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- 0: documents that relate exclusively to buildings or systems that are common to the whole site (e.g. OSC building, parkings, ancillary buildings...)

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BUILDING

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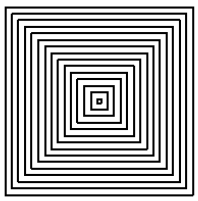

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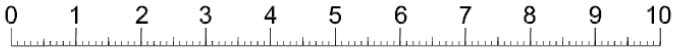

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EDF Energy/NNB GenCo

Sizewell C Project

Sizewell C NVC Survey 2014

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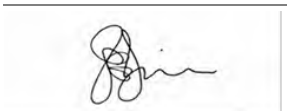
Approver	Jon Davies	

Report No UA004506 – S-EX097 001

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SUMMARY

EDF Energy/NNB GenCo is to submit an application for a Development Consent Order to construct and operate a new nuclear power station, Sizewell C, near the town of Leiston in Suffolk. The proposal site is within an Area of Outstanding Natural Beauty and therefore within an area of high landscape importance. The proposal site is also within an area of ecological sensitivity. It is adjacent to the Minsmere to Walberswick Heaths and Marshes Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar, the Sandlings SPA and the Outer Thames Estuary SPA. Sizewell Marshes Site of Special Scientific Interest (SSSI) and Suffolk Shingle Beaches County Wildlife Site (CWS) are also within the proposal site

Detailed botanical surveys of Sizewell Marshes SSSI and the coastal frontage to the proposed C Station were undertaken in 2007 and 2008 by Amec, and in 2014 these were updated and extended by Hyder Consulting (UK) Ltd. Suffolk Wildlife Trust has also commissioned botanical monitoring surveys of Sizewell Marshes SSSI since 1995, and these surveys are still ongoing. The Wildlife Trust also undertook botanical surveys of the coastal vegetation in 2003. The results of the pre-2014 surveys have been reviewed as part of the current study; however, a detailed comparison between all the survey reports has not been undertaken.

This report presents the results of detailed botanical surveys carried out in 2014 using the National Vegetation Classification (NVC) to assign habitat areas, wherever possible, to recognised NVC communities. The aim of the work is to provide an up-to-date ecological baseline of vegetation that could potentially be directly affected by the works on the proposal site.

The 2014 survey area comprised habitat within three designated sites of nature conservation importance. These comprised: reedbeds, woodland, fen meadows and ditches within Sizewell Marshes SSSI; coastal vegetation within Minsmere to Walberswick Heaths and Marshes SAC/ Ramsar; and coastal vegetation within Suffolk Shingle Beaches CWS. The survey area was divided into separate compartments, labelled Area A to Area I, the locations of which are shown on Figure(0038 – UA004506-UE21D-03 Survey areas and quadrat locations) (note that ‘Area’ D is actually a series of ditches, marked with a red line on the figure) The vegetation within each survey area was sampled using quadrats (the locations of which are also shown on Figure 0038). All plant species rooted within each quadrat were recorded and assigned a cover value using a Domin score of 1 to 10. The quadrat data, together with photographs of representative samples of the vegetation, have been appended to this report.

The 2014 survey results showed strong correlations with the previous survey data. The majority of the plant communities recorded were similar to those recorded in the earlier surveys, both in terms of the NVC plant community and the extent of the area covered by each community. Changes in the composition of the plant communities were, however, recorded in two places. One was in Area E (reedbed and wet woodland in Sizewell Marshes SSSI south of Goodrums Fen) where less Common Nettle was recorded in the reedbed. This change has affected the NVC plant community that was assigned to the vegetation (both are reed-dominated), but does not appear to have affected plant species diversity. The other change has occurred in Area F (fen meadows in Sizewell Marshes SSSI west of the Sizewell C Station Platform) where Blunt-flowered rush was more prevalent than had been recorded previously and the plant community was less diverse. It was considered that this minor change could have been the result of prolonged surface water flooding in previous years. This change to the plant assemblage was not sufficient to alter the classification of the NVC plant community.

A small number of plant species that are uncommon in Britain were recorded in the quadrats. These plants have also been recorded within the survey area in the course of previous surveys. Note that plant species growing outside of the quadrat locations were not recorded.

The results of the botanical surveys are summarised in the table below.

Plant communities and scarce plants recorded within the survey area in 2014

Location	Vegetation sampled	NVC communities and scarce plants *(latter in bold italic)*
Area A	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** Wet woodland (Quadrats 1 to 5)	W5 Alder - Greater Tussock-sedge woodland. W5a Common Reed sub-community
Area B	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** Wet reedbed (Quadrats 6 to 11)	S4 Common Reed swamp and reedbeds. S4a typical sub-community.
Area C	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** Dry reedbed (quadrats 13 to14) Woodland and dry reedbed/grassland (Quadrats 15 to 17)	S26 Common Reed-Common Nettle tall-herb fen. W5 Alder-Greater Tussock-sedge woodland community.
Area D	***Ditches*** D1 Northern boundary Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 18 to 22) D2 Southern boundary Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 23 to 27) D3 and D6 South of Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 28 and 29 and 39 to 41) D4 D5 D5a Located within fen meadows to the west of Sizewell C Station Platform (within Sizewell Marshes SSSI) (Quadrats 30 to 38)	D1, D2, D3, D4, D5, D5a & D6: Emergent flora - no NVC community assigned. D1, D6: Floating vegetation - A2 Common Duckweed aquatic community. D1, D2 Submerged flora - no NVC community assigned. D2, D3, D4, D5 & D5a: Floating vegetation - A3 Greater Duckweed-Frogbit aquatic community. D3, D4, D5, D5a & D6 Submerged flora - A6 Soft Hornwort aquatic community In Ditches 1,2,4,5 & 5a: ***Frogbit.*** In Ditches 3,4,5 & 5a & 6: ***Soft Hornwort***
Area E	***Reedbed and wet woodland in Sizewell Marshes SSSI south of Goodrums Fen*** Reedbed and wet woodland (Quadrats 42 to 46)	S4 Common Reed swamp and reedbeds. S4a typical sub-community. W5 Alder-Greater Tussock-sedge woodland. W5a the Common Reed sub-community
Area F	***Fen meadows in Sizewell Marshes SSSI west of the Sizewell C Station Platform*** Fen meadow (Quadrats 47 to 55)	M22 Blunt-flowered Rush -Marsh Thistle mire community.
Area G	***Minsmere to Walberswick Heaths and Marshes SAC/Ramsar coastal vegetation extending to the north of Sizewell C Station Platform***.	Leiston Drain: S26 Common Reed-Common Nettle tall-herb fen, A2 Common Duckweed aquatic community, A16 Common Water-

Location	Vegetation sampled	NVC communities and scarce plants *(latter in bold italic)*
	Leiston Drain (quadrats 59 to 61) Reedbed adjacent Leiston Drain (quadrats 62 to 65) Dune grassland (Quadrats 66 & 67) Sand dune (Quadrats 56 to 58)	starwort aquatic community, typical sub-community. Reedbed: S26 Common Reed-Common Nettle tall-herb fen. Dune grassland & sand dune: SD12 Sand Sedge-Sheep's Sorrel-Common Bent dune grassland. Sand dune: ***Rat's-tail Fescue***
Area H	***Suffolk Shingle Beaches CWS coastal vegetation*** Dune grassland (Quadrats 78 to 82) Sand dune (Quadrats 68 to 77) Shingle (Quadrats 83 to 92)	Dune grassland: SD8 Red Fescue-Lady's Bedstraw fixed dune community. Sand dune: SD7 Marram-Red Fescue semi-fixed dune community. Shingle: SD2 Sea Sandwort-Sea-kale strandline community. SD1 Curled Dock-Yellow Horned-poppy shingle community. SD1a Sea Pea sub-community. Dune grassland: ***Rat's-tail Fescue*** Sand dune and shingle: ***Rush-leaved Fescue*** Shingle: ***Sea Pea***
Area I	***Wet woodland in Sizewell Marshes SSSI west of Sizewell C Station Platform*** Wet woodland (Quadrats 93 to 95)	W5 Alder-Greater Tussock-sedge woodland community.

1 Introduction

EDF Energy/NNB GenCo is to submit an application for a Development Consent Order to construct and operate a new nuclear power station, Sizewell C, near the town of Leiston in Suffolk. The proposal site is within an Area of Outstanding Natural Beauty and therefore within an area of high landscape importance. The proposal site is also within an area of ecological sensitivity. It is adjacent to the Minsmere to Walberswick Heaths and Marshes Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar, the Sandlings SPA and the Outer Thames Estuary SPA. Sizewell Marshes Site of Special Scientific Interest (SSSI) and Suffolk Shingle Beaches County Wildlife Site (CWS) are also within the proposal site..

A considerable amount of ecological survey work has been carried out within and adjacent to the proposal site. This has included surveys undertaken by Amec in 2007 and 2008 of the plant communities on Sizewell Marshes SSSI and the existing coastal vegetation on the seaward side of the proposals site. Prior to this, in 2003, Suffolk Wildlife Trust (SWT) undertook botanical surveys of the coastal vegetation. Both Amec and SWT used the National Vegetation Classification (NVC) to assign the plant communities to the vegetation (for further information regarding the NVC see JNCC (2006)). In addition, SWT have commissioned a long-term monitoring project in Sizewell Marshes SSSI; this commenced in 1995 and is ongoing (Ecology Land and People, 2010).

Following on from NNB GenCo's Stage 1 Pre-Application Consultation on its initial proposals and options for Sizewell C, which ended on 6th February 2013, the priorities for 2014 were to progress the conceptual engineering design and technical studies relating to the development, as well as to undertake further essential environmental studies in order to inform this work and support a robust Stage 2 Consultation.

The development proposals are likely to result in direct impacts upon the Suffolk Shingle Beaches CWS and part of Sizewell Marshes SSSI. In addition, vegetation within the Minsmere to Walberswick Heaths and Marshes SAC, in close proximity of the C Station Platform, could potentially also be indirectly affected by changes in ground water, surface water and air quality.

Therefore, in 2014, Hyder Consulting undertook targeted NVC surveys of these areas. These surveys were undertaken in response to a direct request from consultees to provide a greater spatial resolution of the location, type and extent of habitats likely to be affected and the plant species that they support. This report presents the results of these surveys and also considers the results of the earlier survey work.

The areas covered by the 2014 surveys are illustrated on Figure 0038 – UA004506-UE21D-03 Survey areas and quadrat locations

2 Methodology

2.1 Extent of the survey area

The Sizewell C Development has the potential to directly affect habitats within designated sites of nature conservation importance that are in close proximity to the development proposals. These designated sites, together with the habitats most likely to be affected, are summarised in Table 1 below:

Table 1 Designated sites and habitats that could potentially be directly affected by the Sizewell C proposals.

Designated site	Qualifying habitats
Minsmere to Walberswick Heaths and Marshes SAC [International importance to nature conservation]	Annual vegetation of drift lines. European dry heaths. Perennial vegetation of stony banks.
Minsmere to Walberswick Ramsar site [International importance to nature conservation]	Mosaic of marine and freshwater habitats that supports nationally scarce plants.
Suffolk Shingle Beaches CWS [County importance to nature conservation]	The stretches of shingle beach along the Suffolk coast are of conservation importance for the range of shingle plants that grow there. There are also rare invertebrates species found in these coastal sites.

The 2014 NVC survey focussed on the plant communities within the areas most likely to be directly and/or indirectly affected by the development proposals. The following distinct areas were sampled:

- Two areas of the Sizewell Marshes SSSI likely to be directly affected by the proposed development (where direct habitat loss is likely); this included reedbed, ditch vegetation and wet woodland vegetation within Goodrums Fen, and ditch vegetation, fen meadow and woodland vegetation adjacent to the western edge of the C Station platform;
- An area of coastal vegetation (including ditch, reedbed and dune grassland) immediately to the north of the proposed C Station Platform, forming part of the Minsmere to Walberswick SAC and Ramsar Site; and
- A strip of coastal vegetation (including dune grassland, sand dune and shingle) to the seaward side of the proposed C Station Platform, forming part of the designated Suffolk Shingle Beaches CWS.

2.2 Selection of sampling locations

A total of nine areas, defined by broad habitat type, were surveyed within the three locations described in 2.1, above. For the purposes of this survey these areas have been labelled Areas A to I as illustrated on Figure 0038 – UA004506-UE21D-03 Survey areas and quadrat locations.

All of these areas are denoted by a blue line, with the exception of 'Area' D, which is actually a series of ditches, marked with a red line on the figure. Standard botanical quadrats were used to survey all of these areas, and the quadrat locations (totalling 95) are alsoshown on Figure 1.

Table 2, below, sets out the habitats that were surveyed and the quadrats that were used to sample these areas. Photographs of each habitat are presented in Appendix A of this report. Botanical names follow Stace (1997).

Table 2 Quadrat locations

Location	Vegetation sampled
Area A	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** • Wet woodland (Quadrats 1 to 5)
Area B	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** • Wet reedbed (Quadrats 6 to 11)
Area C	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** • Dry reedbed (quadrats 13 to14) • Woodland and dry reedbed/grassland (Quadrats 15 to 17)
Area D	***Ditches*** • D1 Northern boundary Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 18 to 22) • D2 Southern boundary Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 23 to 27) • D3 and D6 South of Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 28 and 29 and 39 to 41) • D4 D5 D5a Located within fen meadows (within Sizewell Marshes SSSI) to the west of Sizewell C Station Platform (quadrats 30 to 38)
Area E	***Reedbed and wet woodland in Sizewell Marshes SSSI south of Goodrums Fen*** • Reedbed and wet woodland (Quadrats 42 to 46)
Area F	***Fen meadows in Sizewell Marshes SSSI west of the Sizewell C Station Platform*** • Fen meadow (Quadrats 47 to 55)
Area G	***Minsmere to Walberswick Heaths and Marshes SAC/Ramsar coastal vegetation extending to the north of Sizewell C Station Platform***. • Leiston Drain (quadrats 59 to 61) • Reedbed adjacent Leiston Drain (quadrats 62 to 65) • Dune grassland (Quadrats 66 & 67) • Sand dune (quadrats 56 to 58)
Area H	***Suffolk Shingle Beaches CWS coastal vegetation*** • Dune grassland (Quadrats 78 to 82) • Sand dune (Quadrats 68 to 77) • Shingle (Quadrats 83 to 92
Area I	***Wet woodland in Sizewell Marshes SSSI west of Sizewell C Station Platform*** • Wet woodland (Quadrats 93 to 95)

2.3 Botanical survey methodology

The targeted botanical survey was carried out in accordance with the NVC Users Handbook (JNCC 2006). The results of the previous survey work that had been undertaken by Amec and SWT, together with a large-scale aerial photograph (dated 2013, provided by NNB GenCo) were used to identify homogenous stands of vegetation to be surveyed. The majority of these stands of vegetation were sampled using a standard 2m x 2m square quadrat. The exceptions to this were the woodland canopies (which were sampled using 50m x 50m square quadrats), and the ditch vegetation (which was sampled using a 1m x 4m rectangular quadrat).

With regard to ditch habitat, the NVC divides the emergent, floating and submerged (aquatic) plants within the ditches into separate plant communities. Consequently, the plants that were growing in these different locations within each quadrat were recorded as separate layers. It was not possible to record all of the plant species from the ditch bank, and therefore a grapple attached to a rope was used to obtain samples of the ditch vegetation to confirm identification and/or confirm the presence and species of submerged plants.

The percentage cover of each plant species rooted within each quadrat was recorded using the standard Domin logarithmic scale, as defined in Table 3 below:

Table 3 Domin values

Cover Value	Domin Value
91–100%	10
51–75%	9
76–90%	8
34–50%	7
26–33%	6
11–25%	5
4–10%	4
<4% (many individuals	3
<4% (several individuals)	2
<4% (few individuals)	1

NVC plant community boundaries were mapped in the field using both the results of the field surveys and 2013 aerial photographs.

The NVC survey was undertaken by a team of two experienced botanists over a period of three weeks between June and August 2014. Following the sampling survey, the quadrat results were compared against the habitat keys and floristic tables in the relevant NVC handbooks (Volumes 1 to 5) to confirm the identification of the vegetation communities present (Rodwell 1991a & b, 1992, 1995, 2000).

2.4 Limitations to survey

The surveys were undertaken at a time of year when the majority of the plant species present were in flower or had set seed, making identification to species relatively straightforward. Plants that flower particularly early or late in the season could have been missed. However, the majority of the plants that form the plant communities that were sampled would have been visible at the time of survey, including the uncommon and scarce plants that have been recorded within the sample areas previously. It is not considered necessary to repeat the survey at another time of year.

