

# Development Plan

**for the property at Ballyteige Burrow owned  
by the Kilmore Quay Community  
Development Association  
Limited**

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— July 2008 —

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Front cover: The seashore adjoining the company property at Ballyteige Burrow. [Photo: Jim Hurley, June 2008]

## **Executive summary**

- This is a Development Plan for the area of sand dunes at Ballyteige Burrow owned by the Kilmore Quay Community Development Association Limited. The Development Association holds the property in trust for the local community.
- A Draft Development Plan was produced on 30 May 2008, a one-month period of consultation followed, and a Public Meeting was held on 13 June 2008 to maximise community involvement.
- The Draft Plan, as amended, was adopted by the Development Association on 1 July 2008.
- This plan covers the five-year period 2008-2013.
- The background to the Plan is outlined.
- The community property at Ballyteige Burrow is described in considerable detail. Its location and boundaries are defined. Its infrastructure, and its physical, biological and cultural features are detailed.
- The scientific interests of the dune system are set out and both the ecological significance of the site and the conservation designations that the area is subject to are explained.
- Past and present management initiatives are discussed.
- Nine objectives of the Development Association for managing the property at Ballyteige Burrow over the next five years are set out.
- A comprehensive list of published sources of information about Ballyteige Burrow and its environs is appended.



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# **1 INTRODUCTION**

## **1.1 Rationale**

The reasons for devising this plan were fourfold:

- to have an agreed vision among members of the Kilmore Quay Community Development Association (KQCDA) for the future development of the community property at Ballyteige Burrow,
- to protect and enhance the local natural environment by raising awareness, and by informing, engaging, and involving the local community,
- to identify needs for the development and promotion of the property as a local amenity while actively seeking to contribute to the conservation of the area's natural heritage resource values, and
- to have a more transparent and coherent basis for applications made by the KQCDA for funding from grant-awarding agencies for projects at their property at Ballyteige Burrow.

## **1.2 Background**

### **1.2.1 Origin and scoping**

On 7 February 2008, Jim Hurley, SWC Promotions, was commissioned by the Wexford Organisation for Rural Development (WORD) to write a development plan for the area in question in consultation with committee members of the Kilmore Quay Community Development Association (KQCDA). His terms of reference and the scoping for the plan were agreed at a meeting attended by him and KQCDA committee members held in the Stella Maris Centre on 19 February 2008. Both the layout and content of this plan are in keeping with the agreements reached at that meeting. It was also agreed at that meeting that he would deliver a final draft of the plan in June 2008.

### **1.2.2 Draft plan**

On 30 May 2008 fifteen copies of a draft of the proposed plan were delivered to the Secretary of the Development Association for distribution to members. Copies were also distributed to WORD, Wexford County Council, the National Parks and Wildlife Service, Sofrimar Limited, and other interested parties. A copy was made available for public inspection at the reception desk in the Stella Maris Centre. Comments with regard to the draft were invited. Interested parties were asked to make submissions, not later than Monday 30 June 2008, to Jim Hurley, SWC Promotions, Grange, Kilmore, Co Wexford, e-mail swc@eircom.net, telephone (053) 912 9671, mobile (086)163 7199. In the interests of seeking to maximise community involvement, an oral presentation of the draft was made at a public meeting held in the Stella Maris Centre on Friday 13 June 2008. All interested parties were invited to attend the presentation and to make comments or oral submissions if they so wished.

### **1.2.3 Public meeting**

The public meeting was held at 8pm on Friday 13 June 2008 as planned. It was advertised by Jim Hurley by displaying eight A4-size coloured posters in shops and business premises in both Kilmore Quay and Kilmore villages, and by notices placed in the church newsletters distributed at Kilmore Quay, Kilmore and Mulrankin, and in the local press (*Wexford People*, issue dated 11 June 2008, page 57, and *Wexford Echo*, issue dated 11 June 2008, page



126). On the night, twenty-seven people attended. The attendance included Jim Moore, Chair, Mike Maguire, Secretary, and Committee members of the Kilmore Quay Community Development Association (KQCDA Ltd), and Eileen Dake, Project Manager, Wexford Organisation for Rural Development (WORD). Jim Moore welcomed everybody, outlined the background to the Development Plan and introduced Jim Hurley, the plan author, who gave a fifty-minute PowerPoint presentation on the content of the draft plan. He also answered some brief questions about the plan's content. The meeting was then thrown open to the floor and a lively discussion took place with regard to both the content of the draft plan, and long-term plans for the village and its environs. Issues that generated considerable discussion included

- a) The provision of parking spaces in the village for touring camper vans,
- b) the need for a caravan park in the area,
- c) the problem of litter on the roads and rubbish being dumped in farmland,
- d) rubbish on the beaches and black sacks of litter being left near the beach,
- e) the possibility of securing a Blue Flag for The Little Strand, and
- f) the need for greater feedback from the KQCDA to the local community.

With regard to the draft development plan ownership of the community property, the legal status of the company and the nine Company Objectives for the Site were discussed. Interpretative boards naming fauna and flora along the sides of the walking track were suggested. It was claimed that flooding on the Coastal Path in winter is not a drainage problem and could be solved by top-dressing the affected areas with sand to raise the level of the path. The idea of interpretative material being made available in The Sluice House was welcomed as was the suggestion of training local people as guides.

Contributions to the discussions were made by the following, in order of speaking:

- |                   |                     |                   |
|-------------------|---------------------|-------------------|
| • John Power      | • Dickie O'Sullivan | • Rose Hurley     |
| • John Rossiter   | • Noel Howlin       | • Ann Maddock     |
| • Billy Bates     | • Jo Doyle          | • Fin Howlin, and |
| • Mary Doyle      | • Billy Winters     | • Séamus O'Keeffe |
| • Richard Winters | • Graham Kitt       |                   |

Jim Moore clarified several matters with regard to the functioning of the KQCDA Ltd. In answer to a question, Jim Hurley stated that it was not envisaged that the implementation of the proposed Development Plan would lead to restrictions on people continuing to enjoy the amenities of Ballyteige Burrow.

Eileen Dake outlined the role of WORD and explained the types of projects that were likely to attract funding; these included the training of local guides, making The Cutting secure from a safety point of view, development of facilities for tourists, etc.

Jim Moore thanked everyone for his or her contribution and brought the meeting to a close.

#### **1.2.4 Adoption of draft plan**

A meeting of members of the Kilmore Quay Community Development Association was held at 8pm on 1 July 2008 in the Stella Maris Centre. Jim Hurley attended and the draft plan was discussed. Jim Hurley stated that he received no submissions. Jim Moore stated that he received one submission about the possibility of locating a wind farm on the dunes. With the exception of one point of clarification with regard to the Rural Environment Protection Scheme members of the Development Association expressed their satisfaction with the draft plan. The Chair expressed his pleasure with the comprehensive nature of the proposed plan, the success of the public meeting, the PowerPoint presentation, and the public consultation process. On behalf of the Committee, he complimented and thanked the plan author. The adoption of the draft plan was formally proposed and seconded and was carried unanimously.



### 1.3 The company

The first Kilmore Quay Development Association was formed in June 1964 (Figure 1). The Kilmore Quay Community Development Association (KQCDA) followed in 1985 as a further community initiative. At that time it comprised locally-based volunteers with Trustees-Directors, Chair, Secretary, and Treasurer. The association was incorporated as a guarantee company without a share capital (public) on 20 March 2003 (Registered Company Number E0354730). The company secretary is Michael Maguire and the registered address of the company is the Stella Maris Centre, Kilmore Quay, Co Wexford. On 7 November 2007, the Charities Section of the Revenue Commissioners granted the company charitable tax exemption (Charity Number 12660) under Section 207 of the *Taxes Consolidation Act, 1997* (S.I. Number 39 of 1997). The company sources funding in three main ways

- by its own initiatives (leisure activities in the Stella Maris Centre, an annual Seafood Festival, Bird Rock Café, Internet Café, and several community-based activities),
- by annual income from the Rural Environment Protection Scheme (REPS) at Ballyteige Burrow (see Section 2.9.4 below), and
- by income from grant-awarding agencies.

The company reports to the local community and other interested parties at its Annual General Meeting.

Committee Members of the Development Association during the period February-July 2008 are listed below.

Jim Moore (Chair)  
Tony Kelly (Vice Chair)  
Mike Maguire (Secretary)  
Ella O'Sullivan (Treasurer)  
Joanne Brannigan (Assistant Treasurer)  
Fr Jim Cogley  
Paddy Kelly  
Dickie O'Sullivan  
Margaret Power  
Rob Roche  
Maisie Whelan

## 1.4 The company property

The company owns part of the sand dune system that comprises the townland of Ballyteige Burrow adjoining the village of Kilmore Quay (for details see Section 2.1 below). The 42ha property was purchased by common subscription in 1986 for the sum of £30,727.25. It was purchased for use by the local community for recreational purposes. In this report the 42ha property at Ballyteige Burrow owned by the Kilmore Quay Community Development Association Limited, and held in trust by the company for the local community, is referred to as 'the company property'.

## 1.5 WORD

The Wexford Organisation for Rural Development (WORD) is a limited company that was established in 1992. The company has played a key strategic role in promoting an innovative and comprehensive approach to the long term development of rural Wexford. As part of the LEADER programme — a European Union initiative for assisting rural development — WORD is funded by the Irish Government under the National Development Plan 2000-2006 and is part financed by European Union Structural Funds. WORD works to provide grant aid and supports to communities in rural areas, empowering local communities, businesses and individuals in these areas to identify needs and devise appropriate solutions.

## 1.6 Period of the plan

This Development Plan covers the five-year period 2008-2013.

### DEVELOPMENT ASSOCIATION FORMED

A very well attended meeting of residents of Kilmore Quay district was held in the Stella Maris Hall. The meeting was called for the purpose of forming a local development association. A very lively discussion took place in which matters needing attention, such as the proposed extension to the pier, the dumping of refuse on Ballyteigue Burrow, the erection of a suitable toilet in the vicinity of the pier, roads and other matters, were discussed. The following officers and committee were elected: President, Rev. P. McDonald, C.C.; chairman, Sergeant D. Spillane; vice-chairman, Mr. Thomas Howlin, P.C.; hon-secretary, Mr. Patrick Murphy; assistant hon-secretary, Mr. Patrick Kehoe; hon-treasurer, Mr. John Sutton. Committee: Mr. James Monaghan, P.C. and James Flaherty (farmers), Frank Scallan and William Bates (boat owners), Stephen Scallan and Billy Bates (shore fishermen), Joseph Maddock and James Kehoe (youths), Paddy Maddock (tradesman), Patrick Duggan (professional), Eamonn Doyle and Francis Walsh (businessmen). It was decided to co-opt representatives of farm labourers and a ladies section.

*Figure 1: News item from The People newspaper, June 1964.*

(Source: Power, 1993 page 27)

## **1.7 Acknowledgements**

The following people provided useful information and/or answered questions; their assistance and inputs are gratefully acknowledged.

- Jim Moore, Chair; Mike Maguire, Company Secretary; and Committee members of the Kilmore Quay Community Development Association Limited;
- Eileen Dake, Project Manager, Wexford Organisation for Rural Development (WORD);
- staff of the National Parks and Wildlife Service (NPWS) especially Lorcán Scott, District Conservation Officer, Tony Murray, Conservation Ranger, and Jason Monaghan, Education Officer;
- Olivia Crowe, Data Manager, I-WeBS Office, BirdWatch Ireland;
- Dr Andy Sleeman, Geological Survey of Ireland;
- Dr John Breen, Chemical and Life Sciences Department, University of Limerick;
- Geoff Barry, REPS Planner and Agricultural Consultant;
- Leslie Bates, Chairman and Managing Director, Sofrimar Limited;
- Ibar and Nuala Power, Park Farm, Duncormick;
- Fin Howlin, Ann Maddock and Rose Hurley;
- all those who contributed at the Public Meeting.

## 2 PROPERTY DESCRIPTION

### 2.1 Location

The company property adjoins the village of Kilmore Quay and comprises an area of stabilised and vegetated sand dunes in the townland of Ballyteige Burrow. The townland Ballyteige Burrow has an area of 269.44ha (665 acres, 3 roods, and 6 perches including 2 acres, 3 roods, and 10 perches of water; OSi 1925). The very fine dune system extends in a north-westerly direction from Kilmore Quay village for a distance of almost 10km. Most (84%) of the sand dune system is a nature reserve owned by the State. The boundary of the nature reserve is delineated on the attached map (Figure 2) by a red line.

The company property extends from the village of Kilmore Quay to the red line marking the south-eastern boundary of the nature reserve. The property has an area of 42.22ha. It is 1.6km long and has a mean width of 225m.

Since the hummocky dune field has relatively few easily described reference landmarks in it, specific points within the company property are identified by coordinates of the Irish National Grid (ING). The property is covered by part of four 1km ING squares (S9504, S9604, S9503, and S9603) (Figure 2 and Figure 3).



Figure 2: Location map. The grid is of 1km side.

(Source: OSi, 1999 by permission of Ordnance Survey Ireland, Permit No 8475. © Ordnance Survey Ireland/ Government of Ireland)

The company property varies in width from 90m at its narrowest point (S962034) to 350m at its two widest points (S963038 and S957046). In 1922 seventeen dunes were recorded rising to heights in excess of 50foot = 15.24m (OSi, 1925) while twelve dune areas are elevated above 10m on more recent maps (OSi, 1999). Comparison of elevated areas mapped during the 1840 ordnance survey (OSi, 1841) with the landforms that exist today suggests that some of the dunes appear to have been remarkably stable for the past 168 years. Two trigonometrical points are marked on the six-inch Ordnance Survey sheet (OSi, 1925) giving the highest points in the property at the time as dune crests at 64foot = 19.5m (S955044) and 60foot = 18.3m (S962035).



