



Clifden Tidy Towns Biodiversity Plan 2014 to 2018



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Acknowledgements

Thanks to the Tidy Towns committee of Clifden who had the vision for this plan and the community who participated in the many walks and talks (over 300 people – too many to list!). Also thanks to the Transition year students of Clifden Community school and their teacher who prepared the habitat and invasive maps of clifden and to Scoil Mhuire national school for participating in this project.

The west of Ireland is renowned worldwide as a wilderness area with over 60% of the landscape of Connemara designated as being of international importance for biodiversity and conservation. The town of Clifden, the capital of Connemara is located in a uniquely beautiful area with much of the surrounding area classified as unique and outstanding in the County Development plan.

Clifden is located at the Western periphery of County Galway on the Atlantic seacoast in a sheltered harbour, Clifden Bay. The town is located amidst undulating landscape and is sheltered on all sides by hill and upland moor. Clifden Bay itself divides into two fingers, with the more Northerly, East-West finger harbouring Clifden Quay and town, and the southerly finger forming Ardbear Bay, which in turn connects with the large "Salt Lake". Clifden is one of a series of harbours facing the Atlantic, but it is sheltered to the North and South. Clifden itself lies in the sheltered valley between the Falkeeragh and Shanakeever hill ridge areas to the North and the Ardbear and Killymongan hill areas to the South. The Owenglin River which flows into the sea through the town of Clifden contains brown and sea trout as well as salmon.

The rich biodiversity of the area not only enhances the quality of life of the residents of Clifden but also underpins the local economy as many of the 968, 000 visitors to Galway in 2012 (Failte Ireland, 2013) visit Clifden and surrounding areas to experience this unique wilderness on the edge of Europe.

1.1 Vision for a Biodiversity Plan

In 2013 Clifden Tidy Towns successfully sought funding from the EAFRD Leader Programme administered by Forum Connemara Limited for a Biodiversity Plan for Clifden. The plan was to look at enhancing biodiversity in Clifden incorporating a considerable training element for the local community with the idea that increasing awareness would result in a more comprehensive and inclusive Biodiversity Plan.

2.0 Methodology

The Clifden Biodiversity Plan focused on encouraging the community to become aware of biodiversity through a series of educational workshops and field trips. Both adults and children were included with specific activities organized for different groups. The majority of the workshops and field trips were lead by ecologist Marie Louise Heffernan with additional input from Carol Reynolds (educational officer, Connemara National Park), Dermot Breen (Conservation Ranger, National Parks and Wildlife Service), John O'Halloran (Clifden Gun Club, Grouse Conservation) and Bryony Willams (Independent Ecologist, Liscarney, Westport).

2.1 Awareness raising walks

The walks attracted a minimum of eight people and a maximum of 70 with average numbers around 15 people attending.

Bird Walk

Birdwatching of Clifden Bay from the quays was lead by bird expert Conservation Ranger Dermot Breen who counts this site as part of the annual Birdwatch Ireland Wintering Bird Survey (IWeBS). Binoculars and telescopes were made available for bird watching on the day. Waders such as Curlew and Wildfowl were observed as well as some small birds including rock pipits on the seashore. Cross bills and Gold crests were noted in trees close by.

Bat Walk

The Bat walk down Riverside was lead by independent ecologist Bryony Williams and was attended by 40 children and 30 adults. There were 5 bat detectors available and Pipistrelles bats were seen and heard amongst the trees along the river.

Darcy Monument Walk(2 separate walks)

The focus was on plant and habitat identification. Identification of different heathers were explained and in particular note was made of the specialty heather of the area St Dabeoc's Heath. Note was made of plants valuable for feeding butterflies in particular Marsh Fritillary a rare butterfly of international conservation importance associated with Connemara.

Riverside Walk

Riverside and the railway line was selected for mammal tracking. Observations were made of badger snuffle holes and droppings and habitat selection and management was discussed on site. Much of this area is no longer grazed and there is encroachment of scrub. Land management issues were discussed in relation to value of these areas for wildlife and desired actions to improve habitats here. Gunnera and Himalayan Balsam were noted and this led to discussions on invasive species and control.