Plant species growing outside of the quadrat locations were not recorded.

The locations for the detailed quadrat survey were determined largely by a combination of accessibility and health & safety implications. Not all of the areas were therefore sampled in detail; however, it was possible to survey a representative sample of the habitats present.

3 Results

The results of the NVC survey are summarised below, with photographs of the vegetation presented in Appendix A, and NVC community boundaries illustrated on Figure 2 he detailed NVC floristic tables are presented in Appendix B.

3.1.1 Sizewell Marshes SSSI, Goodrums Fen

A significant proportion of Goodrums Fen would be lost to the proposed Sizewell C development. This part of the SSSI contains wet woodland and reedbed with water-filled ditches on the northern and southern boundaries. The surveys undertaken by Amec revealed the presence of a bank of spoil within the middle of the site that supported the open habitat community OV25 Common Nettle (*Urtica dioica*) - Creeping Thistle (*Cirsium arvense*) community (see grey shading on Figure 2). In 2014, this bank was found to be covered by False Oat-grass (*Arrhenatherum elatius*) and Common Nettle. It is possible that the plant community has changed, but it is not considered that this area of disturbed soil would support a plant community of conservation importance; it was therefore not subject to detailed survey in 2014.

Sample areas A to C are located within Goodrums Fen. The quadrat locations are illustrated on Figure 0038 – UA004506-UE21D-03 Survey areas and quadrat locations, whilst the distribution of the habitats described across Goodrums Fen is shown in Figure 0039 - UA004506-UE21D-03 NVC community bounadaries.. It should be noted that whilst these three areas were selected for sampling because they represent large patches of homogenous habitat, the actual detailed distribution of the constituent habitats (S4, S26 and W5) within Goodrums Fen is more complex than this, as illustrated in Figure 0039 - UA004506-UE21D-03 NVC community bounadaries..

Area A (Quadrats 1 to 5)

This part of the survey area comprised wet woodland, with a closed canopy of young Alder (*Alnus glutinosus*) and Ash (*Fraxinus excelsior*) trees. The ground was slightly drier on the western edge, where Ash was dominant in the canopy. A mixture of shrub species, predominantly comprising Goat Willow (*Salix caprea*) and Raspberry (*Rubus idaeus*), was recorded scattered beneath the main canopy. Mature trees were not present in this woodland.

Twenty five plant species characteristic of wetland were recorded in the ground flora, the most abundant species being Rough Meadow-grass (*Poa trivialis*) and Bittersweet *(Solanum dulcamara*). Other ground flora species were widely distributed throughout the woodland.

This woodland is attributable to the W5 Alder - Greater Tussock-sedge (*Carex paniculata*) woodland community, and was considered to correspond most closely to the W5a Common Reed (*Phragmites australis*) sub-community. This is less diverse than the other W5 sub-communities. This classification was due the scarcity of the ground flora, the frequency of Bittersweet and the dominance of Common Reed elsewhere within Goodrums Fen. W5 is a widely-distributed wet woodland community throughout the English lowlands, and W5a is the most common and widely-distributed of the W5 sub-communities.

The 2014 survey results accord with the survey work undertaken by Amec, and there does not appear to have been a significant change in the composition of the woodland community or its extent since the Amec surveys were undertaken in 2007 and 2008.

Area B (Quadrats 6 to 11)

This part of the survey area comprised the wet reedbed located within the central part of Goodrums Fen. The reedbed was species-poor and located on a wet substrate. Dense

Common Reed dominated the vegetation (between 90 and 100% cover in the quadrats) restricting the growth of other plant species. Fewer than 10 plant species were recorded in each quadrat. Species growing amongst the Common Reed included Common Nettle, Cleavers (*Galium aparine*) and Hedge Bindweed (*Calystegia sepium*). A small area (10m by 10m) of swamp vegetation located on the northern edge of the reedbed was an exception to the species–poor conditions. This area was sampled by Quadrat 11; however, it has not been possible to assign a different NVC plant community to this single quadrat due to the small sample size and limited extent of the vegetation.

The wet reedbed in Goodrums Fen is considered to be attributable to S4a, the typical sub-community of the NVC community S4 Common Reed swamp and reedbeds. As with W5a, S4a is a plant community that is widely distributed across the British lowlands.

Again, the 2014 survey results accord well with the previous survey work undertaken by Amec, and there does not appear to have been a significant change in the composition of the reedbed community or its extent since the Amec surveys were undertaken.

Area C (Quadrats 13 to 17)

Area C comprised areas of open vegetation dominated by Common Reed (dry reedbed) with patches of Alder and willow (*Salix* sp.) scrub. Quadrats 13 and 14 sampled the dry reedbed, whilst quadrats 15 to 17 sampled areas with reedbed and scrub.

The dry reedbed comprised Common Reed (90% cover in the quadrats) and Common Nettle (over 50% cover in the quadrats)(the layered nature of the vegetation in the quadrats makes it possible for the vegetation in each quadrat to exceed 100%). The drier reedbed areas were moderately diverse, supporting 16 plant species indicative of wetland habitat. Species recorded included Gypsywort (*Lycopus europaeus*), Hemp-agrimony (*Eupatorium cannabinum*), Water Mint (*Mentha aquatica*), Wild Angelica (*Angelica sylvestris*), Bittersweet and Cleavers. These species were sparsely distributed, with 10% cover or less within individual quadrats.

The drier reedbed areas are attributable to the NVC community S26 Common Reed – Common Nettle tall-herb fen due to co-dominance of Common Reed and Common Nettle. This is a vegetation community that is widely distributed in lowland Britain, in particular the fens and Broadlands of East Anglia.

The woodland/scrub was not as discrete and well-defined as the woodland in sample Area A. In Area C, it consisted of small scattered stands of Alder and willow which have not formed a closed canopy. These stands of trees and shrubs supported a moderately diverse flora, with 11 species indicative of wetland recorded. These included Water Dock (*Rumex hydrolapathum*), Water-pepper (*Persicaria hydropiper*), Greater Bird's-foot-trefoil (*Lotus pedunculatus*) and Floating Sweet-grass (*Glyceria fluitans*). In addition, common and widespread species more indicative of drier woodland habitats were also recorded, including Bramble (*Rubus fruticosus agg.)*, Cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*) and Herb-Robert (*Geranium robertianum*). These areas of woodland/scrub closely resembled W5 Alder-Greater Tussock-sedge woodland community.

The 2014 survey results accord with the survey work undertaken by Amec and there does not appear to have been a significant change in the composition of the reedbed and/or scrubby woodland community and their extent.

3.1.2 Ditches

Area D

Sample area D (see the red lines on Figure 0038 – UA004506-UE21D-03 Survey areas and quadrat locations) comprised drainage ditches within Sizewell Marshes SSSI and on the edge of the Sizewell C platform. The ditches sampled were:

- Ditch D1 - The northern boundary of Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 18 to 22);
- Ditch D2 - The southern boundary of Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 23 to 27);
- Ditch D3 and D6 - Located south of Goodrums Fen, alongside Area E (within Sizewell Marshes SSSI) (Quadrats 28 and 29 and 39 to 41); and
- Ditches D4, D5 and D5a - Located within the area of fen meadow within Sizewell Marshes SSSI, to the west of C Station Platform (Quadrats 30 to 38).

The ditches within Sizewell Marshes SSSI support diverse emergent and aquatic plant communities, including at least two nationally scarce plant species. The ditches within the SSSI have been managed on a long cycle of rotational management. This has created a wide range of conditions throughout the ditch network. Some ditches support a deep layer of silt, others are shaded by riparian tree and shrub growth, whilst others have been recently cleared of silt and plants and support open water.

The range of aquatic plant species supported within each ditch reflects its stage of development within this management cycle. The ditches that supported open water and receive plenty of light (those that are not shaded by riparian trees and scrub) supported the greatest diversity of aquatic plant species, whilst those that were heavily shaded or had a deep layer of silt supported the lowest number of aquatic plant species. This is illustrated by the photographs in Appendix A, with the shaded ditches supporting a covering of Common Duckweed (*Lemna minor*) and Greater Duckweed (*Spirodela polyrhiza*), with few other aquatic plants.

As discussed above, the emergent, floating and submerged (aquatic) plants are considered to be components of separate plant communities within the NVC system. For example, a ditch full of Common Reed with a floating carpet of duckweed (*Lemna sp*.) would constitute an emergent community of S4 Common Reed swamp growing over a floating carpet of A2 Common Duckweed aquatic community.

Two scarce aquatic plant species were recorded in the ditches sampled. These were: Frogbit (*Hydrocharis morsus-ranae*), which is uncommon but is recorded from more than 100 10km grid squares in Britain; and Soft Hornwort (*Ceratophyllum submersum*), a nationally scarce aquatic plant recorded from between 16 and 100 10km grid squares (Stewart *et al.* 1994).

Each of the ditches sampled are discussed below.

Ditch D1 - (Quadrats 18 to 22)

This ditch forms the northern boundary to Goodrums Fen. The western portion of the ditch (Q18) was within the fen meadow, and was thus relatively unshaded and supported a diverse emergent flora (12 plant species). However, further east the ditch was shaded by overhanging trees and vegetation and supported fewer emergent species. It was not possible to assign the emergent plants to an NVC community, since no particular suite of species was dominant.

The surface of the ditch supported a dense floating carpet of Common Duckweed and Greater Duckweed. This community is attributable to the A2 Common Duckweed aquatic community. The shade cast by overhanging vegetation and the floating carpet of duckweed has reduced the diversity of the submerged vegetation, with only Lesser Water-parsnip (*Berula erecta*) and Common Water-starwort (*Callitriche stagnalis sens. Lat*) recorded. Again, it was not possible to assign the submerged plants to an NVC community, since no particular suite of species was dominant.

Ditch D2 (Quadrats 23 to 27)

This ditch forms the southern boundary to Goodrums Fen. Like Ditch D1, for the majority of its length this ditch was shaded by trees and other vegetation and supported only a limited suite of emergent species. Common Reed and Reed Canary-grass (*Phalaris arundinacea*) were the most abundant emergent plant species recorded. The surface of the ditch supported a dense floating carpet of duckweed species and a sparse cover (less than 50%) of Frogbit. The floating vegetation has been attributed to the A3 Greater Duckweed – Frogbit aquatic community due the presence of both duckweed and Frogbit.

Shade from trees and vegetation had reduced the diversity of submerged vegetation. Plants recorded included Nuttall's Waterweed (*Elodea nuttallii*), Common Water-starwort and Fennel Pondweed (*Potamogeton pectinatus*). It was not possible to assign the submerged plants to an NVC community, since no particular suite of species was dominant.

Ditch D3 and D6 (Quadrats 28, 29 and 39 to 41)

These two ditches were also located within Sizewell Marshes SSSI, but south of Goodrums Fen. They are parallel to each other and separated by an earth track. Ditch D3 was located on the western side of the track and D6 on the eastern side. D6 was shaded by overhanging trees and supported a lower diversity of aquatic species than D3, which was unshaded for most of its length.

Both ditches supported a limited diversity of emergent plants, with Common Reed and Lesser Pond-sedge (*Carex acutiformis*) the most frequently recorded species in ditch D3. All plant species were present at a low abundance (10% cover). The emergent vegetation in ditch D6 comprised sparse Soft-Rush (*Juncus effusus*). It was not been possible to assign the emergent plants in either ditch to an NVC community due to the paucity of the plant species recorded.

The surface of ditch D3 supported a dense floating carpet of duckweed species, together with a few Frogbit and Lesser Water-parsnip plants. This floating vegetation has been attributed to the A3 Greater Duckweed-Frogbit aquatic community due the presence of both Duckweed and Frogbit. The surface of ditch D6 supported a dense floating carpet of Common Duckweed and Greater Duckweed. This community is attributable to the A2 Common Duckweed aquatic community.

Submerged species recorded in both ditches included Rigid Hornwort *(Ceratophyllum demersum*) and Soft Hornwort, but on the whole the diversity was relatively poor. Soft Hornwort was abundant in places (e.g. Q34 and Q40), and the submerged plants have been attributed to the A6 Soft Hornwort aquatic community.

Ditches D4, D5 and D5a (Quadrats 30 to 38)

These ditches are located around areas of marshy grassland/fen meadow within Sizewell Marshes SSSI to the west of the proposed C Station Platform. These ditches were the most botanically diverse ditches that were sampled in 2014. This is largely due to the fact that they were not shaded by tree and shrub vegetation. Eleven emergent species were recorded in the

quadrats. These included False Fox-sedge (*Carex otrubae*), Lesser Water-parsnip, Grey Club-rush (*Schoenoplectus tabernaemontani*) and Greater Pond-sedge (*Carex riparia*). All species were present at a low abundance (10% cover in the quadrats), and so it has not been possible to assign the emergent plants to an NVC community.

Where surface vegetation was present, the ditches supported a dense floating carpet of duckweed species, together with several Frogbit and Lesser Water-parsnip plants. The floating vegetation has been attributed to the A3 Greater Duckweed-Frogbit aquatic community due to the presence of both duckweed and Frogbit.

Rigid Hornwort, Soft Hornwort and Nuttall's Waterweed were also recorded, but overall few submerged species were recorded. Soft Hornwort was recorded in abundance in places, and the submerged plants have therefore been attributed to the A6 Soft Hornwort aquatic community.

Amec sampled a wider selection of ditches across the SSSI as the extent of the proposals was unknown at that stage. The results from the 2014 surveys are comparable to those recorded by Amec, with a similar range of NVC communities.

3.1.3 Sizewell Marshes SSSI - reedbed south of Goodrums Fen

Area E (Quadrats 42 to 46)

This part of the survey area was located southwest of Goodrums Fen and west of the proposed C Station platform. It comprised a reedbed with scattered Alder and willow trees. The reedbed was surrounded by a narrow strip of wet woodland. The northern part of this reedbed was inaccessible, so the quadrats are focussed on the southern end.

Common Reed dominated the vegetation (cover of 90 to 100% in the quadrats sampled). A diverse mixture of plants characteristic of wetland and woodland habitats were recorded amongst the reeds (25 species were recorded). These included Branched Bur-reed (*Sparganium erectum*), Hemp-agrimony, Wild Angelica, Skullcap (*Scutellaria galericulata*), Herb-Robert and Red Campion (*Silene dioica*). These wetland plants were recorded at low abundance, most with below 10% cover (in the quadrats sampled). The exception was Common Nettle, which was recorded in a single quadrat at a cover of 75%.

The dominance of Common Reed and the lack of Common Nettle within most of the quadrats sampled led to a classification of S4a, the typical sub-community of the NVC community S4 Common Reed swamp and reedbeds. Amec classified this area as S26 Common Reed – Common Nettle tall-herb fen. Both S4 and S6 are plant communities dominated by Common Reed. However, it would appear that in 2014, Common Nettle was less abundant than it had been previously.

In contrast to Goodrums Fen, the woodland on the edge of this area supported mature Alder trees. This woodland is attributable to the W5 Alder-Greater Tussock-sedge woodland community, and corresponds to the W5a Common Reed sub-community, which is less species-rich than the other W5 sub-communities. The assignment of this sub-community is due to the paucity of the ground flora, the frequency of Bittersweet and the dominance of Common Reed.

The 2014 survey results accord with the survey work undertaken by Amec, and there does not appear to have been a significant change in the composition of the woodland community or its extent.

3.1.4 Sizewell Marshes SSSI – fen meadow west of C station platform

Area F (Quadrats 47 to 55)

This part of the survey area comprised two fen meadows in Sizewell Marshes SSSI located to the west of the proposed C Station platform. Only the northern portion of each field was surveyed, as this is the area that has the potential to be affected by the development proposals. A total of 41 plant species were recorded in all of the quadrats across the survey area, which makes this the most diverse area surveyed during the 2014 survey. Each quadrat supported between 11 and 21 species.

However, the plant species diversity is less than has been recorded in similar habitat in other areas of the SSSI; for example, the long-term monitoring work undertaken for SWT recorded between 38 and 51 plant species in each of their sample plots, although it should be noted that their sample plots are larger than the 2 by 2m square quadrats. In addition, the vegetation recorded in 2014 appeared to be relatively homogenous, and was dominated by rush species. It would thus appear that this area may have been subject to a localised surface water flooding event, and for a prolonged duration. Such a flooding event would cause localised enrichment of the soil and encourage the growth of rushes, and would have a detrimental effect on plant species diversity.

The monitoring work undertaken by SWT did not include the areas sampled in 2014, and therefore no direct comparison is possible. However, the areas of the fields to the south of the areas sampled in 2014 appeared (based on visual observation) to support a greater diversity of species. It is therefore possible that the plant community recorded in 2014 may be restricted to a discrete area that has been affected by surface water flooding.