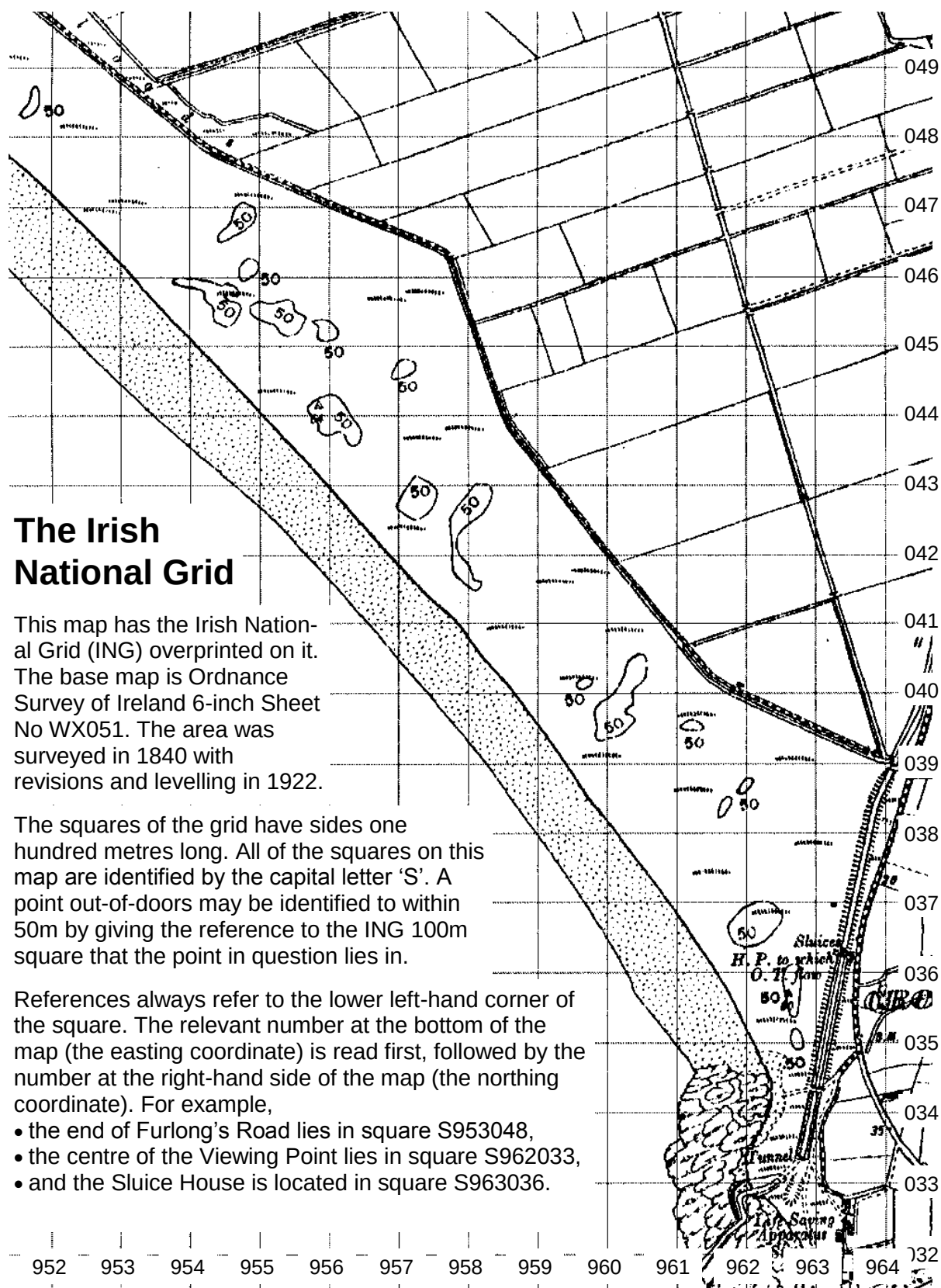


Figure 3: Map with 100m squares of the Irish National Grid.

(Source: Ordnance Survey Ireland, Permit No 8475. © Ordnance Survey Ireland/Government of Ireland)

## 2.2 Property boundaries

The company property at Ballyteige Burrow can be accessed by pedestrians from the following three points. The location of the property boundary between each pair of access points is described.

### 2.2.1 Furlong's Road

Furlong's Road is an un-surfaced farm laneway running from the Kilmore Quay-Baldwinstown third class public road to agricultural lands in the townland of Inish and Ballyteige Slob. While primarily used by landowners in the area, the lane gives a traditional right of access to both The Tan and Ballyteige Burrow. [The Tan is the flat, hind-dune strip of ground sandwiched between Ballyteige Burrow on the seaward side and by the Back Channel on the landward side (Figure 2). It starts at the end of Furlong's Road and extends in a north-westerly direction towards the Cull Bank. The area is a distinctive salt meadow habitat comprising a mosaic of grassland and saltmarsh habitats. The substrate is composed of muds, clays and silts rather than sands and gravels as found at, and under, the adjoining dunes.] Furlong's Road is very straight, is 1.4km-long, and has a very small parking area at its end (S953048). Pedestrian access to the company property from the lane is via three gate stiles; the first gate stile gives access from the lane to The Tan, the second gives access from The Tan to the Ballyteige Burrow nature reserve, and the third gate stile gives access from the nature reserve to the company property. A 2-3m-wide grassed walking track runs south-eastwards from the gate stile through the company property to the next access point at Sofrimar. The boundary of the company property is marked by the fence on the left-hand side of the walking track.

### 2.2.2 Sofrimar

There is a small parking area for a maximum of about six cars on the public road between the entrance to the factory premises of Sofrimar Ltd., fish processors, (S964039) and the small roadside building that houses the Wexford County Council sewage pumping station. The parking area poses dangers when exiting from it as sight distance to the right hand side is very limited. Access from the parking area to the company property is via a concrete bridge over the drainage channel known locally as 'The Cutting'. This bridge also provides pedestrian access to two plots of land at Ballyteige Burrow that are within the company property but not owned by the company. The first plot is a small fenced area (0.016ha approx) enclosing a dark green caravan and outdoor toilet building (S963038). These holiday facilities have been used and occupied since the mid-1970s by a family from Co Wicklow and ownership is claimed by squatters' rights. The second plot is the larger, partially-fenced, roughly square area surrounding the caravan enclosure. This larger area extends 408 feet (124m) from the concrete bridge, along the edge of The Cutting and 380feet (116m) into The Flat of the Burrow; the plot has an area of about 1.5ha, is owned by Sofrimar Ltd, and is subject to an on-going lease agreement between the owners and the Kilmore Quay Community Development Association. The grassed walking track continues southwards from the entrance at Sofrimar to the next access point. The walking track runs parallel with The Cutting and that drainage channel marks the boundary of the company property.

### 2.2.3 The Forlorn

The third and last access to the company property is from two adjoining points near Forlorn Point. In Poole's glossary the placename 'Forlorn' is interpreted as an anglicization of 'Furloan', a word from Yola, the dialect of English spoken in the South Wexford baronies of Forth and Bargy from the time of the Anglo-Norman invasion to the middle of the nineteenth century. In Yola, 'furloan' meant a 'foreland' or 'the farthest land' (Dolan and Ó Muirithe,

1979, page 24). Long-time residents in Kilmore Quay still refer to the headland in a geographically correct and descriptive way as 'The Forlorn' (the foreland) rather than using the official and repetitive Ordnance Survey rendering 'Forlorn Point'. The two adjoining access points are: (1) the elevated area known as The Viewing Point (S962033) beside the premises of Sofrimar Ltd that houses lobster storage tanks; this roughly circular area has space for about eleven parked cars and, (2) the concrete bridge (S963034) over the deep section of The Cutting where the drainage channel is excavated into the bedrock; car parking space by the bridge is limited to about seven vehicles parked along the side of the roadway.

## 2.3 Property infrastructure

There are no buildings or structures on the company property apart from the following

- boundary fences and electric fences to confine grazing cattle, and two cast concrete cattle drinking troughs; one large new one that is in use (S963036) and one old chipped and disused one, flooded with rain water (S957045),
- the dark green caravan and outdoor toilet building (S963038) (Section 2.2.2),
- the very ruined remains of cased concrete walls in a hollow (S963036) near The Sluice House. The remains are those of a cow house in which the late Mag Redmond kept her two milking cows during the 1940s, and
- three underground fibre optics cables. These three submarine cables make a landfall at the southern end of the property. One cable, installed by Esat (now owned by BT Communications Ireland Limited) extends from Land's End to Ballyteige Burrow. It runs under a metal manhole cover (S962035) on the path by The Cutting and ends in a terminal building located on the right hand side of the entrance to the premises of Marindus Engineering Ltd, at Crossfarnoge. The other two submarine cables end in an underground concrete bunker (S962034) near the bridge over The Cutting. The first cable, the 12-fibre, IR£13 million, 275km-long cable code-named CELTIC, extends from Sennan Cove, Land's End, Cornwall, to Ballyteige Burrow and was brought ashore by Telecom Éireann (now Eircom) in 1994. For much of the route *MV Discovery* ploughed the cable into soft seabed sediments. Anticipating a possible huge increase in telecommunications traffic, a second cable, SOLAS, was brought ashore in 1999 to complete the ring. The later project linked Oxwich Bay, Port Eynon, Wales, and Kilmore Quay. Where possible, the £20 million, 50mm-diameter, 230m-long cable was plough-buried to a target depth of 0.8m on the seafloor. On the beach at Ballyteige Burrow the cable was laid in a trench 1-2m deep. The Eircom terminal building is located at Chapel, Kilmore (Sources: Hurley, 2001 pages 18-19, Eircom website (archived press releases) [mmm.eircom.ie/press](http://mmm.eircom.ie/press), *Kilmore Parish Journal*, No 23, 1994/95, page 16, *Kilmore Parish Journal*, No 27, 1998/1999, page 38, and Wexford County Council Planning Authority Register Reference Number 93/0375).

Three main pedestrian grass tracks extend along the length of the property.

- Track 1 connects the three access points (Section 2.2) and is a popular and much-used walking path. The 2-3m-wide walking route is maintained by mowing, filling holes, and seeding bare areas. Cattle are kept off the track by an electric fence. Slí Charman, the Coastal Path, a long-distance coastal walking route is signposted by Wexford County Council through the property via this track.
- Track 2 runs along by the sea on the cliffed edge of the sand dunes. The track is very narrow and is poorly defined.
- Track 3 runs through the dunes in the central region. It has branches off it connecting it to Tracks 1 and 2 above. Branching tracks are more numerous near the village of Kilmore Quay at the southern end of the company property.



## 2.4 Physical features.

### 2.4.1 Geology.

There are no exposures of bedrock within the company property but three different rock types underlie the area (Figure 4). Rocks at the north-western end of the property (S952047 to 955047) belong to the Killag Group (KG; salmon colour) while rocks belonging to the Kilmore Quay Group (KQG; orange colour) and the Greenore Point Group (GPG; green colour) underlie the south-eastern end.

Rocks belonging to the Kilmore Quay Group (KQG; orange colour) and the Greenore Point Group (GPG; green colour) are known collectively as the Rosslare Complex. These rocks are among the oldest rocks found in Ireland. Both rock types were formed during the Precambrian

Period of geological time some 620 million years old. The thicknesses and relative ages of the two groups are unknown but it is believed that the Kilmore Quay Group (KQG; orange colour) is probably the older of the two. Minerals in these rocks have been calculated to be 1.6 billion years old. Rocks belonging to the Kilmore Quay Group (KQG; orange colour) are very well exposed on the foreshore at The Forlorn and under Olinda.

The parent rocks of the Kilmore Quay Group are believed to have been derived from unsorted sands and muds laid down underwater at the edge of a continental landmass. Over time these parent rocks were changed several times into gneisses and schists. The parent rocks of the Greenore Point Group (GPG; green colour) are believed to be slightly younger and to have intruded into the sediments of the Kilmore Quay Group. Volcanic activity may have been involved. Again, because of their very great age these rocks have been changed radically over time. The altered rocks are known as amphibolites. Since the amphibolites and schists of the Rosslare Complex are layered, they split easily and were, therefore, popular sources of building stone in the past. The gneisses are more unyielding but are dense, strong and durable. Rosslare Complex rocks were used to line and armour the side walls of the drainage channel known as 'The Cutting', and to build Ballyteige Castle and other local buildings.

While the Rosslare Complex is very old, the rocks that form the Killag Group (KG; salmon colour) are much younger. They are less than 84 million years old and are at least 220 metres thick. The brownish red rocks are formed of sandy parent material laid down on land in an extensive desert possible not unlike the present Sahara. These relatively young rocks lie beside their very much older neighbours because of activity on the Rosslare Fault, a major crack in the underlying bedrock. Significant vertical displacement along the fault

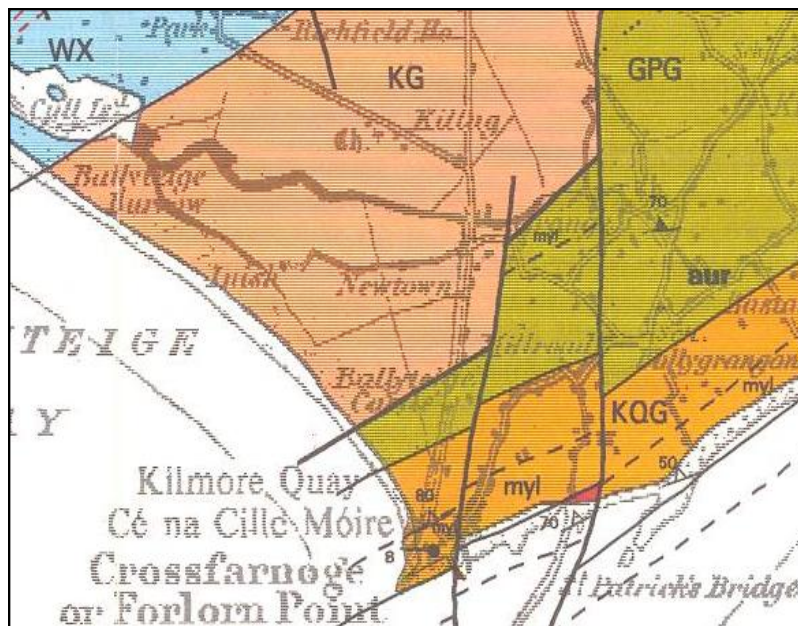


Figure 4: Bedrock geology underlying the company property.

(Source: Tietzsch-Tyler *et al.*, 1994. Map reproduced with the permission of the Geological Survey of Ireland.)

caused a large but isolated block of the young Killag Group to drop down and be preserved beside the much older Rosslare Complex.

## 2.4.2 Geomorphology

The nature and extent of dunes throughout Ireland varies according to a number of environmental factors, of which sediment supply, wind direction, sea-level history and wave conditions are paramount (Carter and Wilson, 1991 page 18).

The dune system at Ballyteige Burrow is of unknown age but it is at least several thousand years old. Information is scant concerning the times at which different events occurred during the early development of the dunes. One borehole drilled at Ballyteige Burrow showed a sequence of layers of both washover and wind-blown sands on the barrier. A sub-dune soil in the sequence yielded a  $^{14}\text{C}$  date of  $1955 \pm 60$  years before present (UB-2758) (Maloney, 1985).