Ball Alley

The Ball Alley area near the seashore is proposed for development into a town park. The site was visited and it was discussed how best this area could be developed so as to enhance biodiversity and raise awareness in this park.

Salt Lake and Seashore

Transition year students were taken to the seashore. Observations of birds using telescope and binoculars were made. Discussion explored the splash zone habitats and use of habitats by different species.

2.2 Awareness Raising Talks

The following topics were covered in 11 classroom style sessions. The audience was mainly adults and average attendance was 13 people.

- Mammals
- Mammal Tracking
- Bird identification
- Habitat mapping and plant identification
- Conservation Areas of International importance within Clifden
- Grouse Conservation Project Cregg Hill (John O Halloran)
- Planting and other actions for Biodiversity (Carol Reynolds)
- Invasive species and control

2.3 Involving the Schools

Twenty two teenagers in Transition Year Clifden Secondary School under the direction of teacher Olivia Staunton prepared the habitat map for the biodiversity over the period of two months. They attended two talks and two outdoor sessions. The learning focused particularly on habitat identification and mapping with additional information on birds and mammals identification and tracking.

Over 100 children in the national school learnt about bird identification in the classroom.

2.4 Feedback to Plan

Throughout the programme peoples views were sought on how to enhance biodiversity in Clifden and methods of raising awareness of biodiversity in the future. Opinions were also sought via a survey on Survey Monkey and through specific topic workshops.

3.0 Description of Biodiversity in Clifden

3.1 Designated Areas

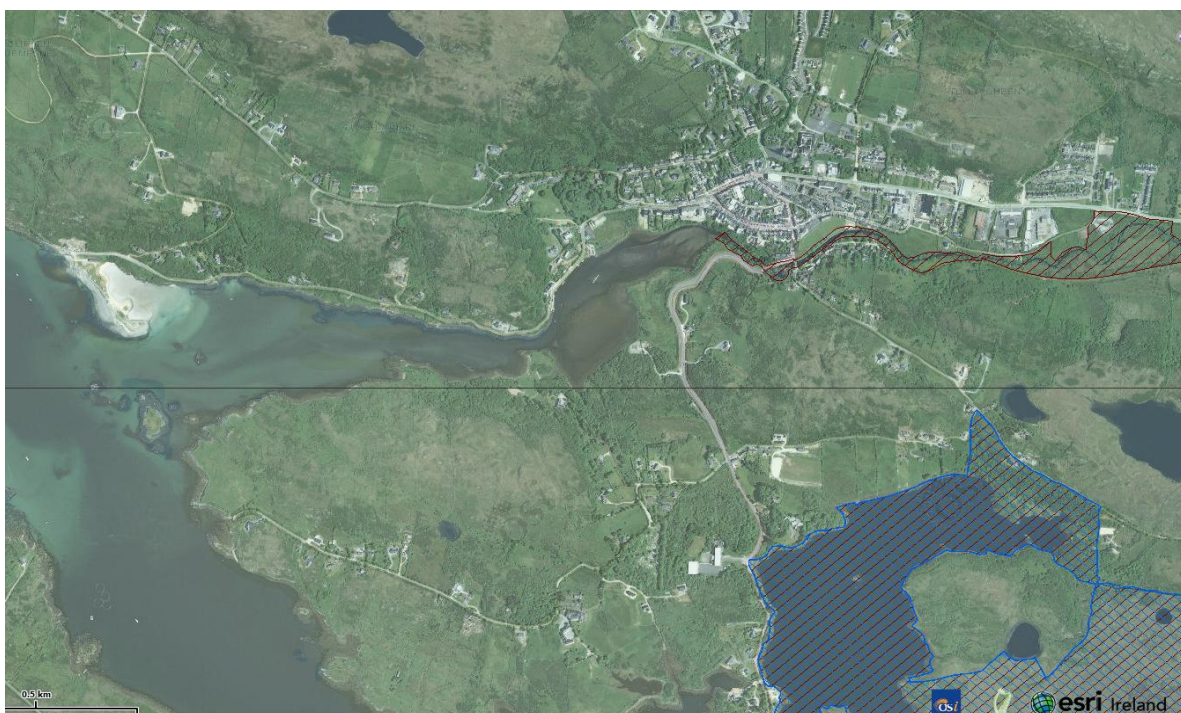
Two areas of International conservation importance lie within the Clifden Town Boundary. These are