Rush species were dominant within the vegetation, with Blunt-flowered Rush (*Juncus subnodulosus*) the most abundant species, with between 75 and 90% cover (in the quadrats sampled). Common Reed was present in every quadrat, with cover values between 4 and 10%, again perhaps indicative of prolonged wet conditions. A moderately diverse range of fen meadow species were recorded in this area. These included Marsh Arrowgrass (*Triglochin palustre*), Brown Sedge (*Carex disticha*), Marsh Pennywort (*Hydrocotyle vulgaris*), Ragged-Robin (*Lychnis flos-cuculi*) and Water Mint, which are indicative of damp conditions, and Red Clover (*Trifolium pratense*), Tall Fescue (*Festuca arundinacea*), Selfheal (*Prunella vulgaris*) and Red Fescues (*Festuca rubra sens. lat*.), which are species indicative of drier grasslands. These fen meadows are attributable to the M22 Blunt-flowered Rush-Marsh Thistle (*Cirsium palustre*) mire community.

Previous survey work has identified M22 as the dominant community across Sizewell Marshes SSSI. This is a widespread plant community associated with wet, base-rich soils, with a particular concentration in East Anglia.

3.1.5 Minsmere to Walberswick Heaths and Marshes SAC/ Ramsar

Area G (Quadrats 56 to 67)

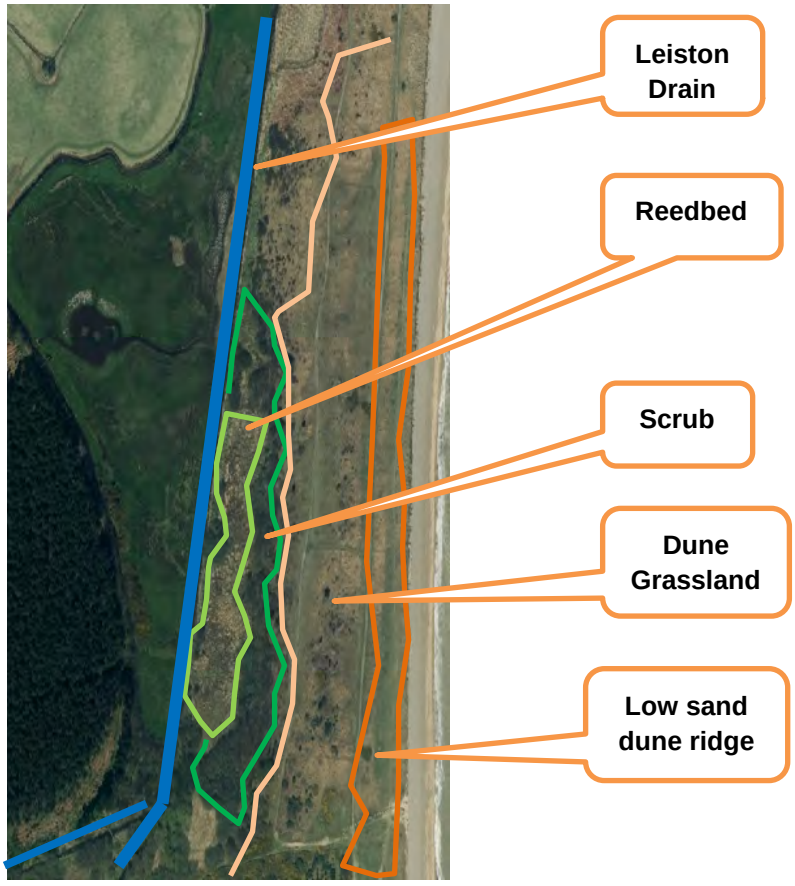
Area G sampled the southern end of the strip of coastal habitat within Minsmere to Walberswick SAC/Ramsar site. This area was sampled specifically in order to aid the assessment of groundwater and air quality effects on the vegetation present. It extends north from the C Station Platform between the Leiston Drain and the sea (see Plate 1, below); the Drain therefore forms the western boundary. Adjacent to this drainage ditch, to the east, was a linear reedbed,

approximately 30m to 40m in width. To the east of this was a strip of windswept and stunted scrub which graded into a flat area of dune grassland that was approximately 100m wide. This culminated in a low (1m-high) dune ridge overlooking bare shingle and the high tide mark (which was the eroded face of the low sand dune). There were no areas of vegetated shingle in this stretch of the SAC immediately to the north of the C Station Platform.

The belt of scrub was not sampled because it is not one the qualifying interest features of either the SAC or Ramsar site. It constituted a wide belt of trees and scrub comprising Silver Birch (*Betula pendula*), Pedunculate Oak (*Quercus robur*) and willow, with a ground flora supporting False Oat-grass (*Arrhenatherum elatius*), Common Reed and Broad Buckler-fern (*Dryopteris dilatata*). This feature was between 10 and 30m in width.

Plate 1, below, shows a simple representation of the habitats at the southern end of the SAC (north of the C station platform between the Leiston Drain and the sea) on the basis of an aerial photograph of the area. The NVC mapping of these habitat communities is presented in Figure 2, and a brief description of the different features is provided below.

Plate 1 Sequence of habitats from Leiston Drain to the sea.



Leiston Drain (Quadrats 59 to 61)

The Leiston Drain was choked by Common Reed, with Branched Bur-reed, Floating Sweet-grass and Lesser Water-parsnip scattered throughout. This emergent vegetation is attributable to the NVC Community S26 Common Reed – Common Nettle tall-herb fen.

The water surface was covered by duckweed species, including Common Duckweed and Fat Duckweed *(Lemna gibba*), with scattered Branched Bur-reed. This community is attributable to the A2 Common Duckweed aquatic community.

Only two submerged plant species were recorded, these were Fennel Pondweed and Common Water-starwort. This community is attributable to the A16 Common Water-starwort aquatic community. Fennel Pondweed was recorded at an abundance of up to 25%; the vegetation was therefore considered to be the typical A16 aquatic community, rather than the A16b Fennel Pondweed sub-community. This aquatic community is a species-poor community which occurs widely throughout lowland Britain.

Reedbed adjacent Leiston Drain (Quadrats 62 to 65)
The reedbed to the east of the Leiston Drain was species-poor, supporting only 11 plant species. The vegetation was Common Reed- and Common Nettle-dominated, with other species such as Wild Angelica, Broad Buckler-fern and Marsh Thistle recorded scattered amongst the dense growth of reeds. Lesser Pond-sedge formed a dense sedge bed in an open area amongst the Common Reed. The reedbed vegetation is attributable to the NVC community S26 Common Reed-Common Nettle tall-herb fen.

Dune grassland (Quadrats 66 & 67)
The dune grassland formed a level area between the reedbed/scrub woodland and a low dune on the seaward edge. The area consisted of a dense cover of Sand Sedge *(Carex arenaria*) and Sheep's-fescue (*Festuca ovina*) with clumps of Heather (*Calluna vulgaris*) and Bell Heather (*Erica cineria*) as well as discrete mats of Sheep's Sorrel (*Rumex acetosella*) and Cladonia lichen. The presence of Heather and Sheep's Sorrel indicates that the sand substrate is acidic in nature, either originating from acidic sands or sands which have been established for a long time and have become acidic through prolonged leaching. This area was species-poor, with 11 plant species recorded. The flat dune grassland is attributable to the SD12 Sand Sedge-Sheep's Sorrel-Common Bent (*Agrostis capillaris*) dune grassland. The 2014 survey results accord with the survey work undertaken by Amec, and there does not appear to have been a significant change in the dune grassland community or its extent.

SD12 dune grassland is more frequent in north and west England; nevertheless, it occurs in scattered localities on the coast of south-east England. It is a relatively uncommon plant community on the Suffolk Coast. SD12 favours areas of stable sand where accretion is negligible and erosion limited. This allows the process of leaching to occur, creating the acidic conditions required for this community to establish.

Sand dune (Quadrats 56 to 58)
The sand dune comprised a low (1m high) ridge on the seaward side of the dune grassland described above. The dune was observed to be actively eroding, and there were no areas of vegetated shingle on the seaward side of the dune. The dune was less consolidated than the dune grassland described above, but the plant species diversity was greater, with 21 species recorded. These included species indicative of less acidic conditions, including Lady's Bedstraw (*Galium verum*), Spiny Restharrow *(Ononis spinosa*) and Sweet Vernal-grass *(Anthoxanthum odoratum*). Both Sand Sedge and Sheep's-fescue were present in some abundance (covering between 50 and 90% of the vegetation in the quadrats sampled). Both Bell Heather and Heather were also present in discrete patches. This sand dune grassland is also attributable to SD12 Sand Sedge-Sheep's Sorrel-Common Bent dune grassland.

3.1.6 Suffolk Shingle Beaches CWS

Area H (Quadrats 68 to 92)

Area H comprised the coastal vegetation located directly on the seaward (eastern) edge of the proposed location for the Sizewell C Station platform. This area, as well as the coastal vegetation in front of the A and B Stations, has been designated as a County Wildlife Site (CWS) for the coastal habitats that it supports.

The coastal vegetation here is extremely complex for a number of reasons. In part, it is due to the fact the habitat was disturbed, altered and subsequently restored when the B Station was constructed. This has encouraged colonisation by a number of plant species characteristic of calcareous habitat, in contrast to the coastal vegetation in the Minsmere to Walberswick SAC/ Ramsar site described above (Area G). The contrast between the species-poor acidic sand dune vegetation north of the proposed location for the Sizewell C Station platform, and the more species-rich vegetation in front of the A and B Station, was quite pronounced.

The zonation of vegetation in this area follows a similar pattern to the SAC vegetation, but is more pronounced. From the eastern edge of the C and B station platforms was a broad level area of dune grassland, culminating in a low (2 to 3m high) sand dune. In front of the dune was an area of vegetated shingle; in some places, this was covered by a thin layer of windblown sand which then graded into bare shingle to the high tide mark. The beach was wider here than to the north of the C Station, and this has enabled the establishment of vegetated shingle.

Plate 2. Sequence of habitats seaward of C Station Platform

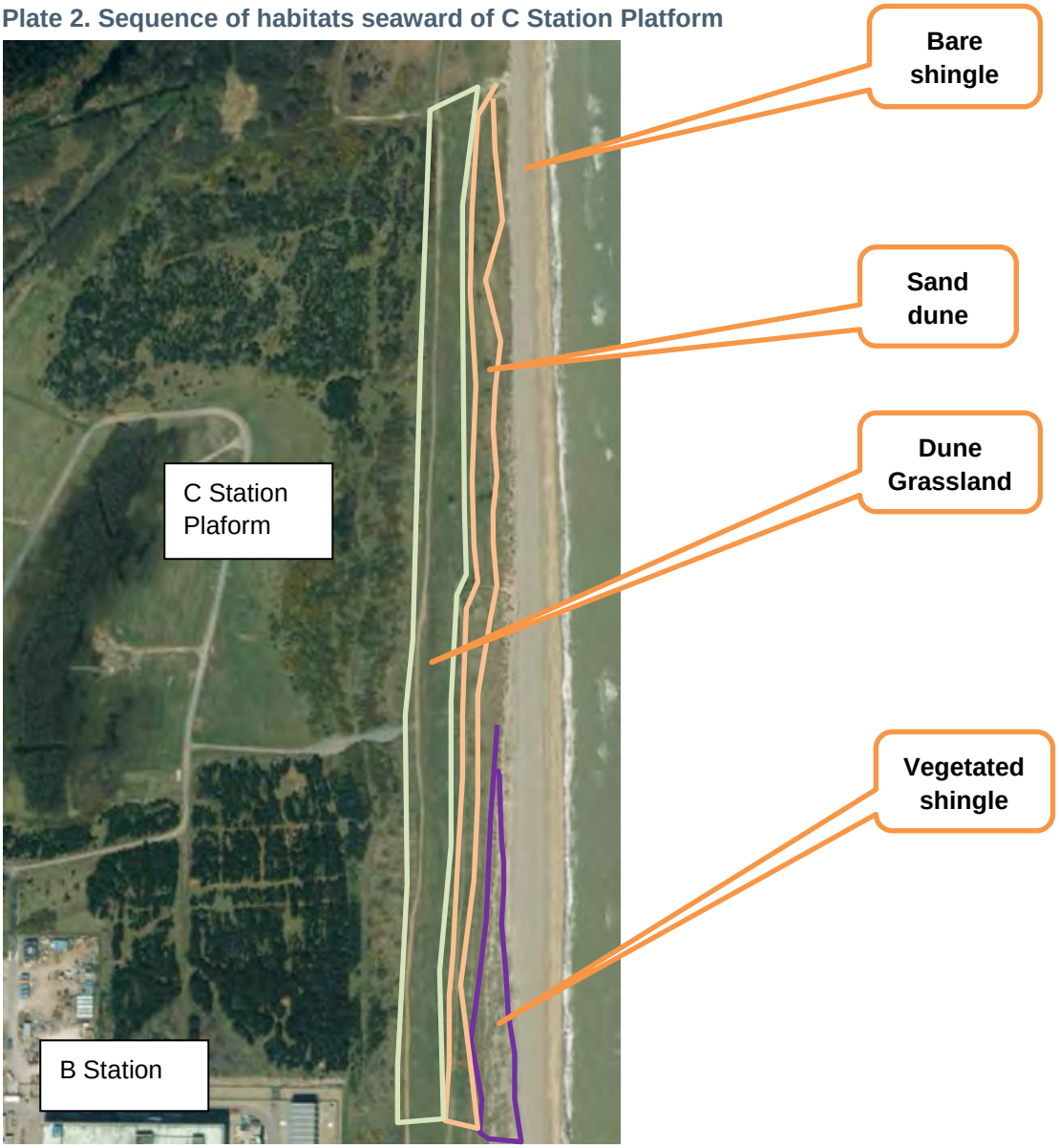


Plate 2, above, shows a simple representation of the habitats between the proposed location of the Sizewell C Station platform and the sea on the basis of an aerial photograph of the area. The NVC mapping of these habitat communities is presented in Figure 3, and a brief description of the different features is provided below.

A number of uncommon plants were recorded growing on the sand and shingle. These included Sea-kale (*Crambe maritima*), Sea Pea (*Lathyrus japonicus*), Rush-leaved Fescue (*Festuca arenaria*) and Rat's-tail Fescue (*Vulpia myuros*). Sea Pea, Rush-leaved Fescue and Rat's-tail Fescue are considered to be nationally scarce in Britain (recorded from between 16 and 100km Ordnance Survey 10km squares in Britain). Sea-kale is uncommon but would be classified as *not scarce* (i.e. it has been recorded in more than 100km squares in Britain); for further detail regarding scarce plant distributions, see Stewart *et al*. (1994).

Dune grassland (Quadrats 78 to 82)

As described above, the dune grassland occupied a flat area between the base of the B and C Station platforms and the sand dune ridge to the east**.** The low-growing sward (between 3 and 5cm high) was species-rich, with 28 grass and forb species recorded in the quadrats. The most abundant grass species were Red Fescue, Smooth Meadow-grass (*Poa pratensis*), Sheep's-fescue and Sweet Vernal-grass. The low growing forbs recorded included Common Bird's-foot-trefoil (*Lotus corniculatus*), Strawberry Clover (*Trifolium fragiferum*), Buck's-horn Plantain (*Plantago coronopus*), English Stonecrop (*Sedum anglicum*), Lady's Bedstraw, Harebell (*Campanula rotundifolia*), Ribwort Plantain (*Plantago lanceolata*) and Rough Hawkbit (*Leontodon hispidus*).

Previous surveys have identified the difficulty in assigning the sand dune and dune grassland to a particular NVC community. However, the consensus has been that the dune grassland most closely resembles the SD8 Red Fescue-Lady's Bedstraw fixed dune community. In SD8, Marram (*Ammophila arenaria*), which is usually the dominant grass on dunes, is replaced by Red Fescue and other herbaceous species to form a low close-cropped short tussocky turf. Lady's Bedstraw, Common Bird's-foot-trefoil and Ribwort Plantain are indicative of the typical sub-community. SD8 is characteristic of calcareous fixed sands on dunes and coastal plains in Britain. It is widely distributed on the coast, and the typical sub-community of SD8 is the most common sub-community on southerly coasts.