It is believed that the land-form originated in the following way. The last Ice Age in Ireland started about 115,000 years ago and finished about 10,000 years ago (Coxon, 1997). Sometime during that time a lobe of the Irish Sea ice sheet covered the eastern half of the South Wexford Coast (Whittow, 1974, Culleton, 1978 and Culleton, 1980). As the ice melted huge volumes of meltwater ran seawards in temporary rivers. One of these rivers flowed from Mayglass to Bridgetown. As it flowed the river carved a valley and the remains of that river valley may still be seen in the landscape today. The Rosslare-Waterford railway line runs along the floor of the present-day valley, the former glacial meltwater channel.

As the river of meltwater ran to the sea it carried large quantities of muds, clays, and silts suspended in the water together with sands, gravels and cobbles transported along the river bed. These sediments were dumped in the estuary of the former river and in the near-shore marine area. At the time, sea-level was lower than it is today as very large quantities of water were tied up in the ice. As the ice melted sea-level rose and sediments in the marine area were worked, re-worked and sorted by the actions of the sea. A long lens of gravels formed and was moved onshore by tidal currents. As time went by and the last of the ice melted, the supply of river water and sediment ran out. The ice sheets of the last Ice Age were the source of both sediment supply and the river currents that helped to sort the sediments. In the absence of river-based sorting and in the presence of rapidly rising sea-level, marine processes became the dominant forces. On-going movement onshore caused the line of gravel to anchor its south-eastern end on Forlorn Point. Its north-western end remained free. The long line of gravels formed a fringing barrier that was the forerunner of the present townland of Ballyteige Burrow. The infant barrier impeded drainage to the sea and a very extensive flatland of tidal muds and silts formed behind it (Figure 5). That marsh land was the forerunner of the present-day townland of Inish and Ballyteige Slob.

The fact that the axis of the barrier lay at a right angle to the direction of the prevailing wind resulted in the wind drying sand on the beach and transporting it inland. Wind-blown sands from the beach collected on the barrier and sand hills started to form. Plants grew on the embryo dunes and both stabilised the shifting sand system and acted as a trap for blowing sand. Over time the barrier was decorated by a magnificent series of sand dunes perched on top of the gravel foundation. A sand spit formed at the north-western tip of the barrier and extended towards Cullenstown (Roche, 1976 pages 3-4). Growth of the spit is suggested by the interpretation of five recurved dune ridges that can be seen in the field and on aerial photographs as remnants of former recurved distal extremities of the spit (Ruz, 1989 page 532). Three movements were, therefore, taking place simultaneously: (1) the barrier continued to transgress inland due to coastal processes, (2) sand dunes continued to grow in height fed by sand from the beach, and (3) the spit on its north-western tip continued to grow causing erosion at Cullenstown as it attempted to re-align itself to the point of lowest wave energy in the wave-shadow of the Keeragh Islands. Spit growth accelerated following the

intaking of Broad Water and part of Ballyteige Lough (Kinahan, 1879 page 43; Ruz, 1989 page 532).

The landform at Ballyteige Burrow comprises gravels and sands derived from glacial outwash. Since they had their origin in an event that that happened some thousands of years ago, these sediments are part of the local glacial legacy. Furthermore, since the deposition of the sediments was a once-off event these sediments are a non-renewable resource.

### **2.4.3 Soils**

The subsoils underlying Ballyteige Burrow are marine and estuarine gravels and sands derived from glacial outwash material (Section 2.4.2) decorated with several veneers of washover sands and blown sand. A thin soil developed in the surface layer and it continues to support a diversity of plants and animals.

The Spatial Analysis Unit of Teagasc mapped the subsoils and soils of Ireland in a collaborative project with the Geological Survey of Ireland, the Forest Service and the Environmental Protection Agency (EPA). The project was completed in May 2006 and the results may be accessed online via ENVision, the EPA interactive GIS facility that shows environmental data in map form (<http://www.epa.ie/>). ENVision data classify the subsoil at Ballyteige Burrow as 'Blown sand' (Code number: 710. Code name: Ws) and the soil that developed on it as 'Aeolian undifferentiated' (Code number: 71. Code name: AeoUND). The extreme landward fringe of the company property is part of the complex found at the adjoining townland, Inish and Ballyteige Slob: the subsoils comprise 'marine estuarine sediments (silts/clays)' (Code number: 502. Code name: Mesc) and the soil 'Marine/Estuarine sediments' (Code number: 73. Code name: MarSed).

## **2.5 Biological features**

The biological features of the company property are the distinctive attributes or aspects of the site with regard to the life forms that the area supports. The habitat types that occur at the company property are described (Section 2.5.1) and the significant wild plants (Flora) and animals (Fauna) that occur in these habitat types are mentioned (Section 2.5.2 and Section 2.5.3).

### **2.5.1 Habitats**

A habitat is a place where plants and animals live. The dominant habitat type that occurs at the company property is sand dune (NPWS, 1999; DGXI.D.2. 1994; Romão, 1996, and NPWS, 2007).

#### **2.5.1.1 Shifting dunes**

Shifting dunes form the seaward cordon of Ballyteige Burrow. This habitat type may be observed all along the dune face between the beach and the track along the top of the dunes. The dry sands on the dune slope are constantly being shifted about by the wind; hence the name 'shifting dunes'. In dry, windy weather the on-shore wind dries the sand on the beach and blows it up the beach face; this has the effects of both nourishing the shifting dunes and maintaining their mobility. Consequently, plants find it difficult to gain a foothold in the moving loose sand on the slopes so there is usually a high percentage of bare sand exposed. The presence of so much bare sand together with the lack of dark plant humus gives this habitat type its alternative names 'white dunes' or 'yellow dunes'. Dune sand tends to be a mixture of grains of weathered siliceous (acid) rock and fragments of lime-rich sea shells. Sometimes, the expression 'white dunes' is used to distinguish shifting dunes with a high content of sea shells from dunes with a high content of sand ('yellow dunes').

Marram grass *Ammophila arenaria* attempts to bind the shifting dunes but succeeds only partially. Plants that colonise the shifting sand constitute the pioneer community of sand systems (Curtis, 1991 pages 44-48). Shifting dune vegetation is assigned to the *Ammophilon borealis* alliance within the *Ammophiletea*, the Marram grass Class (NPWS, 2007 Habitat type 2120, Backing document, page 2). Character species of this pioneer vegetation class are Sea Bindweed *Calystegia soldanella*, Sea Spurge *Euphorbia paralias*, and Sea-holly *Eryngium maritimum* (White, 1982 page 315). From June to August Sea Bindweed has attractive, bell-shaped, pink flowers; each flower has five petals and each petal is marked with a radiating white line. Due to the instability of the sand, lichens and mosses are largely absent (Fossitt, 2000 page 75).

Ballyteige Burrow is aligned at a right angle to the prevailing south-westerly winds and the shifting dunes normally ascend directly and steeply from the beach without the protection of any embryonic shifting dunes or fore-dunes. However, temporary fore dunes often do exist and these have their origin in the following way. In places, strong wind erodes the surface of the dune face blowing much of the sand away. The extensive rhizomes of Marram grass *Ammophila arenaria* growing at the top of the slope bind a large sod together. Sand is removed by the wind from under this sod resulting in the sod hanging loosely on top of the eroded slope. Eventually the sod tears free, tumbles down the slope, and rolls onto the upper beach. There it acts as a trap for blowing sand and it gets covered, and its outline smoothed, by loose sand. Some plants may grow on it causing it to appear like a fore dune. However, it is normally a short-lived feature.

Very species-poor, strand-line communities of summer annuals also occasionally form in wind-blown sand covering coastal jetsam the high tide mark. Two examples of these ephemeral pioneer vegetation types were noted close to the company property during a four-month period of fieldwork June-October 1973 and both examples were classified in the *Salsolo-Honkenyon peploides* alliance (Nooren and Schouten, 1976 pages 90-92 and Map Nr.3A) (White, 1982 page 309).

The shifting dunes in the company property correspond with a habitat type listed in Annex 1 of the EU Habitats Directive as "Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)", CORINE code 16.212, Natura 2000 code 2120; EUNIS database code 10039.

Within the shifting dune habitat type a successive pioneer zonation of the following three vegetation types was recognised at Ballyteige Burrow: (1) *Sociation of Agropyron junceiforme*; extremely poor community; the dominant and often the only occurring species is Sand Couch *Elytrigia juncea*, (2) *Euphorbio-Agropyretum juncei*; Sand Couch *Elytrigia juncea* decreases and Sea Spurge *Euphorbia paralias* increases in abundance, and (3) *Euphorbio-Ammophiletum*; this association is found at the top of the dune slope where the influence of saline soil water has disappeared (Nooren and Schouten, 1976 pages 27-40 and Map Nr.3A) (White, 1982 page 315).

### 2.5.1.2 Fixed dunes

Fixed dunes are the dominant dune type at Ballyteige Burrow. Fixed dunes are so called because the skin of vegetation fixes or stabilises the sand preventing it from being moved about by the wind. As a result, the percentage of bare sand is normally very low. Sand blown from the beach onto the dunes is trapped by the vegetation and covered by plant growth. Consequently, since the rate of sand-gain is always greater than the rate of sand-loss the dunes continue to grow in height. Marram *Ammophila arenaria*, the big, coarse dune grass with the spiky leaf tips is the main dune binder and builder. Known locally as 'Bennett' or 'Bent', it blankets most of the dune system. Increased plant cover results in increased dead organic remains; these remains form dark-coloured humus turning the colour of the sand a shade of grey. Fixed dunes are known as 'grey dunes' either because of increased humus



content or because of the fact that they often support grey lichens (*Cladonia* spp and *Peltigera* spp including the Dog Lichen *Peltigera canina*). In the company property there is a fine example of an extensive stand of grey lichens on the sun slope of an eroded low dune (S957044). Otherwise, the greyer colour of the sand is due to its increased humus content.

The fixed dunes form the central ridge of Ballyteige Burrow; the vegetation they support forms the ridge community (Curtis, 1991 pages 49-52). They are colonised by a more or less closed vegetation dominated by Marram *Ammophila arenaria*, Red Fescue *Festuca rubra*, Sand Sedge *Carex arenaria*, Burnet Rose *Rosa pimpinellifolia*, and a range of other, low-growing herbaceous plants including Kidney Vetch *Anthyllis vulneraria*, Smooth Hawk's-beard *Crepis capillaris*, Lady's Bedstraw *Galium verum*, Lesser Hawkbit *Leontodon saxatilis*, Common Bird's-foot-trefoil *Lotus corniculatus*, Common Restharrow *Ononis repens*, Cat's-ear *Hypochoeris radicata*, Common Ragwort *Senecio jacobaea*, Groundsel *Senecio vulgaris*, Dandelion *Taraxacum vulgare* agg., Common Dog-violet *Viola riviniana*, and Wild Pansy *Viola tricolor*, spp *curtisii*. Carpets of mosses are abundant especially the Golden Screw-moss *Tortula ruraliformis* on patches of bare sand on the shade slopes of most of the taller dunes. The Burnet Rose suckers freely to form extensive bushy patches. Its creamy white flowers bloom from May to July and are followed by plump, purple-black hips.

Fixed dunes are listed in Annex 1 of the Habitats Directive as "Fixed coastal dunes with herbaceous vegetation (grey dunes)", CORINE code 16.221, Natura 2000 code 2130; EUNIS database code 10040. At Ballyteige Burrow all of the plant communities of the dry, stabilised dunes are classified as belonging to the Galio-Koelerion alliance. The character taxa are Kidney Vetch *Anthyllis vulneraria*, Common Restharrow *Ononis repens*, and Lady's Bedstraw *Galium verum*. Regional character taxa are the Carlina Thistle *Carlina vulgaris* and Wild Thyme *Thymus polytrichus* (Nooren and Schouten, 1976 pages 41-47 and Map Nr.3A; White, 1982 page 329; NPWS, 2007 pages 4-5).

### 2.5.1.3 Decalcified dunes

Decalcified dunes are dunes low in calcium ions ( $\text{Ca}^{++}$ ). When sand dunes are young they tend to be rich in calcium due to the presence of seashells, shell fragments, and lime-rich seaweeds carried in from the sea. As they grow older the concentration of calcium in the dunes usually diminishes as calcium salts are leached out by rainwater. When dunes are low in calcium they are said to be 'decalcified'. The change in soil chemistry is mirrored by a succession in the plant communities present. As the soil becomes more lime-poor, acid-loving plants begin to colonise. The dunes at Ballyteige Burrow were originally formed from sand derived from weathered rocks so their initial calcium content was probably low.

Decalcified dunes are listed in Annex 1 of the Habitats Directive as "Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)", CORINE code 16.23, Natura 2000 code 2150; EUNIS database code 10042. In addition to being decalcified, these dunes are fixed and they are characteristic of Atlantic coasts. While it was believed in the past that parts of the dunes at Ballyteige Burrow were representative of this habitat type (NPWS, 1999), the dunes are not now considered to support the habitat type pending further work to clearly define the habitat type's characteristics in Ireland (NPWS, 2007 Habitat type 2120, Form).

### 2.5.1.4 Dry slacks

Dunes are the hills, mounds or ridges of sand formed by the wind. Slacks are the hollows and dips between the dunes. Some slacks are very large (S953046), others are tiny. All slacks are more or less fully vegetated. Bare sand occurs only as a result of either damage to the vegetation skin by cattle as they ascend or descend tracks on the taller dunes or as a result of excavations by Rabbits *Oryctolagus cuniculus*. Deep slacks in the lee of high dunes offer excellent shelter to out-wintered cattle from both the wind and wind-blown sand. Consequently, the vegetation in these slacks tends to be heavily grazed, trampled and

fertilised leading to a reduction in the abundance of, and sometimes a total absence of, both Marram *Ammophila arenaria* and Burnet Rose *Rosa pimpinellifolia*, (S953046, S960038, S960040, etc.). All of the slacks are dry due to the dune system being perched on top of the underlying gravel barrier; as a result the water table fails to reach the surface on a regular basis. In one extensive area in the company property (S957045) the dunes are eroded to the underlying barrier presenting a habitat characterised by areas of bare sand strewn with cobbles. The combination of the exposure of the gravel barrier and the great width of the dune system at this point might suggest a significant dune breach and tidal incursion in the past. The heavily grazed slacks and the exposure of the underlying barrier present different assemblages of wild plants. Exposures of the underlying barrier at Ballyteige Burrow are regarded as examples of a very specialised habitat type (Curtis, 1991 page 57).

#### **2.5.1.5 Blow-outs**

Blow-outs form when the wind removes sand by blowing it away. Since the prevailing wind is south-westerly and since the dune face lies at a right angle to that direction, much of the sand is blown onto the dunes and is therefore not lost to the system.