Connemara Bog Complex SAC (Site Code 2034)

Connemara Bog Complex is 48,000 ha in size and include the large area of Roundstone Bog. It is principally a designation for bogs, heaths, unpolluted lakes and for the species Slender Niaid (an aquatic plant), Marsh Fritillary, Otter and Salmon. The Salt Lake is within the Clifden town boundary and included in this designation.

Twelve Bens Garraun Complex SAC (Site Code 2031)

Twelve Bens Garraun Complex is mainly designated for vegetated rocky slopes, heaths, Blanket bogs, unpolluted lakes and for the species Slender Niaid (an aquatic plant), freshwater pearl mussel, Otter and Salmon. The Owenglin river that runs through Clifden is included in this designation and supports Otter and Salmon.



Map 1: Designated areas Connemara bog Complex (blue), Twelve Bens Garraun Complex SAC (Red) (source www.NPWS.ie)




3.2 Habitats, Flora and Fauna

3.2.1 Habitats

The Habitat map is being produced by the Clifden Community School Transition Year Students and will be attached in Appendix I.

3.2.2 Flora and Fauna

Although there is much Flora and fauna of interest in the Clifden Area this section seeks to describe plants, animals, birds and fish that are particularly associated with Clifden so that they might become symbols in the quest for enhancing and protecting the biodiversity of this area. Those selected are of particular conservation importance or associated with the habitats present in Clifden and the wider area (defined as a the town boundaries plus 5km).

<p>Saint Dabeoc's heath (<i>Daboecia cantabrica</i>). Saint Dabeoc's Heath is a native wild heather which is evergreen. It has glossy dark-green leaves that are white on the underside and flowers from May-October. Its distribution in Ireland is limited to Galway and Mayo. The nearest other location of this rare plant is western France. This plant is found commonly in Clifden and during the Biodiversity Clifden Project was noted at the Darcy Monument as well as beside Clifden Community School.</p>	
<p>Marsh Fritillary (<i>Euphydras aurinia</i>), The Marsh Fritillary, is the only Irish butterfly species protected under the EU Habitats Directive. Once widespread, this species declined severely during the 20th century due to loss of uncultivated grasslands; overgrazing on remaining habitat; and its requirement for extensive habitat area and wildlife corridors. There are records of this species within 5 km of Clifden town.</p> <p>The food plant of the Marsh Fritillary is Devils bit Scabious which is common throughout Clifden. A large area of this plant was noted in September at the Darcy Monument during a Biodiversity Walk. It is possible that these rare butterflies are breeding within the town.</p>	
<p>Otter (<i>Lutra lutra</i>) The Owenglin River which Flows through Clifden is designated as of international iimportance for Otter. Macdonald & Mason (1994) found that otters were rare or extinct in much of central Europe in the early 1990s. Otter have made a good recovery in the last twenty years but numbers are low and otter are still extinct in some of Europe notably Switzerland. Ireland is the European stronghold for this species with the numbers higher in the western region according to Bailey and Rochford (2006)</p>	

Salmon (*Salmo salar*)

The Atlantic Salmon in freshwater is listed as of international importance. Some of the best rivers for this species are found in the west of Ireland. They require very high water quality and cool waters. The Owenglin River is a known salmon river selected for this species.



Red Grouse (*Lagopus lagopus*)

Grouse have lost 50% of their historical breeding range in the last 40 years according to the most recent national survey. In recent years there has been a serious decline linked to overgrazing though undergrazing is also a limiting factor for these birds that require both old and young heather to thrive and breed. During the Biodiversity project we were made aware of a Biodiversity Project to enhance grouse just 5km from Clifden town run by the Clifden Gun Club on Cregg hill in cooperation with the landowners.