Sand Dune (Quadrats 68 to 77)

The sand dune habitat comprised a low, narrow dune, between 2 and 3m high and 5 and 6m in width. As with the dune grassland, the plant community was species-rich, with 37 plant species recorded within the quadrats. The most abundant grass species were Marram and Red Fescue, and a wide variety of forb species were recorded growing amongst the Marram tussocks. These included Common Bird's-foot-trefoil, Common Restharrow (*Ononis repens*), Mouse-ear-hawkweed (*Pilosella officinarum*), Sea Bindweed (*Calystegia soldanella*), Lady's Bedstraw, Common Centaury (*Centaurium erythraea*) and Strawberry Clover. The majority of these species are indicative of less-acidic conditions than the plant species recorded on the sand dune located north of the proposed C Station platform. Notwithstanding this, a small number of plant species indicative of slightly more acidic conditions were recorded, including both Sheep's Sorrel and Sheep's-fescue, but these plant species were present at low abundance (between 10 and 20% cover in the quadrats).

This dune vegetation is attributable to the SD7 Marram-Red Fescue semi-fixed dune community, which is the characteristic vegetation type of less mobile sands around the British coast.

Vegetated shingle (Quadrats 83 to 92)

Two shingle communities were recorded within Area H. Along the strand line was a sparse line of vegetation that comprised individual plants of Sea Sandwort (*Honckenya peploides*), Sea-kale and Halberd-leaved Orache (*Atriplex hastata*). These plants were present at a low density (between 2 and 3 individuals per square metre). This community was not sampled by quadrat due to the scarcity of the vegetation. Nevertheless, it was possible to assign an NVC community to this vegetation; it was attributable to the SD2 Sea Sandwort-Sea-kale strandline community.

Just above the strandline, where windblown sand had begun to cover the shingle, there was a more established shingle vegetation community, comprising a mixture of sand specialists such as Marram and Sand Sedge, together with shingle specialists including Sea-kale, Sea-holly (*Eryngium maritimum*), Sea Pea and Sea Campion (*Silene uniflora*). The shingle vegetation was moderately species-rich with 18 species recorded in the quadrats.

This shingle vegetation was considered to be attributable to the SD1 Curled Dock (*Rumex crispus*)-Yellow Horned-poppy (*Glaucium flavum*) shingle community and, in particular, the SD1a Sea Pea sub-community. This is due to the presence of species associated with sand and shingle. SD1 is the characteristic pioneer vegetation of maritime shingle on the coast of the warmer parts of the British Isles. It is a relatively uncommon vegetation type, with the Sea Pea sub–community largely restricted to the south-east coast.

These survey results accord with the survey work undertaken by both Amec and SWT in this area, and there does not appear to have been any significant change in the nature and extent of these shingle plant communities.

3.1.7 Woodland to the west of C Station Platform

Area I (Quadrats 93 to 95)

Area I comprised an area of wet woodland within Sizewell Marshes SSSI that formed the western boundary of the proposed C Station platform. The woodland canopy comprised young even-aged Alder trees (between 20 and 30 years of age) with a shrub layer of Goat Willow, Silver Birch and White Willow (*Salix alba*).

On the edge of the platform, the ground flora was dominated by Common Nettle and Bramble, with Cleavers, Creeping Buttercup (*Ranunculus repens*) and Wood Dock (*Rumex sanguineus*) also recorded. At the base of platform, the ground was saturated and merged into a ditch on the edge of Sizewell Marshes SSSI. Wetland plants recorded in this area included Yellow Iris (*Iris pseudacorus*), Gypsywort and Common Reed.

The woodland is attributable to the W5 Alder-Greater Tussock-sedge woodland community, due to the dominance of Alder trees. The NVC mapping of this habitat community is presented in Figure 0039 - UA004506-UE21D-03 NVC community bounadaries..

4 Conclusions

The NVC survey work carried out in 2014 has been used to map in detail the plant communities within those areas of Sizewell Marshes SSSI, Minsmere to Walberswick Heaths and Marshes SAC/Ramsar and the Suffolk Shingle Beaches CWS that could be affected by the proposals at Sizewell C, either directly or indirectly. The habitat maps for these different areas are presented in Figure 3. These maps, and the detailed plant information for the different habitat areas, will be used to establish the botanical baseline for the impact assessment for Sizewell C, for both the EIA and the HRA.

The plant communities and sub-communities recorded during the 2014 survey were similar in extent and composition to those recorded in these locations by Amec and SWT. One exception to this was the fen meadow west of the Sizewell C platform (Area F). The abundance of rush in this part of the survey area potentially indicates that localised flooding has caused a minor change in the plant assemblage. Although the NVC plant community present in this area appears not to have been altered, plant species diversity may have been reduced. This change may be temporary, and in the absence of prolonged surface water flooding plant species diversity is likely to recover over time.

A minor change was also identified in the composition of the reedbed within Sizewell Marshes SSSI, in Area E (north-west of the fen meadow). Previously the vegetation here had been assigned to the S26 Common Reed-Common Nettle tall-herb fen community. However, the vegetation sampled in 2014 supported less Common Nettle and was attributed to the S4a sub-community of S4 Common Reed swamp. Although the plant community has changed (both are reed-dominated) it would appear that plant species diversity has not altered.

Previous surveys have also revealed the presence of scarce plant species in Sizewell Marshes SSSI, the ditches and the vegetated shingle within Minsmere to Walberswick Heaths and Marshes SAC/Ramsar, and the Suffolk Shingle Beaches CWS. These plants were also recorded within the areas that were sampled in 2014.

Table 4 presents a summary of the 2014 survey results.

Table 4 Plant communities and scarce plants recorded within the survey area in 2014

Location	Vegetation sampled	NVC communities and scarce plants *(latter in bold italic)*
Area A	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** Wet woodland (Quadrats 1 to 5)	W5 Alder - Greater Tussock-sedge woodland. W5a Common Reed sub-community
Area B	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** Wet reedbed (Quadrats 6 to 11)	S4 Common Reed swamp and reedbeds. S4a typical sub-community.
Area C	***Goodrums Fen*** (***Sizewell Marshes SSSI)*** Dry reedbed (quadrats 13 to14) Woodland and dry reedbed/grassland (Quadrats 15 to 17)	S26 Common Reed-Common Nettle tall-herb fen. W5 Alder-Greater Tussock-sedge woodland community.
Area D	***Ditches*** D1 Northern boundary Goodrums Fen (within Sizewell Marshes SSSI)	D1, D2, D3, D4, D5, D5a & D6: Emergent flora - no NVC community assigned.

Location	Vegetation sampled	NVC communities and scarce plants *(latter in bold italic)*
	(Quadrats 18 to 22) D2 Southern boundary Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 23 to 27) D3 and D6 South of Goodrums Fen (within Sizewell Marshes SSSI) (Quadrats 28 and 29 and 39 to 41) D4 D5 D5a Located within fen meadows to the west of Sizewell C Station Platform (within Sizewell Marshes SSSI) (Quadrats 30 to 38)	D1, D6: Floating vegetation - A2 Common Duckweed aquatic community. D1, D2 Submerged flora - no NVC community assigned. D2, D3, D4, D5 & D5a: Floating vegetation - A3 Greater Duckweed- Frogbit aquatic community. D3, D4, D5, D5a & D6 Submerged flora - A6 Soft Hornwort aquatic community In Ditches 1,2,4,5 & 5a: ***Frogbit.*** In Ditches 3,4,5 & 5a & 6: ***Soft Hornwort***
Area E	***Reedbed and wet woodland in Sizewell Marshes SSSI south of Goodrums Fen*** Reedbed and wet woodland (Quadrats 42 to 46)	S4 Common Reed swamp and reedbeds. S4a typical sub-community. W5 Alder-Greater Tussock-sedge woodland. W5a the Common Reed sub-community
Area F	***Fen meadows in Sizewell Marshes SSSI west of the Sizewell C Station Platform*** Fen meadow (Quadrats 47 to 55)	M22 Blunt-flowered Rush -Marsh Thistle mire community.
Area G	***Minsmere to Walberswick Heaths and Marshes SAC/Ramsar coastal vegetation extending to the north of Sizewell C Station Platform***. Leiston Drain (quadrats 59 to 61) Reedbed adjacent Leiston Drain (quadrats 62 to 65) Dune grassland (Quadrats 66 & 67) Sand dune (Quadrats 56 to 58)	Leiston Drain: S26 Common Reed- Common Nettle tall-herb fen, A2 Common Duckweed aquatic community, A16 Common Water-starwort aquatic community, typical sub-community. Reedbed: S26 Common Reed-Common Nettle tall-herb fen. Dune grassland & sand dune: SD12 Sand Sedge-Sheep's Sorrel-Common Bent dune grassland. Sand dune: ***Rat's-tail Fescue***
Area H	***Suffolk Shingle Beaches CWS coastal vegetation*** Dune grassland (Quadrats 78 to 82) Sand dune (Quadrats 68 to 77) Shingle (Quadrats 83 to 92)	Dune grassland: SD8 Red Fescue-Lady's Bedstraw fixed dune community. Sand dune: SD7 Marram-Red Fescue semi-fixed dune community. Shingle: SD2 Sea Sandwort-Sea-kale strandline community. SD1 Curled Dock-Yellow Horned-poppy shingle community. SD1a Sea Pea sub-community.

Location	Vegetation sampled	NVC communities and scarce plants *(latter in bold italic)*
		Dune grassland: ***Rat's-tail Fescue*** Sand dune and shingle: ***Rush-leaved Fescue*** Shingle: ***Sea Pea***
Area I	***Wet woodland in Sizewell Marshes SSSI west of Sizewell C Station Platform*** Wet woodland (Quadrats 93 to 95)	W5 Alder-Greater Tussock-sedge woodland community.

5 References

Stace, C. (1997). New Flora of the British Isles Second Edition. Cambridge University Press.

JNCC (2006) National Vegetation Classification Users handbook.

Rodwell, J. Ed. (1991a) British Plant Communities Volume One, Woodlands and Scrub. Cambridge University Press.

Rodwell, J. Ed (1991b) British Plant Communities Volume Two, Mire and Heaths. Cambridge University Press.

Rodwell, J. Ed (1992) British Plant Communities Volume Three, Grassland and Montane Communities. Cambridge University Press.

Rodwell, J. Ed (1995) British Plant Communities Volume Four, Aquatic Communities, Swamps and Tall-Herb Fens. Cambridge University Press.

Rodwell, J. Ed (2000) British Plant Communities Volume Five, Maritime Communities and Vegetation of Open Habitats. Cambridge University Press.

Amec (2007 – 2008) Sizewell C, National Vegetation Classification Report 2007 – 2008

Ecology Land and People (2010). Sizewell Marshes SSSI, Report on the fen meadow vegetation monitoring programme. Fieldwork July 2010.

Stewart *et al* (1994) Scarce Plants in Britain Published by the JNCC.

Appendix A. Photographs of the habitat types present

Area A - Goodrums Fen (Sizewell Marshes SSSI) – **wet woodland**		
		
		

Area B - Goodrums Fen (Sizewell Marshes SSSI) – **wet reedbed**

Area C - Goodrums Fen (Sizewell Marshes SSSI) – **dry reedbed**

Area D – Ditches

Ditch – D1



Ditch – D2



Ditch – D3

Ditch – D4

Ditch – D5

Ditch – D5a

Ditch – D6

Area E – Reedbed in Sizewell Marshes SSSI, south of Goodrums Fen

Area F – Fen Meadow in Sizewell Marshes SSSI, west of Sizewell C Station platform

Area G - Minsmere to Walberswick Heaths and Marshes SAC/Ramsar coastal vegetation extending to the north of Sizewell C Station platform – **Leiston Drain**

Area G - Minsmere to Walberswick Heaths and Marshes SAC/Ramsar coastal vegetation extending to the north of Sizewell C Station platform – **reedbed adjacent Leiston Drain**

Area G - Minsmere to Walberswick Heaths and Marshes SAC/Ramsar coastal vegetation extending to the north of Sizewell C Station Platform – **dune grassland**

Area G - Minsmere to Walberswick Heaths and Marshes SAC/Ramsar coastal vegetation extending to the north of Sizewell C Station platform – **dune grassland and sand dune**

Area H - Suffolk Shingle Beaches CWS coastal vegetation – **shingle vegetation**



Area H - Suffolk Shingle Beaches CWS coastal vegetation – **sand dune**



Area H - Suffolk Shingle Beaches CWS coastal vegetation - **dune grassland**		
		

Area I – Wet woodland in Sizewell Marshes SSSI west of Sizewell C Station Platform		
		

Appendix B - NVC floristic tables

Area A - Goodrums Fen (Sizewell Marshes SSSI) - **Wet woodland** (Quadrats 1 to 5)

	Domin				
Plant Species	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**
Alder (*Alnus glutinosus*)	**4**	**4**	**4**	**4**	**4**
Bittersweet (*Solanum dulcamara)*		**2**	**7**	**4**	**1**
Bramble (*Rubus fruticosus agg.*)		**1**	**5**		
Branched Bur-reed (*Sparganium erectum*)			**4**		
Celery-leaved Buttercup (*Ranunculus sceleratus*)			**4**	**5**	
Cleavers (*Galium aparine*)	**2**	**2**			
Climbing Corydalis (*Ceratocapnos claviculata*)	**1**				
Common Nettle (*Urtica dioica*)		**4**	**5**		**4**
Common Reed (*Phragmites australis*)		**4**			
Creeping Buttercup (*Ranunculus repens*)				**4**	**4**
Floating Sweet-grass (*Glyceria fluitans*)	**5**				**5**
Gipsywort (*Lycopus europaeus*)	**2**		**1**		**4**
Grey Club-rush (*Schoenoplectus tabernaemontani*)					
Goat Willow (*Salix caprea*)	**1**	**4**	**4**	**4**	**1**
Hedge Bindweed (*Calystegia sepium*)		**4**			
Large Bitter-cress (*Cardamine amara)*	**4**				
Lesser Water-parsnip (*Berula erecta*)					**7**
Marsh Thistle (*Cirsium palustre*)			**4**	**4**	
Oval Sedge (*Carex ovalis*)					**4**
Pendulous Sedge (*Carex pendula)*		**1**			
Raspberry (*Rubus idaeus*)				**5**	**4**
Reed Canary-grass (*Phalaris arundinacea*)		**5**	**9**		**1**
Rough Meadow-grass (*Poa trivialis*)	**4**	**9**	**4**	**8**	**5**
Skullcap (*Scutellaria galericulata*)					**4**
Soft-rush (*Juncus effusus*)		**4**			
Water Forget-me-not (*Myosotis scorpioides*)	**8**		**4**		**4**
Water Mint (*Mentha aquatica*)					**4**
Water-pepper (*Persicaria hydropiper*)	**4**		**1**	**4**	
Wood Dock (*Rumex sanguineus*)	**4**		**4**	**5**	**1**
Yellow Iris (*Iris pseudacorus*)			**1**	**4**	**4**
50 x 50m Woodland canopy Quadrats					
Ash (*Fraxinus excelsior*)					
Alder (Alnus glutinosus)				**6**	**9**
Crack-willow (*Salix fragilis*)					**5**
Dog-rose (*Rosa canina*)				**4**	
Elm (*Ulmus sp.*)					**1**
Pedunculate Oak (*Quercus robur*)				**4**	**4**
Raspberry (*Rubus idaeus*)				**9**	**5**
Goat Willow (*Salix caprea*)					**4**

Area B - Goodrums Fen (Sizewell Marshes SSSI) - **Wet reedbed** (Quadrats 6 – 11)

	Domin					
Plant Species	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**
Bittersweet (*Solanum dulcamara)*	**4**		**4**			
Bramble (*Rubus fruticosus agg.*)			**4**	**4**		
Branched Bur-reed (*Sparganium erectum*)						**7**
Bottle Sedge (*Carex rostrata*)						**4**
Bulrush (*Typha latifolia*)					**4**	**4**
Celery-leaved Buttercup (*Ranunculus sceleratus*)						**4**
Cleavers (*Galium aparine*)	**4**		**1**	**4**		
Common Club-rush (*Schoenoplectus lacustris*)						**7**
Common Duckweed (*Lemna minor)*			**4**			
Common Nettle (*Urtica dioica*)	**4**	**4**	**4**			
Common Reed (*Phragmites australis*)	**10**	**10**	**10**	**7**	**10**	**7**
Common Spike-rush (*Eleocharis palustris*)						**5**
False Oat-grass (*Arrhenatherum elatius*)				**9**		
Greater Pond-sedge (*Carex riparia*)						**5**
Goat Willow (*Salix caprea*)	**4**					
Hard Rush (*Juncus inflexus)*						**4**
Hedge Bindweed (*Calystegia sepium*)	**4**	**4**	**5**			
Lesser Water-parsnip (*Berula erecta*)	**4**					
Oval Sedge (*Carex ovalis*)						**4**
Rough Meadow-grass (*Poa trivialis*)				**4**		
Soft-rush (*Juncus effusus*)						**6**
Water Forget-me-not (*Myosotis scorpioides*)						**4**
Water Mint (*Mentha aquatica*)						**4**
Water Dock (*Rumex hydrolapathum*)		**4**				
Wood Dock (*Rumex sanguineus*)	**1**					
Yellow Iris (*Iris pseudacorus*)						**4**

