	Soft Rush			r	r	r	r	r	r	r	
<i>Juncus gerardii</i>	Saltmarsh Rush				r	vla	vla	r	vla		
<i>Juncus ranarius</i>	Frog Rush		o	lf	vlf	lo		r	lo	vlo	SCI
<i>Lemna minor</i>	Common Duckweed					vlf					
<i>Leontodon saxatilis</i>	Lesser Hawkbit		r	r	o	o	o	o	o	o	
<i>Leucanthemum vulgare</i>	Oxeye Daisy						r	r	r	r	
<i>Leymus arenarius</i>	Lyme-grass	o	o	la	la	la	la	la	la	la	
<i>Linum catharticum</i>	Fairy Flax								r		
<i>Lolium perenne</i>	Perennial Rye-grass		r	r	r	r	r	o		vla	
<i>Lycopus europaeus</i>	Gypsywort		r	o	o	o	o	o	o	o	
<i>Lysimachia maritima</i>	Sea Milkwort	r	o	o	la	la	la	la	la	la	
<i>Lysimachia tenella</i>	Bog Pimpernel						r	vlf		la	SCI
<i>Lythrum salicaria</i>	Purple Loosestrife					r	r	r	r	r	
<i>Mentha aquatica</i>	Water Mint				r	o	o	o	o	o	
<i>Myosotis laxa</i>	Tufted Forget-me-not				r	o	o	o	o	o	
<i>Myosotis ramosissima</i>	Early Forget-me-not							vlf	lo		SCI
<i>Myosotis scorpioides</i>	Water Forget-me-not					r		r		r	
<i>Nasturtium officinale</i>	Water-cress		o	r	r	o	lo	r	r	lo	
<i>Odontites vernus</i>	Red Bartsia			vlo	vlo	lo	lo	lo	lo	vlf	
<i>Oenanthe crocata</i>	Hemlock Water-dropwort			o	o	o	o	o	o	o	
<i>Oenanthe lachenalii</i>	Parsley Water-dropwort					r	r	o	o	o	NT SCI
<i>Oenothera × fallax*</i>	Intermediate Evening-primrose	r	r	o	r	o	o	o	o	o	
<i>Oenothera biennis*</i>	Common Evening-primrose									r	
<i>Oenothera glazioviana*</i>	Large-flowered Evening-primrose			r					r		

<i>Ononis repens</i>	Common Restharrow					r	vla	vla	vla	vla	
<i>Ophrys apifera</i>	Bee Orchid								r		
<i>Oxalis tetraphylla</i> *	Four-leaved Pink-sorrel 'Iron Cross'			r	vlo	vlo	r	r	r		
<i>Oxybasis rubra</i>	Red Goosefoot		o		r	r	r				SCI
<i>Parapholis strigosa</i>	Hard-grass			r	r	vla	vla	vla		lo	
<i>Parnassia palustris</i>	Grass-of-Parnassus						lf	lf	lf	lf	VU SCI
<i>Persicaria lapathifolia</i>	Pale Persicaria					r					
<i>Persicaria maculosa</i>	Redshank		r	r		lo	r	r			
<i>Phalaris arundinacea</i>	Reed Canary-grass		r	r	r	r	r	vlo		r	
<i>Phleum arenarium</i>	Sand Cat's-tail			r	r			vlf	vlf	vlo	NT SCI
<i>Phragmites australis</i>	Common Reed			r	lo	lo	o	o	o	o	
<i>Pilosella officinarum</i>	Mouse-ear-hawkweed						r				
<i>Plantago coronopus</i>	Buck's-horn Plantain		r	r	o	lf	vlf	r	r		
<i>Plantago lanceolata</i>	Ribwort Plantain		r	r	r		r	r		r	
<i>Plantago major</i>	Great Plantain		o	r	lo	lo	r	o	r	r	
<i>Plantago maritima</i>	Sea Plantain		r	r	o	lf	o	o	o	r	
<i>Poa annua</i>	Annual Meadow-grass		r	r	r	r	r	r	r	lo	
<i>Poa humilis</i>	Spreading Meadow-grass				vlo						
<i>Poa pratensis</i>	Smooth Meadow-grass				vlo	vlf	vlf	o	o	o	
<i>Poa trivialis</i>	Rough Meadow-grass			r			r				
<i>Polygonum aviculare</i>	Knotgrass		r			r	lo				
<i>Polygonum depressum</i>	Equal-leaved Knotgrass					lo	lo		r		
<i>Polygonum oxyspermum</i> subsp. <i>raii</i>	Ray's Knotgrass	r	o	r		vlo	r				SCI
<i>Populus</i> × <i>canescens</i> *	Grey Poplar									r	
<i>Potentilla anserina</i>	Silverweed			r		r	r	vla	vlf	o	
<i>Prunella vulgaris</i>	Selfheal					vla	lf	o		r	
<i>Puccinellia maritima</i>	Common Saltmarsh-grass	la	la	la	lf	lf	lf	lf	lf	lf	
<i>Pulicaria dysenterica</i>	Common Fleabane				o	o	lf	o	lf	lf	
<i>Pyrola rotundifolia</i> subsp. <i>maritima</i>	Round-leaved Wintergreen							vlf		vlf	NS SCI

