

Plants of Sonairte 2008



Cord grass *Spartina anglica*



Pyramidal orchid
Anacamptis pyramidalis

Common name	Latin name	Habitat
Beech	<i>Fagus sylvatica</i>	WD2, WL1, WL2
Ash	<i>Fraxinus excelsior</i>	WD2, WL1, WL2
Sycamore	<i>Acer pseudoplatanus</i>	WD2, WL1, WL2
Willow	<i>Salix</i> sp.	WL1
Apple	<i>Malus</i> sp.	WL1
London plane	<i>Platanus x hispanica</i>	WL1
Hawthorn	<i>Crataegus monogyna</i>	WD2, WL1, WL2
Willow	<i>Salix</i> sp.	WD2, WL1
Elderberry	<i>Sambucus nigra</i>	WD2, WL1, WL2
Blackthorn	<i>Prunus spinosa</i>	WD2, WL1
Elm	<i>Ulmus glabra</i>	WD2, WL1
Oak	<i>Quercus petraea</i>	WD2, WL1, WL2
Cherry	<i>Prunus serrulata</i>	WD2, WL2
Downy Birch	<i>Betula pubescens</i>	WD2, WL2
Whitebeam	<i>Sorbus domestica</i>	WD2, WL1, WL2
Horsechestnut	<i>Aesculus hippocastanum</i>	WD2, WL1
Mock Orange	<i>Philadelphus coronarius</i>	WL2
Holly	<i>Ilex aquifolium</i>	WD2, WL1
Lilac	<i>Syringa vulgaris</i>	WD2
Privet	<i>Ligustrum ovalifolium</i>	WD2
Meadow grass	<i>Poa trivialis</i>	WL2, GS1
Red fescue	<i>Festuca rubra</i>	WL1, GS1, CM2
False oat	<i>Arrhenatherum elatius</i>	WL1, GS1, GS2
Couche	<i>Elymus repens</i>	WL1, CM2
Yorkshire fog	<i>Holcus lanatus</i>	WL1, WL2, GS1, GS2
False brome	<i>Brachypodium sylvaticum</i>	WD2, WL2



Greater sea spurry *Spergularia marina*



Lax flowered sea lavender
Limonium humile



Sea purslane *Atriplex portulacoides*
Arrow grass *Triglochin maritima*



Selfheal *Prunella vulgaris*

Cock's foot GS2	<i>Dactylis glomerata</i>	WD2, WL1, WL2, GS1,
Creeping bent GS2, CM2	<i>Agrostis stolonifera</i>	WD2, WL1, WL2, GS1,
Rye grass	<i>Lolium perenne</i>	WD2, WL2, GS1
Timothy GS2	<i>Phleum pratense</i>	WD2, WL1, WL2, GS1,
Vernal grass	<i>Anthoxanthum odoratum</i>	WD2, GS2
Crested dog's tail	<i>Cynosurus cristatus</i>	GS1
Saltmarsh rush	<i>Juncus gerardii</i>	CM2
Sea clubrush	<i>Scripus maritimus</i>	CM2
Cordgrass	<i>Spartina alternifolia</i>	CM1, CM2
Curled dock	<i>Rumex crispus</i>	WD2, WL1, WL2, GS1
Brambles	<i>Rubus fruticosus</i>	WD2, WL1, WL2
Sweet briar	<i>Rosa rubiginosa</i>	WD2, WL1
Ivy	<i>Hedera helix</i>	WD2, WL1, WL2
Wood sanicle	<i>Sanicula europaea</i>	WD2
Wood avens	<i>Geum urbanum</i>	WD2, WL1, WL2
Germander speedwell	<i>Veronica chamaedrys</i>	WD2, WL1, WL2, GS1
Primrose	<i>Primula vulgaris</i>	WD2
Bush vetch	<i>Vicia sepium</i>	WD2, WL1, WL2, GS2
Common vetch	<i>Vicia cracca</i>	WL2, GS2
Dandelion	<i>taraxacum</i>	WD2, WL1, WL2, GS1
Dog rose	<i>Rosa canina</i>	WD2, WL1
Hog weed	<i>Heracleum sphondylium</i>	WD2, WL1, WL2, GS1
Lesser Celandine	<i>Ranunculus ficaria</i>	WD2
Comfrey	<i>Symphytum x uplandicum</i>	BC2
Great willowherb	<i>Epilobium hirsutum</i>	BC2
Rough sow thistle	<i>Sonchus asper</i>	BC2
Opium poppy	<i>Pavaver somniferum</i>	BC2