The southernmost 400m of the dune face in the company property is heavily indented by blow-outs. The big blow-outs die out after a distance of about 500m from the Viewing Point and are replaced by infrequent smaller points of wind erosion. Blow-outs no longer occur after a point (S955044) three-quarters way along the beach face. The dune face is steep and rises to elevations in the range 8-11m. It is not clear if blow-outs develop as a result of people creating pathways down the slope thereby opening the vegetation skin and exposing the underlying sand to wind-erosion, or whether the erosion happens first and people subsequently avail of the resulting gap way. The combination of the fact that it is much easier to walk down the steep, shifting sand slope than to climb up it, and the location of well-worn track-ways running from the dunes to the beach face suggest that the former is more likely the case.

The very large slack (S953046) at the north-western end of the company property is so extensive that it is separated from the sea by a relatively narrow ridge of sand. A track runs across the ridge from the slack to the beach, eroding and lowering the crest of the ridge and consequently making it very vulnerable to being breached by the sea in the event of a significant blow-out developing in that area.

Blow-outs are not a distinct habitat type. Since they are dominated by bare loose sand they are regarded as part of the shifting dune habitat type (Section 2.5.1.1); when they become vegetated and stable they morph into the dune slack habitat type (Section 2.5.1.4) (Fossitt, 2000 page 75).

#### **2.5.1.6 The Flat**

The level hind-dune, grassy area is known locally as 'The Flat of the Burrow' or simply 'The Flat'. The Flat varies in width from 5m (S955047) to 150m (S963038). It is sheltered from both the prevailing winds and salt spray by the ridges of fixed dunes. It is distinguished from the dunes by its flatness, by a marked lack of vigour in the growth of Marram *Ammophila arenaria*, by a gradual decrease in the assemblage of wild plants that dominate the dunes, by a marked increase in coarse tufted grasses especially False Oat-grass *Arrhenatherum elatius* and Cock's-foot *Dactylis glomerata* both of which are deep-rooted and drought-resistant, and by the presence of encroaching scrub dominated by Bramble *Rubus fruticosus* agg., and stunted Hawthorn *Crataegus monogyna*. As dune grassland, the area is poorly grazed and, consequently, the vegetation is rank.

The Flat has a high content of blown sand. On its landward fringe, The Flat exhibits a transition into a minor habitat type with soils dominated by clay/silt. The habitat type is not significant as it is very limited in extent in the company property being more or less confined



to the parts of the Coastal Path that become slippery underfoot during wet weather (S963039 and S959042).

## 2.5.2 Flora

The flora is the set of wild plants that grows in a particular place.

Since 1987 the dunes in the nature reserve have been managed by the National Parks and Wildlife Service to promote the growth of wild flowers by grazing cattle on them in winter. The cattle are removed in spring and are returned in autumn after the plants have finished flowering and setting seed. Both the number of cattle present and the length of the grazing season are kept under review to maximise the benefits for the flora. As a result of that management regime the dunes are rich in species of wild flowers. The vegetation is predominantly low-growing and contains species such as Common Restharrow *Ononis repens*, Wild Pansy *Viola tricolor* subsp. *curtisii*, Sea Stork's-bill *Erodium maritimum*, Common Centaury *Centaureum erythraea*, Wild Thyme *Thymus praecox* and Red Fescue *Festuca rubra* (NPWS, 2003). The dunes in the nature reserve also support rare plant species (NPWS, 1999). Wild Asparagus *Asparagus officinalis* is frequent. The scarce beard lichen *Usnea articulata* occurs, and the reserve is the only known site in Ireland that supports the Scrambled-egg Lichen *Fulgensia fulgens*. Both the Wild Asparagus and the Scrambled-egg Lichen are protected species under the *Flora (Protection) Order, 1999* (S. I. Number 94 of 1999).

In contrast to the nature reserve, the vegetation in the company property has not enjoyed the same level of intensive grazing. As a result, there is a significant increase in the growth of Marram *Ammophila arenaria* and rank grasses and an encroachment of dune scrub.

Consequently, there is a decrease in species diversity and a paucity of the species of wild plants that the nature reserve is noted for. Differences in the vegetation in the two properties may be clearly seen in summer by standing at the seaward end of the fence line (S952047) that separates the nature reserve from the company property.

However, the dunes in the company property are now being lightly grazed in winter and while the floral diversity of the dunes in the company property is impoverished, appropriate grazing will, in time, contribute to increased species diversity due to the present management strategy.

## 2.5.3 Fauna

The fauna is the set of wild animals that inhabits a particular place. The significant fauna of Ballyteige Burrow comprises a number of nationally scarce and/or rare or local species of insects, especially bees, ants, and wasps (NPWS, 2003 and NPWS, 1999). Furthermore, a very rare beetle and a rare woodlouse were recently discovered in the area (Allen, 2006).

In the national context, the importance of the South Wexford Coast for many insects is attributed to the combination of such factors as the abundance of sands, gravels and other fluvioglacial deposits, the presence of light soils, the latitudinal advantage of the southerly location, the surrounding low-lying coastal plain that mitigates against the formation of orographic cloud, the relatively dry climate, the highest mean annual number of hours of bright sunshine, and the proximity to Britain and mainland Europe with regard to both the post-glacial colonisation and present day immigration (O'Rourke, 1979 pages 1-2; Goodwillie, 1979 pages 12-13; and Hurley, 1991 pages 74-75).

Diversity of habitat in the company property leads to faunal diversity, for example, the old, abandoned cattle drinking trough (S957045) fills with rainwater and often supports water beetles and other aquatic insects. These insects fly in to the company property from neighbouring habitats but find no other bodies of standing water elsewhere among the sand dunes.

### 2.5.3.1 Slugs and snails

The dunes support several species of slugs. The Large Black Slug *Arion ater* may be seen wandering about in daylight in damp weather. Smaller species have to be searched for as they hide under stones, boards, and any other available cover. Snails need calcium to make their shells so they are most commonly found in the younger dunes closest to the sea. The wind often concentrates collections of empty shells in the bottom of blow-outs. The common species in these collections are the big Brown Garden Snail *Cornu aspersum*, the slightly smaller Brown-lipped Snail *Cepaea nemoralis*, the tall-spined Pointed Snail *Cochlicella acuta*, and three related species of hygromids: the Wrinkled Snail *Candidula intersecta*, the Banded Snail *Ceriuella virgata*, and the Heath Snail *Helicella itala*.

### 2.5.3.2 A rare woodlouse

The rare woodlouse *Armadillidium album*, a crustacean, was recorded recently: “A single specimen of this pill-woodlouse was recorded at Ballyteige Burrow. This woodlouse is a specialist of sandy shores and is known from The Raven and from 5 other 10-km squares on the east coast of Ireland in the atlas of 1985. On that evidence (of 21 years ago) Ballyteige Burrow is a small range extension” (Allen, 2006 page 26).

### 2.5.3.3 A rare beetle

During a recent survey conducted to investigate the status in Ireland of a rare moth, a very rare beetle was found on the beach at Ballyteige Burrow. The find was reported as follows: “*Macrorhyncholus littoralis*, new to Ireland, third for the Palaearctic. This wood-boring weevil is thought to be a native of Australia. It is well-established in New Zealand and has also been recorded from South Africa, Chile and California. In 1987, two specimens were found on the Kent coast, with a third specimen being found elsewhere in Kent the following year. These appear to be the only records for Britain and indeed the only records for the entire Palaearctic region. 40 specimens in two colonies were found at Ballyteige Burrow under two pieces of driftwood on the sandy beach. Because of the significance of this record as a first for Ireland and a third Palaearctic record, the identification will need to be confirmed at the Natural History Museum.” (Allen, 2006 page 25).

### 2.5.3.4 Bees

Eighty-four percent of the bumblebee species that occur in Ireland have been recorded in County Wexford (O'Rourke, 1979 page 12).

Some 17-18 species of bumblebee are found in Ireland. Populations have declined significantly in recent years due to the intensification of agriculture. The greatest decline has occurred in the eastern half of the country. Stands of Common Knapweed *Centaurea nigra* at Ballyteige Burrow and stands of Purple-loosestrife *Lythrum salicaria* on Saltee Island Great are of importance to bumblebees (personal communication, Dr John Breen in a presentation made to the Wexford Naturalists' Field Club on 5 July 2007).

Two of the rarest species of bumblebee found in Ireland have been recorded on the dune system at Ballyteige Burrow (NPWS, 2003 and NPWS, 1999). The Great Yellow Bumblebee *Bombus distinguendus* is classed as 'Endangered' and is believed to be “very close to extinction” (Fitzpatrick *et al.*, 2006 pages 12-13). The second species of conservation concern, the Shrill Carder Bee *Bombus sylvarum*, a rare southern species, is classed as 'Vulnerable' (Fitzpatrick *et al.*, 2006 page 14). In terms of their conservation status, populations of both of these bumblebees are in decline due to changes in agricultural practices. Both need flower-rich grasslands to ensure their continued survival (Fitzpatrick *et al.*, 2006).

### 2.5.3.5 Ants

Seventy-nine percent of the ant species that occur in Ireland have been recorded in County Wexford (O'Rourke, 1979 page 12). The Turf Ant *Tetramorium caespitum* is a southern species. It was first recorded in Ireland in the very early 1930s at Ballyteige Burrow (O'Rourke, 1979 page 3). Since then isolated colonies have been recorded at a small number of sites along the south coast between Wexford and Kerry. However, Ballyteige Burrow remains its stronghold in Ireland and it is the dominant species of ant found there (personal communication, Dr John Breen, University of Limerick). It nests under stones in eroded slacks and needs warm, bare ground to nest in (Breen and O'Brien, 1990 pages 219-220). Tall grass habitats are avoided as the grasses shade and, therefore, cool the ground. The Turf Ant swarms in the morning at the end of June. It is the only species of ant in Ireland that gathers, stores, and eats seeds, so it needs wild flowers nearby as a food source. Seeds of Wild Thyme *Thymus polytrichus*, Mouse-ears *Cerastium* spp and Eyebrights *Euphrasia* spp are collected and eaten. Food sources vary according to season, perhaps due to availability of seed (O'Brien and Breen, 1990 page 91). The ants' source of honey dew at Ballyteige Burrow is an unusual species of green aphid that lives on Wild Thyme *Thymus polytrichus* (personal communication, Dr John Breen). Since it needs grazed coastal grassland habitats rich in wild flowers to ensure their continued survival, the present management strategy of winter grazing in the company property to enhance floral diversity contributes to its conservation. An increase in the local Rabbit *Oryctolagus cuniculus* population would also appear to be of benefit to the ants. Turf Ant nests are very common at one eroded area (S957045) in the company property.

Other species of ant found on the company property include the Common Elbowed Red Ant *Myrmica scabrinodis* that nests near The Cutting (S963037) and the Fire Ant *Myrmica rubra* that nests close to the Turf Ant (S957045). At least another five species of ants nest in the surrounding area (personal communication, Dr John Breen).

### 2.5.3.6 Wasps

All of the vespid wasp species that occur in Ireland have been recorded in County Wexford (O'Rourke, 1979 page 12). Wasps of note at Ballyteige Burrow include the Jewel Wasp *Hedychridium ardens*, family Chrysididae, and the small, predatory Silver Spiny Digger Wasp *Oxybelus argentatus*, family Sphecidae, (NPWS, 2003 and NPWS, 1999). A female pimpline wasp caught on the dunes at Ballyteige Burrow on 12 June 1982 belonged to a rare species of ichneumonid new to Ireland (*Scambus eucosmidarum*) (O'Connor and Butler, 1992).

### 2.5.3.7 Other insects

Ballyteige Burrow is a well-known hotspot for butterflies with an impressive range of species recorded.

### 2.5.3.8 Amphibians and Reptiles

There are no known records of amphibians in the company property. The Common Lizard *Lacerta vivipara* is common throughout.

### 2.5.3.9 Birds

The Meadow Pipit *Anthus pratensis* is normally the most common species of bird seen in the company property. Wrens *Troglodytes troglodytes* occur wherever there is scrub. The once-common Skylark *Alauda arvensis* has become scarce. Walkers on the Coastal Path will be well familiar with the Stonechats *Saxicola torquata* and Reed Buntings *Emberiza schoeniclus* that may regularly be seen perching on boundary wire fences. Flocks of Linnets *Carduelis cannabina* are common on Inish and Ballyteige Slob and small parties of them regularly enter the company property. The handsome Wheatear *Oenanthe oenanthe* occurs as a passage

migrant. A range of other migrants occurs too, for example, in late spring, Common Snipe *Gallinago gallinago* have been flushed from tall grasses where they were sheltering and/or resting while on passage. Similarly, Whimbrel *Numenius phaeopus* on passage roost in the large slack (S952047) near the western boundary of the company property.

#### 2.5.3.10 Mammals

Little is known about mammals in the company property. The following items may serve as a starting point for gathering information.

- Hedgehog *Erinaceus europaeus*. Very occasionally recorded near The Flat of the Burrow (S963039).
- Pygmy Shrew *Sorex minutus*. Common resident; often heard squeaking in the grass. Dead individuals seen on the paths and on top of fencing posts as bird of prey remains.
- Bats. Both Leisler's Bat *Nyctalus leisleri* and Soprano Pipistrelle *Pipistrellus pygmaeus* have been recorded at night straying into the company property while feeding on insects attracted to the lights at the factory premises of Sofrimar Limited (S963039).
- Rabbit *Oryctolagus cuniculus*. Common resident; mostly so in the central portion of the company property (S957044 and S957045).
- Irish Hare *Lepus timidus hibernicus*. Rare visitor; very occasional strays from the neighbouring agri-polders where they are very common.
- Rats and mice. No information.
- Red Fox *Vulpes vulpes*. Regular visitor to the Rabbit warren (S957044 and S957045); no evidence of earths in the company property. Also crosses the company property to visit The Forlorn where they presumably hunt for rats, crabs and fish and/or scavenge carcasses of dead seabirds.
- Other carnivores. No information.

## 2.6 Cultural features

### 2.6.1 Past land use

The nature of land use at Ballyteige Burrow prior to the 12<sup>th</sup> century is unknown. For some considerable length of time after the 12<sup>th</sup> century the area was an important ‘coney burrow’, a warren or place where rabbits were farmed for their meat and their fur. In more recent times the dunes were used, and still are used, for grazing out-wintered cattle.

The placename ‘Ballyteige’ is interpreted as an anglicization of the Irish ‘Baile Thaidhg’ (Tadhg’s town), and ‘Ballyteige Burrow’ is ‘Coinigéar Bhaile Thaidhg’ (the rabbit warren of Tadhg’s town) (de Vål, 1994 page 201). It is not known who Tadhg was.