4.0 Aims and Objectives

Through extensive consultation with the community the following objectives were selected

1. Raise Awareness of Biodiversity in Clifden
 - Education of public
 - Education in Schools
 - Signs and Information
 - Public Walks for Tourists and locals
 - Collection of Information
2. Enhance Biodiversity through Actions
3. Protect Biodiversity through Actions
4. Collection of Information and Monitoring



Photo 1. A View of Clifden Bay from Ballyconneely Road

**note the range of habitats present from wet grassland to seashore, tidal mudflats, heaths and scrub.*

5.0 Programme of Action

5.1 Raise Awareness of Biodiversity in Clifden

Raising Awareness Walks				
	Action	Timeframe	Lead	Partner
1.1	Dawn Chorus	Annual (May)	Clifden Tidy Towns	NPWS
1.2	Wildflower Walk	Annual (July)	Clifden Tidy Towns	Aster
1.3	Organise Bat Walks and source funding to buy Bat detectors	Annual (early Sept and April)	Clifden Tidy Towns	TBC
1.4	Seashore Walk	Annual (November)	Clifden Tidy Towns	Aster
1.5	Cregg Grouse Walk	Within the 5 year plan	Clifden Tidy Towns	Gun Club and landowners
1.6	Plant Identification	Within the 5 year plan	Clifden Tidy Towns	TBC

Raising Awareness talks				
	Action	Timeframe	Lead	Partner
1.7	Connemara Bee keepers	Within the 5 year plan	Clifden Tidy Towns	Connemara Bee Keeping Association

Raising Awareness Schools				
	Action	Timeframe	Lead	Partner
1.8	Competition to hear the first cuckoo/see first swallow	Annual (April)	Clifden Tidy Towns	Schools in Clifden Birdwatch Ireland Migration Watch
1.9	Birdwatch Ireland Garden Bird Survey	Annual (Dec to Feb)	Clifden Tidy Towns	Schools in Clifden
1.10	Teach children to identify and map Japanese knotweed	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden
1.11	Assist in planning National School Garden	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden
1.12	Teach children about planting	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden

	and encourage them to use this knowledge to plant Tidy Town Plant boxes			NPWS (Carole Reynolds)
1.13	Mammal Talk	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden NPWS (Carole Reynolds)
1.14	Tree Identification Talk	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden NPWS (Carole Reynolds)
1.15	Butterfly Talk	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden NPWS (Carole Reynolds)
1.16	Insect/Bug Talk	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden NPWS (Carole Reynolds)
1.17	Wild Flower Talk	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden NPWS (Carole Reynolds)
1.18	Ocean Marine Life Talk	Within the 5 year plan	Clifden Tidy Towns	Schools in Clifden TBC

Public Awareness Maps and Signs				
	Action	Timeframe	Lead	Partner
1.19	Information signs at Ball Alley to identify Birds in Bay	Within the 5 year plan subject to funding etc	Clifden Tidy Towns	Clifden Community council
1.20	Put in place Permanent Telescope on quays and at boat club.	Within the 5 year plan subject to funding etc	Clifden Tidy Towns	Clifden Community Council
1.21	Connemara Community Radio and Journal to cover events	On going	Clifden Tidy Towns	Radio and the Journal
1.22	Investigate Bird nest Camera in shop window	Within the 5 year plan subject to funding etc	Clifden Tidy Towns	Local shop or library

Public Walks for Tourists and Locals				
	Action	Timeframe	Lead	Partner
1.23	New Walk developed from Playground to Darcy Monument	Within the 5 year plan subject to funding etc	Clifden Tidy Towns	Forum and or Failte Ireland Landowners
1.24	Derrylea Walk Develop section called Butterfly walk and plant and mark accordingly	Within the 5 year plan subject to funding etc	Forum	Clifden Tidy Towns
1.25	Dooneen Walk Survey and produce a Map showing route and hotspots for biodiversity	Within the 5 year plan subject to funding etc	Clifden Tidy Towns	Forum Recreation Officer and Failte Ireland
1.26	Riverside Walk Survey and produce a Map showing route and hotspots for biodiversity	Within the 5 year plan subject to funding etc	Clifden Tidy Towns	Forum Recreation Officer and Failte Ireland
1.27	Input into Greenway development for biodiversity. Investigate edible greenway.	Within the 5 year plan subject to funding etc	Clifden Tidy Towns	Forum Recreation Officer and Failte Ireland