Area C - Goodrums Fen (Sizewell Marshes SSSI) - **Dry reedbed** (Quadrats 13 to 14)

	Domin	
Plant Species	**Q13**	**Q14**
Bittersweet (*Solanum dulcamara)*	**4**	
Cleavers (*Galium aparine*)	**4**	
Common Nettle (*Urtica dioica*)	**8**	**7**
Common Reed (*Phragmites australis*)	**9**	**9**
Field Horsetail (*Equisetum arvense*)	**7**	**5**
Gipsywort (*Lycopus europaeus*)		**4**
Greater Bird's-foot-trefoil (*Lotus pedunculatus)*	**4**	**4**
Hedge Bindweed (*Calystegia sepium*)	**4**	**4**
Hedge Woundwort (*Stachys sylvatica*)	**5**	
Hemp-agrimony (*Eupatorium cannabinum*)	**4**	
Herb-Robert (*Geranium robertianum*)	**4**	
Marsh Thistle (*Cirsium palustre*)	**4**	**4**
Reed Canary-grass (*Phalaris arundinacea*)		**4**
Rough Meadow-grass (*Poa trivialis*)	**5**	**5**
Soft-rush (*Juncus effusus*)		**5**
Tufted Vetch (*Vicia cracca*)	**4**	
Water Mint (*Mentha aquatica*)		**4**
Wild Angelica (*Angelica sylvestris*)		**4**

Area C - Goodrums Fen (Sizewell Marshes SSSI) - **Woodland and dry reedbed/grassland** (Quadrats 15 to 17)

	Domin		
Plant Species	**Q15**	**Q16**	**Q17**
Bramble (*Rubus fruticosus agg.*)		**1**	
Broad Buckler-fern			**1**
Bog Stitchwort (*Stellaria uliginosa*)			
Climbing Corydalis (*Ceratocapnos claviculata*)		**1**	**2**
Cock's-foot (*Dactylis glomerata*)	**4**		
Common Hemp-nettle (*Galeopsis tetrahit*)	**6**		
Common Nettle (*Urtica dioica*)	**7**	**4**	**4**
Common Reed (*Phragmites australis*)	**1**	**4**	
Dog-rose (*Rosa canina*)		**1**	
False Oat-grass (*Arrhenatherum elatius*)	**5**	**4**	
Field Horsetail (*Equisetum arvense*)			**1**
Floating Sweet-grass (*Glyceria fluitans*)		**8**	
Greater Bird's-foot-trefoil (*Lotus pedunculatus)*		**2**	
Hedge Bindweed (*Calystegia sepium*)	**4**		
Herb-Robert (*Geranium robertianum*)		**1**	
Honeysuckle (*Lonicera periclymenum*)		**1**	
Marsh Foxtail (*Alopecurus geniculatus*)		**4**	
Reed Canary-grass (*Phalaris arundinacea*)	**1**	**4**	**4**
Rough Meadow-grass (*Poa trivialis*)	**8**		**8**
Silver Birch (*Betula pendula*)			**1**
Soft-rush (*Juncus effusus*)		**4**	
Water Dock (*Rumex hydrolapathum*)	**2**		
Water-pepper (*Persicaria hydropiper*)	**4**		
Yorkshire-fog (*Holcus lanatus*)	**4**	**4**	**5**
50 x 50m Woodland canopy Quadrats			
Alder (Alnus glutinosus)			**4**
Dog-rose (*Rosa canina*)		**1**	
Hawthorn (*Crataegus monogyna)*		**5**	**4**
Pedunculate Oak (*Quercus robur*)		**1**	**4**
Poplar (*Populus sp.*)		**5**	
Goat Willow (Salix caprea)		**5**	**4**
Silver Birch (*Betula pendula*)		**8**	**8**

Area D - Ditches (Quadrats 18 to 41)

Ditch 1 Northern boundary Goodrums Fen (within Sizewell Marshes SSSI), Quadrats 18 to 22
Ditch 2 Southern boundary Goodrums Fen (within Sizewell Marshes SSSI), Quadrats 23 to 27
Ditch 3 South of Goodrums Fen (within Sizewell Marshes SSSI), Quadrats 28 and 29
Ditch 4 Located within fen meadows (within Sizewell Marshes SSSI) to the west of Sizewell C Station Platform, Quadrats 30 to 32
Ditch 5 Located within fen meadows (within Sizewell Marshes SSSI) to the west of Sizewell C Station Platform, Quadrats 34 to 36
Ditch 5a Located within fen meadows (within Sizewell Marshes SSSI) to the west of Sizewell C Station Platform Quadrats 37 and 38
Ditch 6 South of Goodrums Fen (within Sizewell Marshes SSSI), Quadrats 39 to 40

Key to tables E- Emergent F- Floating A- Aquatic

Plant Species	Domin											
	Q18			Q19			Q20			Q21		
	E	F	A	E	F	A	E	F	A	E	F	A
Bittersweet (*Solanum dulcamara)*	4									1		
Branched Bur-reed (*Sparganium erectum*)							2					
Common Bird's-foot-trefoil (*Lotus corniculatus*)	1											
Common Duckweed (*Lemna minor)*		9			7			9			9	9
Common Hemp-nettle (*Galeopsis tetrahit*)												
Common Marsh-bedstraw (*Galium palustre*)	2											
Common Nettle (*Urtica dioica*)	3									2		
Common Reed (*Phragmites australis*)	3						4			4		
Common Water-starwort (*Callitriche stagnalis sens. lat.*)						5			5			
Creeping Bent (*Agrostis stolonifer*a)	3											
Creeping Buttercup (*Ranunculus repens*)	3											
False Oat-grass (*Arrhenatherum elatius*)										1		
Field Horsetail (*Equisetum arvense*)										1		
Floating Sweet-grass (*Glyceria fluitans*)				4			5			8		
Greater Duckweed (*Spirodela polyrhiza*)		4			3			3			4	
Great Willowherb (*Epilobium hirsutum*)										1		
Lesser Water-parsnip (*Berula erecta*)	5		8				8			4		
Nuttall's Waterweed (*Elodea nuttallii*)						5						
Water-cress (*Rorippa nasturtium-aquaticum*)	8						6					
Wood Dock (*Rumex sanguineus*)	2											
Yellow Iris (*Iris pseudacorus*)	1						1					
Yorkshire-fog (*Holcus lanatus*)	3											

Plant Species	Domin											
	Q22			Q23			Q24			Q25		
	E	F	A	E	F	A	E	F	A	E	F	A
Bittersweet (*Solanum dulcamara)*	2			1			1					
Common Duckweed (*Lemna minor)*		10									8	
Common Nettle (*Urtica dioica*)	2											
Common Reed (*Phragmites australis*)	7			5			5			5		

Plant Species	Domin											
	Q22			Q23			Q24			Q25		
	E	F	A	E	F	A	E	F	A	E	F	A
Common Water-starwort (*Callitriche stagnalis sens. lat.*)			9			9			9		4	4
Creeping Bent (*Agrostis stolonifer*a)					2			2		4		
Creeping Buttercup (*Ranunculus repens*)					2			2				
False Oat-grass (*Arrhenatherum elatius*)				4			4					
Fennel Pondweed (*Potamogeton pectinatus*)												2
Field Horsetail (*Equisetum arvense*)					1			1				
Floating Sweet-grass (*Glyceria fluitans*)	3		4									
Fool's-water-cress (*Apium nodiflorum*)										2		
Frogbit (*Hydrocharis morsus-ranae*)					2			2			3	
Greater Duckweed (*Spirodela polyrhiza*)		5			6			5			6	
Great Willowherb (*Epilobium hirsutum*)	2											
Goat Willow (*Salix caprea*)				3			3					
Hard Rush (*Juncus inflexus)*				2			2					
Lesser Water-parsnip (*Berula erecta*)					4			4				
Lesser Pond-sedge (*Carex acutiformis*)										1		
Nuttall's Waterweed (*Elodea nuttallii*)						2			2			9
Purple-loosestrife (*Lythrum salicaria*)	3											
Rigid Hornwort (*Ceratophyllum demersum*)						3			3			
Water-plantain (*Alisma plantago-aquatica*)					4			4				

Plant Species	Domin											
	Q26			Q27			Q28			Q29		
	E	F	A	E	F	A	E	F	A	E	F	A
Bittersweet (*Solanum dulcamara)*							1			1		
Bottle Sedge (*Carex rostrata*)	2									2		
Common Duckweed (*Lemna minor)*		7			7			2			9	
Common Reed (*Phragmites australis*)				2			4			5		
Common Water-starwort (*Callitriche stagnalis sens. lat.*)		4	5		4							
Fat Duckweed (*Lemna gibba*)											5	
Fennel Pondweed (*Potamogeton pectinatus*)			4			4						
Frogbit (*Hydrocharis morsus-ranae*)		1			2			7	2		4	
Greater Duckweed (*Spirodela polyrhiza*)		3			5			5			6	
Lesser Pond-sedge (*Carex acutiformis*)										3		
Marsh Thistle (*Cirsium palustre*)						6						
Nuttall's Waterweed (*Elodea nuttallii*)			7									
Reed Canary-grass (*Phalaris arundinacea*)	4											
Rigid Hornwort (*Ceratophyllum demersum*)									4			4
Soft Hornwort (*Ceratophyllum submersum*)												2
Soft-rush (*Juncus effusus*)				2								
Water-pepper (*Persicaria hydropiper*)										1		
Yellow Iris (*Iris pseudacorus*)										1		

Plant Species	Domin											
	Q30			Q31			Q32			Q33		
	E	F	A	E	F	A	E	F	A	E	F	A
Blunt-flowered Rush (*Juncus subnodulosus*)				2								
Branched Bur-reed (*Sparganium erectum*)	2						6					
Bottle Sedge (*Carex rostrata*)				4			2					
Compact Rush (*Juncus conglomeratus*)				2								
Common Duckweed (*Lemna minor)*		8			9			9			5	2
Common Marsh-bedstraw (*Galium palustre*)	2			2			2					
Common Reed (*Phragmites australis*)	5									3		
Creeping Buttercup (*Ranunculus repens*)				1								
False Fox-sedge (*Carex otrubae*)	4											
False Oat-grass (*Arrhenatherum elatius*)				1								
Fat Duckweed (*Lemna gibba*)		7			6			4			5	
Fennel Pondweed (*Potamogeton pectinatus*)									2			
Field Horsetail (*Equisetum arvense*)										2		
Field Forget-me-not (*Myosotis arvensis*)				1								
Floating Sweet-grass (*Glyceria fluitans*)				1								
Frogbit (*Hydrocharis morsus-ranae*)		6	3		5			4			2	4
Greater Duckweed (*Spirodela polyrhiza*)		7			6			5			4	
Greater Pond-sedge (*Carex riparia*)	5			4						6		
Great Willowherb (*Epilobium hirsutum*)	1											
Grey Club-rush (*Schoenoplectus tabernaemontani*)	4											
Hard Rush (*Juncus inflexus)*	1									4		
Lesser Water-parsnip (*Berula erecta*)	2						1			5		
Lesser Pond-sedge (*Carex acutiformis*)	4									6		
Nuttall's Waterweed (*Elodea nuttallii*)			4						3			
Ragged-Robin *(Lychnis flos-cuculi*)				1								
Rigid Hornwort (*Ceratophyllum demersum*)			8									
Rough Meadow-grass (*Poa trivialis*)	1											
Soft Hornwort (*Ceratophyllum submersum*)						9			7			
Soft-rush (*Juncus effusus*)							2					
Water Mint (*Mentha aquatica*)				1			1			2		
Water Dock (*Rumex hydrolapathum*)		2								3		
Water-plantain (*Alisma plantago-aquatica*)	4											
Wavy Bitter-cress (*Cardamine flexuosa*)	2											
Wood Dock (*Rumex sanguineus*)	1			2								
Yellow Iris (*Iris pseudacorus*)							2					
Yorkshire-fog (*Holcus lanatus*)				1								

Plant Species	Domin											
	Q34			Q35			Q36			Q37		
	E	F	A	E	F	A	E	F	A	E	F	A
Blunt-flowered Rush (*Juncus subnodulosus*)	4						2					
Branched Bur-reed (*Sparganium erectum*)										8		
Bottle Sedge (*Carex rostrata*)	5						4			3		
Common Duckweed (*Lemna minor)*		7			9			9			4	
Common Hemp-nettle (*Galeopsis tetrahit*)												
Common Marsh-bedstraw (*Galium palustre*)	4			2								
Common Reed (*Phragmites australis*)	5						8			5		
Fat Duckweed (*Lemna gibba*)		6			4			8			4	
Frogbit (*Hydrocharis morsus-ranae*)		4			3			5			4	
Gipsywort (*Lycopus europaeus*)				4								
Greater Duckweed (*Spirodela polyrhiza*)		4			3			5			5	
Greater Pond-sedge (*Carex riparia*)	9											
Greater Tussock-sedge (*Carex paniculata*)										4		
Grey Club-rush (*Schoenoplectus tabernaemontani*)										3		
Hard Rush (*Juncus inflexus)*							6					
Lesser Water-parsnip (*Berula erecta*)	4						6			4		
Lesser Pond-sedge (*Carex acutiformis*)				6								
Lesser Spearwort (*Ranunculus flammula*)				1						1		
Nuttall's Waterweed (*Elodea nuttallii*)												4
Purple-loosestrife (*Lythrum salicaria*)				1								
Ragged-Robin *(Lychnis flos-cuculi*)	1											
Rigid Hornwort (*Ceratophyllum demersum*)									2			7
Soft Hornwort (*Ceratophyllum submersum*)			9			2						2
Soft-rush (*Juncus effusus*)				4			6			2		
Water Mint (*Mentha aquatica*)				2			4					
Water Dock (*Rumex hydrolapathum*)	2						2			1		

Plant Species	Domin											
	Q38			Q39			Q40			Q41		
	E	F	A	E	F	A	E	F	A	E	F	A
Bittersweet (*Solanum dulcamara)*							1					
Blunt-flowered Rush (*Juncus subnodulosus*)	6											
Compact Rush (*Juncus conglomeratus*)	4											
Common Duckweed (*Lemna minor)*					9			9			10	2
Common Reed (*Phragmites australis*)				1			4			2		
Fat Duckweed (*Lemna gibba*)								4				
Fine-leaved Water-dropwort (*Oenanthe aquatica*)	3											
Floating Sweet-grass (*Glyceria fluitans*)							2					
Frogbit (*Hydrocharis morsus-ranae*)					2			5	7		4	
Greater Duckweed (*Spirodela polyrhiza*)											3	
Gipsywort (*Lycopus europaeus*)				1	3							
Lesser Water-parsnip (*Berula erecta*)							7	7				
Lesser Pond-sedge (*Carex acutiformis*)	3			2			2					
Soft Hornwort (*Ceratophyllum submersum*)									9			
Soft-rush (*Juncus effusus*)	4											
Water Mint (*Mentha aquatica*)	2						4					
Water-plantain (*Alisma plantago-aquatica*)	2											
Water-pepper (*Persicaria hydropiper*)							1					

Area E - Reedbed and wet woodland in Sizewell Marshes SSSI, south of Goodrums Fen (Quadrats 42 to 46)

Plant Species	Domin				
	Q42	Q43	Q44	Q45	Q46
Bittersweet (*Solanum dulcamara)*				4	
Branched Bur-reed (*Sparganium erectum*)				7	
Bog Stitchwort (*Stellaria uliginosa*)			2		
Cleavers (*Galium aparine*)	4		4	4	
Common Hemp-nettle (*Galeopsis tetrahit*)				6	
Common Nettle (*Urtica dioica*)					8
Common Reed (*Phragmites australis*)	10	9	9	7	9
Common Sedge (*Carex nigra*)					1
Common Spotted-orchid (*Dactylorhiza fuchsii*)	1				
Hedge Bindweed (*Calystegia sepium*)	5	5		6	6
Hedge Woundwort (*Stachys sylvatica*)					
Hemp-agrimony (*Eupatorium cannabinum*)		7	5		
Herb-Robert (*Geranium robertianum*)	1	1	3	4	
Lesser Pond-sedge (*Carex acutiformis*)	4	2			
Lesser Stitchwort (*Stellaria graminea*)	2				
Marsh Foxtail (*Alopecurus geniculatus*)					
Marsh Thistle (*Cirsium palustre*)	4	4	3	4	4
Red Campion (*Silene dioica*)	1				
Rough Meadow-grass (*Poa trivialis*)	4		4	6	4
Skullcap (*Scutellaria galericulata*)	2		2		
Sharp-flowered Rush (*Juncus acutiflorus*)			5		
Tall Fescue (*Festuca arundinacea*)		2	2		
Water Figwort (*Scrophularia auriculata*)		1			
Water Mint (*Mentha aquatica*)		4	4		
Wild Angelica (*Angelica sylvestris*)	4	4			
50 x 50m Woodland canopy Quadrats					
Ash (*Fraxinus excelsior*)			4		8
Alder (Alnus glutinosus)	4	7	6	8	
Crack-willow (*Salix fragilis*)			4	4	
Dog-rose (*Rosa canina*)				4	
Elm (*Ulmus sp*.)					4
Hawthorn (*Crataegus monogyna)*				1	
Pedunculate Oak (*Quercus robur*)				4	
Red Currant (*Ribes rubrum*)					
Goat Willow (Salix caprea)	4			4	4
Silver Birch (*Betula pendula*)					
White Willow (Salix alba)			4		4