Hart's tongue fern *Phyllitis scolopendrium*



Greater celandine *Chelidonium majus*



Bird's foot trefoil *Lotus corniculatus*



Thrift *Armeria maritima*

Teasel	<i>Dipsacus fullonum</i>	BC2
Burdock	<i>Arctium lappa</i>	WD2
Tutsan	<i>Hypericum androsaemum</i>	WD2, WL2
Herb robert	<i>Geranium robertianum</i>	WD2
Dog violet	<i>Viola canina</i>	WD2
Bluebell	<i>Hyacinthoides non-scriptus</i>	WD2
Cleavers	<i>Gallium aparine</i>	WD2, WL1, WL2, GS2
Alexander's	<i>Smyrniolus satrum</i>	WD2, WL1, WL2
Nettles	<i>Urtica dioica</i>	WD2, WL1, WL2, GS1
Ragwort	<i>Senecio cineraria</i>	WD2, WL1, WL2, GS1
Daisy	<i>Bellis perennis</i>	WD2, WL1, WL2
Figwort	<i>Scrophularia nodosa</i>	WL1
White nettle	<i>Lamium album</i>	WL1
Spear thistle	<i>Cirsium vulgare</i>	WL1, WL2
Meadow buttercup	<i>Ranunculus acris</i>	WL1, WL2, GS2
White clover	<i>Trifolium repens</i>	CM2, GS1
Cow parsley	<i>Anthriscus sylvestris</i>	WL1, WL2
Cat's ear	<i>Hypochoeris radicata</i>	WL1
Willow herb	<i>Epilobium montanum</i>	WL1
Creeping buttercup	<i>Ranunculus repens</i>	GS1, GS2
Common orache	<i>Atriplex patula</i>	CM2
Sea beet	<i>Beta vulgaris</i>	CM2
Arrow grass	<i>Triglochin maritima</i>	CM2
Sea aster	<i>Aster tripolium</i>	CM1
Sea purslane	<i>Atriplex portulacoides</i>	CM1
Sea plantain	<i>Plantago maritima</i>	CM1, CM2
Thrift	<i>Armeria maritima</i>	CM1
Lax flowered sea lavender	<i>Limonium humile</i>	CM1, CM2
Sea milkwort	<i>Glaux maritima</i>	CM1, CM2
Greater sea spurry	<i>Spergularia marina</i>	CM1, CM2
Common scurvygrass	<i>Cochlearia officinalis</i>	CM1, CM2