The Rabbit *Oryctolagus cuniculus* is not a native animal to Ireland; the present wild population is derived from domesticated individuals introduced by the Normans in the 12<sup>th</sup> century for their meat and fur. Originally, only the young animals were known as ‘rabbits’; adults were known as ‘conies’ (Hayden and Harrington, 2000 page 85).

Ballyteige Castle was the seat of the Anglo-Norman Whitty family and there are several historical references to various members of the family from as early as 1247 to 1654 when the family lost possession of their stronghold following the Cromwellian conquest and re-settlement of the country (Murphy, 1986 pages 257-259, Moore, 1996 pages 169-170, Murphy, 1991 page 47, and Anon, 1972, page 23).

Following the civil war in England between the forces of the king and parliament and the execution of Charles I in 1642, Oliver Cromwell became Lord Protector of the Commonwealth. He arrived in Ireland in August 1649 with three main missions: (1) to deal with those who had supported the Confederate Rebellion of 1641 in Ireland, (2) to reward those who helped finance the overthrow of the royalty in England during the civil war in 1642, and, (3) to confiscate lands from Catholics as a means of paying outstanding debts. The *Act of Settlement, 1652* decreed that all landowners who had fought as confederates were to lose their estates and receive lands in Connacht in exchange. The Civil Survey was conducted in the period 1654-56 to establish land ownership and land value at 1640 prices. The accompanying Down Survey was conducted to map the lands that were to be confiscated (Colfer, 2004 pages 101-102). The Civil Survey describes Ballyteige Burrow as “a sandy Burrow called the great Cunniger of Ballyteige” fringing the tidal creek Maben Haven and the wetland Broad Water (Simmington, 1953 page 132). The Down Survey map of part of the Barony of Bargo (Figure 5) shows the wetlands behind the fringing barrier and features the



Figure 5: Part of the 1654 Down Survey map of the Barony of Bargo showing Ballyteige Burrow and Inish.

(Source: Power, 1975 page 25)



words “*Cunny bourrogh ...*” written across Ballyteige Burrow (Power, 1975 page 25 and the 1655 Down Survey maps, Manuscript No 725 in the National Library of Ireland).

With regard to the period prior to 1837, Samuel Lewis notes in his Topographical Dictionary that “*the burrow abounds with rabbits*” (Browne and Wickham, 1983 pages 92-93). The 1841 Ordnance Survey map of the area shows a trackway running across Ballyteige Lough from Ballyteige Castle to the dunes. Since the area that the trackway traversed was tidal marsh at the time, an elevated walkway presumably had to be constructed. At the time, the trackway in question was the only such means of access on foot from the mainland to the entire dune system apart from the access point at Kilmore Quay where the fringing barrier was anchored to the headland (OSi, 1841).

The island of Inish belonged to the Ballymagyr Estate and was leased to the Boxwell family of Sarshill (Monaghan, 1992 page 23). In 1840 the island had an area of 46.5ha (114 acres, 3 roods and 20 perches) and rose to an elevation of 3m (10 foot) above sea level (OS, 1841). It supported a farming family that had a dwelling house, very extensive out-offices and farm buildings, six large fields, and six other parcels of land. The fact that thick deposits of gravel underlie the former island of Inish may suggest that the island originated as a discrete shoal of gravel separate from the gravel barrier that underlies Ballyteige Burrow. The channel near Inish was reported to be some 7m deep at low tide and was the point where schooners offloaded their cargoes into lighters for distribution to points around the lough (Roche, 1976, pages 3-4).

In 1844, James Fraser described the dunes at Ballyteige Burrow thus: “*The sand-banks, or dunes, present a high wavy surface; are particularly covered with the sea-bent (arundo arenaria,) which serves to bind the loose sands; and they are tenanted solely by rabbits.*” (Fraser, 1844 page 189).

By the 1840s the wetlands at Ballyteige Lough and Broad Water had silted to the point where intaking became a viable proposition. A contemporary account with regard to the 3.5km-long stretch of wetland from the present Cull Bank to Ring’s Nook stated “*the low water channel is no more than 20 yards [18.3m] wide, but the space covered at high water of ordinary springs, suddenly enlarges to nearly a mile [1609.3m] in breadth*” (Fraser, 1845 page 99). While the waters of spring tides flooded large areas of slob, the water depth was only “*about fifteen inches*” [38cm] (*ibid*, page 104). The same source describes “*a bar across the channel at Ring’s Nook*” that impounded Broad Water (*ibid*, page 100). The bar at Ring’s Nook allowed tidal ingress at high water of spring tides only thereby creating a permanent brackish lake or lagoon. Neap tides never flooded Broad Water. Fraser also gives a detailed account of his measurements of tidal movements within the lough on 30 May 1843 and 25 April 1844 with particular focus on the fact that as the flooding tide reached Broad Water the tide was ebbing at Cullenstown resulting in the remarkable difference of 52 minutes in the time of high water on both sides of Ring’s Nook, though the two sides were only a few metres apart (*ibid*, pages 100-103).

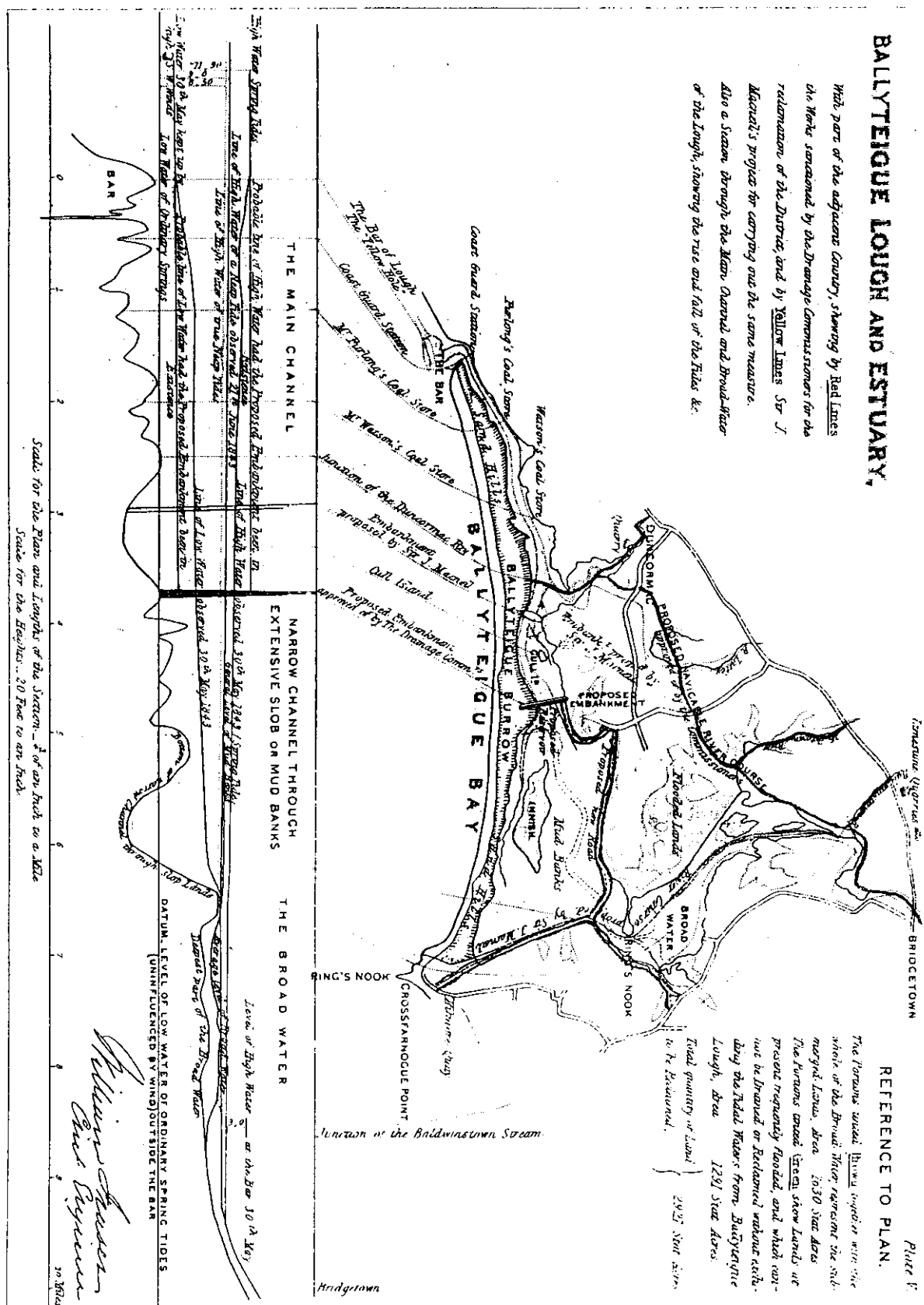
A number of factors contributed to the development of plans to intake the wetlands: the *Drainage (Ireland) Act, 1842* provided a means for advancing major drainage schemes, An Gorta Mór — the Great Potato Famine of 1846-1849 and its immediate aftermath — resulted in greatly increased numbers of hungry people seeking paid employment, and the *Land Improvement Act 1847* facilitated the provision of loans for relief works to provide employment. The severity of the famine in South Wexford is indicated by the fact that 30-40 percent of the population in the coastal strip extending from Cullenstown to Tomhaggard were on food rations (Colfer, 2004 page 167).

During the nineteenth century several proposals were made with regard to draining the wetlands at Broad Water and Ballyteigue Lough. Some years prior to 1840 Captain Vetch had made drainage proposals to a company interested in intaking flooded lands but the plans were rejected as they made no provision for navigation. Sir John Macneill and others also

made proposals but these were rejected too. Macneill, who lived in Dundalk and was one of Ireland's engineers at the time, proposed building an embankment at Blackstone, west of Cull Island, at the narrowest point in the estuary and diverting the river in Bridgetown across the slob via Ballyburn so that it would disgorge into the sea through a breach in the sand dunes near the present factory premises of Sofrimar Ltd. Another proposal suggested the building of embankments along both sides of the deep channels and the reclamation of the land behind these embankments.

The issue of navigation rights became a controversial topic. Fears were expressed that the building of any embankment would result in silting of the shipping channel thereby heralding an end to the local importation of coal, slates, and other goods from Wales. To overcome the influences of various competing local interest groups, an application was made to the Board of the Commissioners for Drainage to undertake an enquiry and impartial study and to make proposals for draining the area. Sir John Burgoyne, 9<sup>th</sup> baronet, of Sutton, investigated for the Commissioners. In submissions made to him the registered tonnage using Ballyteigue Lough in the five-year period 1840-1844 was given as: 2131 tons (1840), 1884 (1841), 2104 (1842), 1321 (1843), and 1766 (1844). In evidence given by Mr Joshua Lett, Officer of Coastguards and Customs at the Bar of Lough Coastguard Station, it was stated that in the six-month period from 9 March to 5 September 1844 a total of 47 ships entered the lough (Lambert, 1995 pages 139-140).

Civil engineers Mr E. Russell, assisted by Mr Wm. Fraser, carried out the study with regard to drainage and reported to the Board (Russell, 1844). Mr McMahon revised the plans and the sanction of the Admiralty was sought for the proposed navigable canal from Ballyteigue Lough to Bridgetown. Some local parties who considered that they would be injured by the proposed development petitioned the Admiralty not to sanction the project. As a result Mr Cubitt was sent over by the Admiralty to examine into, and report on, the matter. Conflicts were resolved somewhat in 1845 and Mr W. T. Mulvany, Commissioner for Drainage, gave a detailed account of the proposed works, as approved by the Board, to the Institute of Civil Engineers of Ireland. Plate V from his presentation shows the drawings prepared by his colleague William Fraser and the works that were sanctioned by the Board (Figure 6) (Mulvany, 1845 pages 106-108).



The wetlands were drained and some 660ha were partially reclaimed in the period 1847-1855 driven by a syndicate of local landlords and promoted as one of a number of local famine relief schemes (O'Brien, 2005 pages 41-44; Lambert, 1995 pages 139-142; Power, 1975 page 24; Roche, 1976, pages 3-4; Anon, 1986 page 47; and Scallan, 1999 pages 45-47).

Reclamation of the wetlands involved at least four distinct projects.

- (1) A 401m-long earthen dam — The Cull Bank — was constructed across Ballyteige Lough to prevent tidal ingress. The chosen location of the dam coincided with the landward terminus of the neap tide basin (Fraser, 1845 page 103). The seaward side of the dam was faced with a high wall built of stone quarried at Seafield, Duncormick (O'Keeffe, 2007 page 60). A reservoir was constructed behind the dam to hold accumulated rainwater draining from the intake, together with water from springs, leakage, and seawater percolating under Ballyteige Burrow. The reservoir held water until it could be discharged on each ebbing tide through sluice doors in the dam (Downing, 1861 page 159).



- (2) The Bridgetown Canal was excavated and levees were constructed both to channel local surface drainage away from the intaken lands and to facilitate local merchants by providing access for lighters offloading goods from ships in the navigable channel beyond The Cull Bank.



- (3) All existing drainage ditches on the intaken land were cleaned. Two separate drainage systems were installed, the Ballyteige one ending at The Cull Bank where the dam was fitted with four sluice doors, the other ending at sluices at the sea walls at Blackstone (O'Brien, 2005 page 44). These sluices opened on falling tides to discharge backed-up drainage waters. The smaller flap-valve sluices opened due to water pressure, the larger doors were opened manually on each falling tide.
- (4) A new road was constructed across the intake linking the village of Kilmore Quay to Baldwinstown, Rathangan and Duncormick.

Figure 7: The company property before and after reclamation works in the mid nineteenth century.

While the intaking of the wetland had many beneficial aspects, it had a profound impact on those who earned their livelihood from fishing and wildfowling in the former extensive lough. There is very scant evidence about punt gun activity in the wetlands at Ballyteige but since the activity was widespread elsewhere in County Wexford it is reasonable to assume that



punt gunners were active at Ballyteige. As late as the mid-1970s the number of punt guns in Ireland in respect of which firearm certificates were held was 21, of which 13 were in the Wexford Garda district (Dáil Éireann Questions, Volume 280, 30 April 1975).

The reclamation works also connected a significant portion of the sand system at Ballyteige Burrow, formerly a long thin peninsula, to the mainland via the intaken slob-lands (Figure 7). Reclamation of the slob-lands stabilised the Burrow “... *before the mud-lands were intaken it was breached in places by high tides, but especially near the centre, south of the drift island in the intake [Inish]*” (Kinahan, 1879 page 42).