<i>Ranunculus acris</i>	Meadow Buttercup				r	r	r				
<i>Ranunculus bulbosus</i>	Bulbous Buttercup				r		r		vlf	r	
<i>Ranunculus flammula</i>	Lesser Spearwort				o	o	o	o	o	lf	VU
<i>Ranunculus repens</i>	Creeping Buttercup						r				
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup		o	r	r	o	o			r	
<i>Raphanus raphanistrum</i> subsp. <i>maritimus</i>	Sea Radish		r	r	r	r	r				SCI
<i>Raphanus raphanistrum</i> subsp. <i>raphanistrum</i>	Wild Radish					r					
<i>Rosa rugosa</i> *	Japanese Rose						r	r		r	
<i>Rubus caesius</i>	Dewberry		r	o			r	r	r	o	
<i>Rumex acetosa</i>	Common Sorrel									r	
<i>Rumex conglomeratus</i>	Clustered Dock			r	r		r	r	r	r	
<i>Rumex crispus</i>	Curled Dock	o	o	o	o	o	o	o	o	o	
<i>Rumex obtusifolius</i>	Broad-leaved Dock		r	r		lo	lo				
<i>Sagina maritima</i>	Sea Pearlwort			r		r	la	lf	lf	lf	
<i>Sagina nodosa</i>	Knotted Pearlwort			vlo	lf	lf	lf	lf	lf	lo	VU
<i>Salicornia dolichostachya</i>	Long-spiked Glasswort					r					
<i>Salicornia fragilis</i>	Yellow Glasswort		r								NS
<i>Salicornia ramosissima</i>	Purple Glasswort					lo	r				
<i>Salix</i> × <i>fragilis</i>	Hybrid Crack-willow		o	o	r	r	r	r	r	r	
<i>Salix</i> × <i>fragilis</i> forma <i>basfordiana</i> *	Hybrid Crack-willow					r	r	r	r	r	
<i>Salix</i> × <i>friesiana</i>	Hybrid Willow			r							NR
<i>Salix</i> × <i>smithiana</i> (?)	Broad-leaved Osier				r	r	r				
<i>Salix alba</i>	White Willow									r	
<i>Salix caprea</i>	Goat Willow						r	r	o	o	
<i>Salix cinerea</i> subsp. <i>cinerea</i>	Grey Willow								r		
<i>Salix cinerea</i> subsp. <i>oleifolia</i>	Grey Willow					r	o	f	f	f	
<i>Salix repens</i>	Creeping Willow		r	o	o	o	o	o	o	o	NT
<i>Salix viminalis</i>	Osier							r	r	r	

<i>Salsola kali</i>	Prickly Saltwort	r	o	r			r	r	r		VU SCI
<i>Samolus valerandi</i>	Brookweed				o	o	la	la	la	la	SCI
<i>Schedonorus arundinaceus</i>	Tall Fescue					r					
<i>Schoenoplectus tabernaemontani</i>	Grey Club-rush	r									SCI
<i>Sedum acre</i>	Biting Stonecrop			r							
<i>Senecio vulgaris</i> subsp. <i>denticulatus</i>	Groundsel			o	r	o	o	o	lo	o	NS
<i>Senecio vulgaris</i> subsp. <i>vulgaris</i>	Groundsel					lo	o	r	r	o	
<i>Senecio vulgaris</i> var. <i>hibernicus</i>	Groundsel					o					
<i>Sinapis arvensis</i>	Charlock						r				
<i>Sisyrinchium californicum</i> *	Yellow-eyed-grass						r	r	vlf	r	
<i>Solanum dulcamara</i>	Bittersweet		r	r							
<i>Sonchus arvensis</i>	Perennial Sowthistle		o	o	o	o	o	o	o	o	
<i>Sonchus asper</i>	Prickly Sowthistle		r	r	lo	o	o	o	r	r	
<i>Sonchus oleraceus</i>	Smooth Sowthistle		r	r	lo	o	o	r	r	r	
<i>Spartina anglica</i>	Common Cord-grass			r		r					
<i>Spergularia marina</i>	Lesser Sea-spurrey		r								
<i>Stellaria media</i>	Common Chickweed					lo					
<i>Suaeda maritima</i>	Annual Sea-blight		o	r		r	r				
<i>Symphyotrichum</i> sp.*	Michaelmas-daisy					r	r	r	vlf	r	
<i>Taraxacum</i> agg.	Dandelion		r	r	r	r	o	o	o	o	
<i>Tragopogon pratensis</i>	Goat's-beard				r		r				
<i>Trifolium fragiferum</i>	Strawberry Clover						vlf	vla	la	vla	VU VU SCI
<i>Trifolium pratense</i>	Red Clover			r	vla	la	la	la	la	la	
<i>Trifolium repens</i>	White Clover				lf	la	la	la	la	la	
<i>Triglochin maritima</i>	Sea Arrow-grass		o	o	o	o	o	o	o	o	
<i>Triglochin palustre</i>	Marsh Arrow-grass										NT SCI
<i>Tripleurospermum maritimum</i>	Sea Mayweed	r	o	lf	lf	lf	lf	o	o	r	
<i>Tripolium pannonicum</i>	Sea Aster	r	o	o	lf	lf	lf	o	r	r	

<i>Triteleia laxa</i> *	Triplet Lily			r	r	r	r	vlo	vlo	r	
<i>Triticum aestivum</i> *	Bread Wheat		r			vlo					
<i>Tussilago farfara</i>	Colt's-foot		r	r	r	lo	lo	r	r	r	
<i>Typha latifolia</i>	Bulrush		r	vlo	r	r	vlo	r	lo	lo	
<i>Veronica catenata</i>	Pink Water-speedwell			r	vlf	o		lo	r	lo	
<i>Vulpia fasciculata</i>	Dune Fescue					vlf	vlf	vlf	vlf	vla	NS SCI
196 taxa 21 non-native		21	67	97	97	133	140	135	137	136	40 notable