Privet *Ligustrum vulgare*



Ash *Fraxinus excelsior*

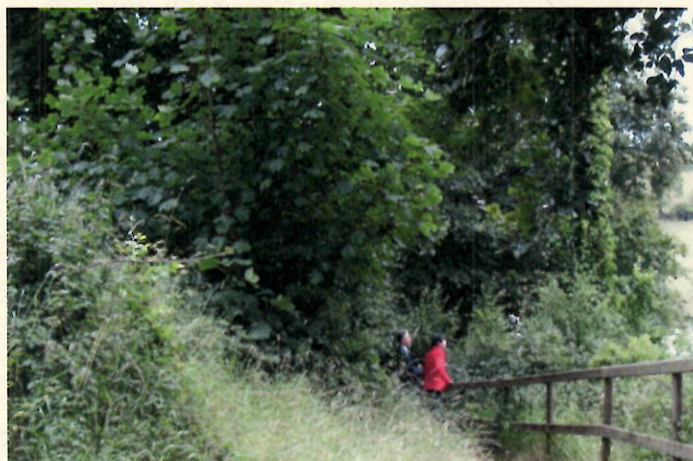


Reed mace *Typha latifolia*



Yellow iris *Iris pseudoacorus*

Reedmace	<i>Typha latifolia</i>	CM2
Yellow iris	<i>Iris pseudoacorus</i>	CM2
Bird's foot trefoil	<i>Lotus corniculatus</i>	CM2
Hart's tongue fern	<i>Phyllitis scolopendrium</i>	WL1, WD2
Male fern	<i>Dryopteris filix-mas</i>	WD2
Soft shield fern	<i>Polystichum setiferum</i>	WL1, WD2