Area F - Fen meadow west of C Station Platform (Quadrats 47 to 55)

Plant Species	Domin								
	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55
Blunt-flowered Rush (*Juncus subnodulosus*)	8	9	6	8	7	8	9	6	8
Bottle Sedge (*Carex rostrata*)	1							3	
Brown Sedge *(Carex disticha*)	5		2						
Carnation Sedge (*Carex panicea*)						2	4		
Compact Rush (*Juncus conglomeratus*)								8	
Common Marsh-bedstraw (*Galium palustre*)	1	4	3	4	7			4	
Common Reed (*Phragmites australis*)	4	4	4	2	4	4	5	4	4
Compact Rush (*Juncus conglomeratus*)			2	1					
Creeping Bent (*Agrostis stolonifer*a)	8	7			7	6	6	6	8
Creeping Buttercup (*Ranunculus repens*)								4	4
Creeping Cinquefoil (*Potentilla reptans)*						2			
False Fox-sedge (*Carex otrubae*)	8	5	4	4					
Glaucous Sedge (*Carex flacca*)		1					3		2
Greater Bird's-foot-trefoil (*Lotus pedunculatus)*		4	5	4	5	3	7	7	
Hairy Tare (*Vicia hirsuta*)						2	3	4	
Hard Rush (*Juncus inflexus)*	4					4	4		
Hedge Bindweed (*Calystegia sepium*)								1	
Lesser Pond-sedge (*Carex acutiformis*)							3		4
Lesser Spearwort (*Ranunculus flammula*)		2			2				
Marsh Arrowgrass (*Triglochin palustre*)						3			
Meadow Buttercup (*Ranunculus acris*)				1					
Meadow Fescue (*Festuca pratensis)*		4	7	7	5	2		4	
Marsh Thistle (*Cirsium palustre*)								1	
Marsh Pennywort (*Hydrocotyle vulgaris*)	6		4	4	8				
Oval Sedge (*Carex ovalis*)			4						
Red Clover (*Trifolium pratense*)						3			
Red Fescues (F*estuca rubra sens. lat.*)		4	7	7	5		7	8	
Ragged-Robin *(Lychnis flos-cuculi*)					3			1	
Ribwort plantain (*Plantago lanceolata*)			1			5	7	7	2
Selfheal (*Prunella vulgaris)*						2			
Sharp-flowered Rush (*Juncus acutiflorus*)	5	4	4	4	4				
Silverweed (*Potentilla anserina*)					2	2	3	3	3
Smooth Meadow Grass (*Poa pratensis*)						2		2	
Soft-rush (*Juncus effusus*)								3	
Sweet Vernal-grass *(Anthoxanthum odoratum*)						5	8	5	
Tall Fescue (*Festuca arundinacea*)		4	5		5	3	4	4	3
Tufted Hair-grass (*Deschampsia cespitosa*)	1								
Tufted Vetch (*Vicia cracca*)		2	4						
Water Mint (*Mentha aquatica*)	4	7			5				
White Clover (*Trifolium repens*)								1	
Yellow Iris (*Iris pseudacorus*)		2							
Yorkshire-fog (*Holcus lanatus*)	5	4	5	4	5	4	8	5	

Area G - Minsmere to Walberswick Heaths and Marshes SAC/Ramsar – **Sand dune** (Quadrats 56 to 58)

Plant Species	Domin		
	Q56	Q57	Q58
Bell Heather (*Erica cinerea*)	5		
Bryophyte Sp.	5	5	5
Cat's-ear (*Hypochaeris radicata)*	4	4	
Cladonia Lichen Sp.		7	4
Common Restharrow (*Ononis repens*)			4
Creeping Bent (*Agrostis stolonifer*a)			4
Early Hair-grass (*Aira praecox)*		6	4
English Stonecrop (*Sedum anglicum)*			5
Field Wood-rush (*Luzula campestris*)	4		
Heather (*Calluna vulgaris*)	5		
Lady's Bedstraw (*Galium verum*)			4
Mouse-ear-hawkweed (*Pilosella officinarum*)			4
Rat's-tail Fescue (*Vulpia myuros*)		4	
Ribwort plantain (*Plantago lanceolata*)			4
Sand Couch (*Elytrigia juncea*)			4
Sand Sedge (*Carex arenaria*)	7	7	4
Sea Couch (*Elytrigia atherica*)			4
Sheep's-fescue (*Festuca ovina*)	9	8	8
Sheep's Sorrel (*Rumex acetosella*)	4	5	4
Smooth Meadow Grass (*Poa pratensis*)			4
Spiny Restharrow (*Ononis spinosa*)			4
Sweet Vernal-grass *(Anthoxanthum odoratum*)	4		4

Area G - Minsmere to Walberswick Heaths and Marshes SAC/Ramsar – **Leiston Drain** (Quadrats 59 to 61)

Key to tables E- Emergent F- Floating A- Aquatic

Plant Species	Domin								
	Q59			Q60			Q61		
	E	F	A	E	F	A	E	F	A
Bramble (*Rubus fruticosus agg.*)	2								
Branched Bur-reed (*Sparganium erectum*)	5	1		2					
Common Duckweed (*Lemna minor)*		9			2			2	
Common Nettle (*Urtica dioica*)	1						2		
Common Ragwort (*Senecio jacobaea*)									
Common Reed (*Phragmites australis*)	7			7			8		
Common Water-starwort (*Callitriche stagnalis sens. lat.*)			9			9			
Creeping Thistle (*Cirsium arvense*)				1					
Fat Duckweed (*Lemna gibba*)		4			4			2	
Fennel Pondweed (*Potamogeton pectinatus*)			5			5			

Plant Species	Domin								
	Q59			Q60			Q61		
Floating Sweet-grass (*Glyceria fluitans*)	4			5					
Greater Pond-sedge (*Carex riparia*)							5		
Great Willowherb (*Epilobium hirsutum*)	1			1					
Hedge Bindweed (*Calystegia sepium*)	1								
Lesser Water-parsnip (*Berula erecta*)	5			6					
Nuttall's Waterweed (*Elodea nuttallii*)						5			
Soft-rush (*Juncus effusus*)							1		

Area G - Minsmere to Walberswick Heaths and Marshes SAC/Ramsar – **reedbed adjacent to Leiston Drain** (Quadrats 62 to 65)

	Domin			
Plant Species	**Q62**	**Q63**	**Q64**	**Q65**
Bramble (*Rubus fruticosus agg.*)	4	4	2	5
Broad Buckler-fern (*Dryopteris dilatata*)				3
Cleavers (*Galium aparine*)	2	2	4	4
Common Nettle (*Urtica dioica*)	3	3	5	5
Common Reed (*Phragmites australis*)	5	5	8	8
Creeping Thistle (*Cirsium arvense*)	3	4		
False Oat-grass (*Arrhenatherum elatius*)	3	3	7	7
Hedge Bindweed (*Calystegia sepium*)	4	4	5	6
Lesser Pond-sedge (*Carex acutiformis*)	9	9		
Marsh Thistle (*Cirsium palustre*)				5
Soft-rush (*Juncus effusus*)				5
Tufted Vetch (*Vicia cracca*)	3	3	3	
Wild Angelica (*Angelica sylvestris*)		2		5

Area G - Minsmere to Walberswick Heaths and Marshes SAC/Ramsar – **Dune grassland** (Quadrats 66 & 67)

Plant Species	Domin	
	Q66	Q67
Bramble (*Rubus fruticosus agg.*)	2	1
Bryophyte Sp.		4
Cat's-ear (*Hypochaeris radicata)*	1	2
Cladonia Lichen Sp.		5
Heather (*Calluna vulgaris*)	5	
Honeysuckle (*Lonicera periclymenum*)	4	
Pedunculate Oak (*Quercus robur*)		1
Sand Sedge (*Carex arenaria*)	9	7
Sheep's-fescue (*Festuca ovina*)	8	10
Sheep's Sorrel (*Rumex acetosella*)	5	4
Yellow Iris (*Iris pseudacorus*)	2	

Area H - Suffolk Shingle Beaches CWS – **Sand dune** (Quadrats 68 to 77)

Plant Species	Domin									
	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77
Bramble (*Rubus fruticosus agg.*)								1		
Buck's-horn Plantain (*Plantago coronopus*)						8	9	10		
Bryophyte Sp.		2	2	2				4		
Cat's-ear (*Hypochaeris radicata)*			1	4				1		2
Cock's-foot (*Dactylis glomerata*)	3				4	4			3	
Common Bird's-foot-trefoil (*Lotus corniculatus*)		5	4	5						
Common Centaury (*Centaurium erythraea*)		*3*	*4*	*1*						
Common Ragwort (*Senecio jacobaea*)	1		1	1	1	1				
Common Restharrow (*Ononis repens*)	7	4		7	4	6	7	5		4
Creeping Bent (*Agrostis stolonifera*)					5	5	6	5	7	7
Dandelions (*Taraxacum agg.*)		1	1		1	1				
False Oat-grass (*Arrhenatherum elatius*)							3		2	2
Harebell (*Campanula rotundifolia*)			2	2	2	1				
Hop Trefoil (*Trifolium campestre)*	4									
Lady's Bedstraw (*Galium verum*)	7	6	7	7	6	4			2	7
Marram (*Ammophila arenaria*)	4	5	6	5	3	8		5	2	
Mouse-ear-hawkweed (*Pilosella officinarum*)	7	7	6	7						
Red Fescues (F*estuca rubra sens. lat.*)	7	7	4	4	2	7	7	4	3	1
Ribwort plantain (*Plantago lanceolata*)	4	4	5	4	4	3	3	5		5
Rough Hawkbit (*Leontodon hispidus*)					1					
Rush-leaved Fescue (*Festuca arenaria*)		3								
Sand Couch (*Elytrigia juncea*)	4	3	4	4	5	1	8		7	
Sand Sedge (*Carex arenaria*)						4		6	9	4
Sea Bindweed (*Calystegia soldanella)*				4		3	4	4	2	
Sea Couch (*Elytrigia atherica*)	5		4		3	5				5
Sea Sandwort (*Honckenya peploides*)							5	6		
Sheep's-fescue (*Festuca ovina*)	4		5	4				4		
Sheep's Sorrel (*Rumex acetosella*)								2		
Smooth Hawk's-beard (*Crepis capillaris*)								3	3	2
Smooth Meadow Grass (*Poa pratensis*)	3				2	4				5
Spiny Restharrow (*Ononis spinosa*)			5		7					
Strawberry Clover (*Trifolium fragiferum*)	5		3							
Sweet Vernal-grass *(Anthoxanthum odoratum*)	5	4	5		4	4		4		6
Tree Lupin (*Lupinus arboreus*)	1									
Yellow- rattle (*Rhinanthus minor*)								4		
Yarrow (*Achillea millefolium*)							3			
Yorkshire-fog (*Holcus lanatus*)	5	4	4	4	5			4	4	5

Area H - Suffolk Shingle Beaches CWS – **Dune grassland** (Quadrats 78 to 82)

Plant Species	Domin				
	Q78	Q79	Q80	Q81	Q82
Buck's-horn Plantain (*Plantago coronopus*)					4
Bryophyte Sp.	5	6	4	3	9
Cat's-ear (*Hypochaeris radicata)*	5			3	
Cladonia Lichen Sp.	8				
Cock's-foot (*Dactylis glomerata*)		3			
Common Bent (*Agrostis capillaris*)	5	6	5	6	
Common Bird's-foot-trefoil (*Lotus corniculatus*)	1				
Common Restharrow (*Ononis repens*)		5	4	5	
Early Hair-grass (*Aira praecox)*				3	4
English Stonecrop (*Sedum anglicum)*	4	3		3	
Field Wood-rush (*Luzula campestris*)	3				
Harebell (*Campanula rotundifolia*)					4
Lady's Bedstraw (*Galium verum*)			4	3	
Mouse-ear-hawkweed (*Pilosella officinarum*)	4	3	4	2	
Peltigera Lichen Sp.				1	
Rat's-tail Fescue (*Vulpia myuros*)				3	
Red Fescues (F*estuca rubra sens. lat.*)	4	7	7	2	
Ribwort plantain (*Plantago lanceolata*)			4		4
Rough Hawkbit (*Leontodon hispidus*)	5	5	3		
Sea Couch (*Elytrigia atherica*)				5	
Sheep's-fescue (*Festuca ovina*)	8	9	9	9	4
Sheep's Sorrel (*Rumex acetosella*)		3		5	
Smooth Hawk's-beard (*Crepis capillaris*)				3	
Smooth Meadow Grass (*Poa pratensis*)	1	4	4	4	
Strawberry Clover (*Trifolium fragiferum*)			3		7
Sweet Vernal-grass *(Anthoxanthum odoratum*)		5	4	4	
Yorkshire-fog (*Holcus lanatus*)		4			

Area H - Suffolk Shingle Beaches CWS – **Shingle** (Quadrats 83 to 92)

Plant Species	Domin									
	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92
Cat's-ear (*Hypochaeris radicata)*		3		3			1			5
Cock's-foot (*Dactylis glomerata*)										1
Common Restharrow (*Ononis repens*)		4			5		8	6		5
Halberd - leaved orach (*Atriplex hastata)*	1									
Marram (*Ammophila arenaria*)		4	4	4	6	4	6	4	9	2
Rush-leaved Fescue (*Festuca arenaria*)		2			2		4			
Sand Sedge (*Carex arenaria*)					4				4	
Sea Bindweed (*Calystegia soldanella)*			4				2		5	

Plant Species	Domin									
	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92
Sea Campion (*Silene uniflora*)		2	5	3	2	7		5		
Sea-kale (*Crambe maritima*)	3	2	2	2		1		2		
Sea-holly (*Eryngium maritimum*)				1		3	3		2	
Sea Couch (*Elytrigia atherica*)				3	6			5		
Sea Pea (*Lathyrus japonicus)*		5	5	4		4			1	4
Sea Sandwort (*Honckenya peploides*)		4	4	1				2		
Sheep's-fescue (*Festuca ovina*)							5			
Smooth Sow-thistle (*Sonchus oleraceus)*		2			2				1	
Spiny Restharrow (*Ononis spinosa*)								3		5
Yorkshire-fog (*Holcus lanatus*)										1

Area I - Wet woodland in Sizewell Marshes SSSI West of C Station Platform (Quadrats 93 to 95)