Connection to the mainland had a downside in that Rabbits could stray off the former peninsula and predators and poachers could gain easier access to the warren. However, Rabbits continued to thrive after the intaking of the wetlands. A letting notice for Ballyteige Castle published in 1876 described Ballyteige Burrow as “*the rabbit warren of Ballyteigue Castle ... very valuable and consists of 666 acres, 2 roods and 10 pers. statute*” (Anon, 1976 page 27). In his County Guide and Directory, George Henry Bassett describes the dunes as “*miles of sand banks, all of which are occupied by rabbits*” (Bassett, 1885 page 180).

Trapping rights at Ballyteige Burrow were leased by the owners of Ballyteige Castle. If the owners of the trapping rights did not trap themselves they employed trappers working for them on commission. Rabbits were sold locally and in Wexford town. They were also sent by train to retail markets in Dublin. Second quality carcasses were purchased by Dublin Zoo for feeding to meat-eating animals. The construction of the railway line from Rosslare Harbour in 1906 and the opening of a station at Bridgetown facilitated exports to Britain. Rabbit trapping remained popular to the mid-1950s when the viral disease myxomatosis was introduced to the area. In its heyday, the Rabbit resource was carefully managed; winter feeding was supplemented with cart-loads of turnips in severe weather. Two recorded harvesting rates per season were 1200 pairs by Nick Busher on Inish, and 4400 Rabbits by brothers Nicky and Peter Jordan (O’Keeffe, 2007 pages 56-57).

Long before the Normans introduced Rabbits to South Wexford the Romans had selectively bred them for high reproductive rates so it may be assumed that the original breeding stock introduced to Ballyteige Burrow had a high reproductive rate. Population densities of Rabbits vary throughout the year; numbers peak at up to 40 animals per hectare in September and October and drop to up to 15 per hectare in winter (Hayden and Harrington, 2000 page 87). Taking the autumn peak figure of 40 animals per hectare and assuming even distribution of animals over the 270ha area of the dune system, it appears possible that Ballyteige Burrow could have supported up to 10,800 Rabbits at peak times. Inish and adjoining areas are not, of course, included in the calculation.

With regard to the drainage works, the initial reaction to the outcome was favourable considering that “... *many persons were seriously apprehensive that the proposed works would injuriously affect the navigation; some eminent engineers reported unfavourably of the measure; and a long correspondence took place with the Admiralty on the subject*” (Mulvany, 1949 pages 92-93). The apparently successful drainage works in the “*remarkable estuary*”, the “*remarkable features*” of “*the peculiarities in the surface of the tide within the estuary*”, and the advanced design of the self-acting sluices were the subject of a substantial case study in an engineering textbook written by Dr Samuel Downing, Professor of Civil Engineering in the University of Dublin and published shortly afterwards (Downing, 1861).

Water exchange in the wetland on spring tides before the 1847-1855 drainage works was estimated at “*about 163,000,000 of cubic feet*” [4.6m<sup>9</sup>] (Fraser, 1845 page 105). The drainage works proved unsuccessful in that the building of The Cull Bank significantly reduced the former very large water exchange in and out of Ballyteige Lough and changed the tidal pattern. These changes reduced the scouring effect of the ebbing water resulting in the deep channels silting up very rapidly. The fall from The Cull Bank to the bar at Cullenstown — a distance of 6.5km — was only 1.5m (Kinahan, 1879 page 43). Rapid



channel silting seriously reduced the gravity gradient that permitted water to drain from the low-lying intake via the sluice doors.

The building of The Cull Bank also had the effect of raising water level in Ballyteige Lough during times of high water resulting in some flooding. Consequently, the Commissioners had to bear the expense of alterations at the Bar of Lough Coastguard Station at Coolsekin and of raising privately-built embankments at Duncormick (Downing, 1861 page 160).

To remedy the lack of outfall to the west a complementary outfall system to the east was installed in the period 1883-1886. This second scheme involved the excavation of The Cutting, the building of The Sluice House, and the digging of new drainage channels (O'Brien, 2005 pages 41-44; O'Keeffe, 2007 page 60; Power, 1975 page 24 and Scallan, 1999 pages 45-47). The second scheme was also only partially successful as the fall to the east across the low-lying slob-lands was also inadequate to drain the intaken lands. The option of breaching the dunes at Ballyteige Burrow and draining directly from The Cull Bank to the open sea where the fall was 4m over 0.5km had been suggested (Kinahan, 1879 page 43) but not followed through on. Success was eventually achieved in the late 1950s and early 1960s when the Board of Works installed pumps at The Cull Bank, deepened and cleaned all the feeder drainage ditches, and pumped water out of the extended network of waterways. The government's Office of Public Works (OPW) is now responsible for maintaining the drainage system and Cull Pump House (Station No 13081).

In the Civil Survey of 1654-56 the tidal, estuarine component of the former wetland and the freshwater component were known as Mablen Haven and Broad Water respectively (Simmington, 1953 page 132). Mablen Haven was later referred to as Ballyteigue Lough and the reclaimed lands were known as the Ballyteige Intake before the intaken area became the townland of Inish and Ballyteige Slob.

## **2.6.2 Archaeological sites and monuments**

There are no recorded archaeological sites or monuments in the townland of Ballyteige Burrow (Moore, 1996 page 258). Archaeologists of the future may make some unusual finds: in the summer of 1973 some large pits were dug in the dunes and decaying waste from fish processing enterprises at Kilmore Quay was dumped and buried (Nooren and Schouten, 1976 page 18).

## **2.6.3 Present land use**

Ballyteige Burrow is presently used solely for nature conservation, winter grazing, and local amenity purposes.

## 2.7 Natural heritage resource values

The dune system at Ballyteige Burrow and environs are rated an area of scientific interest and importance. Relevant designations, classifications, definitions of natural heritage resource values, etc., are tabulated below (Table 1) together with references to sections that outline data relevant to the company's property.

| Designations, classifications, etc.           | Is the company property included? | For more detail see Section |
|-----------------------------------------------|-----------------------------------|-----------------------------|
| Area of Scientific Interest (ASI)             | Yes                               | 2.7.1                       |
| Proposed Natural Heritage Area (pNHA)         | Yes                               | 2.7.1                       |
| Nature Reserve                                | No                                | 2.7.2                       |
| Special Protection Area (SPA)                 | No                                | 2.7.3                       |
| Important Bird Area (IBA)                     | Unknown                           | 2.7.3                       |
| Irish Wetland Bird Survey (I-WeBS) site       | Yes, but under review             | 2.7.3                       |
| Candidate Special Area of Conservation (cSAC) | Yes                               | 2.7.4                       |
| Site of Community Importance (SCI)            | Yes                               | 2.7.4                       |
| A Flora (Protection) Order site               | Yes                               | 2.7.5                       |
| Biogenetic Reserve                            | No                                | 2.7.6                       |

Table 1: Natural heritage designations.

### 2.7.1 ASI / NHA / pNHA

In 1963, the *Local Government (Planning and Development) Act, 1963* (S.I. No. 28 of 1963) made formal provision, for the first time, for the protection of Ireland's natural heritage. However, the detailed extent of what constituted that heritage was largely unknown at the time. To remedy the situation, An Foras Forbartha compiled a National Heritage Inventory of man-made structures and the natural environment during the 1970s. The purpose of the exercise was to assist Planning Authorities to discharge their functions under the 1963 Planning Act.

In the inventory being prepared by An Foras Forbartha areas that were regarded as important for their natural heritage resource values were called Areas of Scientific Interest (ASIs). The entire dune system of Ballyteige Burrow was identified an ASI (Goodwillie, 1979 pages 54-57). The wetland at The Cull was also identified an ASI (Goodwillie, 1979 pages 73-75). The two sites were subsequently combined as ASI WX08 (Cabot, 1981 page 147). ASI maps showing site boundaries were compiled in 1982 by C. Douglas of the Wildlife Service. Revisions followed in July 1983. Objectives with regard to the conservation of Ballyteige Burrow by the Local Authority were included in the 1985 *County Wexford Development Plan* adopted by Councillors on 30 May 1985 (WCC, 1985). Similar objectives were incorporated in the three subsequent Plans produced to date (WCC, 1993, WCC, 2002a, and WCC, 2007).

In a revision of ASI boundaries in January 1987 by Dr Peter Foss for the Wildlife Service, part of the reclaimed lands at Inish and Ballyteige Slob, collectively known as 'Killag', were added to the inventory as ASI No 36. In a subsequent updating by Dr Neil Lockhart in January 1992, the complex comprising the combined sites of Ballyteige Burrow and The Cull (ASI 08), and Killag (ASI 36) were amalgamated as ASI No 696.

In a High Court judgment handed down in that same month (January 1992), an ASI designation in County Galway was quashed following a challenge to its constitutionality (Judicial Review 72/JR/90 between Seán MacPharthaláin, Angela O'Malley and the Clifden and West Connemara Airport Company, and, the Commissioners of Public Works, Ireland and the Attorney General (Nairn, 1992). This action prompted a national review of ASIs and a re-naming and identification of all ASIs as Natural Heritage Areas (NHAs). Notification of the designation of ASI 696 as NHA 696 was made by a Government public notice in local

newspapers on 27 October 1994. However, since the Minister had no power to make such a designation in the absence of the required enabling legislation a Government public notice was published in local newspapers on 16 March 1995 withdrawing all NHA designations in twelve counties, including County Wexford.

To remedy the 1995-situation and the lack of enabling legislation, the NHAs were subsequently referred to as 'proposed NHA' (pNHAs) to clarify that, though published, the areas in question had not been statutorily proposed or designated. It has to be remembered, of course, that the fundamental purpose of the ASI/NHA exercise was, and still is, to assist Planning Authorities to discharge their functions under the Planning Acts. That situation did not change; the suite of pNHAs is the national inventory of Ireland's finest natural heritage sites and legal obligations under the planning acts require that these areas of scientific interest, and the natural heritage resource values they support, are conserved for the common good by planning authorities. Conservation of pNHAs is also required for Rural Environment Protection Scheme (REPS) plans, and the approval on the National Parks and Wildlife Service is required before the Forest Service will pay afforestation grants on pNHA lands.

The *Wildlife (Amendment) Act, 2000* (S.I. No 38 of 2000) was enacted on 18 December 2000. Chapter II of the Act empowers the Minister to designate pNHAs as NHAs. To date some 150 NHAs have been formally designated. It is planned to proceed with the designation of a further 630 sites on a phased basis over the coming years (Source: <http://www.npws.ie/en/ConservationSites/NaturalHeritageAreasNHAs/>).

All of the company property at Ballyteige Burrow is in pNHA 696. The site boundaries are the low tide mark (B9) along the shore, The Cutting, and the wet ditch (B5) adjoining the boundary fence of the company property from the premises of Sofrimar Ltd to Furlong's Road (Source: NPWS site map for pNHA 696, Version 1 dated 11 August 1994).

## 2.7.2 Nature Reserve

In 1985 an advertisement was published in the local press offering 700 acres (283.29ha) of land at Ballyteige Burrow for sale by directions of the owner [*The People* (Wexford), issue dated 11 October 1985, page 22]. With national backing, the Wexford branch of the Irish Wildbird Conservancy (now BirdWatch Ireland) and the Wexford Association of An Taisce encouraged the State to acquire the entire property as a nature reserve. While the matter was being considered by the State a letter was circulated on 15 February 1986 by the Kilmore Quay Community Development Association stating that "*The people of the area have successfully negotiated the purchase of 85 acres of Ballyteigue Burrow, at the Kilmore Quay end.*" The letter noted the "*scientific, scenic and amenity values*" of the area and stated that the purpose of the purchase was "... *to keep the Burrow in its natural state, so that what we have enjoyed will be there for our children and generations to come.*" A deposit of £2,800 had been raised locally and the circular letter invited financial assistance to raise the balance of the purchase price of £28,000 plus expenses.

On 20 December 1986 the Minister for Tourism, Fisheries and Forestry announced that the purchase of the remainder of Ballyteige Burrow by the State had been settled and that the area would be the subject of a nature reserve order. National nature reserves are established under Section 15 of the *Wildlife Act, 1976*, (S.I. No. 39 of 1976). On 28 September 1987 the State-owned lands were designated a protected area under the *Nature Reserve (Ballyteige Burrow) Establishment Order, 1987*, (S.I. No. 279 of 1987). Ownership of the nature reserve was vested in the Minister for Energy when the State registered the 223ha property on 2 October 1989 (Folio No. 13003F).

The reserve included adjoining wetland areas; these wetland areas comprised State foreshore and were of international importance for waterbirds. The total area of the nature reserve was 531ha. In 1990 the reserve was extended by the acquisition of an area of

saltmarsh at Lacken, Duncormick [Nature Reserve (Ballyteige Burrow) Establishment Order, 1990, S. I. Number 8 of 1990].

On the ground, the nature reserve and the company property are separated by a double fence line. The fence line is interpreted to be the boundary between the two properties. However, the boundary is a straight line running across the 'company property' south-east of the fence line. None of the land south-east of the nature reserve boundary is registered with the Land Commission.

### 2.7.3 SPA / IBA / I-WeBS

The European Union 'Birds Directive' [Council Directive of 2 April 1979 on the conservation of wild birds (79/409/EEC)] was adopted by the Council of Ministers in April 1979 and came into force in April 1981. This Directive requires Member States to co-operate in protecting wild birds, *inter alia*, by designating Special Protection Areas (SPAs) for the conservation of wild birds. The State-owned part of Ballyteige Burrow that was the subject of a nature reserve establishment order in 1987 was classified SPA No 020.

Important Bird Areas (IBAs) are areas identified by BirdLife International as priority sites throughout Europe for the conservation of wild birds (Heath and Evans, 2000). IBAs are recognised by the European Court of Justice (ECJ) as areas suitable for classification by Member States as Special Protection Areas (SPAs) (ECJ, 2007). A large complex of sites comprising parts of Ballyteige Burrow and the adjoining foreshore, wetlands and agri-polders comprises IBA Code Number IE098. The site is variously known as 'Ballyteige Burrow' (National Parks and Wildlife Service), 'The Cull/Killag' (area 896ha) (Heath and Evans, 2000 page 402) and 'The Cull & Killag (Ballyteige Burrow)' (area 826ha) (Crowe, 2005 pages 225-226). A map of the IBA has not been produced so the boundaries of the area are not defined.

Since the mid-1990s the Irish Wetland Bird Survey (I-WeBS) has monitored the abundance and distribution of waterbirds and the status of the wetlands that support them. The I-WeBS is a joint project of BirdWatch Ireland, the National Parks and Wildlife Service, and the Wildfowl & Wetlands Trust in the United Kingdom. 'Cull & Killag' is a 1458ha I-WeBS site in which waterbirds are counted. The I-WeBS count unit 'Cull & Killag' includes IBA Code Number IE098.