Raising Awareness Events				
	Action	Timeframe	Lead	Partner
1.28	Sat Patricks Day Theme for Parade Biodiversity	Within the 5 year plan	Clifden Tidy Towns	
1.29	Pub Quiz on theme of Biodiversity	Within the 5 year plan	Clifden Tidy Towns	

Raising Awareness Publications				
	Action	Timeframe	Lead	Partner
1.30	Maps and pamphlets on Clifden Biodiversity with pictures	Within the 5 year plan	Clifden Tidy Towns	Forum, Failte Ireland and Clifden Tourist Office.

5.2 Enhance Biodiversity through Actions

Enhance Biodiversity				
	Action	Timeframe	Lead	Partner
2.1	Leave mosses, lichens and ferns on stone walls and ivy on trees	Annual	Clifden Tidy Towns	
2.2	Leave areas of Grass uncut and trim edges to show planned management	Annual	Clifden Tidy Towns	Galway County Council and FAS
2.3	Leave dead trees in place where no hazards exist	Annual	Clifden Tidy Towns	
2.4	Plant Native Trees	Annual	Clifden Tidy Towns	
2.5	Plant Herb Garden or Herb pots to attract insects	Annual	Clifden Tidy Towns	
2.6	Plant flowers high in nectar e.g. Buddleia, Cedum, Lavender to attract butterflies and other insects N59 approach road	Annual	Clifden Tidy Towns	Contact www.wildflowers.ie
2.7	Plant or retain nettles where possible	Annual	Clifden Tidy Towns	
2.8	Encourage Businesses to Sponsor flower boxes or herb pots within the town	Within the 5 year plan	Clifden Tidy Towns	
2.9	Erect Bird Boxes	Annual	Clifden Tidy Towns	Forum (Marie Feeney)
2.10	Erect Bat Boxes	Annual	Clifden Tidy Towns	Forum (Marie Feeney)

2.11	Liaise with Secondary School re Making bird feeding tables or bug hotels for primary school	Within the 5 year plan	Clifden Tidy Towns	Clifden Community School
2.12	Encourage people to take these actions in their own gardens	Within the 5 year plan	Clifden Tidy Towns	
2.13	Install bug hotels in key locations. Support with publicity campaign	Within the 5 year plan	Clifden Tidy Towns	Connemara Journal
2.14	Planting wildflower border on N59 approach Galway Road into Clifden	Within the 5 year plan	Clifden Tidy Towns	Galway County Council TUS
2.15	Planting wildflower area as alternative to strimming on N59 at Gowlaun.	Within the 5 year plan	Clifden Tidy Towns	Galway County Council TUS
2.16	Use Peat Free compost where possible	Within the 5 year plan	Clifden Tidy Towns	
2.17	Identification and mapping of local areas within Clifden of nature conservation importance/fragile ecosystems	Within the 5 year plan	Clifden Tidy Towns	

5.3 Protect Biodiversity Through Actions

Control Invasive Species				
	Action	Timeframe	Lead	Partner
3.1	Clear out Gunnera infestation	Within the 5 year plan subject to funding and “buy in” from lead groups. Ongoing Annual Control	Galway County Council or Forum (TUS) Or Conservation Volunteers Ireland	Clifden Tidy Towns
3.2	Map Japanese knotweed infestation in Clifden	Within the 5 year plan	Galway County Council or Forum (TUS) Or Conservation Volunteers Ireland	Clifden Tidy Towns
3.3	Treat Japanese Knotweed infestation as shown on map	Within the 5 year plan subject to funding and “buy in” from lead groups	Galway County Council or Forum (TUS) Or Conservation Volunteers Ireland	Clifden Tidy Towns
3.4	Articles in Connemara Journal on Invasive Species and their control	Within the 5 year plan	Clifden Tidy Towns	Connemara Journal