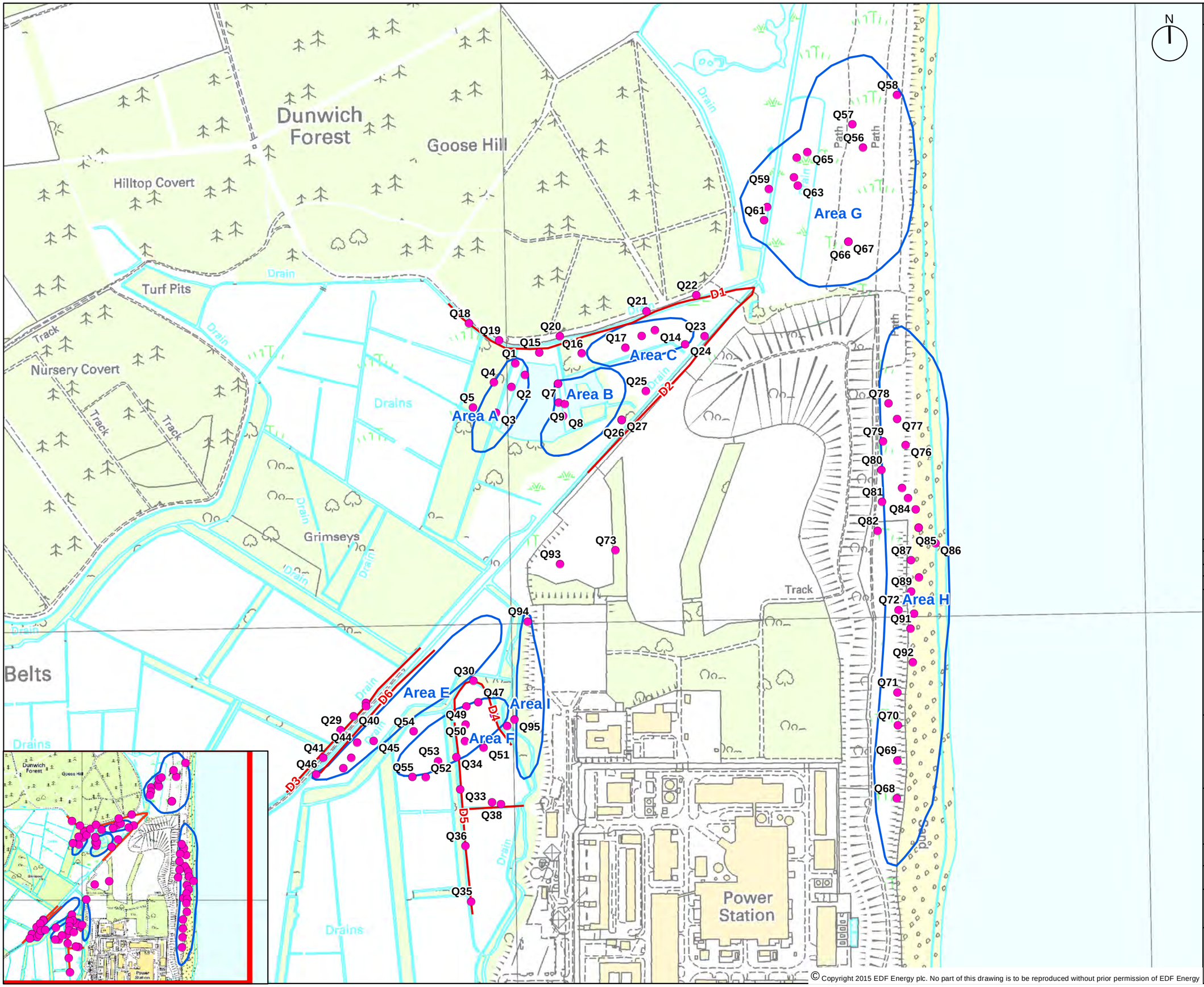
Plant Species	Domin		
	Q93	Q94	Q95
Broad Buckler-fern			1
Bryophyte Sp.			1
Cleavers (*Galium aparine*)			4
Common Duckweed (*Lemna minor)*	6	4	
Common Nettle (*Urtica dioica*)		4	9
Common Reed (*Phragmites australis*)	4		
Creeping Bent (*Agrostis stolonifera*)	3		7
Creeping Buttercup (*Ranunculus repens*)			5
False Fox-sedge (*Carex otrubae*)	4		2
False Oat-grass (*Arrhenatherum elatius*)			
Fat Duckweed (*Lemna gibba*)	4	4	
Gipsywort (*Lycopus europaeus*)	1		2
Greater Pond-sedge (*Carex riparia*)		4	
Hedge Bindweed (*Calystegia sepium*)	1		1
Hemp-agrimony (*Eupatorium cannabinum*)	1	2	
Marsh Thistle (*Cirsium palustre*)			1
Water Dock (*Rumex hydrolapathum*)		1	
Wood Dock (*Rumex sanguineus*)			1
Yellow Iris (*Iris pseudacorus*)	1	3	3
50 x 50m Woodland canopy Quadrats			
Alder (Alnus glutinosus)	1	9	9
Red Currant (*Ribes rubrum*)	9		
Goat Willow (Salix caprea)	6	7	4
Silver Birch (*Betula pendula*)			2
White Willow (Salix alba)			2

Appendix C

Figures

0038 – UA004506-UE21D-03 Survey areas and quadrat locations.

0039 - UA004506-UE21D-03 NVC community bounadaries.



INTERNAL BUSINESS COLLABORATOR REFERENCE
NOT APPLICABLE FOR ALL FIGURES

KEY

- Quadrat Locations
- Ditches
- Sample Areas

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION/COMMENTS	APPROVED
3.0	03/29/2015	A.D.	M.L.	Done some amendments	M.L.
2.0	02/11/2015	A.D.	M.L.	Modified Features	M.L.
1.0	11/19/2014	A.D.	M.L.	Version 1	M.L.

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OVERVIEW MAP

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2.0	02/11/2015	A.D.	M.L.	Modified Features	M.L.
1.0	11/19/2014	A.D.	M.L.	Version 1	M.L.

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NVC SURVEY COMPARTMENTS AND QUADRAT LOCATIONS
PAGE 2 OF 5

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DATE: MAR 2015
DRAWN: A.D.
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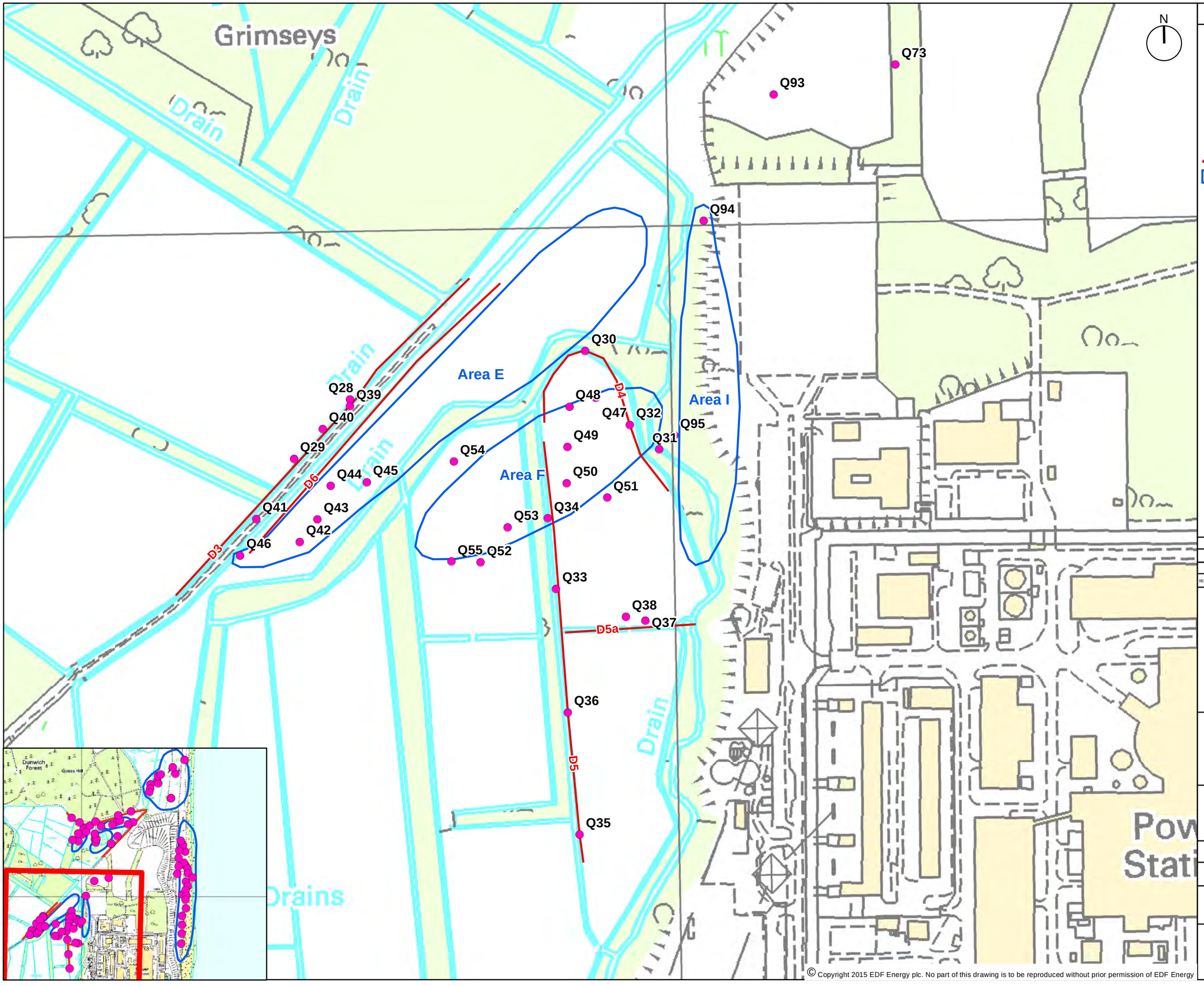

KEY

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- Ditches
- Sample Areas

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PAGE 3 OF 5

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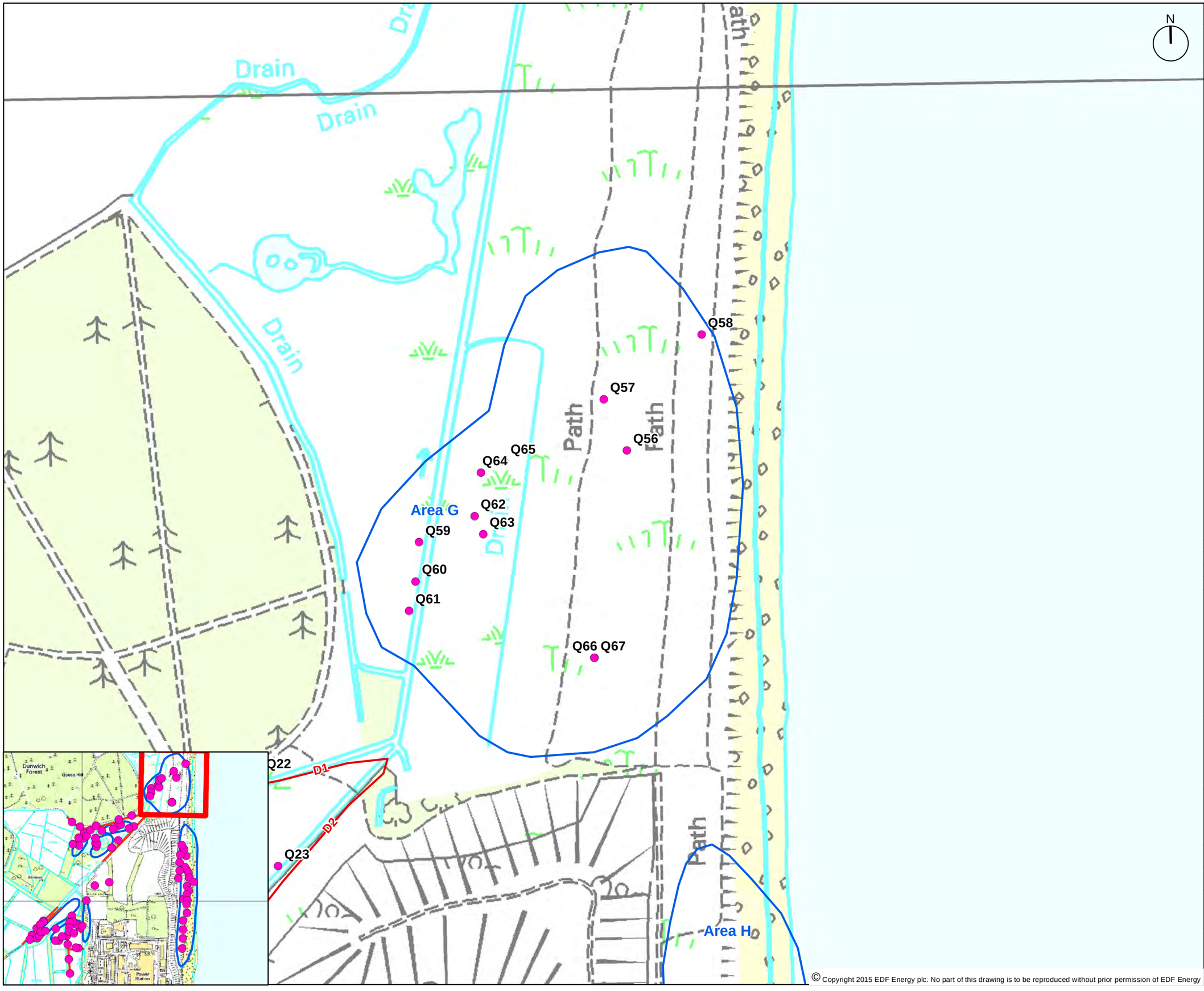

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- Sample Areas

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NVC SURVEY COMPARTMENTS AND QUADRAT LOCATIONS
PAGE 4 OF 5

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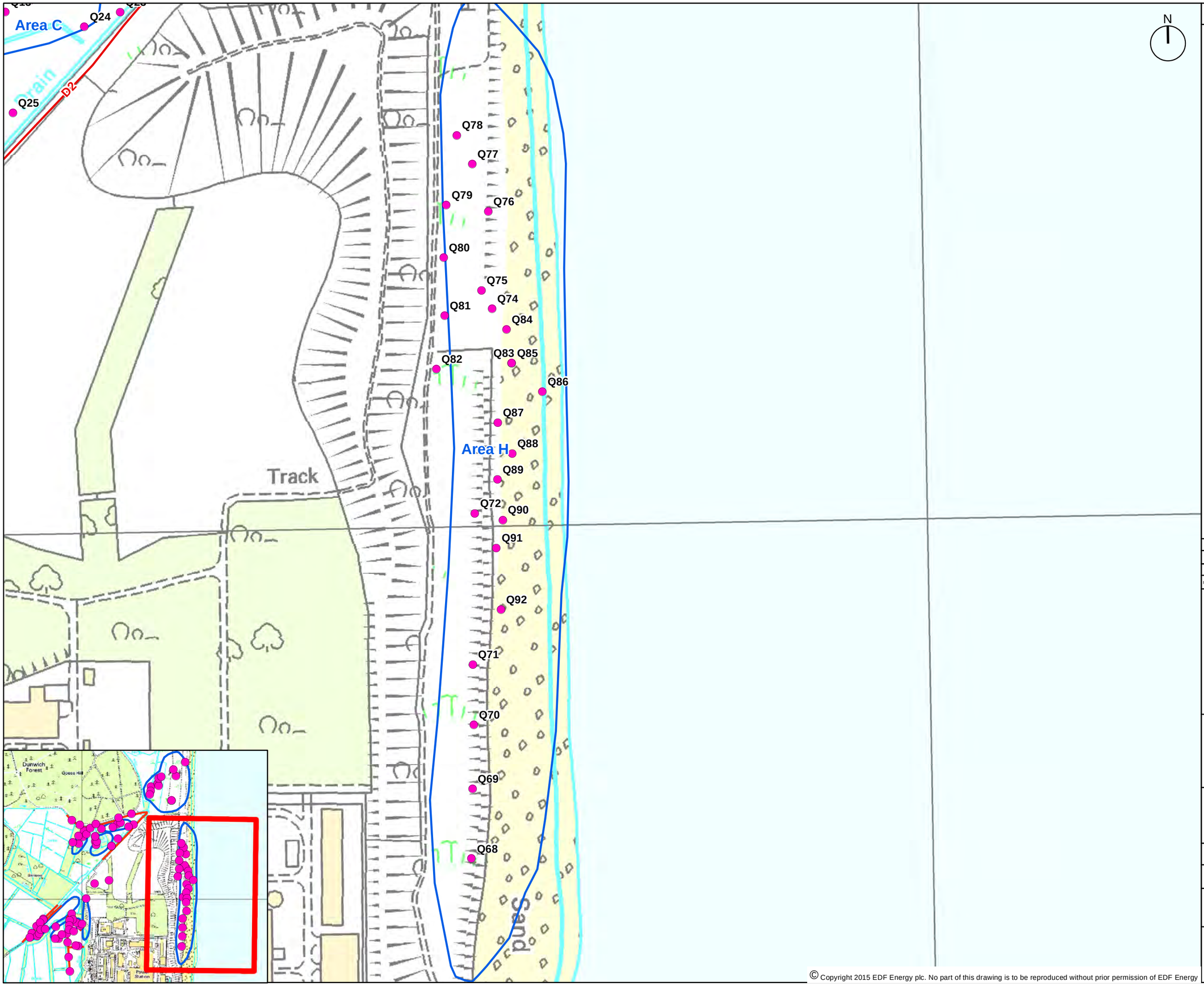