In 1998 a Count Unit Definition Inventory (CUDI) was initiated by the I-WeBS Office and maps were produced defining the boundaries of count sites. A CUDI map exists for the I-WeBS count unit 'Cull & Killag' so the boundaries of the site are clearly defined. The CUDI map for 'Cull & Killag' shows that the north-western part of the company property (centred on S955045) lies within the I-WeBS site. An extract of that map (Figure 8) shows



Figure 8: Part of the CUDI map for the I-WeBS count unit at Cull & Killag.

(Source: I-WeBS Office, BirdWatch Ireland)



the current SPA boundary outlined in red, the I-WeBS count unit boundary outlined in blue, and the area that is inside the I-WeBS count unit boundary but outside the SPA highlighted in yellow.

While the SPA boundary is currently under review there is no plan to extend the SPA into the company property. When the SPA boundary revision has been finalised it is very likely that the boundary of the IBA will be amended to conform to the boundary of the SPA (personal communication, Olivia Crowe, Data Manager, I-WeBS Office, BirdWatch Ireland).

#### **2.7.4 cSAC / SCI**

While the Birds Directive of 1979 concerned birds only, the 'Habitats Directive' (*Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora*) developed European Community thinking on the need to protect the habitats, that is, the places that are essential for the continued existence of all forms of wildlife. The legal requirements of this Directive came into force in June 1994. The Directive required Member States to designate a network of Special Areas of Conservation (SACs). By public notice in the local press on 13 March 1997, the Government gave notice of its intention to propose the entire dune system at Ballyteige Burrow candidate Special Area of Conservation (pcSAC) No 696. The proposal was subsequently submitted to the European Commission, was accepted, and is registered as Site of Community Importance (SCI), Code IE0000696. A SCI is a site that contributes significantly to the maintenance of biological diversity within the European Community. All of the company property is in cSAC / SCI 696.

#### **2.7.5 Flora Protection Order site**

In exercise of powers conferred by Section 21 of the *Wildlife Act, 1976* (S.I. No. 39 of 1976), *Flora (Protection) Orders* are made to protect endangered species of wild plants and their habitats. To date, three Orders have been made (S.I.s. No 338 of 1980, No 274 of 1987, and No 94 of 1999). The *Flora (Protection) Order, 1999* revokes the earlier Orders and affords protection to 89 species of wild plants throughout Ireland (68 vascular plants, 14 mosses, 4 liverworts, 1 lichen, and 2 stoneworts). At least four of these species (Wild Asparagus *Asparagus officinalis*, Lesser Centaury *Centaureum pulchellum*, Cottonweed *Otanthus maritimus*, and Scrambled-egg Lichen *Fulgensia fulgens*) grow on the dune system at Ballyteige Burrow. Wild Asparagus *Asparagus officinalis* is not as common in the company property as it is in the adjoining nature reserve; the most substantial plants have been seen at S956044 and S957045. It is not known how many, if any, of the other three protected species grow in the company property.

#### **2.7.6 Biogenetic Reserve**

In 1973, at a European Ministerial Conference on the Environment convened in Vienna, Austria, it was agreed to establish a pan-European network of areas that held representative examples of Europe's natural heritage that would be protected for nature conservation. These areas were to be known as Biogenetic Reserves and would be designated by the Council of Europe. Ireland has no legislation that enables the designation of Biogenetic Reserves as such. Instead, areas are designated Biogenetic Reserves when they are subject to protection under other legislation. On 28 September 1987 the State-owned lands at Ballyteige Burrow were designated a protected area under the *Nature Reserve (Ballyteige Burrow) Establishment Order, 1987*, (S.I. No. 279 of 1987) (Section 2.7.2). On foot of that ministerial order, the nature reserve was subsequently designated a Biogenetic Reserve on 10 March 1989.



## 2.8 Ecological assessment

A National Shingle Beach Survey (NSBS) was conducted in 1999 (Moore and Wilson, 1999). That survey reported only three shingle-based dune systems in Ireland: Ballyteige Burrow and one each in counties Sligo and Mayo. Of the three, Ballyteige Burrow was considered the most impressive example of a shingle-based dune system in the country (NPWS, 2007 Habitat type 1220, Backing document, page 5).

A description of the larger Ballyteige Burrow complex in 2003 stated: *“This coastal site is of major ecological value for its range of good quality coastal habitats, including three habitats given priority status on Annex I of the EU Habitats Directive - fixed dune, dune heath and lagoon. The dune system is of excellent quality, physically well-developed and with a rich flora which includes five protected species. The importance of the site for wintering waterfowl further enhances its value.”* (NPWS cSAC Site Synopsis dated 20 March 2003).

The dune habitats types that occur in the company property have already been described: (Section 2.5.1). These dunes are of international importance as they are an EU Site of Community Importance (SCI) (Section 2.7.4). The fixed dunes are listed in Annex 1 of the Habitats Directive as a priority habitat type. These fixed dunes have an area of 238.638ha. In the recent Coastal Monitoring Programme (CMP) the overall assessment of the dunes was ‘unfavourable-inadequate’. While the dune’s structure and functions were assessed in that way *“due to decline in the habitat due to maturing”* the future prospects for the site were rated ‘favourable’ (NPWS, 2007 Habitat type 2130, Backing document, Appendix II, page 25, CMP Site code 041). The shifting dunes have an area of 6.236ha; all attributes assessed in the CMP were found to be ‘favourable’ (NPWS, 2007 Habitat type 2120, Backing document, Appendix II, page 17, CMP Site code 041).

## 2.9 Management infrastructure

### 2.9.1 Introduction

When several people are involved in managing a project it is self-evident that there is a need to have an agreed plan. Ideally, and so as to avoid confusion, the plan should be written down and its objectives clearly set out.

Management of the company property over the past twenty-two years falls into three phases with regard to the availability of written and agreed management plans.

- 1) First, there was an initial ten-year period (1986-1996) characterised by the absence of an agreed plan for the company property. Various differing, and sometimes conflicting, interests competed for support as to how the sand dunes should be managed; issues with regard to playing golf on the dunes illustrate the point (Section 2.9.2). At the time, the dunes were, of course, a proposed Natural Heritage Area (pNHA) (Section 2.7.1). The area was also subject to the provisions of the *Flora (Protection) Order, 1980* (Section 2.7.5). Consequently Wexford County Council had objectives in its 1985 County Development Plan to preserve and protect the area (WCC, 1985 page 73). The specific action that the County Council intended to pursue over the lifetime of the 1985 Plan was to protect the dunes at Ballyteige Burrow with a Special Amenity Area Order (WCC, 1985 page 75). In its 1993 County Development Plan, the Council reaffirmed its objective to preserve and protect the dunes. Protection was defined by the Planning Authority as *“The control of any development within and outside the boundaries of these areas which would be injurious or detrimental to the scientific or amenity value of each area.”* (WCC, 1993 page 116).

- 2) The second management phase extended from 1997 to the present time. This phase is identified by the following initiatives all of which impacted, both individually and in combination, on the management of the company property.
  - a) Classification in 1997 of the entire dune system as a proposed candidate Special Area of Conservation (pcSAC) followed by its acceptance by the European Commission as a Site of Community Importance (SCI) (Section 2.7.4).
  - b) The introduction by the National Parks and Wildlife Service (NPWS) of a list of Notifiable Actions (Section 2.9.3).
  - c) Participation by the company in the Rural Environment Protection Scheme (REPS) (Section 2.9.4).
  - d) Formulation by the NPWS of a Conservation Plan for the period 2003-2008 that applied to the company property (Section 2.9.5).
  - e) The County Development Plans of 2001 and 2007 (Section 2.9.6).
  - f) The Local Area Plan for Kilmore Quay 2002 (Section 2.9.7).
  - g) The Wexford County Council Beach Bye-laws 2004 (Section 2.9.8).
- 3) And, third, the present management initiative seeks to pull all the different elements together and to integrate them in an agreed vision for the short-term future as outlined in this synoptic overview (Section 2.9.9).

## 2.9.2 Golf

In 1985, the State was seriously considering acquiring the entire dune system as a nature reserve (Section 2.7.2). It was clear that if the acquisition was successful that nature reserve regulations would ensure that the area would be conserved in its natural state for present and future generations to enjoy. Therefore, it appeared unnecessary for the local community to purchase part of the property in an attempt to protect it. A perception was created locally that the real reason for acquiring the company property was to block State acquisition and to establish a golf course on the dunes.

In 1971 an application for outline planning permission was lodged with the Planning Authority of Wexford County Council to construct a hotel, chalets and golf courses at Ballyteige Burrow. Permission was refused by the Planning Authority on amenity and nature conservation grounds. While the permission sought was refused, a widely-held perception lingered on that the dunes at Ballyteige were an ideal location for a golf course.

In 1979 the dunes at Ballyteige Burrow were identified an Area of Scientific Interest (ASI) (Goodwillie, 1979 pages 54-57) (Section 2.7.1). In 1985 Wexford County Council recognised the ASI classification and set out its objective *“to preserve and protect”* the natural resources of Ballyteige Burrow (WCC, 1985 page 73); that objective was re-affirmed in all subsequent County Development Plans.

When the Kilmore Quay Community Development Association (KQCDA) purchased 42ha of the dune system in 1986, the reason given for acquiring the land was *“... to keep the Burrow in its natural state, so that what we have enjoyed will be there for our children and generations to come.”*

In 1991, as part of a submission for funding made by the KQCDA to the Wexford Organisation for Rural Development (WORD), the Guillemot Golfing Society (GGS) sought funds to develop facilities for golf on the community-owned property at Ballyteige Burrow. In December 1993 the KQCDA submitted a Development Plan to WORD setting out proposals for funding with the amount of funding required appended. Proposal No 47 stated: *“It is intended to develop a Golf Course on Ballyteigue Burrow which will provide an alternative*

activity in the area. The course will be links and one of only approximately 30 courses of the countries 600 plus courses to meet this criteria. Expenditure £750,000". (At the time, the development of a golf course with up to twenty-four parking spaces for cars was exempt under planning legislation.) The developers of the proposed golf course suffered two setbacks in 1994: the funding requested from WORD was not forthcoming and golf courses ceased to be exempted development under the *Local Government (Planning and Development) Regulations, 1994* (S.I. No 86 of 1994).

In September 1995 a three-man deputation from the GGS formally asked the KQCDA to lease the company property to the GGS for the purpose of setting up a golf course. The KQCDA refused on the grounds that the development of a golf course would not be in keeping with the original reason for acquiring the property, that is, "... to keep the Burrow in its natural state, so that what we have enjoyed will be there for our children and generations to come." At the AGM of the KQCDA on 10 March 1996 the then President of the GGS, proposed "*That the possibility of constructing a golf course on the Burrow be considered.*" The proposal was seconded and was carried by the meeting, 40 in favour 15 against. Details regarding the proposal were set out in an information sheet circulated at the meeting. Controversy surrounding the issue was reported in the press (*The People* (Wexford), issue dated 20 March 1996, page 3). Mr Paddy Governey of Sporting Concepts was commissioned by the GGS to inspect the site. A report from the GGS to the KQCDA stated "*Mr. Governey was most impressed by the area and assures us that the Burrow would be an ideal location for a golf course and would be totally in harmony with the flora and wildlife of the area.*"

The dunes at Ballyteige Burrow were identified a priority habitat for conservation and by public notice in the local press on 13 March 1997, the Government gave notice of its intention to propose the entire dune system candidate Special Area of Conservation (cSAC) No 696. The proposal carried with it an obligation that any proposed development on the dunes would be subject to Environmental Impact Assessment.

The dunes continue to attract the attention of golfing interests. On Sunday 31 August 2003 a party of six people concerned with golf course development carried out a reconnaissance of the dunes by helicopter.

### 2.9.3 Notifiable Actions

In protected areas (pNHAs, cSACs and SPAs), certain activities or operations that might be damaging can only be carried out with the permission of the Minister for the Environment, Heritage and Local Government. These activities are called Notifiable Actions. The activities that require permission vary depending on the type of habitat that is present at any particular site. Landowners are sent copies of the Notifiable Actions that are relevant to their lands. The activities listed as Notifiable Actions are not prohibited but require the landowner/occupier to consult with the local Conservation Ranger in advance. The Notifiable Actions that apply to sand dunes are attached (Figure 9). Notifiable Actions that apply to the company property are incorporated in the company's REPS plan (Section 2.9.4) and do not require consultation. However, the REPS plan excludes areas such as the main walking track — part of the Coastal Path — so that activities such as drainage on the path, filling holes, mowing, reseeding, etc., are subject to consultation with the local NPWS Conservation Ranger, Tony Murray, telephone (053) 914 7576.

## NOTICE OF NOTIFIABLE ACTIONS

### HABITAT TYPE 1.4

Under STATUTORY INSTRUMENT 94 of 1997, made under the EUROPEAN COMMUNITIES ACT 1972 and in accordance with the obligations inherent in the COUNCIL DIRECTIVE 92/43/EEC of 21 May 1992 (the Habitats Directive) on the conservation of the natural habitats and species of wild fauna and flora, all persons must obtain the written consent, (in circumstances prescribed at section A and B below) of the Minister for The Environment and Local Government before performing any of the operations on, or affecting, the following habitats where they occur on lands / waters within the candidate Special Area of Conservation.

Please note that where a landowner has a current approved plan under the Rural Environmental Protection Scheme or any scheme which the Minister considers to be equivalent s/he need only notify the Minister of activities not covered in the plan.

### HABITAT TYPE

### **SAND DUNES OR MACHAIR**

#### **SECTION A**

**Please note that the activities listed in *Section A overleaf* are required to be notified to the Minister for The Environment and Local Government (see attached form) and should not be undertaken before consent.**

#### **SECTION B**

**Please note that the activities listed in *Section B overleaf* may, and in most cases do, require a license or consent from another statutory authority (e.g. the local planning authority, the Minister for the Marine and Natural Resources, or the Minister for Agriculture and Food).**

**If so, these notifiable actions do not apply.**

**However, if such activities are not regulated by another statutory authority, the said activities are required to be notified to the Minister for The Environment and Local Government (see attached form).**

| <p align="center"><b><u>SECTION A</u></b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p align="center"><b><u>Section B</u></b></p>                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>THE MINISTER FOR THE ENVIRONMENT AND LOCAL GOVERNMENT IS REQUIRED TO BE NOTIFIED IN RELATION TO THE FOLLOWING ACTIVITIES AND SUCH ACTIVITIES SHOULD NOT PROCEED WITHOUT PRIOR CONSENT</b></p> <p>causing erosion by any means (e.g. driving vehicles, riding horses etc.)</p> <p>grazing of livestock above a sustainable density (as defined in approved farm plans)</p> <p>grazing by livestock treated within the previous week with a pesticide which leaves persistent residues in the dung</p> <p>supplementary feeding of stock (e.g. with hay, silage, concentrates, roots etc.)</p> <p>cropping or removal of plants</p> <p>reclamation, infilling, ploughing or land drainage<br/>reseeding, planting of trees or any other species</p> <p>application of fertiliser, lime or organic materials</p> <p>dumping, burning or storing any materials<br/>use of any pesticide or herbicide</p> <p>alteration of the banks, bed or flow of watercourses</p> <p>operation of commercial recreation facilities (e.g. pony trekking)</p> <p>introduction (or re-introduction) into the wild of plants or animals of species not currently found in the area</p> <p>any other activity of which notice may be given by the Minister from time to time</p> | <p><b>(NO REQUIREMENT TO NOTIFY IF ALREADY LICENSED BY ANOTHER MINISTER/BODY)</b></p> <p>construction of fences or embankments<br/>removal of soil, mud, gravel, sand or minerals</p> <p>construction of buildings or sewerage facilities</p> <p>construction of roads or car parks or access routes</p> <p>developing leisure facilities including golf courses, sports pitches, caravan or camping facilities</p> |

Figure 9: Notifiable Actions that apply to the sand dunes at Ballyteige Burrow.