Red valerian *Centranthus ruber*



Tutsan *Hypericum androsaemum*



Cow parsley *Anthriscus sylvestris*



Sweet briar *Rosa rubiginosa*



Hawthorn *Crataegus monogyna*



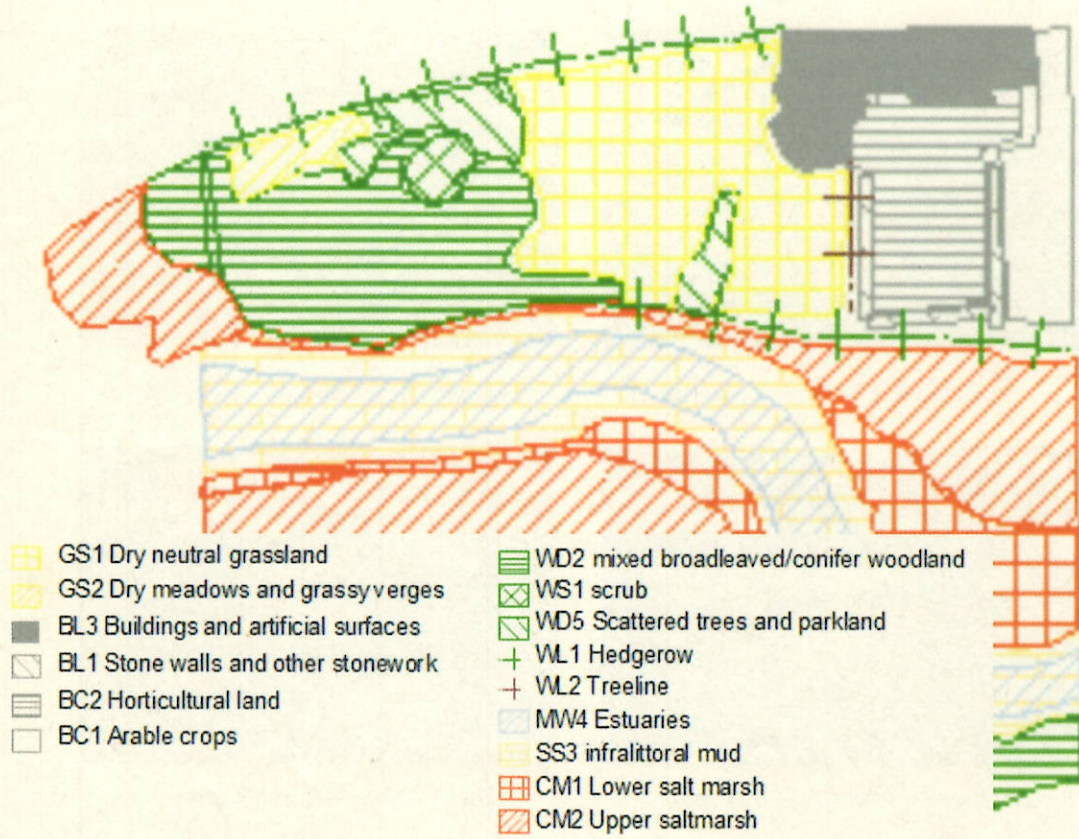
Beech *Fagus sylvatica*



Horsechestnut *Aesculus hippocastanum*



Sycamore *Acer pseudoplatanus*



Opium poppy *Pavaver somniferum*



Rough sow thistle *Sonchus asper*



Great willowherb *Epilobium hirsutum*



Comfrey *Symphytum x uplandicum*

Birds at Sonairte 2008



Kestral *Falco tinnunculus*



Starling *Sturnus vulgaris*



Robin *Erithacus rubecula*



Mallard *Anas platyrhynchos*



Lapwing *Vanellus vanellus*



Redshank *Tringa totanus*



Long-tailed tit *Aegithalos caudatus*



Heron *Ardea cinerea*

Birds at Sonairte 2008

Common Name	Latin Name	Conservation Status
Blackbird	<i>Turdus merula</i>	Green
Black-headed gull	<i>Larus ridibundus</i>	Red
Blue tit	<i>Parus caeruleus</i>	Green
Brent goose	<i>Branta bernicla</i>	Amber
Buzzard	<i>Buteo buteo</i>	Green
Chaffinch	<i>Fringilla coelebs</i>	Green
Chiffchaff	<i>Phylloscopus collybita</i>	Green
Cormorant	<i>Phalacrocorax carbo</i>	Amber
Curlew	<i>Numenius arquata</i>	Red
Dunlin	<i>Calidris alpina</i>	Amber
Dunnock	<i>Prunella modularis</i>	Green
Goldcrest	<i>Regulus regulus</i>	Green
Goldfinch	<i>Carduelis carduelis</i>	Green
Great black-backed gull	<i>Larus marinus</i>	Amber
Great tit	<i>Parus major</i>	Green
Greenfinch	<i>Carduelis chloris</i>	Green
Heron	<i>Ardea cinerea</i>	Green
Hooded crow	<i>Corvus corone ssp. cornix</i>	Green
Jackdaw	<i>Corvus monedula</i>	Green
Kestrel	<i>Falco tinnunculus</i>	Amber
Lapwing	<i>Vanellus vanellus</i>	Red
Lesser black-backed gull	<i>Larus fuscus</i>	Amber
Little egret	<i>Egretta garzetta</i>	Green
Long tailed tit	<i>Aegithalos caudatus</i>	Green
Magpie	<i>Pica pica</i>	Green
Mallard	<i>Anas platyrhynchos</i>	Green
Oystercatcher	<i>Haematopus ostralegus</i>	Amber
Pheasant	<i>Phasianus colchicus</i>	Green
Pied wagtail	<i>Motacilla alba</i>	Green
Redshank	<i>Tringa totanus</i>	Red
Robin	<i>Erithacus rubecula</i>	Green
Rook	<i>Corvus frugilegus</i>	Green
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	Green
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	Green
Shelduck	<i>Tadorna tadorna</i>	Amber
Skylark	<i>Alauda arvensis</i>	Amber
Song thrush	<i>Turdus philomelos</i>	Green
Starling	<i>Sturnus vulgaris</i>	Amber
Swallow	<i>Hirundo rustica</i>	Amber
Teal	<i>Anas crecca</i>	Amber
Willow warbler	<i>Phylloscopus trochilus</i>	Green
Wood pigeon	<i>Columba palumbus</i>	Green
Wren	<i>Troglodytes troglodytes</i>	Green