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KEY

- Quadrat Locations
- Ditches
- Sample Areas

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NVC SURVEY COMPARTMENTS AND QUADRAT LOCATIONS
PAGE 5 OF 5

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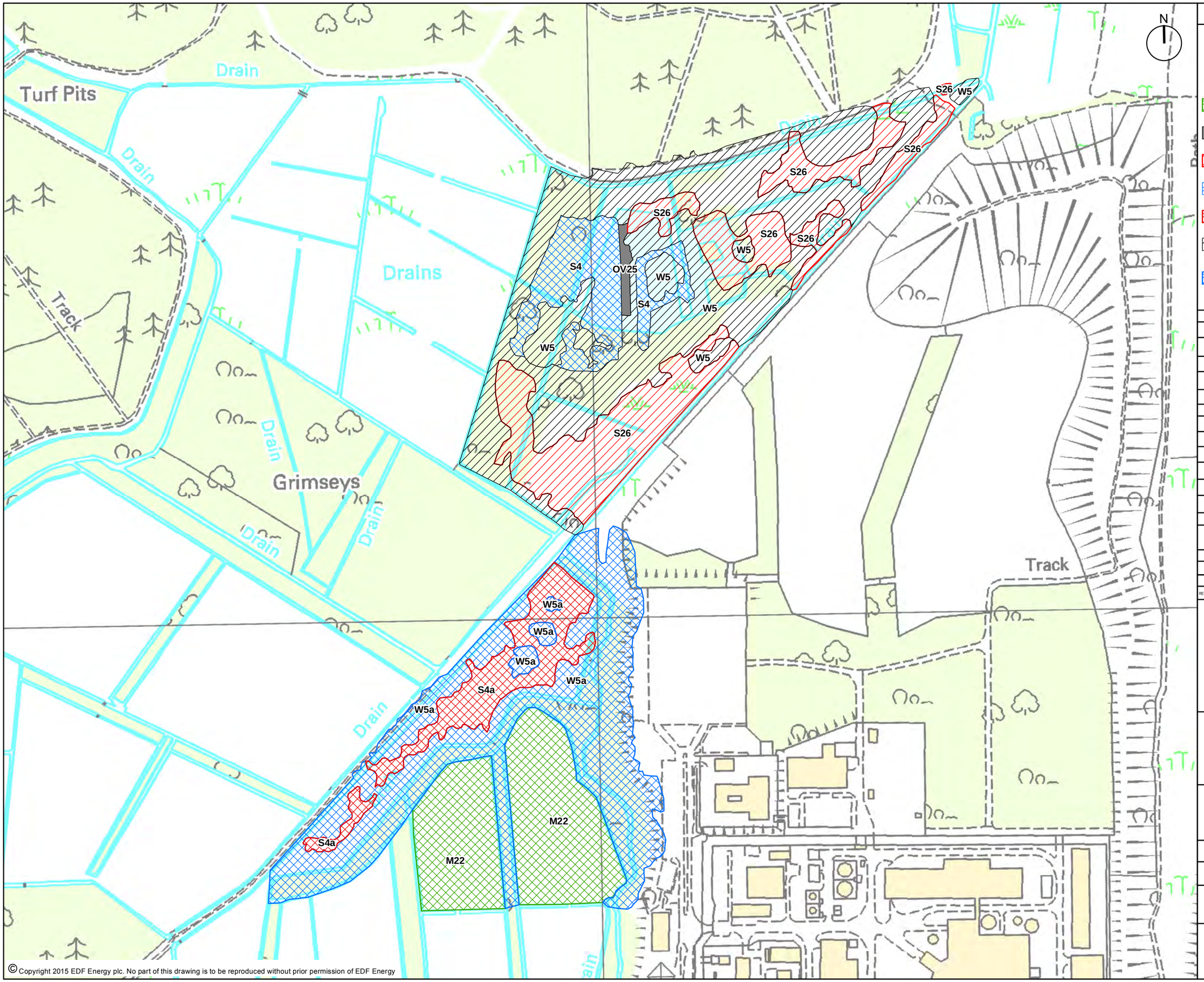

INTERNAL BUSINESS COLLABORATOR REFERENCE
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KEY

- Blunt-flowered Rush-Marsh Thistle mire community
- Common Nettle - Creeping Thistle community
- Common Reed – Common Nettle tall-herb fen
- Common Reed swamp and reedbed community
- The typical sub-community of the S4 Common Reed swamp
- Alder - Greater Tussock-sedge woodland community
- Alder - Greater Tussock-sedge woodland, Common Reed sub-community

	Community	Area in Hector
W5a	Alder - Greater Tussock-sedge woodland, Common Reed sub-community	4.526842
SD8	Red Fescue-Lady's Bedstraw fixed dune community	2.446489
SD7	Marram-Red Fescue semi-fixed dune community	1.706516
SD1a	Curled Dock Yellow Horned-poppy shingle community, Sea Pea sub-community	0.648144
SD12	Sand Sedge-Sheep's Sorrel-Common Bent dune grassland	4.873542
	Scrub	1.735685
S4a	the typical sub-community of the S4 Common Reed swamp	1.096422
S26	Common Reed – Common Nettle tall-herb fen	3.967703
M22	Blunt-flowered Rush-Marsh Thistle mire community	2.797751
OV25	Common Nettle - Creeping Thistle community	0.082011
S4	Common Reed swamp and reedbed community	1.228447
W5	Alder - Greater Tussock-sedge woodland community	5.150946
	Total Community Area	**30.260498**

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION/COMMENTS	APPROVED
3.0	03/25/2015	A.D.	M.L.	Done some amendments	M.L.
2.0	02/11/2015	A.D.	M.L.	Modified Features	M.L.
1.0	11/19/2014	A.D.	M.L.	Version 1	M.L.

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NVC COMMUNITY BOUNDARIES
PAGE 1 OF 3

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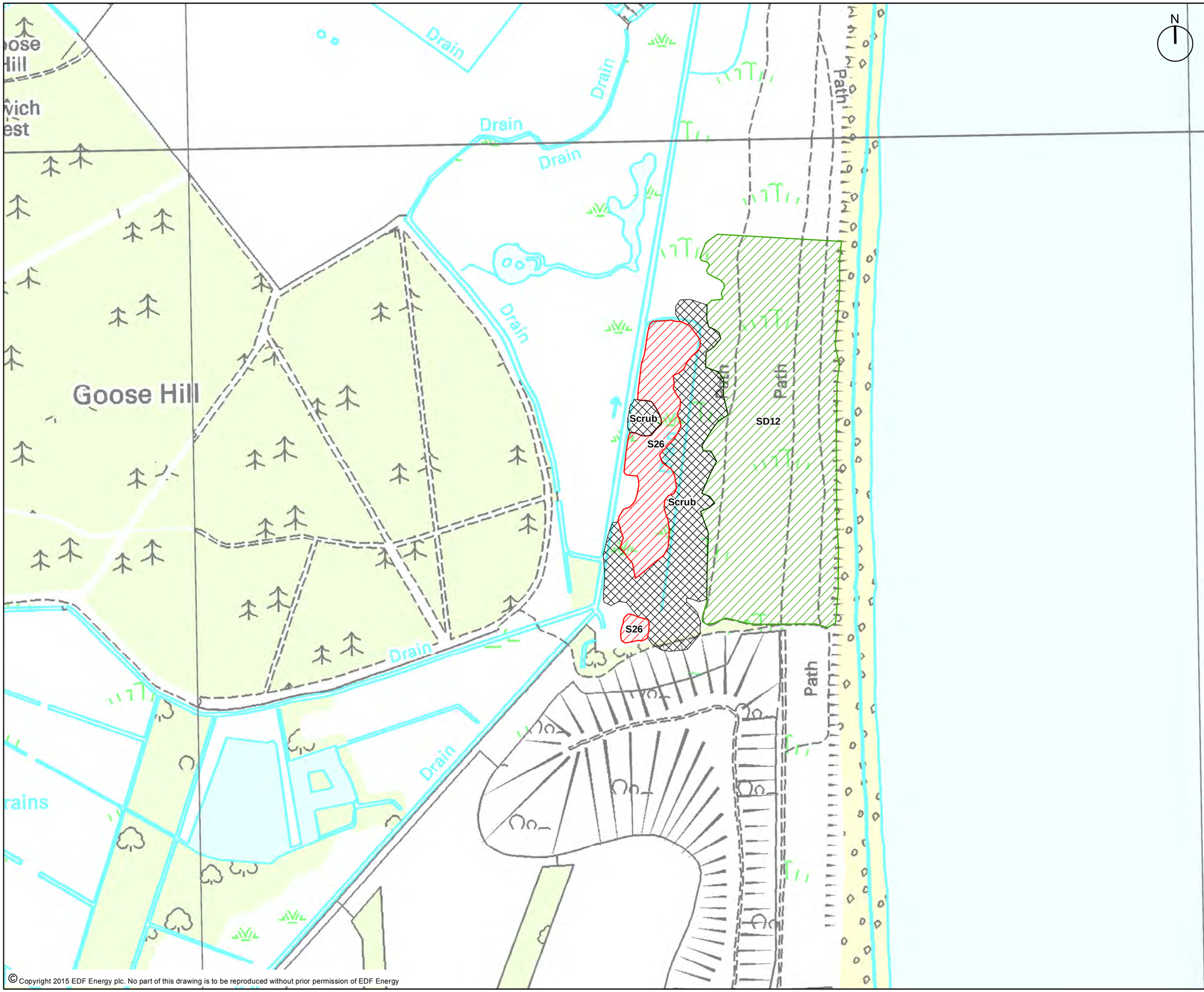

INTERNAL BUSINESS COLLABORATOR REFERENCE
NOT APPLICABLE FOR ALL FIGURES

KEY

- Common Reed – Common Nettle tall-herb fen
- Sand Sedge-Sheep's Sorrel-Common Bent dune grassland
- Scrub

	Community	Area in Hector
W5a	Alder - Greater Tussock-sedge woodland, Common Reed sub-community	4.526842
SD8	Red Fescue-Lady's Bedstraw fixed dune community	2.446489
SD7	Marram-Red Fescue semi-fixed dune community	1.706516
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SD12	Sand Sedge-Sheep's Sorrel-Common Bent dune grassland	4.873542
	Scrub	1.735685
S4a	the typical sub-community of the S4 Common Reed swamp	1.096422
S26	Common Reed – Common Nettle tall-herb fen	3.967703
M22	Blunt-flowered Rush-Marsh Thistle mire community	2.797751
OV25	Common Nettle - Creeping Thistle community	0.082011
S4	Common Reed swamp and reedbed community	1.228447
W5	Alder - Greater Tussock-sedge woodland community	5.150946
	Total Community Area	**30.260498**

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1.0	11/19/2014	A.D.	M.L.	Version 1	M.L.

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NVC COMMUNITY BOUNDARIES
PAGE 2 OF 3

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SCALE BAR
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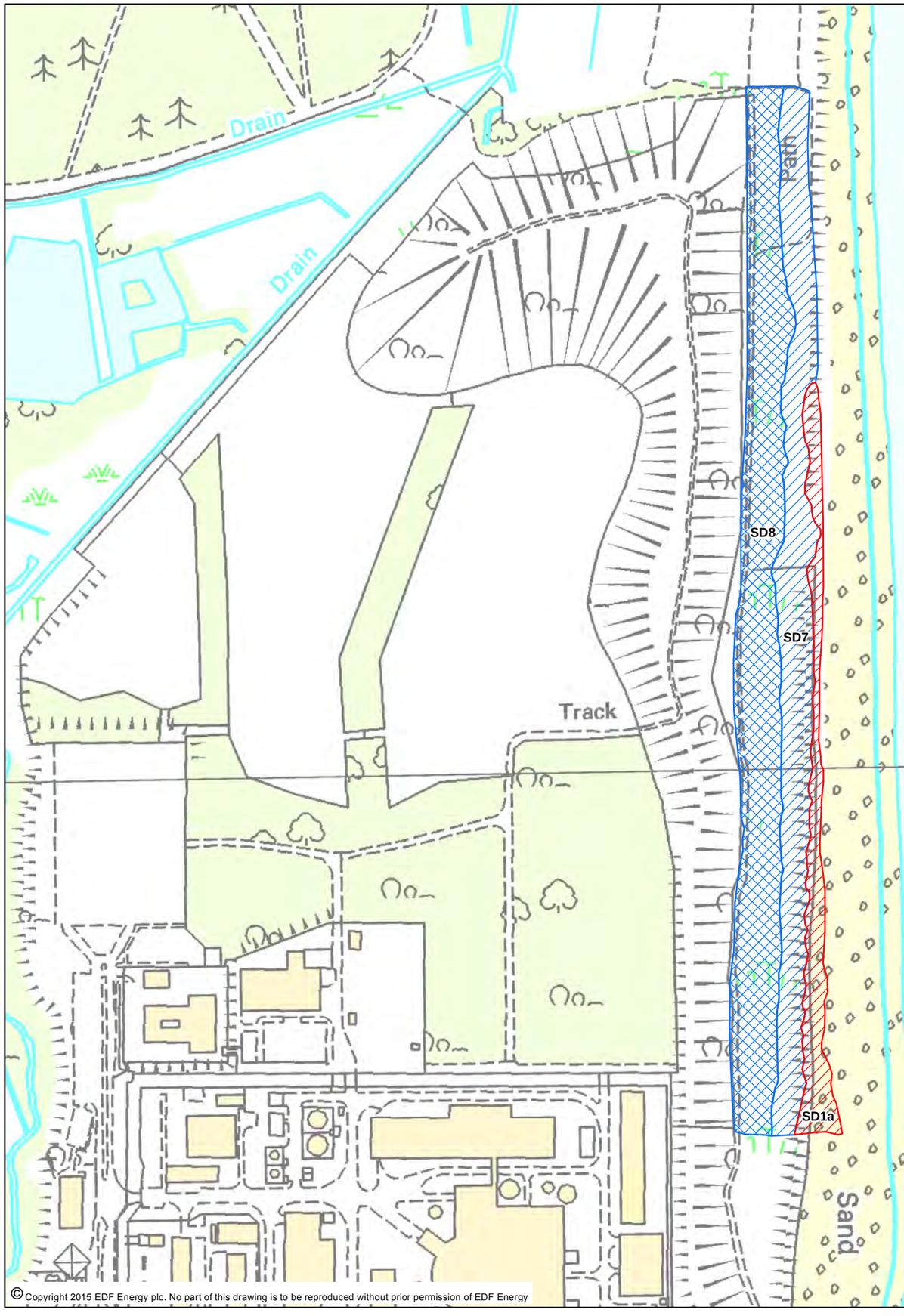
☐ PROTECTIVE MARKING REQUIRED
☒ NOT PROTECTIVELY MARKED



N

INTERNAL BUSINESS COLLABORATOR REFERENCE
NOT APPLICABLE FOR ALL FIGURES

KEY

- Curled Dock Yellow Horned-poppy shingle community, Sea Pea sub-community
- Marram-Red Fescue semi-fixed dune community
- Red Fescue-Lady's Bedstraw fixed dune community

	Community	Area in Hector
W5a	Alder - Greater Tussock-sedge woodland, Common Reed sub-community	4.526842
SD8	Red Fescue-Lady's Bedstraw fixed dune community	2.446489
SD7	Marram-Red Fescue semi-fixed dune community	1.706516
SD1a	Curled Dock Yellow Horned-poppy shingle community, Sea Pea sub-community	0.648144
SD12	Sand Sedge-Sheep's Sorrel-Common Bent dune grassland	4.873542
	Scrub	1.735685
S4a	the typical sub-community of the S4 Common Reed swamp	1.096422
S26	Common Reed – Common Nettle tall-herb fen	3.967703
M22	Blunt-flowered Rush-Marsh Thistle mire community	2.797751
OV25	Common Nettle - Creeping Thistle community	0.082011
S4	Common Reed swamp and reedbed community	1.228447
W5	Alder - Greater Tussock-sedge woodland community	5.150946
	Total Community Area	**30.260498**

REVISION	DATE	DRAWN	CHECKED	REASONS FOR REVISION/COMMENTS	APPROVED
3.0	03/25/2015	A.D.	M.L.	Done some amendments	M.L.
2.0	02/11/2015	A.D.	M.L.	Modified Features	M.L.
1.0	11/19/2014	A.D.	M.L.	Version 1	M.L.

EDF ENERGY
SIZEWELL C

DOCUMENT:
SIZEWELL C PROJECT

DRAWING TITLE:
NVC COMMUNITY BOUNDARIES
PAGE 3 OF 3

DRAWING NO: FIGURE 0039
REVISION: 3.0

DATE: MAR 2015
DRAWN: A.D.
SCALE: 1:3,500

SCALE BAR
0 0.035 0.07 0.105 0.14 0.175 KM

DRAWING SECURITY CLASSIFICATION:
☐ PROTECTIVE MARKING REQUIRED
☒ NOT PROTECTIVELY MARKED