(Source: National Parks and Wildlife Service website at [www.npws.ie/](http://www.npws.ie/))



## 2.9.4 Grazing and REPS

The company property was acquired in 1985. The site had been grazed prior to acquisition. From the twelfth century to the early 1950s the area was grazed by Rabbits *Oryctolagus cuniculus*. Grazing by Rabbits was so intense that the area did not support any grass for cattle (personal communication, Ibar Power). An onset of myxomatosis occurred in 1956 (Monaghan, 2004 page 61) and the Rabbit population crashed. The Bruens from Oak Park, Co Carlow, were the last landlords to manage the Rabbit warren. The following account summarises the recent history of the Oak Park estate.

*“Oak Park was first owned by the Cooke family who were dispossessed of the lands in 1725. Subsequently, it has been owned by five generations of the Bruen family, having purchased the property comprising of 1600 acres in 1775. By 1843 this had increased to 21,000 acres.*

*The last owner in the Bruen dynasty was Henry Bruen who died in 1954 and left the property to his first cousin, Francis Bruen. A move zealously contested legally by his daughter, Patricia. A subsequent court case ordered everything to be sold and the proceeds divided evenly between both parties. At the auction the land was purchased by Brownhill Farms and a number of years later it was taken over by the Land Commission.*

*In the division that followed, An Foras Taluntais purchased part of the lands for a new Crops Research Centre. In subsequent years An Foras Taluntais joined with Acot to form Teagasc who own the lands today. Two years ago Teagasc relocated its corporate head office to Oak Park House and the Crops Research Centre operate the lands.”* (Source: Teagasc website at <http://www.teagasc.ie/news/2006/200606-02.htm>).

Ibar Power, Park, Duncormick, bought the entire dune system at Ballyteige Burrow in 1958 from the estate of Henry Bruen. Since the area had not been grazed since the Rabbits died out some years previously the dunes supported a plentiful supply of grass. The fence line at Furlong's Road was erected by Ibar Power in the early 1960s to keep cattle off the eastern end of the dune system as they were causing problems by straying onto adjoining tillage land at Inish and Ballyteige Slob.

There was some intermittent grazing of cattle and horses and a herd of some 20-25 asses on the company property during the 1960s. In the early 1970s, Tommy Howlin, Crossfarnoge, leased part of the eastern end of the dune system from Ibar Power for out-wintering some 40-50 head of cattle. Grazing was particularly intense at the eastern end of the company property (personal communication, Fin Howlin).

Grazing ceased in 1985 when the KQCDA purchased the property and did not resume until 1997. Damage to the vegetation due to the lack of grazing was noted by the National Parks and Wildlife Service: “... as a result, there is an increase in dune scrub encroachment and a decrease in species diversity.” (NPWS Site Synopsis dated 20 March 2003).

In 1997, the then trustees of the company property joined the Rural Environment Protection Scheme (REPS). The scheme generated a valuable income for the local community from the property. Since the company property was part of proposed Natural Heritage Area (pNHA) No 696 (Section 2.7.1) management prescriptions for nature conservation were prepared by the National Parks and Wildlife Service (NPWS). Dated 4 December 1997, the overall aim of the prescriptions was that no major change in land use would take place without prior consultation with the NPWS. In the interests of managing the vegetation, cattle were to be grazed on the property between 1<sup>st</sup> September and 31<sup>st</sup> March each year. The number of cattle grazed each year and the layout of fencing to be agreed with the NPWS. Specific prescribed actions did not permit the following

a) Change in land use to forestry, quarrying, land-filling, set-aside, abandonment, etc.

- b) Removal of sand or gravel.
- c) Creation of new roads, tracks or drains.
- d) Deliberate introduction of new flora or fauna.
- e) Deliberate disturbance of wild plants, summer grazing, cutting of vegetation, creation of hedgerows, or application of herbicide, fungicide, or insecticide.
- f) Deliberate disturbance of wild animals.
- g) Introduction of supplementary feed for cattle.
- h) Training or exercising of horses or ponies.
- i) Unauthorised entry onto the property by non-agricultural vehicles.

These prescribed actions take full account of Notifiable Actions 1.4 that require the written consent of the Minister under *Statutory Instrument No 94 of 1997*.

The original REPS plan was in force from 19 December 1997 to 31 December 2003. A new plan for 40.37ha of the company property (known in the REPS Land Parcel Identification System (LPIS) as Y13412004) came into force, under the REPS 3 scheme, on 1 January 2004 and the management agreement continues to 31 December 2009.

The level of grazing that the company property requires to return the vegetation cover to a quality comparable with that in the nature reserve needs to be assessed. Former owner, Ibar Power, is of the opinion that the area needs to be grazed heavily with 30-40 cattle left on it from September to March.

### 2.9.5 NPWS Conservation Plan

In March 2004, the National Parks and Wildlife Service (NPWS) produced and circulated its Conservation Plan for the Ballyteige Burrow complex of protected sites for the period 2003-2008. The plan noted: *"A partnership approach between the KQDA and the NPW on matters relating to the conservation of the sand dune system is now being adapted."* (Anon, 2004 page 21). Objective 1 of the plan was to maintain the sand dunes and Strategy 1.1 was to continue the agreed level of grazing (Anon, 2004 page 35). The NPWS sought to liaise with the KQCDA with regard to both the erection of signage (Anon, 2004 page 38 Strategy 6.1) and public access to the dunes (Anon, 2004 page 39 Strategy 8.4).

Work on the production of a revised plan for the period 2008-2013 was deferred, and is still on hold, pending the outcome of the proposed extension of the Special Protection Area (SPA) at Ballyteige Burrow into a large area of agri-polder at Inish and Ballyteige Burrow.

The NPWS enjoys excellent relations with the KQCDA Ltd and is keen to strengthen its bond with the local community in the interests of nature conservation at the company property (personal communication, Tony Murray, NPWS Conservation Ranger).

### 2.9.6 County Development Plans

The County Development Plan 2001 was adopted by Wexford County Council on 11 June 2001 and was published in February 2002. The Plan set out the Council's on-going objective to "... *facilitate and co-operate with national agencies, local and community groups ...*" in seeking to protect areas of scientific interest (WCC, 2002a pages 108-112).

The Plan was revised in 2007 and was adopted by the County Council on 30 April 2007. Policy NH1 of the Plan for the period 2007-2013 states: *"The Council shall support the conservation of the abundance and diversity of habitats characteristic of County Wexford and their dependent plant and animal communities and will facilitate and co-operate with national agencies, local and community groups in their protection"*. Two objectives were set out.

- a) *Objective NH1: Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves.*
- b) *Objective NH2: To encourage and assist individuals, environmental organisations and community groups in the conservation of nature.*

(Source: WCC, 2007a Section 9, online version at <http://www.wexford.ie/wex/Departments/Planning/DevelopmentPlans/>).

## **2.9.7 Local Area Plan for Kilmore Quay**

Wexford County Council commissioned Brady Shipman Martin to prepare a *Village Development Plan* for Kilmore Quay concurrently with its own revision of the 2001 County Development Plan. The revised draft of the consultants' village plan was produced in October 1998. The County Council went on to produce its own plan and that was adopted by the Council on 11 March 2002. While the company property is not part of the village, one of the development strategies of the Village Plan is to keep the neighbouring protected areas, like Ballyteige Burrow, *"free from further development"* (WCC, 2002b page 4, first bulleted point; page 6, RP8; page 9, TP3; page 17, OSP6, OSP8, and OSP9; and page 21, 12.5, 12.6 and 12.7). The Coastal Path runs through the company property (Section 2.3). It is an objective of the Council *"to seek the continued development and upgrading of the Wexford Coastal Path in the Kilmore Quay area including improvements in access and sign posting ..."* (WCC, 2002b page 18, OSO5). Another objective seeks to encourage year-round tourism in the area by promoting eco-tourism, walking and related environmentally friendly activities (WCC, 2002b page 9, TP4).

## **2.9.8 Wexford County Council Beach Bye-laws**

Wexford County Council introduced Beach Bye-laws in 1999. Ballyteige Burrow was not covered by these bye-laws. The dunes were partially included in the Draft Bye-laws of 2004 and all of the company property was included in the 2005 Bye-laws. Save with the written permission of the Council, prohibited activities on the company property include the use of motorcycles and quads, the use of jet skis and power boats on the beach, riding horses and ponies, erecting tents, parking caravans, dumping, etc. Full details with regard to the Beach Bye-laws may be accessed on the County Council's website at <http://www.wexford.ie/wex/Departments/Environment/BeachBye-Laws2005/>. A person who contravenes the Bye-laws is liable to an on-the-spot-fine of €125 for a simple breach or a fine of not less than €1270 on summary conviction. Breaches of the bye-laws should be reported to the Environment Department of the County Council at (053) 914 2211 during office hours or Lo-Call 1890 666 777 outside office hours in the case of environment emergencies.

## **2.9.9 The present initiative**

It is hoped that as a result of community involvement, and following reflection and discussion on the contents of this draft report by all interested parties, that a consensus will emerge on how the company property should be managed in years to come.

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## **3 COMPANY OBJECTIVES FOR THE SITE**

The company wishes to develop clear objectives for the management of the community property at Ballyteige Burrow. The company is mindful of the fact that its property is a protected area, that Article 6 of the Habitats Directive requires prediction of the significance of likely impacts of all proposed developments on the conservation of the natural heritage resource values of the dunes, and that various Notifiable Actions and Beach Bye-laws are in place.

The company plans to address the following management issues during the life of this development plan. Issues are listed below in no particular order of importance or priority.

The overriding company objective continues to be the enhancement of the amenity for the benefit of the local community in a way that is compatible with the sustainable development of the natural heritage resource values of the site.

### **3.1 Grazing**

The present REPS 3 management plan expires on 31 December 2009. Future involvement in the scheme needs to be addressed. Serious health and safety issues for members of the general public arise when cattle are present on the dunes. The presence of long lengths of live electric fences has led to the suggestion that the location of stiles at key points should be considered to allow access for people to and from the walking tracks and the dunes.

### **3.2 Public access**

Facilitating and enhancing public access to the company property is an important on-going objective. Access to both the company property and the beach from the Viewing Point is a particular concern. The present arrangement of climbing over the wooden barrier and descending steep, narrow paths with loose gravel is considered dangerous. There is a need for a properly-planned and properly-constructed flight of steps, hair-pin path, or boardwalk. Facilities and/or access for wheelchair-users and/or those with limited mobility need to be investigated. Access for the emergency services to the dunes and the beach remains a priority.

### **3.3 Car parking**

The company intends to pursue the provision of better car parking facilities. Matters of concern include the state of the surface at the Viewing Point, the rough road-side ground on which cars park near the bridge over The Cutting, and the facilities in the small car parking area at the entrance to the factory premises of Sofrimar Limited. The Viewing Point is owned by Sofrimar Ltd and is leased to Wexford County Council. It is believed that Wexford County Council owns the small car park beside the Sofrimar entrance.

### **3.4 Information and interpretation**

It is planned to continue to promote the company property, to highlight the rich natural heritage to be found locally, to increase awareness and appreciation of the amenity, and to provide better information about the attractions of Ballyteige Burrow as a product in local tourism. Ecotourism initiatives, nature trails, signs, leaflets, and a website have been suggested. How the amenity might be better marketed as a product in local tourism initiatives will be investigated.

### **3.5 Walking track**

The portion of the Coastal Path that runs through the company property is a very popular walking route. It is proposed to continue mowing the path and developing it as an amenity for walking. Problems associated with the uneven surface in places are a cause for on-going concern. Use of a roller or infilling of hollows with sand have been suggested. Many people also use the track as a place in which to exercise their dogs and fouling with dog faeces by very large dogs on high-fibre diets can be an issue for other users of the amenity. Strategies to encourage the use of pooper-scoopers will be investigated. Solutions to flooding of one portion of the path during winter will also be addressed. Calls for the provision of an all-weather shelter and seating at suitable locations will be looked into.

### **3.6 Anti-social behaviour**

Some of the dune slacks in the company property are used for lighting fires. The remains of these fires are either small or large. Small remains suggest picnic fires made by holiday makers; larger remains (S962037, S960039 and S960038), sometimes strewn with surrounding beer cans and vodka bottles (S962037) suggest drinks parties by larger groups. Use of the company property for holding such parties will be resisted and the dangers of setting fire to the dune grasses during dry weather will be highlighted. Damage to the property by horses and quads will also be addressed via Wexford County Council's Beach Bye-laws (Contact: the Environment Department of the County Council at (053) 914 2211 during office hours or Lo-Call 1890 666 777 outside office hours in the case of environment emergencies) and/or the government's Notifiable Actions (Contact: the local NPWS Conservation Ranger, Tony Murray, telephone (053) 914 7576).

### **3.7 The Cutting**

Issues with regard to The Cutting include safety to prevent people, especially children, falling into it and the unpleasant smells that emanate from it in warm summer weather when accumulated seaweed drifted in by the sea starts to rot.

### **3.8 The Sluice House**

The future of The Sluice House needs to be discussed. Rather than having it boarded up, standing idle, and falling into disrepair, it has been suggested that it might be developed as a small museum or interpretative centre focusing on the local history of very extensive drainage works carried out and the intaking of the former wetlands at Inish and Ballyteige Slob.

### **3.9 Coastal defences**

Bearing in mind predicted increases in storminess due to climate change together with already rising sea level, the long-term ability of the dunes to resist breaching by the sea is a cause for concern.



## 4 REFERENCES

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