Butterflies at Sonairte 2008



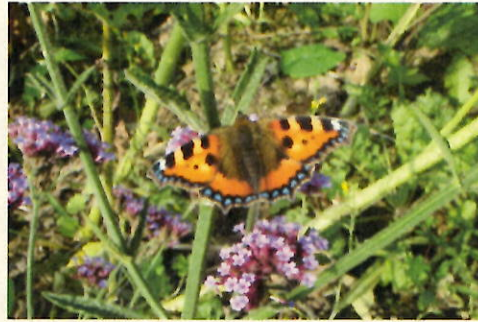
Speckled wood



Large white



Peacock



Small tortoiseshell



Common blue

Butterflies at Sonairte 2008

Ringlet	<i>Aphantopus hyperanthus</i>
Meadow brown	<i>Maniola jurtina</i>
Speckled wood	<i>Pararge aegeria</i>
Holly Blue	<i>Polyommatus icarus</i>
Ringlet	<i>Aphantopus hyperanthus</i>
Small Tortoiseshell	<i>Nymphalis urticae</i>
Peacock	<i>Nymphalis io</i>
Red admiral	<i>Vanessa atalanta</i>
Large white	<i>Pieris brassicae</i>

Moths at Sonairte 2008



Gold spangle



Buff-tip



Buff arches



Lesser swallow prominent



Ruby tiger



Canary-shouldered thorn



The Drinker



Common footman



Large yellow underwing



Poplar hawkmoth



Eyed hawkmoth



Elephant hawkmoth



Green carpet



Clouded border



Magpie



Large emerald



Brimstone



Garden tiger

Moths at Sonairte 2008

Angle shades	<i>Phlogophora meticulosa</i>
August thorn	<i>Ennomos quercinaria</i>
Barred umber	<i>Plagodis pulveraria</i>
Brimstone	<i>Opisthograptis luteolata</i>
Brimstone moth	<i>Opisthograptis luteolata</i>
Brown silver line	<i>Petrophora chlorosata</i>
Buff-tip	<i>Phalera bucephala</i>
Burnished brass	<i>Diachrysia chrysitis</i>
Canary-shouldered thorn	<i>Ennomos alniaria</i>
Clouded border	<i>Lomaspillis marginata</i>
Common footman	<i>Eilema lurideola</i>
Common quaker	<i>Orthosia incerta</i>
Common Swift	<i>Hepialus lupulinus</i>
Common wainscot	<i>Mythimna pallens</i>
Dog's tooth	<i>Lacanobia suasa</i>
Drinker	<i>Euthrix potatoria</i>
Early thorn	<i>Selenia dentaria</i>
Elephant hawkmoth	<i>Deilephila elpenor</i>
Eyed hawkmoth	<i>Smerinthus ocellata</i>
Garden dart	<i>Euxoa tritici</i>
Garden tiger	<i>Artica caja</i>
Gold spangle	<i>Autographa bractea</i>
Green carpet	<i>Colostygia pectinataria</i>
Heart and Dart	<i>Agrotis exclamationis</i>
Hebrew character	<i>Orthosia gothica</i>
Hebrew character	<i>Orthosia gothica</i>
Large emerald	<i>Geometra papilionaria</i>
Large yellow underwing	<i>Noctua pronuba</i>
Lesser broad bordered yellow underwing	<i>Noctua janthe</i>
Lesser swallow prominent	<i>Pheosia gnoma</i>
Magpie	<i>Abraxas grossulariata</i>
Mottled beauty	<i>Alcis repandata repandata</i>
Pale oak beauty	<i>Hypomecis punctinalis</i>
Pale oak beauty	<i>Hypomecis punctinalis</i>
Pale tussock	<i>Calliteara pudibunda</i>
Peach blossom	<i>Thyatira batis</i>
Poplar hawkmoth	<i>Laothoe populi</i>
Puss moth	<i>Cerura vinula</i>
Ruby tiger	<i>Phragmatobia fuliginosa fuliginosa</i>
Scalloped hazel	<i>Crocallis elinguaris</i>
Scorched carpet	<i>Ligdia adustata</i>
Silver ground carpet	<i>Xanthorhoe montanata montanata</i>
Small angle shades	<i>Euplexia lucipara</i>
Snout	<i>Hypena proboscidalis</i>
Sallow kitten	<i>Furcula furcula</i>
Turnip moth	<i>Agrotis segetum</i>
Valerian pug	<i>Eupithecia valerianata</i>
White ermine	<i>Spilosoma lubricipeda</i>