Liaise with Various Authorities				
	Action	Timeframe	Lead	Partner
3.5	Liaise with Council re spread of Invasives and use of pesticides	During 5 year plan	Clifden Tidy Towns	Galway County Council
3.6	Liaise with Council and other authorities on Biodiversity	During 5 year plan	Clifden Tidy Towns	Galway County Council
3.7	Liaise with Council and other authorities retaining wilderness value of area (Road Signs etc)			

5.4 Collection of Information and Monitoring

Monitoring				
	Action	Timeframe	Lead	Partner
4.1	Secondary school to repeat river monitoring of Q values which was carried out 10 years ago	Within the 5 year plan	Olivia Staunton	Clifden Tidy Towns
4.2	Secondary school to repeat Water monitoring of Clifden Bay	Within the 5 year plan	Olivia Staunton	Clifden Tidy Towns
4.3	Encourage locals to participate in Garden Bird Survey. Buy guides and binoculars	Within the 5 year plan	Clifden Tidy Towns	Birdwatch Ireland
4.4	Get BioBlitz to come to Clifden the next time the Connemara National Park is being Blitzed (essentially a one day species race)	Within the 5 year plan (Heritage week)	Clifden Tidy Towns	NPWS
4.5	Survey for Marsh Fritillary	Within the 5 year plan (Aug/Sept)	NPWS	Clifden Tidy Towns
4.6	Participate in Irish Butterfly Monitoring Scheme and buy nets and identification guides	Within the 5 year plan	Clifden Tidy Towns	Biodiversity Ireland
4.7	Frog Survey Survey the high numbers of frogs on the Cleggan road	Within the 5 year plan	Clifden Tidy Towns	Biodiversity Ireland
4.8	Return monitoring results to Biodiversity Ireland	Within the 5 year plan	Clifden Tidy Towns	Biodiversity Ireland

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Cummins, S., Bleasdale, A., Douglas, C., Newton, S., O'Halloran, J. & Wilson, H.J. (2010) The status of Red Grouse in Ireland and the effects of land use, habitat and habitat quality on their distribution. Irish Wildlife Manuals, No. 50. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.

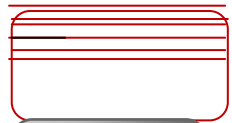


Map 1: Habitat Map of Clifden as prepared by Transition Year Students Clifden Community School