Biodiversity at Sonairte

The Tidal River CW2

The section of the River Nanny which flows adjacent to Sonairte is a tidal estuary. Estuaries are the downstream component of a river valley, these are subject to the tide and are therefore brackish. An estuary is defined as the lower limit of a tidal river where the channel begins to widen as it enters the sea. The mixing of fresh and sea water and mild currents leads to the deposition of fine sediments and the development of intertidal mudflats. Estuaries are of significant international importance for wintering water birds. In this regard, the section of the River Nanny, which flows, by Sonairte has been designated as a Special Protection Area under the EU Birds Directive. A large number of water birds have been identified on the estuary including Oystercatcher, Little Egret, Heron, Redshank and Brent. In addition, several mammal species are associated with estuaries including Otters, which have been observed on the stretch of the estuary adjacent to Sonairte. The River Nanny Estuary is a Special Protected Area due to its importance for wintering water birds.

The Lower and Upper Salt Marshes CM1 and CM2

A substantial area of salt marsh occurs beside the Nanny estuary. Salt marshes generally occur between the upper limits of the neap and spring tides in sheltered areas of coastline such as that adjacent to Sonairte. The lower and upper salt marshes at Sonairte are of a type known as an "Atlantic Salt Meadow". Different plants grow at different heights above the tide line. The lowest part along the tidal zone is dominated by such as Common salt-marsh grass (*Puccinellia maritima*). The mid-marsh zone is dominated by species such as Sea thrift (*Armeria maritima*), Sea plantain (*Plantago maritima*) and Sea aster (*Aster tripolium*), Lax flowered sea lavender (*Limonium humile*) and Sea purslane (*Atriplex portulacoides*). The Upper salt marsh is not flooded as often. It is dominated by rush and grass species such as the Sea club rush (*Scirpus maritimus*), Red fescue (*Festuca rubra*), Creeping bent (*Agrostis stolonifera*), Sea rush (*Juncus maritimus*). Herb species include Sea arrowgrass (*Triglochin maritima*) and Sea milkwort (*Glaux maritima*). The invasive alien species Common cord-grass (*Spartina anglica*) was found in the lower salt marsh adjacent to Sonairte. This could out compete the native plants at Sonairte and will need to be managed in the future.

Infralittoral muds SS3

Intertidal mudflats are normally associated with inlets, bays and estuaries. At Sonairte, the intertidal mudflats at Sonairte are submerged at high tide and exposed at low tide. The mudflat at Sonairte is comprised of fine sediments deposited by the River Nanny as a result of reduced current strength. The biodiversity of such a habitat is dependent upon the level of exposure experienced by the mudflat. As the mudflat at Sonairte is quite sheltered it is very likely that this portion of the estuarine mudflat is quite biodiverse. Estuarine mudflats are usually dominated by

osmo-regulators such as oligochaete (*Tubificoides* spp.) and polychaete (*Aphelochaeta marioni*) worms. The biodiversity of such invertebrate species is reflected in the number of waders present on the mudflat at low tide. Hence, the area of mudflat adjacent to Sonairte is considered as a core biodiversity area as it holds an essential food source for many species of bird. Because the estuary bridges the gap between the banks of the River Nanny and several marine habitats it is an essential component of a significant ecological corridor. Global warming and rising sea levels are a huge danger to the tiny wildlife of this habitat, as are pollution from upstream and the invasion of spartina grass which has already been mentioned. Without the creatures that live in the mud there would be no winter food for the birds.

Mixed Broadleaved/conifer woodland WD2

The woodland at Sonairte comprises a mixture of broadleaved native and non-native trees and conifers. Much of the eastern section of the woodland is dominated by Sitka spruce (*Picea stichensis*). The broadleaved component of this woodland is made up of Sycamore (*Acer pseudoplatanus*), Beech (*Fagus sylvatica*), Ash (*Fraxinus excelsior*) and Horsechestnut (*Aesculus hippocastanum*). The herb layer of this woodland is made up of Dog violet (*Viola canina*), Primrose (*Primula vulgaris*), Bluebell (*Hyacinthoides non-scriptus*), Tutsan (*Hypericum androsaemum*), Wood sanicle (*Sanicula europaea*), Herb Robert (*Geranium robertianum*) and Lesser Celandine (*Ranunculus ficaria*). Although this is quite a small area of woodland, it is crucial in the context of landscape functioning, acting as a stepping stone between habitats to the north of the R150 and the mosaic of core habitats located within the estuary. Although most of the trees are non-native this is an essential component of the green-infrastructure of the locality and should be maintained as such. In addition, the woodland and its associated scrub component provide essential sites for a variety of small birds.

Hedgerow WL1/Treeline WL2

The hedgerows at Sonairte run the length of the grounds bounded by the R150 and much of that bounded by the upper/lower salt marsh. Much of the hedgerow is made up of various spiny plants such as Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Dog rose (*Rosa canina*) and Holly (*Ilex aquifolium*). These two lengths of hedgerow are joined by a mature Ash (*Fraxinus excelsior*) treeline. Hence the combination of hedgerow and treeline forms a continuous corridor along the R150 to the core areas within the estuary. However, the hedgerow, which runs adjacent to the upper salt marsh, may also be considered as a buffering habitat, as it shelters and enhances connectivity of the salt marsh. By buffering the upper salt marsh, this portion of hedgerow increases the biodiversity importance of this habitat.

Although the hedgerows/treelines within the grounds of Sonairte are not protected by either Irish or European legislation, they form an integral and irreplaceable component of the green infrastructure of Sonairte and the Laytown locality. Because small losses in individual

trees/shrubs in a hedgerow like this impact greatly on its functioning as a ecological corridor the hedge is being maintained with the help of the Hedge Laying Association of Ireland.

Stone walls and other stonework BL1

The garden at Sonairte is surrounded by a tall stonewall which appears quite old and neglected and as such is particularly important for wildlife. The wall at Sonairte supports a variety of plant life such as Ivy (*Herdera helix*) and Red valerian (*Centranthus ruber*) and Harts tongue fern (*Phyllitis scolopendrium*) as well as an abundance of mosses such as *Tortula muralis* and a variety of lichens. The ivy on the wall creates ideal nesting sites for small birds, which feed in the garden such as Greenfinch (*Carduelis chloris*) and Great tit (*Parus major*).

Buildings and artificial surfaces BL3

This broad category relates to areas of built land such domestic and commercial buildings, roads, areas of tarmac, yards etc. At Sonairte, the buildings, residences, courtyards and car park are all components of this category. Birds such as swallows, starling and sparrows nest under eaves and in gaps in the old stonework

Horticultural land BC2

The garden at Sonairte is managed for the production of vegetables, fruit and herbs. Wild species include Figwort (*Scrophularia auriculata*), Common poppy (*Pavaver rhoeas*), Fumitory (*Fumaria* spp.) and Common chickweed (*Stellaria media*) occur in the garden. The garden is an essential source of food for bird species including Robin (*Erithacus rubecula*), Blackbird (*Turdus merula*), Great tit (*Parus major*), Blue tit (*Parus caeruleus*) and Greenfinch (*Carduelis chloris*).

Dry neutral grassland GS1

A substantial area of dry neutral grassland occurs adjacent to the garden at Sonairte. This area of grassland has not been fertilised in recent times but is grazed regularly. This grassland comprises several grass species including Timothy (*Phleum pratense*), Annual meadow grass (*Poa annua*), Creeping bent (*Agrostis stolonifera*), Sweet vernal grass (*Anthoxanthum odoratum*), Crested dog's tail (*Cynosurus cristatus*), Cock's foot (*Dactylis glomerata*) and Yorkshire fog (*Holcus lanatus*).