LEGEND FOR CLIFDEN HABITAT MAP



Brown= Dry Heath



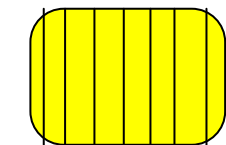
Red= Salt Lake



Grey= buildings and roads



White, no fill = Improved Agricultural Grassland



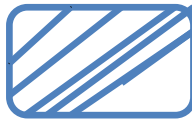
Yellow/stripes= Amenity Grassland



Blue/stripes= Acid Oligotrophic Lake



Blue = Sea /Bay



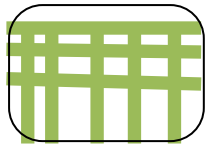
Blue/ stripes slanted = estuary



Yellow= dry, humid grassland



Purple gridded= lowland blanket bog



Green Gridded = Conifer Woodland



Green Striped= Deciduous Woodland



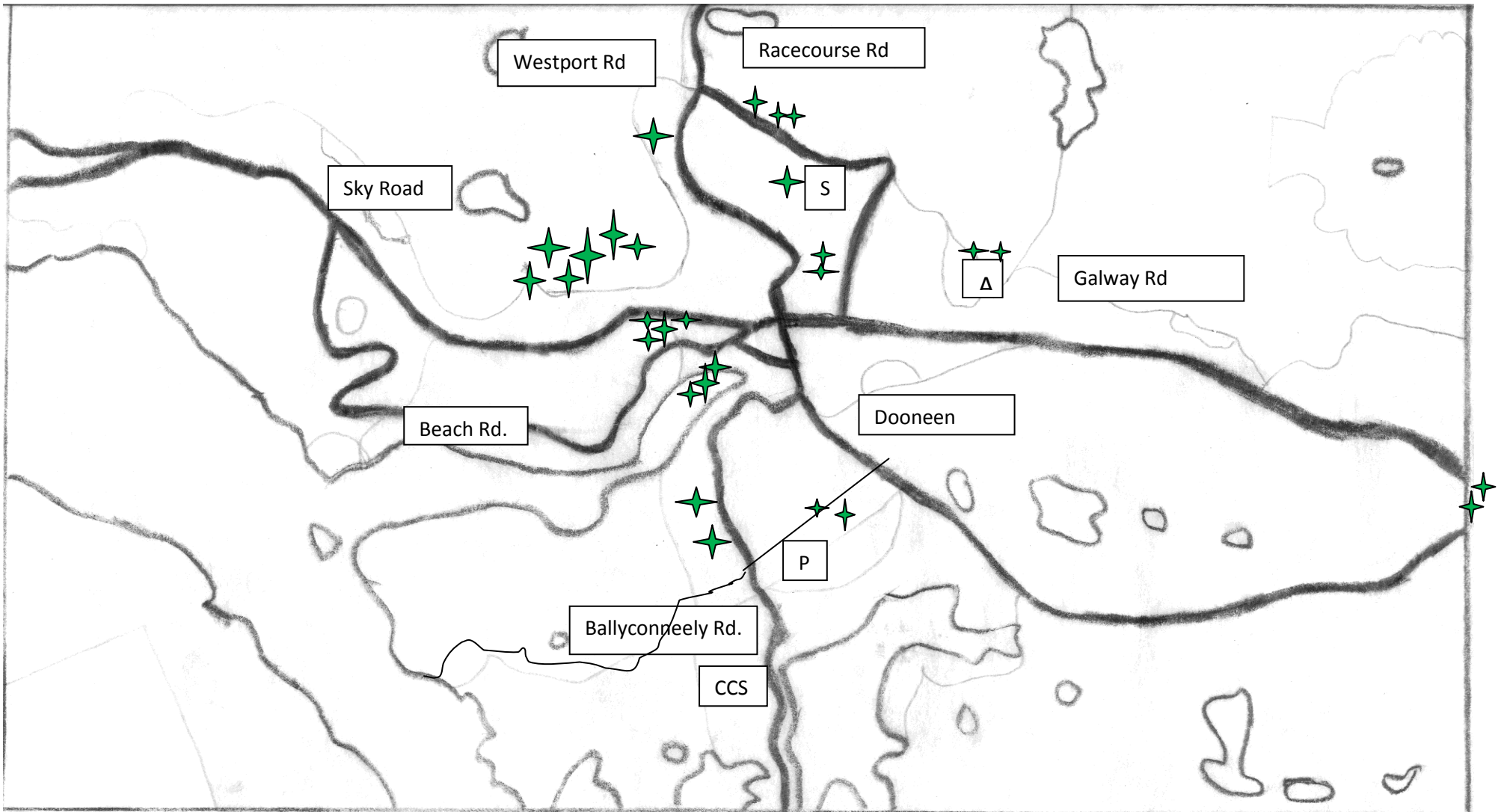
Red = Rocky Sea Cliffs



Sand / Beach



Sea Stack



Map2: Invasive Species, *Gunnera* in Clifden Area as prepared by Transition Year Students Clifden Legend

Legend for Map of *Gunnera*

CCS= Clifden Community School

P= Rugby Pitch/ Monastery Field

S= Scoil Mhuire

A= Aldi

Project Clifden Community School Students involved in Habitat and Gunnera Mapping were Daniel Keane, Henry O Toole, Katie Bolger, Sean Pryce, Mairead Clarke, Neethu Venat, Ciaran Connolly, Callum Wallace Lyons, Helena Conroy, Rebecca Walsh, Joeleen Conroy, Shane Laffey, Lauren de Lappe, Laragh Gray, Jake Grover, Roma Joyce, Caitriona King, Sarah Maher, Fionn McAleer, Emmet Moran, Eythan Mortimer and Shane O Reilly

Teacher : Olivia Staunton