Dry meadows and grassy verges GS2

There are small areas of grassy verge on the edge of the woodland where it buffers this important stepping stone habitat. These have not been fertilised in recent times and are not grazed. This pattern of management has produced grassland with a high proportion of tussock forming grasses such as False Oat-grass (*Arrhenatherum elatius*), Cock's foot (*Dactylis glomerata*). Several other grasses are found here including Yorkshire fog (*Holcus lanatus*) and meadow foxtail (*Alopecurus pratensis*). Herbs here include species such as Common knapweed (*Centaurea nigra*), Nettles (*Urtica dioica*) and Bush vetch (*Vicia sepium*)

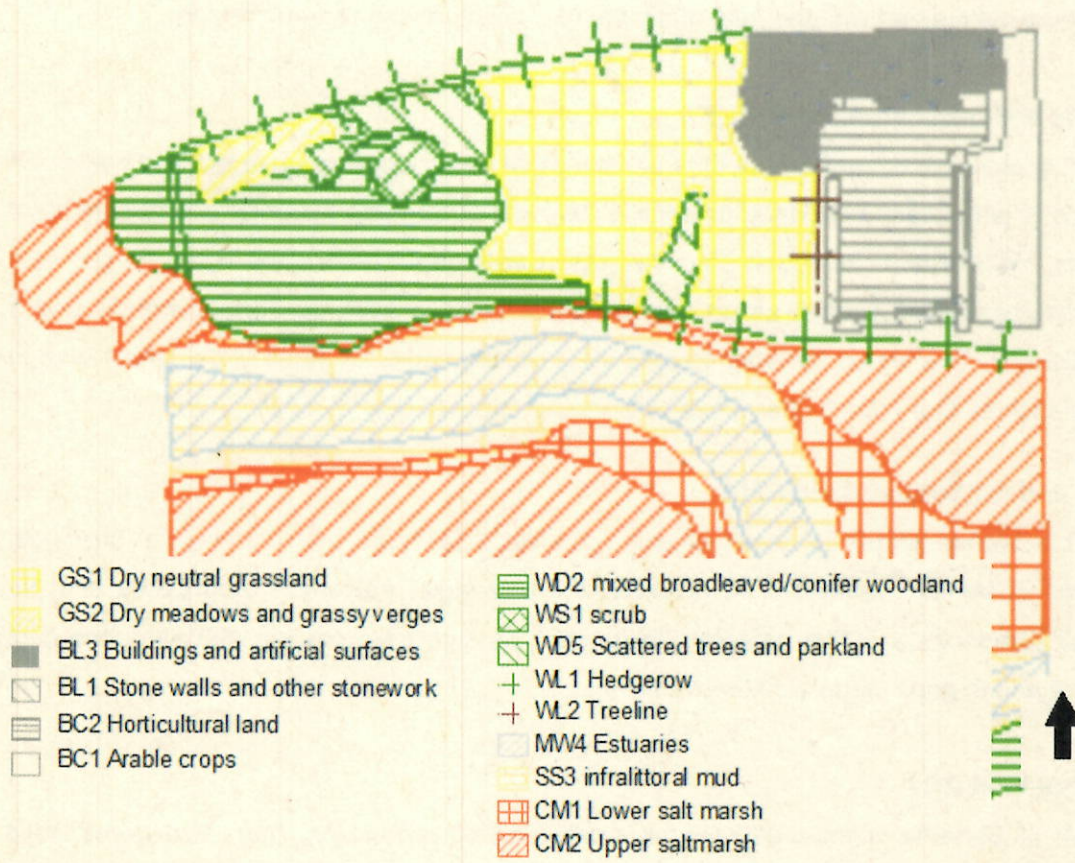


Figure 1: Habitat map of the grounds of Sonairte, colour coding of the map follows those of the Heritage Council (2005).